

# Factors associated with the success of exclusive breastfeeding in the rural area

## Factores asociados al éxito de la lactancia materna exclusiva en el área rural

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### SUMMARY

**Introduction:** In Indonesia, coverage of exclusive breastfeeding has not yet met the government's goal of 80 %. This study aimed to ascertain the relationship between maternal education and occupation, family support, and belief in myths and exclusive breastfeeding success in a rural region.

**Methods:** This cross-sectional study was conducted in the Mentoro Village, Indonesia, from October 2020 to December 2020. The data collection was carried out using a questionnaire.

**Results:** Among 50 respondents, the age of breastfeeding mothers at the age of 20-29 and 30-39 years old was the same. Most of the respondents graduated from university (78 %), 29 mothers were housewives (58 %), mothers obtained support from family (90 %), and mothers believed in myths (82 %). Variables associated with the exclusive breastfeeding success were education level ( $p= 0.019$ ), maternal

occupation ( $p= 0.025$ ), family support ( $p= 0.006$ ), and belief in myths ( $p= 0.042$ ). The occupation and family support were risk factors for the success of exclusive breastfeeding ( $p= 0.014$ ;  $p= 0.045$ , respectively).

**Conclusion:** Maternal education level and occupation, family support, and belief in myths were associated with the success of exclusive breastfeeding.

**Keywords:** Exclusive breastfeeding, education level, occupation, family support, myths belief, rural area.

### RESUMEN

**Introducción:** En Indonesia, la cobertura de la lactancia materna exclusiva aún no ha cumplido la meta del gobierno del 80 %. El objetivo de este estudio fue determinar la relación entre la educación y la ocupación materna, el apoyo familiar y la creencia en los mitos y el éxito de la lactancia materna exclusiva

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en una región rural.

**Métodos:** Este estudio transversal se realizó en Mentoro Village, Indonesia, de octubre de 2020 a diciembre de 2020. La recolección de datos se realizó mediante un cuestionario.

**Resultados:** Entre los 50 encuestados, la edad de las madres que amamantaban entre los 20 y 29 años y entre los 30 y 39 años era la misma. La mayoría de los encuestados se graduaron de la universidad (78 %), 29 madres eran amas de casa (58 %), las madres obtuvieron apoyo de la familia (90 %) y las madres creían en los mitos (82 %). Las variables asociadas al éxito de la lactancia materna exclusiva fueron el nivel educativo ( $p= 0,019$ ), la ocupación materna ( $p= 0,025$ ), el apoyo familiar ( $p= 0,006$ ) y la creencia en mitos ( $p= 0,042$ ). La ocupación y el apoyo familiar fueron factores de riesgo para el éxito de la lactancia materna exclusiva ( $p= 0,014$ ;  $p= 0,045$ , respectivamente).

**Conclusión:** El nivel de educación y ocupación materna, el apoyo familiar y la creencia en los mitos se asociaron con el éxito de la lactancia materna exclusiva.

**Palabras clave:** Lactancia materna exclusiva, nivel de educación, ocupación, apoyo familiar, mitos creencia, área rural.

## INTRODUCTION

Breastfeeding exclusively for six months and continuing for up to two years is the optimal nutrition for infants (1). Breastfeeding protects children from life-threatening and chronic illnesses. It also supports the early development of children and is associated with their higher intelligence. Globally, improving breastfeeding rates has the potential to save the lives of over 820 000 children under the age of five (2). Infants aged 0 to 6 months need sufficient nutrition from exclusive breastfeeding. The nutritional requirement fulfillment of the baby who is not given exclusive breastfeeding is not optimal, and the nutritional status is impaired (3). Exclusive breastfeeding supports optimal growth so that the incidence of malnutrition can decrease. The incidence of malnutrition is lower in children who receive exclusive breastfeeding than those who do not receive exclusive breastfeeding (4).

