

Article

Analysis Factors Related with Successful in Exclusive Breastfeeding During Pandemic

*Baharika Suci Dwi Aningsih¹, Dewi Novitasari Suhaid²*¹Midwifery, STIK Sint Carolus, Indonesia²Midwifery, STIK Sint Carolus, Indonesia

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CORRESPONDENCE

Phone: +628998333211

E-mail: dewinovitasarisuhaid@gmail.com

A B S T R A C T

Exclusive breastfeeding is one of the Sustainable Development Goals programs that aim to provide good nutrition for babies naturally. Given the far-reaching benefits of exclusive breastfeeding for babies, mothers and the economy, concerted efforts are needed to meet the World Health Assembly (WHA) target of at least 50% exclusive breastfeeding for 6 months by 2025. The exclusive breastfeeding coverage rate is still far from the expectations removed. This is to be expected as only 1 in 2 babies under 6 months are exclusively breastfed. This shows that almost 50% of Indonesia's child population does not receive the nutrition they need in the first two years of life. The WHO reports that more than 40% of infants were introduced to complementary foods before the age of 6 months and were given food that did not meet their nutritional needs. The aim of this study is to analyze factors related with successful in exclusive breastfeeding during a pandemic. This research is an observational, analytic, cross-sectional study. The sample in this study were mothers whom have toddlers aged 6-18 months from January 2020 to July 2021. The number of samples is 138 people. Data analysis will use the Chi Square test, fisher, and logistic regression. The results showed that the spacing pregnancy (p value = 0.010), Covid-19 infection during delivery or breastfeeding (p value = 0.017), and knowledge (p value = 0.013) had a significant relationship with exclusive breastfeeding. The dominant factor influencing exclusive breastfeeding is knowledge. The probability of logistic regression is seen with a value of 0.99.

I. INTRODUCTION

According to the World Health Organization (WHO), exclusive breastfeeding means giving babies only breast milk from birth to 6 months of age without any other food and drink, except for medicines and vitamins. At 6 months, babies are fed complementary foods for breast milk, so babies continue to be exclusively breastfed until the baby is 2 years old.

Exclusive breastfeeding is one of the Sustainable Development Goals programs that aim to provide good nutrition for babies naturally. The benefits of exclusive breastfeeding are very broad, not only for babies but also for mothers, and even offer economic benefits. UNICEF (2021) notes that breastfeeding has various health, social and economic benefits for both children and mothers. Additionally, awareness of the importance of breastfeeding for children aged 0-6 months is an important part of the success indicator of practicing clean and healthy behaviors at the household level (Kemenkes, 2016).

Many studies have been conducted regarding the benefits of exclusive breastfeeding for babies and mothers. Babies who are exclusively breastfed have optimal brain development, intelligence and physical growth, so they are not prone to diseases, in addition, mothers who are exclusively breastfeed can avoid the risk of breast cancer and avoid the baby blues syndrome, so that the physical and mental health conditions of mothers when giving breast milk to babies will be more (Kemenkes, 2018). A study by The Global Breastfeeding Collective (2017) shows that a country will suffer economic losses of around US\$300 billion per year due to poor coverage of exclusive breastfeeding, which translates into increasing the risk of maternal and infant mortality and health funding due leads to a high incidence of diarrhea and other infections (Kemenkes, 2019).

Given the far-reaching benefits of exclusive breastfeeding for babies, mothers and the economy, concerted efforts are needed to meet the World Health Assembly (WHA) target of at least 50% exclusive breastfeeding for 6 months by 2025. The exclusive breastfeeding coverage rate is still far from the expectations removed. This is to be expected as only 1 in 2 babies under 6 months are exclusively breastfed. This shows that almost 50% of Indonesia's child population does not receive the nutrition they need in the first two years of life. WHO data (2020) also show that more than 40% of infants were introduced to complementary foods before the age of 6 months and were given food that did not meet nutritional needs (WHO, 2020).

In the past 2 years, Indonesia and all countries in the world have experienced a downturn in various walks of life caused by the Covid-19 pandemic. The economy as well as education, social life and even healthcare are areas that are severely affected by this situation. In the healthcare sector, government policy adjustments to reduce the incidence of Covid-19 viral infections are one of the factors that allow healthy mothers and children to consult about their health. Counseling restrictions and changed forms of counseling have an indirect effect on the sustainability of health programs, which also include exclusive breastfeeding.

