



## Factors influencing the occurrence of exclusive breastfeeding failure in six-month-old infants

Ayu Nathalia<sup>1\*</sup>, Dwi Rahmawati<sup>1</sup>, Kunti Nastiti<sup>2</sup>, Desilestia Dwi Salmarini<sup>1</sup>

<sup>1</sup>Department of Midwifery, Faculty of Health, Sari Mulia University, Banjarmasin, Indonesia

<sup>2</sup>Department of Pharmacy, Faculty of Health, Sari Mulia University, Banjarmasin, Indonesia

\*Corresponding author: [ayunathalia85@gmail.com](mailto:ayunathalia85@gmail.com)

| ARTICLE INFO   | ABSTRACT   |
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| <p><i>Article history:</i><br/>Received 5 May 2024<br/>Revised 12 May 2024<br/>Accepted 20 May 2024</p> <p><i>Keywords:</i><br/>Breastfeeding<br/>Failure factor<br/>Factor influence<br/>Under six month old<br/>Infant</p> | <p><i>Background:</i> Mother's milk is the best food for babies aged 0 – 6 months. Babies who are not exclusively breastfed have a greater risk of death due to malnutrition. The failure factor for exclusive breastfeeding can be caused by various circumstances and regional factors.</p> <p><i>Objective:</i> Knowing what are the factors that influence the failure of exclusive breastfeeding in six-month-old babies</p> <p><i>Method:</i> The research design used is cross-sectional, using a total sampling technique. The sample used was 28 respondents who were tested using the Chi-square test. Data was collected using a closed questionnaire where respondents provided responses in the form of answer choices on the questionnaire. Data analysed using Fisher's exact test, the p-value used was 0.05.</p> <p><i>Results:</i> The results showed that there was no relationship between maternal age with a p-value of 0.284, education level with a p-value of 0.114, knowledge of breast milk with a p-value of 1.000, maternal employment with a p-value of 1.000 with exclusive breastfeeding failure and there was a relationship between family support with a p-value of &lt;0.001 to exclusive breastfeeding failure. the cause of exclusive breastfeeding failure. evidenced by the existence of a relationship with a p-value &lt;0.05.</p> <p><i>Conclusion:</i> There is no relationship between maternal age, education, knowledge, and occupation. There is a relationship between family support and factors that influence the occurrence of exclusive breastfeeding failure.</p> |

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### 1. Introduction

Mother's milk is the best food for babies aged 0 – 6 months. This is supported by the World Health Organization (WHO), (2023), statement that exclusive breastfeeding for the first six months of a baby's life is the best. Exclusive breastfeeding can prevent babies from dying due to disease and speed up healing during illness. WHO in 2021 reported data on exclusive



breastfeeding globally, namely that around 42% of babies aged 0 – 6 months worldwide received exclusive breastfeeding during the 2015 – 2020 period, and in 2022 it will reach 44%. This has not yet reached the target for exclusive breastfeeding coverage in the world (50%) and Indonesia's exclusive breastfeeding target is 80% (Ahlia et al., 2022).

Health Office of Central Kalimantan (2022) stated that in the breastfeeding counselling training activity on 25 October 2023, several regencies still had low coverage for the exclusive breastfeeding indicator on six-month-old babies in 2022, one of which was Murung Raya with a percentage of 5.52%. The statement that Murung Raya Regency is the district with the lowest exclusive breastfeeding achievement is directly proportional to data from the Murung Raya Health Service in 2021 at 2% and 5.52% in 2022. The Muara Laung Community Health Center recorded an achievement of 3.57%, which means one in 28 babies will be able to receive exclusive breast milk by 2022.

The failure factor for exclusive breastfeeding can be caused by various circumstances and regional factors. Research by Marifah, (2019), at the Pegadan Community Health Center, Semarang, shows that education, employment, and knowledge factors are related to the failure of exclusive breastfeeding, while maternal attitude factors and the role of birth attendants are not related to the failure of exclusive breastfeeding. In contrast to research by Idawati et al., (2021), at the Chik Ditiro District Hospital, Aceh, it was stated that the mother's age, education, occupation, income, parity and age of the baby had nothing to do with the failure of exclusive breastfeeding. On the contrary, the mother's attitude, mother's behavior, mother's knowledge, the role of the birth attendant and tradition has something to do with the failure of exclusive breastfeeding. In line with research by Pratiwi et al., (2021) at the Lubuk Batang Community Health Center, Ogan Komering Ulu Regency, South Sumatra, the factors of education, knowledge and employment are related to the failure of exclusive breastfeeding. In conclusion, each region has different factors that can influence the failure of exclusive breastfeeding. Based on previous research, various factors influence the failure of exclusive breastfeeding in babies aged 6 months. According to Idawati, (2021), breastfeeding success is influenced by internal factors (including the mother's age, education, employment, income, knowledge, parity, attitudes, and behavior) and external factors (including the role of delivery assistant, family support and traditions).

