



Factors Affecting The Success of Exclusive Breastfeeding Among Mothers Recovered From Covid-19

Ulfatul Latifah^{1*}, Nora Rahmanindar², Ardhi Henda Karmandika³

¹Department of Nursing, Harapan Bersama Polytechnic, Central Java, Indonesia

²Department of Midwifery, Harapan Bersama Polytechnic, Central Java, Indonesia

³Philippine Women's University, Manila, Philipphine

*Authors Correspondence: [ulfatul.bidan@poltektegal.ac.id/085742446855](mailto:ulfatul.bidan@poltektegal.ac.id)

ARTICLE INFO

Article History:

Received Feb, 12th, 2024

Accepted May, 15th, 2024

Published online Jun, 30th, 2024

Keywords:

Exclusive breastfeeding;
COVID-19 recovery;
maternal concerns;
infant health;

ABSTRACT

Exclusive breastfeeding for the first 6 months and continued breastfeeding with complementary foods up to 2 years are emphasized by the World Health Organization. Amid the COVID-19 pandemic, maternal concerns about virus transmission through breastfeeding have surfaced. Despite these concerns, breastfeeding remains the primary recommendation due to its manifold health benefits. This research, conducted in Tegal City's Margadana sub-district, investigates factors influencing exclusive breastfeeding success among mothers recovered from COVID-19. Using an analytical observational design with a cross-sectional approach, the study explores the link between COVID-19 symptoms in infants and exclusive breastfeeding success, revealing a significant correlation (p-value=0.042). Conversely, breast milk production shows no significant association with exclusive breastfeeding success (p-value=0.144). Notably, spousal and family support emerges as pivotal, exhibiting a significant association with exclusive breastfeeding success (p-value=0.003). However, there is no significant relationship between healthcare provider support during breastfeeding and adherence to 6-month exclusive breastfeeding (p-value=0.456). The findings underscore the importance of breastfeeding during post-COVID-19, balancing potential virus transmission risks against the established breastfeeding health benefits. The study concludes by advocating for further research to comprehensively understand and address complexities of exclusive breastfeeding in the post-COVID-19 context, offering insights for healthcare practitioners and policymakers.

INTRODUCTION

COVID-19 is a highly contagious disease. As of November 24, 2021, the total confirmed cases worldwide reached 258,164,425 with 5,166,192 deaths (CFR 2.0%) in 204 affected countries and 151 countries experiencing community transmission. In Indonesia, there have been 4,254,443 confirmed cases of COVID-19, resulting in 143,766 deaths (CFR: 3.4%), and 4,102,700 patients have recovered from the disease.^{1,2} COVID-19 is primarily transmitted through respiratory droplets. Transmission occurs when an individual is in close proximity (less than 1 meter) to a person with respiratory symptoms (e.g., coughing or sneezing), allowing droplets to potentially contact mucous membranes (mouth and nose) or conjunctiva (eyes). Additionally, the virus can be transmitted through contact with surfaces and objects contaminated by droplets from an infected person. Consequently, COVID-19 transmission can occur through both direct and indirect routes, either via close contact with an infected person or through contact with objects of surfaces used by an infected person.^{3,4}

The World Health Organization (WHO) emphasizes the recommendation of exclusive breastfeeding for the first six months of an infant's life, followed by continued breastfeeding along with complementary foods until two years of age. The current situation raises concerns among mothers due to the perception that SARS-CoV-2 may be transmitted to infants through breastfeeding, even though active SARS-CoV-2 has not been detected in breast milk. This fear has led to policies promoting mother-child isolation. However, there is no evidence of vertical transmission, and the risk of horizontal transmission to infants is comparable to that of the general population. For infants with COVID-19, breastfeeding may positively influence the disease's clinical course.¹⁰ Despite these circumstances, breastfeeding remains the primary recommendation, considering not only the potential risk of infection and infant mortality due to COVID-19 but also the health risks to infants from not receiving breast milk or inappropriate formula feeding. SARS-CoV-2 presents exceptional challenges, particularly in maternity care settings. Prevention strategies and appropriate treatment are crucial to minimize transmission from breastfeeding

mothers with acute respiratory symptoms or confirmed SARS-CoV-2 infection.^{5,6,7}