Outside of the pandemic situation, the Exclusive Breastfeeding program is the main program funded since its establishment in 2024 until now. Various efforts and strategies have been undertaken to achieve the coverage set by the government. In 2020, too, the trend towards low quotas for exclusive breastfeeding remuneration will still be noticeable.

The national exclusive breastfeeding coverage report was 67.74% in 2019, while the 2020 coverage report was 66.1%. The decline is forecast due to the impact of the Covid-19 pandemic. Government policies to break the chain of transmission by limiting large-scale activities have implications for health services, both at the primary and secondary levels. Most activities, both health checks and counseling, are covered by this policy. Exclusive breastfeeding is the first step for someone to lead a healthy and successful life in the future. This program is an integral part of stunting, wasting and malnutrition. In the end, it boils down to the goals contained in the SDGs 2030 indicators of success, namely improving nutrition and ensuring healthy lives. One effort that can be made is diet scaling, which is a driving force for good nutrition in the first 1000 days of

life. If the factors associated with exclusive breastfeeding during a pandemic continue to be explored, then in enacting the new normal throughout life, when not providing exclusive breastfeeding, health workers will not find it difficult to strategize and capture mothers with predictable risk factors .

The aim of this study is analyze factors relates successful of exclusive breastfeeding during pandemic.

II. METHODS

The study used an analytical research with a cross-sectional approach. The study was conducted at the X Primary Clinic in Central Jakarta. The population in this study was all mothers whom have toodlers aged 6-18 months from January 2020 to July 2021. The number of samples was taken using the Lemeshow formula calculation with a confidence level of 95% and added for avoid missing data, the results obtained were 138 respondents. Inclusion criteria included patients at the X Primary Clinic, mobile phone numbers on medical records, willing to participate in the research.

In this study, the instrument used by the researcher was a questionnaire used to collect secondary data obtained through medical records and primary data to determine respondent's knowledge. The questionnaire used contained identity data on the respondent code, cell phone number, age, level of education, occupation, parity, distance between children, Covid infection during pregnancy or childbirth, knowledge and success in exclusive breastfeeding. The questionnaire with questions to describe knowledge was checked for validity and reliability before it was used as a research instrument. The reliability test used the Cronbach alpha test with a result of 0.856. Data analysis using rasch model, chi square and fisher test, and then followed by logistic regression analysis.

III. RESULT

The study involved 138 mothers whom had toodler between the ages of 6 and 18 months. The results showed that 76.8% of the mothers exclusively breastfed.

Table 1. Cut off Point to Transformed Variable Knowledge

Variable	Non-exclusive Breasfeeding	Exclusive Breasfeeding
Knowledge		
Mean (logit)	51.31	51.93

Knowledge is a variable that has a measurement scale in numerical form. This variable is converted to a measurement scale in categorical form for further bivariate analysis. Using the Rasch model test, the intersection point for categorizing knowledge into less and good categories analyzed based on each category of research subject groups, exclusive breastfeeding and non-exclusive breastfeeding, was obtained. In the group of respondents who were not exclusively breastfed, the knowledge category was divided into the categories less and good with a logit mean value of 51.31. Knowledge of the subject group giving exclusive breastfeeding is divided into less and good categories with an intercept of 51.93.

Table 2. Frequency Distribution of Characteristic Respondents

Variable	Frequency	Percentage
Age		
Risk	18	13.0
No-Risk	120	87.0
Education level		
Basic	0	0
Higher	138	100
Occupation		
Does no work	37	26.8
Work	101	73.2
Parity		
Primipara	81	58.7
Multipara	57	41.3
Spacing pregnancy		
<2 years	74	53.6
>2 years	64	46.4
Covid-19 infection during pregnancy		
Yes	9	6.5
No	129	93.5
Covid-19 infection during delivery or breastfeeding		
Yes	8	5.8
No	130	94.2
Support		
No	109	79.0
Yes	29	21.0
Knowledge		
Less	76	55.1
Good	62	44.9
Exclusive breastfeeding		
No	32	23.2
Yes	106	76.8

From Table 2, it is known that most of the respondents fall into the 'not at risk' category by age (87%). A no-risk age range of 20-35 years was identified, while a risk age ranged from < 20 to > 35 years.