United Nations Children's Fund (UNICEF) Indonesia states that from 5 million children born each year in Indonesia, more than half do

not get breast milk optimally in their first year of life (5). The coverage of breastfeeding in Indonesia in 2016 did not reach the target set by the government. According to data in 2007 - 2013, the prevalence of exclusive breastfeeding in Indonesia was decreased from 32 % to 30.2 %. Data obtained from the Provincial Health Office of East Java showed that the coverage of exclusively breastfed infants in East Java in 2016 was 74 %. Overall achievement in East Java had not met the predetermined target of 80 % (6). This phenomenon indicates that many mothers in Indonesia are rarely giving exclusive breastfeeding. In Indonesia, exclusive breastfeeding is governed by a statute, which specifies that every child, except for medical indications, has the right to receive exclusive breastfeeding for six months from birth (7).

Breastfeeding exclusively can help reduce child mortality. Indonesia has a poor rate of exclusive breastfeeding (8,9). Numerous factors, including cultural factors, affected exclusive breastfeeding practices in developing countries. There are many myths and cultural beliefs among the community regarding breastfeeding and influenced the success of exclusive breastfeeding activities in developing countries (10). However, there are still limited data in Indonesia, especially from the rural area. This study aims to determine whether the belief in the myths spread in the community about breastfeeding and other factors such as the level of mother's education, mother's occupation, and support from family could influence exclusive breastfeeding in Mentoro Village, East Java, Indonesia.

## METHODS

This cross-sectional study was conducted in the Mentoro Village Area, East Java Province, Indonesia, from October 2020 to December 2020. The population of this study was breastfeeding mothers who had babies aged more than six months. The sampling technique used a simple random sampling technique. The sample obtained in this study was 50 breastfeeding mothers. This research was approved by the Health Research Ethics Commission of the Muhammadiyah University of Surabaya, Surabaya, Indonesia (No certificate: 051. /KET./11.3./AU./F/2020).

In this study, the data collection technique used a questionnaire by google form link given to breastfeeding mothers by visiting each house according to the data provided. In the pandemic Corona Virus Disease 2019 (COVID-19), researchers could not gather all the respondents in one place simultaneously. The data were analyzed using the chi-square test by Statistical Product and Service Solutions (SPSS) application. The researchers' questionnaire referred to previous existing questionnaires, then supplemented by various myths spread in the research area and tested for validity and reliability.

## RESULTS

### Characteristics of breastfeeding mothers

Based on Table 1, the age of breastfeeding mothers at the age of 20-29 years old and 30-39 years old is the same. Most of the respondents who graduated from university for the latest education were 39 mothers (78 %). Most of the respondents' occupation was 29 mothers as housewives (58 %). Among 50 respondents, there were 45 mothers with obtained support family (90 %). For the myth belief, it is known that most of the respondents were 41 mothers who believed (82 %).

Table 1  
The distribution of breastfeeding mother characteristics in Mentoro Village, Sumobito District, Jombang Regency, Indonesia

Characteristics	Category	Frequency	Percentage
Age (year)	20 – 29	25	50
	30 – 39	25	50
Level of Education	High School	11	22
	University	39	78
Occupation	Government employees	2	4
	Private Employees	10	20
	Entrepreneurs	9	18
	Housewives	29	58
Family Support	Without Family Support	5	10
	Obtained family support	45	90
Myths Belief	Do not believe	9	18
	Believe	41	82
Total		50 mothers	100

### The relationship between education level, occupation, family support and myth belief with the success of exclusive breastfeeding

All data had been tested by Chi-square since it meets the requirements of the chi-square test to determine the relationship between the influencing factors and the success of exclusive breastfeeding. Based on Table 2, it can be seen the test results of maternal education level ( $p=0.019$ ), maternal occupation ( $p=0.025$ ), family support ( $p=0.006$ ) and belief in myth ( $p=0.042$ ) had significant relationship with the success of exclusive breastfeeding.

