

## The relationship between anxiety and breastfeeding among post-partum mothers at the Manduro Community Health Center, Ngoro District, Mojokerto Regency

Nadhifa Salsabilla \*

*Department of Midwifery, Faculty of Medicine, University of Airlangga, Surabaya, Indonesia.*

World Journal of Advanced Research and Reviews, 2026, 30(02), 2569-2575

Publication history: Received on 21 April 2026; revised on 27 May 2026; accepted on 29 May 2026

Article DOI: <https://doi.org/10.30574/wjarr.2026.30.2.1543>

### Abstract

**Background:** Breastfeeding is the process of providing milk directly from the mother's breast to the baby from birth. Exclusive breastfeeding plays a crucial role in infant health and strengthens the emotional bond between mother and child. However, not all postpartum mothers can immediately produce breast milk, which may impact the achievement of exclusive breastfeeding targets. The breastfeeding process in postpartum mothers is often hindered by various factors, one of which is anxiety. Anxiety can inhibit the milk ejection reflex by increasing stress hormones such as cortisol, which reduces the release of oxytocin. This study highlights the issue of low exclusive breastfeeding coverage, particularly at Manduro community health center, which has only reached 40% of the 50% target. One of the main obstacles to breastfeeding is delayed milk ejection, which is often influenced by postpartum maternal anxiety. Feelings of worry and uncertainty can hinder breast milk production and reduce mother-infant contact, thereby affecting breastfeeding success. Therefore, this study aims to examine the relationship between anxiety and milk ejection in postpartum mothers at Manduro community health center.

**Method:** This study is an observational analytic research with a cross-sectional design. A total of 42 postpartum mothers were recruited using consecutive sampling techniques at Manduro community health center, Ngoro District, Mojokerto Regency. The collected data were analyzed using the Spearman rho statistical test.

**Results:** The research results indicate a relationship between anxiety and breast milk production in postpartum mothers. It was found that 60% of respondents without anxiety experienced smooth milk production. Among respondents with mild anxiety, 60% (or the majority) experienced insufficient milk production. The majority (75%) of respondents with moderate anxiety also experienced insufficient milk production. Meanwhile, all respondents (100%) with severe anxiety experienced insufficient milk production. Statistical analysis shows a significant relationship between anxiety and breast milk production ( $p=0.040$ ;  $r=0.318$ ).

**Conclusion:** There is a significant relationship between anxiety and breast milk production in postpartum mothers at UPTD Manduro community health center, Ngoro District, Mojokerto Regency.

**Keywords:** Anxiety; Breast Milk Production; Postpartum; Oxytocin Hormone; Cortisol Hormone

### 1. Introduction

Breastfeeding is the process of providing milk directly from the mother's breast to the baby from birth [1]. Exclusive breastfeeding is defined as giving only breast milk without any additional food or drink to infants from birth until 6 months of age, except for medicines and vitamins [2]. Exclusive breastfeeding not only protects infants and children from dangerous diseases, but also strengthens the emotional bond between mother and child [3]. Every mother has the

\* Corresponding author: Nadhifa Salsabilla

potential to breastfeed her baby, yet not all postpartum mothers are able to produce breast milk immediately after delivery [4].

Support for breastfeeding is still needed. In 2021, only 44% of infants aged 0–6 months globally received exclusive breastfeeding during the 2015–2020 period, while the global target for exclusive breastfeeding coverage is 50% [5]. In Indonesia, the coverage of exclusive breastfeeding in 2022 was recorded at 67.96%, decreasing from 69.7% in 2021 [6]. In East Java Province, the percentage of exclusive breastfeeding in 2022 reached 69.72%. Based on data from the East Java Health Office in 2022, the exclusive breastfeeding achievement in Mojokerto Regency reached 70%. However, among the 27 community health centers in Mojokerto Regency, the Manduro Community Health Center had not yet achieved the target. Data from the Manduro Community Health Center in 2022 showed that exclusive breastfeeding coverage only reached 40% of the expected 50% target.

There are several barriers to breastfeeding, one of which is insufficient breast milk production to meet the infant's needs [7]. One factor contributing to breastfeeding failure is delayed or absent breast milk secretion [3]. Delayed milk production may also be caused by maternal anxiety [8]. Anxiety in postpartum mothers is described as a vague and generalized feeling of worry associated with uncertainty and helplessness, where the emotional condition does not have a specific object [7]. A study conducted in Slahung District, Ponorogo Regency found that anxiety could affect milk production in breastfeeding mothers [3].

Postpartum mothers can reduce anxiety by understanding and adapting to the physical and psychological changes that occur after childbirth. Conversely, when mothers experience fear, worry, and anxiety, psychological disturbances may increase. Psychological disturbances during the postpartum period may reduce mother–infant interaction because the mother's interest and attachment toward her baby decrease [9].

---

## 2. Material and methods

This study employed an observational analytic design with a cross-sectional approach to analyze the relationship between postpartum anxiety and breast milk production at Manduro community health center, Ngoro District, Mojokerto Regency. The research population includes all postpartum mothers in the Manduro Community Health Center working area, with a total sample of 42 respondents selected using consecutive sampling based on inclusion criteria, including breastfeeding mothers with infants aged 0–42 days, willing to participate, and free from mental disorders other than anxiety. Data were collected through questionnaires comprising two validated instruments: an anxiety questionnaire adapted from the Hamilton Anxiety Rating Scale (HARS) and a breast milk production questionnaire assessing indicators such as feeding schedules, breast conditions, maternal sensations, infant responses, and the frequency of infant urination and defecation. Data analysis included univariate analysis to describe the frequency distribution of anxiety and breast milk production and bivariate analysis using the Spearman rho test to examine variable relationships, with significance set at  $p < 0.05$ . This study utilized printed questionnaires, observation sheets, and writing tools without involving laboratory equipment or chemical materials.

