# Analysis of Factors Contributing to Exclusive Breastfeeding Failure in the Province of Aceh, Indonesia

**Kartinazahri** [1], **Eva Purwita** [1], **Yusnaini** [1]

[1] *Health Polytechnic Institute of the Ministry of Health of Aceh*
Jln. Soekarno - Hatta, Lagang. Kec. Darul Imarah, Kab. Aceh Besar, 23231, Indonesia

DOI: 10.22178/pos.94-6

LCC Subject Category: R5-920

Received 28.05.2023
Accepted 28.06.2023
Published online 31.07.2023

Corresponding Author:
Kartinazahri
kartinazahri@poltekkesaceh.ac.id



**Abstract**. This research aims to identify factors associated with exclusive breastfeeding failure in the Aceh Province. The method used is an analytical survey with a cross-sectional design. The study population comprises all mothers with infants aged 6-12 months in Aceh Besar district and Sabang City. The study was conducted in the Aceh Besar Health Office and Sabang City working area from January to December 2022. The measurement tool used was a questionnaire. Data analysis was performed using the chi-square test. The study results show that lack of cultural support for exclusive breastfeeding increases the likelihood of complete breastfeeding failure by 1.7 times, and there is a statistically significant relationship ($p = 0.0001$). Lack of support from healthcare providers increases the likelihood of exclusive breastfeeding failure by 3.5 times, and there is a substantial relationship with a p-value of 0.0001 ($p < 0.05$). Caesarean section (C-section) as a maternal factor increases the likelihood of exclusive breastfeeding failure by 1.5 times, but there is no statistically significant relationship ($p = 0.104$). Low birth weight infants have a 3.2 times higher likelihood of exclusive breastfeeding failure but no statistically significant relationship ($p = 0.052$). Lack of support from the husband for exclusive breastfeeding increases the possibility of complete breastfeeding failure by 1.8 times, and there is a significant relationship with a p-value of 0.014 ($p < 0.05$). Efforts are needed to overcome challenges in achieving optimal exclusive breastfeeding coverage in the region, especially in areas with low range, such as Sabang City. Cultural factors that influence the early introduction of food and drinks to newborns also need to be addressed through programs that educate the community about the benefits and proper practices of exclusive breastfeeding.

**Keywords**: failure; exclusive breastfeeding; social-cultural factors.

## INTRODUCTION

Exclusive breastfeeding for the first six months, followed by complementary feeding up to 2 years of age, is a recommendation issued by the World Health Organization (WHO) to ensure optimal nutrition for infants' growth and development. However, data from the WHO shows that many infants and children are not receiving appropriate food according to these recommendations [1]. The achievement of exclusive breastfeeding varies significantly worldwide. According to WHO reports, only about 44% of infants aged 0-6 months received exclusive breastfeeding from 2015 to 2020 [2]. Although there has been an increase in the rate of exclusive breastfeeding over the years, there are still challenges in achieving the global target. Various factors, such as lack of knowledge and support, social pressure, physical difficulties, and economic factors, can affect the success of exclusive breastfeeding.

In the province of Aceh, the achievement of exclusive breastfeeding has significantly increased in recent years. According to data released by the Indonesian Ministry of Health, the rate of exclusive breastfeeding in Aceh was recorded at 62.81% in 2019. There has been a positive increase in the following years, reaching 65.6% in 2020 and further increasing to 66.6% in 2021 [3–5].

Despite the significant increase, the achievement of exclusive breastfeeding in Aceh in 2021 is still below the national target of 80%. This indicates that more intensive efforts are needed to increase awareness and practice of exclusive breastfeeding in Aceh to reach the national target. Exclusive breastfeeding has crucial benefits

for the health and development of infants. Breast milk contains complete and easily digestible nutrients, as well as antibodies that help protect infants from diseases. Additionally, breastfeeding plays a role in strengthening the emotional bond between the mother and baby. Breast milk contains essential nutrients such as proteins, fats, carbohydrates, vitamins, and minerals for optimal infant growth and development [6]. It also has immunological factors, such as antibodies, enzymes, and immune cells, which help protect infants from infections and diseases [7]. Furthermore, exclusive breastfeeding can strengthen the emotional bond between the mother and baby through physical contact and intensive interaction during breastfeeding [8]. Cultural practices of introducing food and drinks too early to newborns can have negative impacts on achieving exclusive breastfeeding targets.