Despite the fact that mothers with a coronavirus infection can still breastfeed their infants, the risk of the baby contracting the coronavirus from the mother still exists if the mother does not use Personal Protective Equipment (PPE). When a mother infected by coronavirus breastfeeding, coughs or sneezes near the baby or contact with unwashed hands can transmit the viruses to her baby. Therefore, the implementation of health protocols is crucial for breastfeeding mothers, including washing hands with soap for 20 seconds or using hand sanitizer, wearing personal protective tools (cloth masks), maintain body condition with regular exercise and sufficient rest, consuming a balanced diet, and practicing proper coughing and sneezing etiquette.^{12,13}

According to Indonesian health research, *Riset Kesehatan Dasar (RISKESDAS) 2021* data, only 52.5% - or half of the 2.3 million infants under six months old - receive exclusive breastfeeding in Indonesia, a 12% decline from the 2019 figures. The number of early initiation of breastfeeding (IMD) has also decreased, from 58.2% in 2019 to 48.6% in 2021. Early and exclusive breastfeeding is crucial for infant survival and protection against various potentially fatal diseases, such as diarrhea and pneumonia. Increasing evidence suggests that children who receive breast milk demonstrate higher intelligence test scores.⁸ Additionally, they have a lower likelihood of obesity or excess weight, as well as a reduced vulnerability to future diabetes.⁹ Globally, increased breastfeeding could potentially save more than 820,000 children annually and prevent an additional 20,000 cases of breast cancer in women each year.^{8,9}

Women who gave birth during the pandemic faced limited access to postnatal care. Pregnant and lactating women who contract SARS-CoV-2 are more susceptible to adverse health outcomes and face an elevated risk of mental health challenges due to restricted support systems. Continued breastfeeding can offer passive immunity to infants against SARS-CoV-2, and COVID-19 vaccination has been demonstrated to be safe and effective for pregnant and lactating women. To support breastfeeding during future disease outbreaks,

the implementation of innovative and adaptable lactation care, including holistic perinatal, mental health, and social support services, both digital and in-person, will be crucial.¹¹

This research, conducted in Tegal City's Margadana area, investigates factors influencing the adherence to 6-month exclusive breastfeeding among mothers recovered from COVID-19.

MATERIAL AND METHOD

This research is an observational research with a cross-sectional approach. The study objective is to identify factors influencing the adherence to 6-month exclusive breastfeeding among mothers who are COVID-19 survivors. The collection of the data used an online questionnaire by Google form. The population for this research are breastfeeding mothers recovered from COVID-19 in the Margadana sub-district of Kota Tegal. The study sample comprised 20 breastfeeding mothers diagnosed with COVID-19 who had infants aged six months or younger in the Margadana area of Kota Tegal. Participants were selected using purposive sampling.¹⁴

In this study, univariate analysis is used to generate the frequency distribution and presentation of each variable. the Chi-Square analysis test is used to compare the cross-distribution between two relevant variables. The study received ethical approval (reference number: 0329/EA/KEPK/2022) from the Research Ethics Commission of Poltekkes Kemenkes Semarang.¹⁵

RESULTS

There were 20 respondents in this study consisting of breastfeeding mothers who were COVID-19 survivors who had infants aged ≤ 6 months with the characteristics of the respondents in Table 1.

Based on the research findings in Table 1, the characteristics of respondents regarding the adherence to 6-month exclusive breastfeeding indicate that most of mothers are ≤ 35 years old, with total of 17 (85%) mothers and 15 (88.2%) successfully adherence to exclusive breastfeeding. In contrast, among mothers aged <20 th or >35 th, all 3 mothers (100%) successfully

breastfed exclusively. The majority of participants ($n=10$, 50%) had completed secondary education (junior to senior high school). Among this subgroup, 9 participants (90%) successfully practiced exclusive breastfeeding. Additionally, among those with higher education, 7 (100%) mothers successfully breastfed exclusively.

Regarding working status, half of the mothers were employed, and the other half were not, each accounting for 10 (50%). In both working and non-working mothers groups, 9 (90%) successfully breastfed exclusively. In terms of parity, the majority ($n=12$, 60%) had given birth once, with 11 (91.7%) mothers successfully breastfeeding exclusively. For parity of 2-3 times, 6 (85%) mothers successfully breastfed exclusively. Mothers who are unable to breastfeed their babies cited stress and fear of COVID-19 transmission to their babies as primary reasons.