### Multivariate analysis

Table 3 shows that the statistical test results of the occupation variable are  $p$ -value 0.014 ( $p < 0.05$ ) with a prevalence ratio of 11 (95 % CI 1.633 - 74.083). The family support variable showed a  $p$ -value of 0.010 ( $p < 0.05$ ) and a prevalence ratio of 0.045 (95 % CI 0.004 - 0.480). The range of confidence intervals on these two variables does not include number 1, which indicates that the variables of work and family support are risk factors for the success of exclusive breastfeeding.

Table 2

Table cross relationship between maternal education level and the success of exclusive breastfeeding

Characteristics	Category	The success of exclusive breastfeeding				p
		Without exclusive breastfeeding		Exclusive breastfeeding		
		n	%	n	%	
Education Level	Low Education	13	38.2	21	61.8	0.019
	High Education	1	6.2	15	93.8	
Occupation	Unemployed	10	22.7	34	77.3	0.025
	Employed	4	66.7	2	33.3	
Family Support	Without family support	4	80.0	1	20.0	0.006
	Obtained Family Support	10	22.2	35	77.8	
Belief Myth	Unbelieve Myth	5	55.6	4	44.4	0.042
	Believe	9	22.0	32	78.0	

Table 3

Results of multivariate analysis of maternal education and occupation levels, family support and belief in the myth towards the success of exclusive breastfeeding in Mentoro Village, Sumobito District, Jombang Regency, Indonesia

	Variable	Coefficient	p	RP (CI 95%)
Step 1	Education Level	-2.700	0.051	0.067 (0.004-1.010)
	Occupation	2.454	0.029	11.64 (1.280-105.873)
	Family Support	-2.786	0.043	0.062 (0.004-0.919)
	Constant	1.703	0.282	5.489
Step 2	Occupation	2.398	0.014	11 (1.633-74.083)
	Family Support	3.091	0.010	0.045 (0.004-0.480)
	Constant	-693	0.423	0.5

**DISCUSSION**

Breastfeeding is both a natural situation and an art that must be re-learned. Breastfeeding provides opportunities for babies to benefit from growing physically healthy, getting intelligence and emotional stability, and improving positive social and spiritual (11). Breastfeeding from the first day of birth can reduce the risk of death for newborns by 45 % (12). The success and

failure of exclusive breastfeeding are influenced by several factors, including education level, knowledge, attitudes, experiences of mothers, number of children, pregnancy examinations, and early breastfeeding. The factors that can trigger childbirth assistance are efforts to prepare for exclusive breastfeeding, family support, health worker support, husband support, and formula milk advertisements (13).

Most of the breastfeeding mothers in Mentoro Village are indigenous people who live in the

village. Mentoro Village is one of the villages in Sumobito District, Jombang Regency, East Java Province, Indonesia. The area of agricultural land in Mentoro Village exceeds half of the village area because most of the villagers live as farmers. Most of the breastfeeding mothers are housewives and some occupied as kindergarten and elementary school teachers in the village, and most of their husbands work as farmers.

Education level also affects the knowledge level, while knowledge plays an essential role in changing attitudes and behavior; the higher a person's education level, the broader understanding's ability to accept new positive behavior (14). Mothers who have high education levels are easier to understand and choose exclusive breastfeeding for 6 months. They also assume that breast milk is the perfect baby food during the first 6 months. From this study, 26 % of breastfeeding mothers who did not exclusively breastfeed with recent low education tended to experience major breast milk production obstacles. Low education mothers usually provide additional food or other drinks for newborn babies, such as water, honey, bananas, and formula milk. Another study from Poland also showed that knowledge of general breastfeeding was a strong predictor for exclusive breastfeeding. Also, increasing breastfeeding knowledge could improve successful breastfeeding rates (15).

The reason women have to work outside their homes is because of economic demands. This condition forced them to leave their babies with other family members or caregivers, and thus, their babies were only fed by formula milk (6). For mothers who work every day, the obstacles they experience are due to the short time for maternity and childbirth leave and the lack of knowledge and information about breastfeeding babies, which is an obstacle for mothers who do not exclusively breastfeed (16). Additionally, another study conducted in Iran discovered that housewives had a longer period of exclusive breastfeeding than working mothers (17).