Additionally, many mothers face difficulties in breastfeeding due to inadequate milk production [4]. However, in Aceh, the community also has longstanding traditions known as "peutron aneuk" and "peucicap". These traditions hold high religious and philosophical values and aim to build shared responsibility in supporting the growth and development of infants. During these rituals, not only the baby's tongue is touched to increase its sensitivity but also sweet substances are applied to the baby's taste organs symbolically to encourage the baby to develop lovely and good characteristics [9].

Various studies have identified several factors associated with the failure of exclusive breastfeeding, including aspects that influence the practice of exclusive breastfeeding among mothers. Individual factors such as limited knowledge and understanding of the benefits and techniques of exclusive breastfeeding, physical discomfort or difficulties in breastfeeding, and maternal health issues such as breast infections or hormonal problems can hinder the achievement of optimal complete breastfeeding practices [10, 11]. Additionally, social and cultural factors play a significant role, such as social support from family and the surrounding environment, cultural habits or norms that do not support exclusive breastfeeding, and the influence of community perceptions towards breastfeeding practices [12, 13]. The economic factor can also be a barrier, especially if the mother has to work or has limited access to healthcare and adequate support [14, 15]. These factors can cause mothers to struggle to maintain the practice of exclusive breastfeeding, which in turn can contribute to the failure of exclusive breastfeeding. Therefore, it is essential to identify these factors and develop appropriate strategies to enhance support, knowledge, and understanding among mothers regarding the importance of exclusive breastfeeding practices. This study aims to investigate the factors associated with the failure of exclusive breastfeeding in infants aged 0-12 months.

## METHODS

This study utilised an analytical survey method with a cross-sectional study design to measure phenomena without intervening in variables. The independent variables included maternal, infant, psychological, healthcare provider, and sociocultural factors. The dependent variable in this study was the failure of exclusive breastfeeding. The study was conducted in the working areas of Aceh Besar Regency and Sabang City from January to December 2022. The study population consisted of mothers with infants aged 6-12 months in Aceh Besar Regency and Sabang City. The sampling used a total population approach, where the entire population was included as the sample.

The inclusion criteria for participants were willingness to participate and ability to read and write. The exclusion criteria included mothers and infants exposed to the coronavirus (COVID-19). The research process was conducted in three stages: pre-research (administrative procedures, briefing, and initial data exploration), research stage (sample screening, informed choice and informed consent, questionnaire completion, and explanation by enumerators), and post-research (data processing, data interpretation, result presentation, and journal publication). In the data processing stage, editing, coding, transferring, and tabulating were performed to ensure accurate data processing.

Furthermore, in data analysis, univariate analysis was conducted to determine the distribution and percentage of each variable. The presentation of values was also calculated using appropriate formulas. The results of the univariate analysis were presented in frequency distribution tables using the SPSS program. Subsequently, bivariate analysis was conducted using the chi-square statistical test to test the hypotheses. Lastly, multivariate analysis was performed to determine the most dominant risk factors influencing the failure of exclusive breastfeeding.

## RESULTS AND DISCUSSION

The study was conducted in primary health centers (Puskesmas) working areas in Aceh Besar Regency and Sabang City from June 2022 to October 2022. The total number of respondents was 260 mothers with infants aged 6 to 12 months. The sample selection met the inclusion criteria, which included the ability to read and write and the willingness to participate.