Based on the research findings in Table 2, most infants did not exhibit symptoms of COVID-19, with 13 (65%), and all 13 (100%) mothers in this category successfully breastfed exclusively. The analysis indicates a significant relationship between the symptoms of COVID-19 in infants and the success of exclusive breastfeeding, with a p-value of 0.042.

Regarding lactation, the majority of participants ($n=17$, 85%) reported no reduction in breast milk production. Among these mothers, 16 (94.1%) successfully practiced exclusive breastfeeding. However, statistical analysis revealed no significant association between breast milk production and exclusive breastfeeding success ($p=0.144$). Support from husbands/family showed a significant impact, with 16 (80%) cases of sufficient support resulting in 16 (100%) successful cases of exclusive breastfeeding. The analysis indicates a significant relationship with a p-value of 0.003.

On the other hand, support from healthcare professionals did not show a significant relationship with exclusive breastfeeding success, as indicated by a p-value of 0.456.

Tabel. 1 Characteristics of Respondents

Variable	Adherence to 6-Month Exclusive Breastfeeding					
	No		Yes		Total	
	n = 2	%	n = 18	%	n = 20	%
Age (Years)						
< 20th or > 35th	0	0	3	100	3	15
≤ 35th	2	11.80	15	88.20	17	85
Education						
Primary/No formal education	1	33.30	2	66.70	3	15
Secondary (SMP/SMA)	1	10	9	90	10	50
Higher Education	0	0	7	100	7	35
Working status						
Working	1	10	9	90	10	50
Not working	1	10	9	90	10	50
Parity						
1 time	1	8.30	11	91.70	12	60
2-3 times	1	14.30	6	85.70	7	35
4 times or more	0	0	1	100	1	5

Source: Primary Data, 2022

Table 2. Factors Influencing the Adherence to 6-Month Exclusive Breastfeeding Among COVID-19 Survivor Mothers

Variable	Breastfeeding Adherence						p-value
	No		Yes		Total		
	n = 2	%	n = 18	%	n = 20	%	
Symptoms of Covid in Infant							
No	0	0	13	100	13	65	0.042
Yes	2	28.60	5	71.40	7	35	
Breast Milk Production							
Not Reduced	1	5.90	16	94.10	17	85	0.144
Reduced	1	33.30	2	66.70	3	15	
Support from Husband/Family							
Insufficient	2	50	2	50	4	20	0.003
Sufficient	0	0	16	100	16	80	
Support from Healthcare Professionals							
Insufficient	2	12.50	14	87.5	16	80	0.456
Sufficient	0	0	4	100	4	20	

Source: Primary Data, 2022

DISCUSSION

The result of a study by Chertok Azulay Ilana, et al, 2022 indicates a decline in exclusive breastfeeding rates in the WHO European Region during the COVID-19 pandemic. Employing the socio-ecological model to identify factors linked with breastfeeding outcomes enables a comprehensive and holistic approach to addressing breastfeeding needs among women across the region. These findings

highlight the need to enhance breastfeeding support and protect exclusive breastfeeding among mother-infant to counteract the decreasing exclusive breastfeeding rates. Breastfeeding mothers had limited access to support systems throughout the pandemic. Although emotional, instrumental, and appraisal support regarding exclusive breastfeeding practices were found to be statistically insignificant, mothers who practiced exclusive

breastfeeding received higher levels of informational support. During the COVID-19 pandemic, informational support was a crucial factor in achieving successful exclusive breastfeeding practice.¹⁷

The COVID-19 pandemic has had a significant psychological impact on breastfeeding mothers. According to a research survey by Ceulemans et al 48.9% of breastfeeding mothers showed signs of depressive disorders, while 54% exhibited symptoms of anxiety disorders. Factors inhibiting exclusive breastfeeding, apart from maternal psychological issues, include lack of maternal self-confidence, insufficient knowledge, inappropriate breastfeeding techniques, and maternal health problems. These factors can result in decreased production of oxytocin, the hormone responsible for breast milk secretion, potentially leading to insufficient milk supply. When infants younger than six months experience inadequate breast milk intake, they may cry more frequently. This situation often prompts mothers to introduce supplementary foods such as porridge, bananas, honey, or other solid foods, contrary to exclusive breastfeeding recommendations. Maternal breastfeeding behaviors are frequently influenced by existing habits or sociocultural beliefs trusted by the mother.¹⁸