The impact of not achieving exclusive breastfeeding is the risk of developing severe and



fatal diarrhea (Salamah & Prasetya, 2019). This risk is 30 times greater than in babies who are fully breastfed. Babies who are not exclusively breastfed have a greater risk of death due to malnutrition. WHO research results in 2005 stated that 42% of the biggest causes of infant death in the world were malnutrition (58%) (Sunarto et al., 2022).

In the preliminary study that researchers conducted at the Muara Laung Community Health Center through interviews, among mothers who had babies aged 6 months, the majority of mothers had low education and lacked knowledge, making some babies given breast milk but not exclusively because the behavior of mothers who gave food other than breast milk was adopted from their parent's and local tradition. This research aims to determine the factors that influence the occurrence of exclusive breastfeeding failure in six-month-old babies.

## **2. Method**

### **Research design**

The survey research method in this study uses a cross-sectional research design, which aims to study the dynamics of the correlation between internal factors and external factors of mothers and the failure of exclusive breastfeeding by approaching or collecting data at one time (Syapitri et al., 2021).

### **Sample size**

Total sampling was carried out on mothers who underwent health checks at the Muara Laung Community Health Center, Murung Raya. Mothers who could participate as respondents had children aged six months. There were 28 respondents involved in this research.

### **Data collection**

The dependent variables studied included the mother's age, education level, level of knowledge, employment, and family support. Data was collected using a closed questionnaire where respondents provided responses in the form of answer choices on the questionnaire. The questionnaire used refers to research by Harissa et al., (2022), and has been tested for validity and reliability. The answer choices consist of three score criteria, including a score of 0 for a hesitant answer, a score of 1 for a yes answer, and a score of 2 for no.

### **Data analysis**

Respondent demographic data and failure rates for exclusive breastfeeding are



presented in the form of frequency distribution tables and percentages. Analysis of the relationship between the variables studied and the failure rate of breastfeeding was carried out using the Fisher exact test, the p-value used was 0.05. The software used for data analysis is the Statistical Package for the Social Sciences (SPSS).

### Ethical consideration

The research received ethical permission from the Research Ethics Commission of Sari Mulia University on February 6<sup>th</sup>, 2024, with the number 078/KEP-UNISM/II/2024. All respondents have received a detailed explanation of the research activities that will be carried out. Respondents understand that this research is not dangerous and aims to provide information and solutions to health problems. Respondents who take part in research activities have provided a statement of consent to take part in research activities, and they can cancel or withdraw from their participation whenever they want.

### 3. Results

#### Respondent characteristics

The respondents involved in this research had the characteristics as presented in Table 1. Each characteristic of the respondents studied generally does not have the same frequency distribution, with the difference between components ranging from 4 to 22 respondents. The highest differences are in the age group and maternal knowledge. Meanwhile, the highest difference is in the education level group.

Table 1. Respondent characteristics

| Characteristics                 | Frequency (Respondent) | Percentage (%) |
|---------------------------------|------------------------|----------------|
| Ages (years old)                |                        |                |
| 20 – 35                         | 3                      | 10.7           |
| <20 and >35                     | 25                     | 89.3           |
| Educations                      |                        |                |
| Elementary & Junior High School | 16                     | 57.2           |
| Senior High School & Bachelor   | 12                     | 42.8           |
| Mother knowledge                |                        |                |
| Good                            | 25                     | 89.3           |
| Sufficient                      | 3                      | 10.7           |
| Occupation                      |                        |                |
| Employed                        | 6                      | 21.4           |
| Not employed                    | 22                     | 78.6           |
| Family supports                 |                        |                |
| Yes                             | 18                     | 64.3           |
| No                              | 10                     | 35.7           |



### The failure rate for exclusive breastfeeding

Table 2 presents the frequency distribution and percentage of success and failure in giving exclusive breastfeeding. Even though the number of mothers who failed to provide exclusive breastfeeding was less (35.7%) compared to those who succeeded (64.3%), this failure rate was higher than the target set in Indonesia (less than 20%). However, if we refer to the WHO target (no more than 50% failure to breastfeed), then this achievement is better.

Table 2. The failure rate for exclusive breastfeeding

| Exclusive breastfeeding | Frequency (Respondent) | Percentage (%) |
|-------------------------|------------------------|----------------|
| Success                 | 18                     | 64,3           |
| Failed                  | 10                     | 35,7           |
| Total                   | 28                     | 100            |

### Relationship between respondent characteristics and level of exclusive breastfeeding

The relationship between respondent characteristics as predictors of failure to provide exclusive breastfeeding is presented in Table 3. The Fisher exact test shows that maternal age group, education level, maternal knowledge level, and employment are not related to failure to provide exclusive breastfeeding. Failure is more influenced by family support, where in this study, 17 mothers who received family support succeeded in providing exclusive breastfeeding, compared to one mother who failed despite receiving family support. Meanwhile, if they did not receive family support, nine of them failed to provide exclusive breastfeeding, and only one was still successful.