This study aimed to determine the factors influencing the failure to provide exclusive breastfeeding. The factors analysed included maternal factors (age, parity, knowledge, occupation, mode of delivery), infant factors (premature birth, low birth weight, sick infant, early initiation of breastfeeding), psychological factors (maternal motivation, husband's support, family support), healthcare provider factors, and socio-cultural factors.

Table 1 – Characteristics of Respondents

| No | Variable | Total | % |
|---|---|---|---|
| | DEPENDENT VARIABLE | | |
| | Breastfeeding | | |
| | Exclusive | 140 | 53.8 |
| | Non-Exclusive | 120 | 46.2 |
| | INDEPENDENT VARIABLE | | |
| | **Maternal Factors** | | |
| 1. | Age Group (Years) | | |
| | < 20 | 2 | 0.8 |
| | 20-35 | 212 | 81.5 |
| | > 35 | 46 | 17.7 |
| 2. | Parity Group | | |
| | Primiparous | 86 | 33.1 |
| | Multiparous | 165 | 63.5 |
| | Grand Multiparous | 9 | 3.5 |
| 3. | Education | | |
| | Primary | 56 | 21.5 |
| | Secondary | 127 | 48.8 |
| | Higher Education | 77 | 29.6 |
| 3. | Maternal Occupation | | |
| | Working outside the home | 218 | 83.8 |
| | Not working outside the home | 42 | 16.2 |
| 4. | Type of Delivery | | |
| | Vaginal | 129 | 49.6 |
| | Caesarean Section | 131 | 50.4 |
| 5. | Nutritional Intake | | |
| | Adequate | 183 | 70.4 |
| | Inadequate | 77 | 29.6 |
| 6 | Knowledge | | |
| | High | 202 | 77.3 |
| | Moderate | 58 | 22.7 |
| | **Baby Factors** | | |
| 1. | Birth | | |
| | Not Premature | 257 | 98.8 |
| | Premature | 3 | 1.2 |
| 2. | Birth Weight | | |
| | Not Low Birth Weight (LBW) | 244 | 93.8 |
| | LBW | 16 | 6.2 |
| 3. | Sick Baby | | |
| | Not Hospitalised | 255 | 98.1 |
| | Hospitalised | 5 | 1.9 |
| 4. | Early Initiation of Breastfeeding | | |
| | Yes | 146 | 56.2 |
| | No | 114 | 43.8 |
| | **Psychological Factors** | | |
| 1. | Motivation | | |
| | Strong | 108 | 41.5 |
| | Not Strong | 152 | 58.5 |
| 2. | Husband's Support | | |
| | Supportive | 144 | 55.4 |
| | Not Supportive | 116 | 44.6 |
| 3. | Family Support | | |
| | Supportive | 133 | 51.2 |
| | Not Supportive | 127 | 48.8 |
| | | | |
| 4. | Mother's Perception | | |
| | Positive | 50 | 19.2 |
| | Negative | 210 | 80.8 |
| | **Healthcare Provider Support** | | |
| 1 | Healthcare Provider Support | | |
| | Supportive | 147 | 51.5 |
| | Not Supportive | 113 | 48.5 |
| | **Socio-Cultural Factor** | | |
| 1 | Socio-Cultural Factor | | |
| | Supportive | 82 | 33.5 |
| | Not Supportive | 178 | 66.5 |

The study yielded significant findings concerning the factors associated with the failure to provide exclusive breastfeeding. Data analysis revealed that most respondents were mothers aged 20-35 (81.5%), representing the healthy reproductive age group. Most mothers had experienced multiple pregnancies (63.5%) and attained a secondary level of education (48.8%). Furthermore, a considerable proportion of mothers were employed outside the home (83.8%).

The notable percentage of mothers delivering through caesarean section (50.4%) indicated the potential influence of the delivery method on the success of exclusive breastfeeding. Overall, mothers exhibited a high level of knowledge about breastfeeding (77.7%), suggesting a good understanding of the benefits of exclusive breastfeeding. Concerning infant factors, most babies were born at term (98.8%) with an average birth weight (93.8%), which are positive indicators supporting the success of exclusive breastfeeding. However, a small number of sick babies re-

quiring hospitalisation (1.9%) posed a potential risk factor for achieving exclusive breastfeeding.