The analysis reveals a correlation between the presence of COVID-19 symptoms in infants and the adherence to 6-month exclusive breastfeeding, with a p-value of 0.042. In cases where mothers are confirmed positive for COVID-19, their infants are categorized as high-risk. Consequently, these infants undergo SARS-CoV-2 RT-PCR testing on days 1 and 14 postpartum. If the infant's test results are negative or pending, isolation protocols are implemented and maintained until the mother's recovery is confirmed.^{19,20} Lactation is maintained through expressed breast milk, with the mother using a mask during expression. Stringent hygiene measures for hands, containers, and breast pumps are emphasized. The expressed breast milk is administered by a healthy caregiver following proper protocols. Post recovery from COVID-19, breastfeeding continues with consistency, adhering to health protocols. In the event of a positive confirmation of COVID-19 in the infant, both the infant and mother undergo isolation procedures until recovery, with the

infant receiving separate or combined care. Emotional support, instrumental, appraisal and information regarding exclusive breastfeeding must be provided as associated supports to continue breastfeeding. Notably, mothers who practice exclusive breastfeeding report receiving higher levels of informational support. The informational support factor during the pandemic period has been identified as crucial for achieving successful exclusive breastfeeding practices.²¹

The analysis indicates that most mothers show no reduction in breast milk production, with 17 (85%) indicating no reduction, and 16 (94.1%) successfully practicing exclusive breastfeeding. The analysis, however, suggests no significant correlation between breast milk production and the success of exclusive breastfeeding, with a p-value of 0.144. Mothers with infants and toddlers generally focus on ensuring sufficient breast milk production for their children, recognizing it as a primary builder of antibodies. Strategies for enhancing lactation include the consumption of specialized nursing supplements and maintenance of balanced nutrition. Addressing concerns perceived by breastfeeding mothers constitutes a primary focus, emphasizing the need for clear communication regarding lactation practices during the pandemic. Consequently, targeted education and problem-solving support are essential for breastfeeding mothers facing the challenges associated with the COVID-19 pandemic.^{22,23} Recent research indicates that breastfeeding duration of most women was not influenced by the pandemic. However, the same studies found that a minority of subjects experienced either shortened or extended breastfeeding periods.^{24,25}

Results from the present research affirm a significant correlation between support from husbands/family in exclusive breastfeeding, with p-value of 0.003. The breastfeeding mothers in this study reported benefiting from spousal support, which encompasses emotional backing, visible expressions of joy from the partner during breastfeeding sessions, comfort provision when the mother experiences fatigue, and the maintenance of a positive atmosphere by the partner. Furthermore, informative and instrumental support from the partner, including assertions of the superiority and

practicality of breastfeeding over formula feeding, and ensuring the provision of nutritious food for the lactating mother, significantly contribute to the success of exclusive breastfeeding practices. Family support, particularly from the husband, emerges as a crucial factor in the success of exclusive breastfeeding.

The role of family support, especially from the husband, is highlighted as pivotal in transforming the mother's attitude towards positive changes.²⁶ The results of other research state the COVID-19 pandemic has had a discernible impact on the decision-making processes concerning infant and young child feeding practices within Mexican households. This impact is typified by the irregularity in governmental communication and the widespread prevalence of misconceptions within the community, particularly among socioeconomically disadvantaged families. These circumstances heighten the risk of families refraining from initiating or sustaining breastfeeding during the pandemic. The amelioration of these social inequities necessitates targeted interventions designed to enhance breastfeeding practices and attain the long-term health benefits associated with breastfeeding.²⁷ Family support encompasses attitudes and actions taken by supportive family members who accept the conditions of other family members and are prepared to provide assistance when needed. Forms of family support include informational, appraisal, instrumental, and emotional support. The majority of mothers who successfully practice exclusive breastfeeding report receiving good family support.¹⁷

Conversely, in the present study, the analysis of support from healthcare professionals during breastfeeding shows limited support, with 16 (80%) indicating insufficient support and 14 (87.5%) successfully practicing exclusive breastfeeding. The analysis suggests no significant correlation between support from healthcare professionals during breastfeeding and the success of exclusive breastfeeding, with a p-value of 0.456. Common reasons for discontinuing breastfeeding include inadequate healthcare support, physical challenges such as fatigue, insufficient milk supply, and pain.²⁸ The pandemic of COVID-19 has influenced decisions

to discontinue breastfeeding, with respondents expressing concerns about inadequate face-to-face support, apprehensions regarding the safety of breastfeeding during the pandemic, and misinformation from some healthcare professionals suggesting that breastfeeding may not be safe in the context of COVID-19. The lack of accurate information from healthcare providers during prenatal check-ups or upon discharge about breastfeeding contributes to the misconception that formula feeding is equivalent to or superior to breastfeeding. This insufficient guidance from healthcare professionals during pregnancy check-ups or at the time of discharge is a significant factor influencing the decision to cease breastfeeding.^{29,30}