Table 3. Fisher exact test on variables of breast milk failure

| Variables                       | Breastfeeding rate (Respondents) |                |                         |                |                         |                | p-value* |
|---------------------------------|----------------------------------|----------------|-------------------------|----------------|-------------------------|----------------|----------|
|                                 | Success                          |                | Failed                  |                | Total                   |                |          |
|                                 | Frequency (Respondents)          | Percentage (%) | Frequency (Respondents) | Percentage (%) | Frequency (Respondents) | Percentage (%) |          |
| Ages (years old)                |                                  |                |                         |                |                         |                |          |
| 20 – 35                         | 1                                | 3.6            | 2                       | 7.2            | 3                       | 10.7           | 0.284    |
| <20 and >35                     | 17                               | 60.7           | 8                       | 28.5           | 25                      | 89.3           |          |
| Educations                      |                                  |                |                         |                |                         |                |          |
| Elementary & Junior High School | 8                                | 26.8           | 8                       | 28.6           | 16                      | 57.2           | 0.114    |
| Senior High School & Bachelor   | 10                               | 35.7           | 2                       | 7.1            | 12                      | 42.8           |          |
| Mother knowledge                |                                  |                |                         |                |                         |                |          |
| Good                            | 16                               | 57.2           | 9                       | 32.1           | 25                      | 89.3           | 1.000    |
| Sufficient                      | 2                                | 7.1            | 1                       | 3.6            | 3                       | 10.7           |          |
| Occupation                      |                                  |                |                         |                |                         |                |          |
| Employed                        | 4                                | 14.3           | 2                       | 7.2            | 6                       | 21.4           | 1.000    |



|                 |    |      |   |      |    |      |        |
|-----------------|----|------|---|------|----|------|--------|
| Not employed    | 14 | 50   | 8 | 28.5 | 22 | 78.6 |        |
| Family supports |    |      |   |      |    |      |        |
| Yes             | 17 | 60.7 | 1 | 3.6  | 18 | 64.3 | <0.001 |
| No              | 1  | 3.6  | 9 | 32.1 | 10 | 35.7 |        |

\* Fisher exact test

#### 4. Discussions

Based on the facts found in the field, the achievement of exclusive breastfeeding at the Muara Laung Community Health Center is currently increasing even though the community is still traditional and adheres to Dayak or rural traditions, but it cannot be denied that there are still significant failures so that the national target of at least 80% exclusive breastfeeding has not been achieved. Mothers aged 20 – 35 years are the majority of productive age respondents who are expected to be able to provide exclusive breastfeeding so that they can increase the achievement of exclusive breastfeeding. The majority of respondents had low education, namely elementary-middle school. This is in accordance with inadequate educational facilities to reach the secondary education level and the distance is quite far so most respondents dropped out of elementary school. Even though the majority of respondents have low education, mothers' knowledge of exclusive breastfeeding is very good. With this, it is hoped that we can implement exclusive breastfeeding for babies which can indirectly influence the achievement of exclusive breastfeeding.

Most of the respondents' jobs are housewives or are in the not-working category. Even though being a housewife is not considered work, housewives also have activities that are almost the same as respondents who work. Becoming a housewife is not an easy thing because housewives also have a busy schedule that is no less busy than working mothers, it's just that most housewives stay at home so they are expected to be able to provide exclusive breast milk optimally whereas respondents or working mothers usually. Meanwhile, for family support, there are still many families who hold traditions passed down from generation to generation which can influence the failure of exclusive breastfeeding. In line with research by Utami, (2018), the relationship between family support and exclusive breastfeeding at the Umbulharjo 1 Community Health Center, Yogyakarta City, states that family support influences the practice of exclusive breastfeeding and can cause the failure of exclusive breastfeeding. According to research conducted in Sanggau, West Kalimantan by Suprabowo, (2006), there are cultural beliefs and beliefs in caring for postpartum mothers in the Dayak tribe which involve limiting fluid and food intake. Based on the facts of the study, family



support greatly influenced the respondents' actions and decisions, especially the decision to breastfeed or not. Traditions passed down from generation to generation such as giving honey or coffee after the baby is born, and giving bananas or rice porridge before the age of 6 months are still widely practised in the Muara Laung community.