The importance of early breastfeeding initiation was evident, with approximately 56.2% of babies practising this crucial step. Psychological factors also played a significant role, with around 58.5% of mothers displaying strong motivation to breastfeed. However, challenges were noted in obtaining support from husbands (55.4%) and family members (51.2%), potentially impacting the success of exclusive breastfeeding. Additionally, negative perceptions about exclusive breastfeeding (80.8%) emerged as potential barriers to address.

The support from healthcare providers in promoting exclusive breastfeeding requires improvement, as only 56.5% of respondents received adequate support. Non-supportive cultural practices (68.5%) also demand attention in efforts to enhance the success of exclusive breastfeeding. By gaining a deeper understanding of these factors, appropriate preventive measures and interventions can be implemented to improve support and education for mothers, thereby facilitating the provision of exclusive breastfeeding to their babies.

*Bivariate Analysis*. The bivariate analysis in this study aims to evaluate the relationship between maternal, infant, psychological, and healthcare support factors with the failure of exclusive breastfeeding in the province of Aceh. This research will involve an in-depth exploration of maternal characteristics such as age, parity, education, occupation, and type of delivery to understand the influence of these variables on the failure of exclusive breastfeeding.

Infant factors such as birth status (term or preterm), birth weight, infant health, and early breastfeeding initiation will also be analysed in the context of exclusive breastfeeding failure. Psychological factors such as maternal motivation, husband's support, family support, and maternal perception of exclusive breastfeeding will also be explored to examine their correlation with the failure of exclusive breastfeeding. The role of healthcare support in providing information, education, and practical assistance to mothers in practising exclusive breastfeeding will also be evaluated.

Analysing the relationships between these variables and the failure of exclusive breastfeeding is expected to gain a deeper understanding of the factors influencing the success of exclusive breastfeeding in the province of Aceh. The findings of this study can provide significant contributions to efforts aimed at improving programs and interventions to enhance the success of exclusive breastfeeding and infant health in the region.

Table 2 – Relationship between Maternal, Infant, Psychological, and Healthcare Factors in Bivariate Analysis of Exclusive Breastfeeding Failure in Aceh Province Area

| Variable | Breastfeeding | | | | Total | | P-Value |
|---|---|---|---|---|---|---|---|
| | Exclusive | | No Exclusive | | | | |
| | n | % | n | % | n | % | |
| **Mother Factor** | | | | | | | |
| Age Group (Years) | | | | | | | 0.765 |
| < 20 | 1 | 50 | 1 | 50 | 2 | 100 | |
| 20-35 | 112 | 52.8 | 100 | 47.2 | 212 | 100 | |
| > 35 | 27 | 58.7 | 19 | 41.3 | 46 | 100 | |
| Parity | | | | | | | 0.543 |
| Primipara | 43 | 50 | 43 | 50 | 86 | 100 | |
| Multipara | 91 | 55.2 | 74 | 44.8 | 165 | 100 | |
| Grande Multipara | 6 | 66.7 | 3 | 33.3 | 9 | 100 | |
| Education Level | | | | | | | 0.313 |
| Elementary School | 26 | 46.4 | 30 | 53.6 | 56 | 100 | |
| Junior High School | 68 | 53.5 | 59 | 46.5 | 127 | 100 | |
| High School | 46 | 59.7 | 31 | 40.3 | 77 | 100 | |
| Occupation | | | | | | | 1.000 |
| Homemaker | 117 | 53.7 | 101 | 46.3 | 218 | 100 | |
| Working outside the home | 23 | 54.8 | 19 | 45.2 | 42 | 100 | |