From the respondents' various opinions, most of them are exclusively breastfed and housewives, who only take care of their children and work in the kitchen daily to have more time with their children. Working mothers often entrust their babies to parents or parents-in-law

and their families. Usually, they failed to give exclusive breastfeeding to their babies. Based on the analysis result, the occupational risk increases 0.14 times for exclusive breastfeeding success. Additionally, this research demonstrates an important relationship between work and exclusive breastfeeding success.

Family support becomes something that mothers highly require in taking care of their babies. Family support can be obtained from the husband, parents, in-laws, or other families. Suppose the family always motivates and supports the mother. In that case, this affects the mother's behavior and attitudes so that she is encouraged to take action according to what is expected and with the intention, self-confidence, and belief in the mother vice versa (18). The study from Bangladesh showed that the role of husband support is crucial for the breastfeeding mom. They showed that intimate partner violence is associated with more inadequate breastfeeding practices in Bangladesh (19).

Types of family support listed in this study's questionnaire are emotional support provided by the family, such as attention by asking about the mother and baby, listening to the mother's complaints and problems during breastfeeding. Afterward, family support ensures mothers give breast milk to babies. Praise support to the mothers that had given breast milk. Considering that praise means giving an appreciation to the mothers who can give full breastfeeding to the baby. Instrumental support includes helping mothers look after and bathe the baby, assisting in housework for mothers, providing nutritious food for mothers during breastfeeding. All these supports can ease the burden on mothers to provide breast milk to their babies. The previous study from China also showed a higher prevalence of exclusive breastfeeding among mothers who got support from their partners (20).

This study's results are in line with the research conducted, which states that the report on the results of the analysis of the relationship between family support and self-confidence in exclusive breastfeeding with the chi-square test shows the relationship between family support and increased exclusive breastfeeding. On the contrary, some myths support exclusive breastfeeding (21). The myths in this research questionnaire include

positive and negative myths. Examples of positive breastfeeding myths are mothers who breastfeed not consuming alcohol and mothers with small breast sizes produce less milk than mothers with larger breasts. In contrast, examples of negative myths are mothers who eat spicy food will lead eye boogers to the baby and mothers who do not consume herbal (ginger, turmeric, galanga) have fishy breast milk.

Respondents' responses in questionnaires indicate they believed in negative myths such as mothers who eat spicy food will lead eye boogers to the baby and mothers who do not consume herbal (ginger, turmeric, galanga) have fishy breast milk. Most mothers have believed in the myth about breastfeeding that has been passed down from generation to generation from their parents. It has been applied for a long time, and most of the population living in the village still has a strong belief in hereditary culture.

### CONCLUSION

Several factors may influence exclusive breastfeeding in rural areas. This research shows a significant relationship of education level, maternal work, family support, and belief in myth towards the success of exclusive breastfeeding in the Mentoro Village, Indonesia. Increasing family support and giving general knowledge about breastfeeding may improve the success of exclusive breastfeeding rates.