CONCLUSION AND RECOMMENDATION

Based on the research findings, it has been determined that there are factors influencing the success of exclusive breastfeeding among mothers recovering from COVID-19. The analysis results indicate a relationship between COVID-19 symptoms in infants and the success of exclusive breastfeeding with a p-value of 0.042. Regarding breast milk production, the analysis results indicate no significant relationship between breast milk production and the success of exclusive breastfeeding, with a p-value of 0.144. As for the support factor, the analysis results reveal a relationship between spousal/family support and the success of exclusive breastfeeding, with a p-value of 0.003. However, in the case of support from healthcare professionals (nurses), the analysis results show no significant relationship with the adherence of exclusive breastfeeding, with a p-value of 0.456.

For future researchers, investigating other factors that may influence the adherence of exclusive breastfeeding among mothers who have recovered from COVID-19 is recommended. Infant protection against SARS-CoV-2 infection may be conferred by vaccination and continued breastfeeding. It is imperative that the isolation of new mothers, as experienced during the current pandemic, is not repeated in future public health crises. Optimizing breastfeeding during COVID-19 can be achieved by prioritizing lactation support and perinatal care, including the maintenance of in-person services where possible. High levels of support from various

stakeholders, including healthcare professionals, family members, and social networks, are crucial for mothers practicing exclusive breastfeeding. However, maternal and infant health issues, as well as sociocultural factors, have been identified as potential barriers to exclusive breastfeeding practices.³¹

ACKNOWLEDGMENTS

The authors express their gratitude to Politeknik Harapan Bersama for providing the financial support that facilitated the completion of this research. Special thanks are also conveyed to the dedicated midwives and cadres whose invaluable assistance significantly contributed to the execution and success of this study.

The collaborative efforts of Politeknik Harapan Bersama and the commitment of the midwives and cadres have played a pivotal role in advancing of this research. Their support has been crucial in enabling the investigation of key aspects related to breastfeeding among mothers who have overcome COVID-19.

AUTHOR CONTRIBUTIONS

UL (Author and Content Development): UL is responsible for conceiving the manuscript, designing it, defining the intellectual content, conducting literature research, clinical studies, data analysis, statistical analysis, and manuscript review.

NR (Manuscript Preparation): NR is responsible for preparing the manuscript, editing the manuscript, and reviewing the manuscript for accuracy and coherence.

AHK (Data Acquisition and Analysis): AHK is tasked with data acquisition, data analysis, and reviewing the manuscript. UL = Ulfatul Latifah; NR = Nora Rahmanindar; AHK = Ardhi Henda Karmandika.

CONFLICTS OF INTEREST

The authors declare no conflict of interest.