| Variable | Breastfeeding | | | | Total | | P-Value |
|---|---|---|---|---|---|---|---|
| | Exclusive | | No Exclusive | | | | |
| | n | % | n | % | n | % | |
| Knowledge | | | | | | | |
| Moderate | 27 | 45.8 | 32 | 54.2 | 59 | 100 | 0.182 |
| High | 113 | 56.2 | 88 | 43.8 | 201 | 100 | |
| Nutritional Intake | | | | | | | |
| Adequate | 101 | 55.2 | 82 | 44.8 | 183 | 100 | 0.586 |
| Inadequate | 39 | 50.6 | 38 | 49.4 | 77 | 100 | |
| Type of Delivery | | | | | | | |
| Vaginal Delivery (Pervaginam) | 76 | 58.9 | 53 | 41.1 | 129 | 100 | 0.108 |
| Caesarean Section (SC) | 64 | 48.9 | 67 | 51.1 | 131 | 100 | |
| **Baby Factors** | | | | | | | |
| Type of Birth | | | | | | | |
| Not Premature | 140 | 54.5 | 117 | 45.5 | 257 | 100 | 0.097 |
| Premature | 0 | 0 | 3 | 100 | 3 | 100 | |
| Birth Weight | | | | | | | |
| Not Low Birth Weight (NBBLR) | 136 | 55.7 | 108 | 44.3 | 244 | 100 | 0.020 |
| Low Birth Weight (BBLR) | 4 | 25 | 12 | 75 | 16 | 100 | |
| Sick and Hospitalised Baby | | | | | | | |
| Not | 140 | 54.9 | 115 | 45.1 | 255 | 100 | 0.020 |
| Yes | 0 | 0 | 5 | 100 | 5 | 100 | |
| EIBF | | | | | | | |
| EIBF | 82 | 56.2 | 64 | 43.8 | 146 | 100 | 0.452 |
| Not EIBF | 58 | 50.9 | 56 | 49.1 | 114 | 100 | |
| **Psychological Factors** | | | | | | | |
| Motivation | | | | | | | |
| Strong | 64 | 59.3 | 44 | 40.7 | 108 | 100 | 0.165 |
| Not Strong | 76 | 50 | 76 | 50 | 152 | 100 | |
| Spousal Support | | | | | | | |
| Supportive | 88 | 61.1 | 56 | 38.9 | 144 | 100 | 0.012 |
| Not Supportive | 52 | 44.8 | 64 | 55.2 | 116 | 100 | |
| Family Support | | | | | | | |
| Supportive | 72 | 54.1 | 61 | 45.9 | 133 | 100 | 1.000 |
| Not Supportive | 68 | 53.5 | 59 | 46.5 | 127 | 100 | |
| Maternal Perception | | | | | | | |
| Positive | 33 | 66 | 17 | 34 | 50 | 100 | 0.060 |
| Negative | 107 | 51 | 103 | 49 | 210 | 100 | |
| **Healthcare Provider Support** | | | | | | | |
| Supportive | 75 | 51 | 72 | 49 | 147 | 100 | 0.000 |
| Not Supportive | 65 | 57.5 | 48 | 42.5 | 113 | 100 | |
| **Socio-Cultural Factor** | | | | | | | |
| Supportive | 48 | 58.5 | 34 | 41.5 | 82 | 100 | 0.035 |
| Not Supportive | 92 | 51.7 | 86 | 41.5 | 178 | 100 | |

Several interesting findings were made based on analysing factors related to the failure of exclusive breastfeeding. In the maternal factor, most respondents were aged 30-35 years old, and the percentage of those who practised exclusive breastfeeding was 52.8%. Still, the statistical test result showed a p-value of 0.765. Most respondents had multiparous parity, and the percentage of mothers practised exclusive breastfeeding was 66.2%, with a p-value of 0.543. Respondents generally had a moderate level of education, and the rate of mothers who practised exclusive breastfeeding was 53.5%, with a p-value of 0.313. The majority of mothers in this study were

homemakers, and the percentage of those who practised exclusive breastfeeding was 53.7%, but the statistical test result showed a p-value of 1.000.