All respondents (100%) have a higher level of education. Based on Indonesian Law No. 2 of 2003 on the National Education System, compulsory education in Indonesia lasts 9 years divided into 6 years of primary education and 3 years of secondary education. This base is an indicator of the basic education category in this study, which includes primary through secondary education. Continuing education starts at the upper secondary level up to an education organized by the university. Most of the respondents (73.2%) in this study were working mothers. The remaining 26.8% are mothers as housewives.

Half of the respondents (58.7%) were primipara, meaning that the mothers who participated in this study were mothers who had just given birth. While the rest (41.3%) were multipara, defined as mothers who gave birth more than 1 time. According to the WHO, the recommended distance between children is 2 years. In this study, half of the respondents (53.6%) had children <2 years apart.

The description of Covid-19 infection during pregnancy in this study was that almost all (93.5%) were not infected with the virus that causes Covid-19 disease. However, another 6.5% of respondents said they had infected Covid-19 during pregnancy. Exposure to the Sars-Cov2 virus during childbirth or breastfeeding showed that almost all (94.2%) of the respondents had never

been infected with this virus, only 5.8% of the respondents said they had infected the Sars-Cov2 virus.

Most respondents, 79%, admitted that they did not receive breastfeeding support from husband or family in this study. Describing respondents' knowledge of exclusive breastfeeding, half of respondents have 55.1% less knowledge of exclusive breastfeeding. Almost half (44.9%) had a good knowledge of exclusive breastfeeding.

Table 3. Relationship between Age, Education Level, Occupation, Parity, Spacing of Pregnancy, Covid-19 Infection during Pregnancy, Covid-19 Infection during Delivery or Breastfeeding, Support and Knowledge with Exclusive Breastfeeding

Variabel	ASI Eksklusif		Nilai p
	Tidak n = 32 (%)	Ya n = 106 (%)	
Age			
Risk	5 (27.8)	13 (72.2)	0.566
No-Risk	27 (22.5)	93 (77.5)	
Occupation			
Does no work	6 (16.2)	31 (83.8)	0.344
Work	26 (25.7)	75 (74.3)	
Parity			
Primipara	22 (27.2)	59 (72.8)	0.266
Multipara	10 (17.5)	47 (82.5)	
Spacing pregnancy			
<2 years	24 (32.4)	50 (67.6)	0.010*
>2 years	8 (12.5)	56 (87.5)	
Covid-19 infection during pregnancy			
Yes	2 (22.2)	7 (77.8)	1.000
No	30 (23.3)	99 (76.7)	
Covid-19 infection during delivery or breastfeeding			
Yes	5 (62.5)	3 (37.5)	0.017*
No	27 (20.8)	103 (79.2)	
Support			
No	25 (22.9)	84 (77.1)	1.000
Yes	7 (24.1)	22 (75.9)	
Knowledge			
Less	11 (14.5)	65 (85.5)	0.013*
Good	21 (33.9)	41 (66.1)	

The analysis used to see the relationship between occupation, parity, spacing of pregnancy, support and knowledge with exclusive breastfeeding is the chi-square test. Age, Covid-19 infection during pregnancy, Covid-19 infection during delivery or breastfeeding using Fisher's test analysis to see association with exclusive breastfeeding. Most respondents who were in the no-risk age group succeeded in exclusively breastfeeding (77.5%). The fact found in this study also showed that the majority of respondents who belonged to the risk age group were also successful in exclusive breastfeeding (72.2%). The results of the bivariate analysis showed that age had no significant association with exclusive breastfeeding ($p\text{-value} = 0.566 > 0.05$).

74.3% of the employed respondents successful in exclusively breastfeed. Most of the group of respondents who did not work success in exclusively breastfeed (83.8%). The results of the analysis showed that there was no significant association between occupation and exclusive breastfeeding ($p\text{-value} = 0.344 > 0.05$).

Success in exclusive breastfeeding was seen overall in both groups. In both the primiparous group and in the multiparous group, most respondents success to exclusively breastfeed. The

results of the analysis show that the value of $p=0.266$ meets the requirements for the significance of the relationship between variables is <0.05 . From this, it can be concluded that there is no significant association between parity and exclusive breastfeeding.