Based on the Fisher exact test, it shows that there is no relationship between the mother's age and the failure of exclusive breastfeeding carried out at the Muara Laung Community Health Center, which indicates that the mother's age does not influence the decision to breastfeed her baby, so that failure to exclusively breastfeed can occur at any age of the mother. This contradicts research by Lestari et al., (2019), that the factors that cause failure to provide exclusive breastfeeding to babies aged 0-6 months in the Pejeruk Mataram Community Health Center working area are mothers aged 20-35 years. Even though at that age the reproductive organs of breast milk are still very productive in producing breast milk, mothers choose not to breastfeed exclusively because many young mothers still do not know proper breastfeeding techniques and are afraid that breast milk will not meet the baby's needs, even though breastfeeding will also make the mother's health and mental condition worse. become more stable, exclusive breastfeeding can also minimize the risk of breast cancer.

Meanwhile, at the educational level, those who failed to provide exclusive breastfeeding were mostly those with low elementary and middle school education. Even though there is no relationship between education and the failure of exclusive breastfeeding, this does not mean that education does not influence the decision to breastfeed the baby. This is not in line with research by Sumarmi, (2022) which states the factors that influence the failure of exclusive breastfeeding is a mother whose educational status is elementary-middle school. In this study, an odds ratio of 4 was obtained, which means that mothers have 4 times the chance of not exclusively breastfeeding compared to mothers with high school and bachelor's degrees. Based on the facts found in the study, the majority of respondents who failed to provide exclusive breastfeeding were those with lower elementary and middle school education. In this research, there is a tendency that the higher the mother's education, the higher the interest in providing exclusive breastfeeding, and conversely, those with low education can influence a person's mindset not to provide exclusive breastfeeding.

The study shows that no relationship between knowledge and the failure of exclusive



breastfeeding, indicating that good knowledge does not influence the decision to breastfeed the baby so exclusive breastfeeding failure can occur even if the mother knows the benefits of exclusive breastfeeding are very good for her baby. In line with research by Nur & Supiyati, (2022), the factors that influence the failure to provide exclusive breastfeeding to babies 0-6 months at the Kajuara Community Health Center, Bone Regency, have nothing to do with knowledge because there are still 10 respondents who have good knowledge but give non-breast milk to their babies.

Maternal work is an activity or type of work carried out by a mother who has a dual role, namely as a housewife and as a working woman. Based on the facts found in the field, there is no relationship between work and the failure of exclusive breastfeeding because the majority of respondents who failed to provide exclusive breastfeeding were also mothers who were unemployed or housewives. This finding shows that respondents who do not work even though taking care of the house is also hard and tiring work which can affect exclusive breastfeeding. In line with research by Raj et al., (2020), employment is not classified as a factor that influences exclusive breastfeeding in North Semarang District because working or not working does not influence the mother's interest in providing exclusive breastfeeding.

Based on the Fisher Exact test, family support is related to the failure of exclusive breastfeeding in Muara Laung respondents. That mothers who have good family support for exclusive breastfeeding greatly influence the success of exclusive breastfeeding, while those who fail to provide exclusive breastfeeding, are not far from the influence of family support which is still strong in the tradition passed down from generation to generation of giving honey or coffee when a new baby is born, suggests mothers to give formula milk as an addition, or give tim rice or bananas before the baby is 6 months old because the baby does not have enough breast milk alone. In line with research by Utami, (2018), family support is related to the practice of giving exclusive breastfeeding, which is the cause of the failure of exclusive breastfeeding in the Umbulharjo 1 Community Health Center Working Area, Yogyakarta City because family support is very influential in the mother's decision to give exclusive breastfeeding. Family support is support to motivate mothers to give only breast milk to their babies until the age of 6 months. Failure to provide exclusive breastfeeding can have an impact on the health of the mother and baby. Exclusive breastfeeding not only provides optimal nutrition for babies but can also help protect mothers from health risks, such





as breast cancer. Therefore, this research can help the government, health workers and across sectors to jointly support the achievement of optimal exclusive breastfeeding.

## 5. Conclusion

This research concludes that there is no relationship between maternal age, education, knowledge, employment and exclusive breastfeeding failure, while family support is a factor that influences exclusive breastfeeding failure. There are indications that some respondents chose not to give exclusive breast milk because they received encouragement from the surrounding environment, including in-laws or parents who suggested giving additional food before the baby was 6 months old or accompanied by giving formula milk.

To increase the achievement of exclusive breastfeeding, it is important to implement knowledge about exclusive breastfeeding into daily actions. With the actions of health workers, providing information and education regarding exclusive breastfeeding starting from pregnancy and monitoring of breastfeeding actions needs to be carried out to ensure exclusive breastfeeding is maintained until the baby reaches 6 months of age. Further research is also needed to examine other factors that influence the failure to provide exclusive breastfeeding, such as mental readiness or the mother's attitude towards making decisions regarding exclusive breastfeeding. Some mothers may not breastfeed exclusively for reasons such as being too lazy to breastfeed, even though they are aware of the benefits for the baby.

## 6. Conflict of interest

All authors declare no conflict of interest.

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