Furthermore, most mothers had a high level of knowledge about exclusive breastfeeding, and the percentage of those who practised exclusive breastfeeding was 56.2%, with a p-value of 0.182. Most mothers also had adequate nutritional intake and gave birth by caesarean section, but the percentage of those who practised exclusive breastfeeding was 51.1%, with a p-value of 0.108.

In the infant factor, most infants were born at term, and the percentage of mothers practised exclusive breastfeeding was 58.9%, with a p-value of 0.097. Most infants had average birth weight, and the rate of mothers who practised exclusive breastfeeding was 55.7%, with a p-value of 0.020. There were also a small number of infants who were sick but not hospitalised, and the percentage of mothers who practised exclusive breastfeeding was 56.2%, with a p-value of 0.020. Furthermore, most respondents initiated early breastfeeding, and the rate of mothers who practised exclusive breastfeeding was 56.2%, with a p-value of 0.452.

In the psychological factor, most mothers did not have a strong motivation for breastfeeding (50%), but the percentage of those who practised exclusive breastfeeding was 50%, with a p-value of 0.165. The majority of mothers received support from their husbands (61.1%), and family (54.1%), but the p-value showed variation (husband: 0.012, family: 1.000). Moreover, the majority of mothers had a negative perception of exclusive breastfeeding (66%), but the p-value was 0.060. In the healthcare support factor, most respondents received support from healthcare providers (51%), with a p-value of 0.000.

In the socio-cultural factor, most respondents did not receive support for exclusive breastfeeding (51.7%), with a p-value of 0.035. These findings provide important insights into the factors influencing the failure of exclusive breastfeeding in this research area, which can be used to inform better efforts in improving complete breastfeeding practices in the future.

The research findings indicate that among respondents in the age group of 20-35 years, the percentage of those exclusive breastfeeding was 52.8%, with a p-value of 0.765, suggesting no association between age and failure of exclusive breastfeeding in the Aceh Province area. This means that age is not a determining factor for the success of exclusive breastfeeding. Similarly, no significant associations were found between parity (grande multipara), employment (working outside the home), high knowledge level, adequate nutrition intake, vaginal delivery, and failure of exclusive breastfeeding in the area, with p-values ranging from 0.104 to 0.897. This indicates that these factors do not significantly influence the loss of exclusive breastfeeding. However, the research findings did reveal factors related to the failure of exclusive breastfeeding.

Regarding infant factors, the type of birth was not significantly associated with the inability to exclusive breastfeeding (p-value=0.060). However, there was a significant association between low birth weight and loss of exclusive breastfeeding (p-value=0.017) and between sick and hospitalised infants and failure of exclusive breastfeeding (p-value=0.015). These findings suggest that the infant's health and condition significantly impact the success of exclusive breastfeeding.

Regarding psychological factors, maternal motivation was not significantly associated with the failure of exclusive breastfeeding (p-value=0.147). Still, there was a significant association between spousal support and the inability to exclusive breastfeeding (p-value=0.009). This highlights the importance of spousal support in the success of exclusive breastfeeding. Additionally, both healthcare provider support and socio-cultural support were significantly associated with the failure of exclusive breastfeeding. Healthcare provider support showed a significant association with the loss of exclusive breastfeeding (p-value=0.000), while socio-cultural support also exhibited a significant association (p-value=0.044). This emphasises the crucial roles of healthcare provider support and socio-cultural support in improving the success of exclusive breastfeeding. This study's findings align with similar research conducted in Pringsewu Regency, which demonstrated a significant association between socio-cultural factors and the failure of exclusive breastfeeding (p-value=0.021, OR 7.58358). One of the critical factors influencing mothers in not providing exclusive breastfeeding is a lack of knowledge among respondents, likely stemming from insufficient clear information and inadequate ability of mothers to comprehend the information received. This knowledge gap may be influenced by local tradi-

tions and cultural beliefs, where some individuals consider colostrum unimportant and believe it should be discarded due to its perception as expired and potentially causing diarrhoea if given to the baby.