Almost all respondents in the group with spacing of children >2 years success to exclusively breastfeed (87.5%). In the group with spacing of children < 2 years apart, the majority (67.6%) of those respondents success to exclusively breastfeed. The results of the follow-up test showed that there was a significant association between the distance between the children and exclusive breastfeeding ($p\text{-value} = 0.010 < 0.05$).

Respondents' exposure to the Covid-19 disease was diagnosed by positive results of the antigen and PCR tests performed. During pregnancy, most of the two groups of respondents studied, both the group not exposed to the Sars-Cov2 virus and the group exposed to the Sars-Cov2 virus, success to exclusively breastfeed. This is inversely proportional to the group exposed during delivery or breastfeeding. Most respondents who infected Covid-19 during delivery or breastfeeding did not exclusively breastfeed their babies, and most of those who did not infected Covid-19 during delivery or breastfeeding succed to exclusively breastfeed . The results of the bivariate analysis showed that Covid-19 infection during pregnancy had no significant association with exclusive breastfeeding ($p\text{-value} = 1,000 > 0.05$), while infection during labor or breastfeeding had a significant association with exclusively breastfeeding ($p\text{-value} = 0.017 < 0.05$).

Most respondents admitted that they received no positive support from their husbands or families by exclusively breastfeeding their babies (79%). However, when looking at the success of exclusive breastfeeding, both unassisted and assisted groups showed that the majority of the two groups were successful at exclusive breastfeeding. The results of further analysis showed that there was no significant association between support and exclusive breastfeeding ($p\text{-value} = 1,000 > 0.05$).

Almost all respondents who had less knowledge about exclusive breastfeeding still managed to offer exclusive breastfeeding (85.5%). Likewise, respondents who are comfortable with exclusive breastfeeding managed to enable most of their babies to exclusively breastfeed (66.1%). The results of the bivariate analysis showed a $p\text{-value} = 0.013$, which means there is a significant association between knowledge and exclusive breastfeeding.

Table 4. Logistic Regression Analyze between Spacing of Pregnancy, Covid-19 Infection during Delivery or Breasfeeding, and Knowledge with Exclusive Breasfeeding

Variable	Koef (β)	SE (β)	Wald	p-value	Exp.B (95% CI)
Spacing of children <2 years	-0.640	0.547	1.370	0.242	0.181- 1.540
Covid-19 infection during delivery or breasfeeding	19.723	15191.515	0.000	0.999	0.000 – 0
Less knowledge	0.913	0.430	4.506	0.034	1.073- 5.790
Constant	1.206	0.541	4.969	0.026	

Hoshmer and Lemeshow test = 0.967

Based on Table 5, the logistic regression model is known to explain the data well, as evidenced by the Hoshmer and Lemeshow test results showing the number 0.967 (>0.05). Multivariate analysis with logistic regression using the Enter method. The results of the multivariate analysis showed that the most dominant factor influencing exclusive breastfeeding was knowledge. This can be seen from the smallest p-value between the 3 variables, which are further examined using logistic regression. The p-value for knowledge is 0.034. Using the logistic regression probability formula, the result is 0.99, meaning that the probability of someone not

exclusively breastfeeding if they have children <2 years apart, suffer by Covid-19 infection during delivery, or while breastfeeding and has less knowledge is 99%.

IV. DISCUSSION

This study analyzed various risk factors associated with exclusive breastfeeding. Exclusive breastfeeding is breast milk that is given to babies from birth to the first 6 months of life without the addition or substitution of other foods or beverages. WHO recommends exclusive breastfeeding within 1 hour of birth until 6 months of age and continued breastfeeding until the child is 2 years old. Exclusive breastfeeding in Indonesia is regulated in Government Regulation No. 33 of 2012 on Exclusive Breastfeeding (Indonesia, 2012).

Exclusive breastfeeding has many benefits for both mother and child. The nutrients contained in breast milk can meet the needs and support the optimal development of the baby. Breast milk is the most important food for babies. Immunoglobulin contained in breast milk can protect babies from the threat of various diseases and infections. In addition, breastfeeding is a simple way to feed baby, inexpensive process that can be done anywhere without additional tools. The benefits for breastfeeding mothers are that they can reduce the risk of breast cancer, ovarian cancer, type 2 diabetes and high blood pressure (CDC, 2021; Mustika, 2020).