REFERENCES

1. WHO dan PHEOC Kemenkes. Situasi Terkini Perkembangan Coronaviris Diseasea (COVID-19) 25 November 2021. (2021).
2. Al-Awadhi AM, Alsaifi K, Al-Awadhi A, Alhammedi S. Death and Contagious Infectious Diseases: Impact of the COVID-19 Virus on Stock Market Returns. *Journal of Behavioral and Experimental Finance*. 2020;27:100326. <https://doi.org/10.1016/j.jbef.2020.100326>
3. Anas Ma'ruf, yoeyen aryanti, wardah, marlina indah, *et al*. Indonesia Health Profile 2020. Kementerian Kesehatan RI; 2021.<https://media.neliti.com/media/publications/554203-efektivitas-penerapan-vidio-dan-leaflet-c9aab682.pdf>
4. Bhadra A, Mukherjee A, Sarkar K. Impact of population density on Covid-19 Infected and Mortality Rate in India. *Modeling Earth Systems And Environment*. 2021;7(1):623–629. <https://doi.org/10.1007/s40808-020-00984-7>
5. UNICEF, WHO. World Breastfeeding Week. WHO; 2022. <https://www.who.int/indonesia/news/detail/01-08-2022-world-breastfeeding-week--unicef-and-who-urge-greater-support-for-breastfeeding-in-indonesia-as-rates-decline-during-covid-19>
6. Perl SH, Uzan-Yulzari A, Klainer H, et al. SARS-CoV-2–Specific Antibodies in Breast Milk After COVID-19 Vaccination of Breastfeeding Women. *JAMA*. 2021;325(19):2013–2014. <https://jamanetwork.com/journals/jama/fullarticle/2778766>
7. Kumar, R. *et al*. SARS-CoV-2 Infection During Pregnancy And Pregnancy-Related Conditions: Concerns, Challenges, Management and Mitigation Strategies–A Narrative Review. *Journal of Infection and Public Health*. 2021;14(1):863–875. <https://doi.org/10.1016/j.jiph.2021.04.005>
8. World Health Organization. Scientific Brief: Breastfeeding and COVID-19. WHO; 2020. <https://reliefweb.int/report/world/scientific-brief-breastfeeding-and-covid-19-23-june-2020>
9. Mohamed BY, and Kissimova-Skarbek, K. Economic Evaluation of Home-Based Counselling to Promote Exclusive Breastfeeding in Egypt. 2022:1–49. <https://doi.org/10.21203/rs.3.rs->

1450911/v1

10. Galindo-Sevilla NDC, Contreras-Carretero NA, Rojas-Bernabé A, Mancilla-Ramírez J. Breastfeeding and COVID-19. *Gaceta Medica De Mexico*. 2021;152(2):201–208. <https://doi.org/10.24875/gmm.20000665>
11. Vassilopoulou, E. *et al.* Breastfeeding and COVID-19: From Nutrition to Immunity. *Frontiers in Immunology*. 2021; 12:661806. <https://doi.org/10.3389/fimmu.2021.661806>
12. Purnama Y, Dewiani K, Yusanti L. Pemutusan Rantai Penularan Covid-19 Pada Ibu Hamil, Nifas dan Menyusui di Kecamatan Ratu Agung Kota Bengkulu. *Dharma Raflesia: Jurnal Ilmiah Pengembangan Dan Penerapan IPTEKS*. 2020;18(2):190–198. <https://doi.org/10.33369/dr.v18i2.13170>
13. Avsar G, Kasikci M, Yagci N. Hand Washing of Nursing Students: An Observational Study. *International Journal of Caring Sciences*. 2015;8:618–624. <https://www.proquest.com/scholarly-journals/hand-washing-nursing-students-observational-study/docview/1732805688/se-2>.
14. Levin, K. A. Study Design III: Cross-Sectional Studies. *Evidence-based Dentistry*. 2006;7(1):24–25. <https://doi.org/10.1038/sj.ebd.6400375>
15. Qian, X. *et al.* Changes in Distributions of Waist Circumference, Waist-To-Hip Ratio and Waist-To-Height Ratio Over an 18-Year Period Among Chinese Adults: A Longitudinal Study Using Quantile Regression. *BMC Public Health*. 2019;19(1):700. <https://doi.org/10.1186/s12889-019-6927-6>
16. Chertok, I. A. *et al.* Factors Associated with Exclusive Breastfeeding at Discharge During The COVID-19 Pandemic in 17 WHO European Region Countries. *International Breastfeeding Journal*. 2022; 17(1):83 <https://doi.org/10.1186/s13006-022-00517-1>
17. Agrina A, Afandi D, Suyanto S, et al. Analysis of Supporting Factors Associated with Exclusive Breastfeeding Practice in the Urban Setting during the COVID-19 Pandemic. *Children (Basel)*. 2022; 2022;9(7):1074. <https://doi.org/10.3390/children9071074>
18. Ceulemans M, Foulon V, Ngo E, et al. Mental Health Status of Pregnant and Breastfeeding Women During the COVID-19 Pandemic-A Multinational Cross-Sectional Study. *Acta Obstetrica Et Gynecologica*. 2021;100(7):1219-1229. <https://doi.org/10.1111/aogs.14092>
19. Masrurroh, N., Rizki, L. K., Ashari, N. A. & Irma, I. Analisis Perilaku Ibu Menyusui dalam Memberikan ASI Eksklusif di Masa Pandemi Covid 19 di Surabaya (Mix Method). *Muhammadiyah Journal of Midwifery*. 2022;3(1):1-10. <https://jurnal.umj.ac.id/index.php/MyJM/article/view/10443>
20. Safitri, M. G. & Citra, A. F. Perceived Social Support Dan Breastfeeding Self Efficacy Pada Ibu Menyusui Asi Eksklusif. *Jurnal Psikologi*. 2019;12(2):108–111. <http://dx.doi.org/10.35760/psi.2019.v12i2.2436>
21. Felicia, F. V. Manajemen Laktasi di Masa Pandemi COVID-19. *Cermin Dunia Kedokteran*. 2020;47(9):691-693. <https://cdkjournal.com/index.php/cdk/article/view/568>
22. Selfy Rosida Bakker, Utami TA, Paramitha Wirdhani Ningsih. Hubungan Karakteristik dan Pengetahuan Ibu dengan Keberhasilan Menyusui Eksklusif pada Masa Pandemi Covid-19 di Puskesmas Alak Kupang. *Media Publikasi Promosi Kesehatan Indonesia*. 2023;6(3):482-489. <https://doi.org/10.56338/mppki.v6i3.2969>
23. Fitria, A., Pa, M. & Wahyuni, S. Efektifitas Perawatan Payudara terhadap Produksi ASI pada Ibu Nifas. Proceeding Book Seminar Nasional Interaktif dan Publikasi Ilmiah. *Prosiding Kebidanan: Seminar Nasional "Bidan Kuat Bidan Maju"*.2022:1(2). <https://journal.umtas.ac.id/index.php/prosidingkeperawatan/article/view/1987>
24. Dewi, Dewa A. D. K., and Dinar Lubis Tingkat Pengetahuan dan Sikap Remaja Putri Tentang Kehamilan Usia Dini di Kota