Various studies conducted in different countries have also explored factors associated with the failure of exclusive breastfeeding. For instance, a study in Ghana conducted by [8] found that low maternal knowledge of exclusive breastfeeding, lack of social support, and negative perceptions of breastfeeding practices can contribute to the failure of exclusive breastfeeding [8]. In Nigeria, research by Jones et al. demonstrated that a low level of education, maternal employment outside the home, and lack of spousal and family support can influence the success of exclusive breastfeeding [9]. Similarly, a study in the Philippines by [11] identified factors such as inadequate maternal knowledge, physical discomfort during breastfeeding, and the influence of formula milk advertising as barriers to achieving exclusive breastfeeding practices [11]. Studies conducted in the United States and Australia by [12, 14] also highlighted factors such as low education level, low socioeconomic status, lack of social support, and negative perceptions of breastfeeding as contributing to the failure of exclusive breastfeeding.

These collective findings provide valuable insights into factors that need to be considered to improve exclusive breastfeeding practices in the specific region of this study and various countries globally. Understanding these factors and their unique contextual variations makes it possible to design more effective interventions and support systems to empower and assist mothers in providing exclusive breastfeeding to their babies. Addressing the knowledge gaps, challenging cultural beliefs, promoting social support, and raising awareness about the importance of exclusive breastfeeding can pave the way for healthier infant feeding practices and improved maternal and child health outcomes on a larger scale. As the promotion of exclusive breastfeeding is a shared global goal, the knowledge gleaned from these studies can contribute to evidence-based policy decisions and targeted interventions to enhance breastfeeding practices and ultimately benefit the well-being of mothers and infants alike.

## CONCLUSIONS

Based on the research conducted in the districts of Aceh Besar and Sabang, it can be concluded that several factors are associated with the failure of exclusive breastfeeding.

Firstly, maternal factors did not show a significant association, but delivery methods through caesarean section (CS) had 1.5 times greater odds of causing mothers not to provide exclusive breastfeeding.

Secondly, infant factors did not show a significant association, but infants born with low birth weight (LBW) had 3.2 times greater odds of not receiving exclusive breastfeeding.

Thirdly, psychological factors showed a significant association, where unsupportive spousal support for exclusive breastfeeding had 1.8 times greater odds of causing mothers not to provide exclusive breastfeeding.

Fourthly, healthcare provider factors also showed a significant association, where mothers who did not receive healthcare provider support for exclusive breastfeeding had 3.5 times greater odds of not providing exclusive breastfeeding.

Lastly, cultural factors also had a significant association, where unsupportive cultural factors for exclusive breastfeeding had 1.7 times greater odds of causing mothers not to provide exclusive breastfeeding.

This research provides important insights into understanding the factors influencing the failure of exclusive breastfeeding. Healthcare practitioners and stakeholders must consider these factors to improve complete breastfeeding practices and support mothers in maintaining them.

### Conflict of interest

The authors declare no conflict of interest.

## REFERENCES

1. World Health Organization. (2002). *The Optimal Duration of Exclusive Breastfeeding. A Systematic Review*. Retrieved from https://apps.who.int/iris/bitstream/10665/67208/1/WHO_NHD_01.08.pdf

2. Ministry of Health Republic of Indonesia. (2020). *Profil Kesehatan Indonesia Tahun 2019* [Indonesia Health Profile 2019]. Retrieved from https://www.kemkes.go.id/downloads/resources/download/pusdatin/profil-kesehatan-indonesia/Profil-Kesehatan-Indonesia-2019.pdf (in Indonesian).