### REFERENCES

1. Wulandari RD, Laksono AD. Does the place of residence affect the achievement of exclusive breastfeeding? A Study in Eastern Indonesia. *Syst Rev Pharm.* 2020;11(9):872-876.
2. Victora CG, Bahl R, Barros AJD, França GVA, Horton S, Krasevec J, et al. Breastfeeding in the 21st century: Epidemiology, mechanisms, and lifelong effect. *Lancet.* 2016;387(10017):475-490.
3. Yustianingrum LN, Adriani M. Perbedaan Status Gizi dan Penyakit Infeksi pada Anak Baduta yang Diberi ASI Eksklusif dan Non ASI Eksklusif. *Amerta Nutr.* 2017;1(4):415.
4. Diana R, Adi AC. Mother's knowledge, attitude, and practice of exclusive breastfeeding. *Indian J Public Heal Res Dev.* 2019;10(3):887-892.
5. UNICEF. Breastfeeding a mother's gift, for every child, 2018. UNICEF for every child. Unicef. 2017:1-13.
6. Dinkes. PROFIL KESEHATAN PROVINSI JAWA TIMUR TAHUN 2016 [East Java Health Profile 2016]. Provinsi Jawa Timur, Dinkes. 2016;
7. Callista D, Ca A, Etika R, Kurniawati EM, Medicine F, Airlangga U, et al. Relationship Between Working Mothers towards Exclusive Breastfeeding in Bunda Maternity Clinic Surabaya 15 | Publisher: Humanistic Network for Science and Technology Health Notions. 2020;4(1):15-19.
8. Kusumayanti N, Nindya TS. Hubungan Dukungan Suami Dengan Pemberian Asi Eksklusif Di Daerah Perdesaan. *Media Gizi Indones.* 2018;12(2):98.
9. Oktalina O, Muniroh L, Adiningsih S. Hubungan Dukungan Suami dan Dukungan Keluarga dengan Pemberian ASI Eksklusif pada Ibu Anggota Kelompok Pendukung ASI (KP-ASI). *Media Gizi Indones.* 2015;10(1):64-70.
10. Wanjohi M, Griffiths P, Wekesah F, Muriuki P, Muhia N, Musoke RN, et al. Sociocultural factors influencing breastfeeding practices in two slums in Nairobi, Kenya. *Int Breastfeed J.* 2017;12(1):1-8.
11. Juliani S, Arma N. Hubungan Pengetahuan, Sikap, dan Dukungan Tenaga Kesehatan dengan Keberhasilan ASI Eksklusif di Wilayah Kerja Puskesmas Darussalam Kecamatan Medan Petisah. 2018;1(3).
12. Kumar A, Singh VK. A study of exclusive breastfeeding and its impact on nutritional status of child in EAG states. *J Stat Appl Probab.* 2015;4(3):435.
13. Pratiwi BA, Riska Y, Wati N, Angraini W, Okavianti L. Faktor Pendorong Keberhasilan ASI Eksklusif di Wilayah Kerja Puskesmas Lingkar Barat Kota Bengkulu. *Avicenna J Ilm.* 2019;14(02):25-30.
14. Nasihah L. Hubungan Tingkat Pendidikan dengan Perilaku Ibu dalam Pemberian ASI di BPM Ny. Andre Kediri Tahun 2015. *J Kesehat Ibu Dan Anak (Mother Child Med Sci Journal).* 2017;2(2):54-63.
15. Zielińska MA, Sobczak A, Hamułka J. Breastfeeding knowledge and exclusive breastfeeding of infants in first six months of life. *Rocz Panstw Zakl Hig.* 2017;68(1):51-59.
16. Bahriyah F, Jaelani AK, Putri M. Hubungan Pekerjaan Ibu Terhadap Pemberian Asi Eksklusif Pada Bayi Di Wilayah Kerja Puskesmas Sipayung. *J Endur.* 2017;2(2):113.
17. Maharlouei N, Pourhaghighi A, Raeisi Shahraki H, Zohoori D, Lankarani KB. Factors affecting exclusive breastfeeding, using adaptive LASSO regression. *Int J community-based Nurse midwifery.* 2018;6(3):260-271.
18. Hamidah S. Hubungan Antara Dukungan Keluarga

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- Dengan Pemberian Asi Eksklusif Pada Bayi Usia 0-6 Bulan. *J Kebidanan*. 2016;8(1):9.
19. Tran LM, Nguyen PH, Naved RT, Menon P. Intimate partner violence is associated with poorer maternal mental health and breastfeeding practices in Bangladesh. *Health Policy Plan*. 2020;35(Suppl 1):i19-29.
  20. Li J, Nguyen TT, Wang X, Mathisen R, Fang J. Breastfeeding practices and associated factors at the individual, family, health facility and environmental levels in China. *Matern Child Nutr*. 2020;16(S2):1-11.
  21. Yusrina A, Devy SR. Faktor Yang Mempengaruhi Niat Ibu Memberikan Asi Eksklusif Di Kelurahan Magersari, Sidoarjo. *J Promkes*. 2017;4(1):11.