- Denpasar. *Archive of Community Health* 2012;1(1):63–68.
<https://media.neliti.com/media/publications/43784-ID-tingkat-pengetahuan-dan-sikap-remaja-putri-tentang-kehamilan-usia-dini-di-kota-d.pdf>
25. Magnazi, M.B., Sartena, G., Goldberg, M. et al. Impact of The COVID-19 Pandemic on Breastfeeding in Israel: A Cross- Sectional, Observational Survey. *International Breastfeeding Journal* 2022;17(16): 1–7 (2022). <https://doi.org/10.1186/s13006-022-00505-5>
 26. Zulaida, I. P., Nawangsari, H. & Arham, A. H. Identification of Factors that Influence Exclusive Breastfeeding During the Covid-19 Pandemic. *Midwifery: Jurnal Kebidanan*. 2022;8(1):22–32.
<https://doi.org/10.21070/midwifery.v8i1.1635>
 27. Vilar-Compte, M., Gaitán-Rossi, P., Rhodes, E.C. et al. Breastfeeding Media Coverage and Beliefs During the COVID-19 Pandemic In Mexico: Implications For Breastfeeding Equity. *International Journal for Equity in Health*. 2021;20:1–12.
<https://doi.org/10.1186/s12939-021-01588-y>
 28. Amir, F. Hubungan Sikap Ibu Tentang Pemberian ASI Eksklusif Pada Bayi pada Masa Covid-19 Di Puskesmas Cendrawasih Makassar. *Jurnal Delima Kesehatan Pelamonia*. 2021;5(1):40–46.
<https://doi.org/10.37337/jkdp.v5i1.215>
 29. Sari, F., Aprillia, Y. T. & Mawarni, E. S. Analisis Tindakan untuk Ibu Menyusui Terkait Sikap dan Social Distancing pada Masa Pandemi COVID-19. *Muhammadiyah Journal of Midwifery*. 2023;3(2):80.
<https://doi.org/10.24853/myjm.3.2.80-88>
 30. Wanjohi, M., Griffiths, P., Wekesah, F. et al. Sociocultural Factors Influencing Breastfeeding Practices in Two Slums in Nairobi, Kenya. *International Breastfeeding Journal*. 2017;12(5):1–8.
<https://doi.org/10.1186/s13006-016-0092-7>
 31. Winda Gaolis Putri Br. Manurung, Yulia Irvani Dewi & Erika. Gambaran Faktor Pendukung dan Penghambat dalam Pemberian Asi Eksklusif Di Klinik Laktasi Masa Pandemi Covid-19. *Health Care: Jurnal Kesehatan*. 2023;12(1);56-67.
<https://doi.org/10.36763/healthcare.v12i1.284>