3. Ministry of Health Republic of Indonesia. (2021). *Profil Kesehatan Indonesia Tahun 2020* [Indonesia Health Profile 2020]. Retrieved from https://www.kemkes.go.id/downloads/resources/download/pusdatin/profil-kesehatan-indonesia/Profil-Kesehatan-Indonesia-Tahun-2020.pdf (in Indonesian).

4. Ministry of Health Republic of Indonesia. (2022). *Profil Kesehatan Indonesia Tahun 2021* [Indonesia Health Profile 2021]. Retrieved from https://www.kemkes.go.id/downloads/resources/download/pusdatin/profil-kesehatan-indonesia/Profil-Kesehatan-2021.pdf (in Indonesian).

5. Horta, B. L., Loret de Mola, C., & Victora, C. G. (2015). Long-term consequences of breastfeeding on cholesterol, obesity, systolic blood pressure and type 2 diabetes: a systematic review and meta-analysis. *Acta Paediatrica, 104*, 30–37. doi: 10.1111/apa.13133

6. Lyons, K. E., Ryan, C. A., Dempsey, E. M., Ross, R. P., & Stanton, C. (2020). Breast Milk, a Source of Beneficial Microbes and Associated Benefits for Infant Health. *Nutrients, 12*(4), 1039. doi: 10.3390/nu12041039

7. Underdown, A., Barlow, J., Chung, V., & Stewart-Brown, S. (2006). Massage intervention for promoting mental and physical health in infants aged under six months. *Cochrane Database of Systematic Reviews*. doi: 10.1002/14651858.cd005038.pub2

8. Aborigo, R. A., Moyer, C. A., Rominski, S., Adongo, P., Williams, J., Logonia, G., Affah, G., Hodgson, A., & Engmann, C. (2012). Infant nutrition in the first seven days of life in rural northern Ghana. *BMC Pregnancy and Childbirth, 12*(1). doi: 10.1186/1471-2393-12-76

9. Puspita, D. A., Martini, M., & Sholihah, S. (2018). Tradisi Peucicap dan Peutron Aneuk Sebagai Upaya Penguatan Peran Orang Tua Dalam Pembentukan Karakter Pada Anak Usia Dini [Traditions of Peucicap and Peutron Aneuk as Efforts to Strengthen Parental Role in Character Formation of Early Childhood]. *Journal of Early Childhood Education Research and Development, 1*(1), 49-59 (in Indonesian).

10. Jones, J. R., Kogan, M. D., Singh, G. K., Dee, D. L., & Grummer-Strawn, L. M. (2011). Factors Associated With Exclusive Breastfeeding in the United States. *Pediatrics, 128*(6), 1117–1125. doi: 10.1542/peds.2011-0841

11. Salim, Y. M., & Stones, W. (2020). Determinants of exclusive breastfeeding in infants of six months and below in Malawi: a cross sectional study. *BMC Pregnancy and Childbirth, 20*(1). doi: 10.1186/s12884-020-03160-y

12. Gray, K., Ryan, S., Churchill, M., & Harder, V. S. (2022). The Association Between Type of Supplementation in the Newborn Nursery and Breastfeeding Outcomes at 2 and 6 Months of Age. *Journal of Human Lactation, 39*(2), 245–254. doi: 10.1177/08903344221105810

13. Lakati, A. S., Makokha, O. A., Binns, C. W., & Kombe, Y. (2018). The effect of pre-lacteal feeding on full breastfeeding in Nairobi, Kenya. *East African Journal of Public Health, 7*(3), 265–270.

14. Victora, C. G., Bahl, R., Barros, A. J. D., França, G. V. A., Horton, S., Krasevec, J., Murch, S., Sankar, M. J., Walker, N., & Rollins, N. C. (2016). Breastfeeding in the 21st century: epidemiology, mechanisms, and lifelong effect. *The Lancet, 387*(10017), 475–490. doi: 10.1016/s0140-6736(15)01024-7

15. World Health Organization. (2003, December 22). *Global Strategy for Infant and Young Child Feeding*. Retrieved from https://www.who.int/publications/i/item/9241562218