From 2020 to present, both Indonesia and other countries have experienced the impact of the Covid-19 outbreak. This affects the situation of essential health services such as maternal and child health, where all measures are aimed at preventing the transmission of this infection at the national level. As a result, health professionals, who play a role in the delivery of maternal and child health services, participate in this acceleration. In addition, the public's fear of accessing healthcare services in healthcare facilities is itself a challenge for the healthcare world.

Exclusive breastfeeding during a pandemic has faced significant challenges in its application. The fear of being exposed to the virus, both from pregnancy to breastfeeding, is of concern to the public. The possibility of exposure of a baby by someone carrying the Sars-Cov2 virus could occur due to droplet transmission. The national policy of implementing far-reaching social restrictions also means that people do not have access to health facilities related to support for exclusive breastfeeding, such as lactation clinics (Hanifah, 2017; Latorre et al., 2021).

Occupation has nothing to do with exclusive breastfeeding. The results of this study contrast with the research conducted by Gayatri. The results of research conducted by Gayatri are known to show a significant association between mothers not working and exclusive breastfeeding. This is based on the fact that mothers who do not work have more time to spend at home with their babies. However, looking at the results of the study, there is a possibility that the opposite is true. Working mothers can be successful in exclusively breastfeeding because of the wealth of information and mothers' awareness to offer exclusive breastfeeding with adjustments to pumping breast milk at work. Research conducted by Nuampa also found that the characteristics of the type of work in which one of them is a housewife has a significant association with exclusive breastfeeding (Gayatri, 2021; Nuampa et al., 2022).

Parity has no significant association with breastfeeding. This finding is consistent with Nuampa's research that parity is not significantly associated with exclusive breastfeeding. This is not consistent with the research conducted by Gayatri (Gayatri, 2021; Nuampa et al., 2022).

Education level has no significant association with exclusive breastfeeding. This differs from the results examined by Nuampa, which found that educational level was significantly associated with exclusive breastfeeding (Nuampa et al., 2022; Sulastri, 2020).

Support is a form of involvement that is externally motivated to support someone in adopting attitudes and behaviors towards something. Husband or family are a very valuable source of support for a mother in child care. No significant association was found between support and exclusive breastfeeding in this study. This is consistent with research conducted by Agustin. The mother's decision to continue exclusive breastfeeding may be an image related to husband or

family support. The strength of this decision can be influenced by personal understanding in terms of knowledge, experience, support from health workers, or even changes in social dynamics within the family (Agustin, Februhartanty, & Bardosono, 2021; Mamangkey, 2018).

Knowledge is the most dominant factor influencing exclusive breastfeeding in this study. A significant relationship between knowledge and exclusive breastfeeding was also found in a study conducted by Istisya. Knowledge is a part that can represent elements in shaping behavior. Cognitive is one of the bases for a person to be able to take an attitude that continues through behavioral reflection (Istisya, SImanjuntak, & Marleni, 2022).

Experience opens the horizon to find out more based on knowledge. This motivation supports a person to learn something and then act through behavior. Knowledge-based behavior will be more permanent (Mizrak Sahin, 2019; Yusnita, 2019).

V. CONCLUSION

This research shows that the Covid-19 pandemic is having an impact on exclusive breastfeeding. Spacing of children, Covid-19 infection during delivery or breastfeeding and knowledge are factors influencing exclusive breastfeeding. It is well known that a lack of knowledge is the factor that most influences exclusive breastfeeding.

The results of the study indicate that knowledge is the dominant factor influencing exclusive breastfeeding, therefore a public awareness approach may be an alternative to promote exclusive breastfeeding programs through counseling, lactation classes or the use of social media groups support financially.

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BIOGRAPHY

First Author : Baharika Suci Dwi Aningsih, Bd., M.Keb was born in Nganjuk, May 10, 1986. Graduated with Master's Degree in Midwifery at Brawijaya University in 2016. Currently she works as a lecture at Midwifery Study Program at STIK Sint Carolus Jakarta.

Second Author and Correspondent : Researcher named Dewi Novitasari Suhaid, M.Keb. She was born in Pontianak, Januari 2, 1988. Graduated with a master's degree in midwifery at Padjajaran University in 2016. Currently the researcher works as a lecture at Midwifery Study Program at STIK Sint Carolus Jakarta.