---

## 3. Results and discussion

### 3.1. Respondent Characteristics

**Table 1** Respondent Characteristics

No	characteristics	Frequency	Percentage
Mother Age			
1.	<20 years	2	4,8
2.	20-35 years	31	73,8
3.	>35 years	9	21,4
Baby Age			
1.	0-4 day	1	42,4
2.	5-14 day	6	14,3
3.	>15 day	35	83,3

Delivery Method			
1.	SC	30	71,4
2.	Normal	12	28,6
Birth weight			
1.	2500-4000 gr	40	95,2
2.	<2500 gr	2	4,8
Gestational Age			
1.	9 Months	38	90,5
2.	8 Months	3	7,1
3.	7 Months	1	2,4
Early Breastfeeding Initiation			
1.	Yes	37	88,1
2.	No	5	11,9
Parity			
1.	Parity 1	13	31,0
2.	Parity 2	16	38,1
3.	Parity 3	9	21,4
4.	Parity 4	2	4,8
5.	Parity 5	1	2,4
6.	Parity 7	1	2,4
Contraception			
1.	Yes	33	78,6
2.	No	9	21,4
Food Restrictions			
1.	No	42	100,0
Family Members Who Smoke			
1.	Yes	17	40,5
2.	No	25	59,5
		42	100,0
Community Health posts			
1.	Prima	5	11,9
2.	Glatik	8	19,0
3.	Watesnegoro	1	2,4
4.	Sekantong	2	4,8
5.	Kandangan	6	14,3
6.	Tlogo	1	2,4
7.	Sumber	1	2,4
8.	Krikilan	1	2,4
9.	Mawar	8	19,0
10.	Melati	2	4,8
11.	Dateng	1	2,4
12.	Nusa Indah	6	14,3

Table 1 shows that of the 42 respondents, the majority (73.8%) were aged 20–35 years. The majority (83.3%) of the infants at the time of the study were older than 15 days. The mode of delivery in this study was predominantly (71.4%) cesarean section. The birth weight of the infants in this study was predominantly (95.2%) between 2,500 and 4,000 grams. The gestational age at birth in this study was predominantly (90.5%) in the term group. The majority of respondents (88.1%) practiced immediate skin-to-skin contact (IMD). In this study, the majority (38.1%) of respondents were mothers with a parity of two children. The majority (78.6%) of respondents were mothers who used contraception. The majority (100%) were mothers who had no dietary restrictions. The majority (59.5%) of respondents were mothers whose family members did not smoke. The majority (19.0%) of the community health posts (posyandu) in this study were Mawar posyandu.

### 3.2. Univariate Analysis

**Table 2** Distribution of Maternal Anxiety Frequency Postpartum

Anxiety	f	%
<14 No anxiety	23	54,8
14-20 Mild anxiety	10	23,8
21-27 Moderate anxiety	8	19,0
42-56 Severe anxiety	1	2,4
Total	42	100,0

Table 2 presents the results of the anxiety frequency analysis among postpartum mothers at the Manduro Community Health Center (UPTD Puskesmas Manduro) in Ngoro Subdistrict, Mojokerto Regency, involving 42 respondents. It was concluded that 54.8% of the respondents did not experience anxiety. Meanwhile, nearly half of the respondents experienced anxiety, which was categorized into mild, moderate, and severe anxiety.

**Table 3** Frequency Distribution Based on Breast Milk Production Among Postpartum Mothers at the Manduro Community Health Center

Smooth flow of breast milk	f	%
Smooth breast milk production	20	47,6
Insufficient breast milk production	22	52,4
Total	42	100,0

Based on Table 3, the research findings show that of the 42 postpartum mothers surveyed at the Manduro Community Health Center (UPTD Puskesmas Manduro) in Ngoro Subdistrict, Mojokerto Regency, the majority of respondents (52.4%) experienced difficulties with breast milk flow, while the remaining respondents (47.6%) had a smooth flow of breast milk.

### 3.3. Bivariate Analysis

**Table 4** The Relationship Between Anxiety and Breast Milk Production in Postpartum Mothers

Anxiety	Breast milk production						p-value
	Smooth breast milk production		Insufficient breast milk production		Total		
	F	%	F	%	F	%	
No anxiety	14	61	9	39	23	100	0,040
Mild anxiety	4	40	6	60	10	100	
Moderate anxiety	2	25	6	75	8	100	

Severe anxiety	0	0	1	100	1	100	
Very severe anxiety/panic	0	0	0	0	0	0	

Table 4 Based on the cross-tabulation table above, 61% of respondents who did not experience anxiety reported a smooth milk flow. Among respondents with mild anxiety, 60%—or the majority—experienced an insufficient breast milk production. The majority (75%) of respondents with moderate anxiety experienced an irregular milk flow. All respondents (100%) with severe anxiety experienced an irregular milk flow.

Based on the results of the Spearman's rho correlation analysis, a relationship was found between anxiety and breast milk flow in postpartum mothers with a correlation coefficient of 0.318, indicating a moderate relationship between anxiety and breast milk flow with a p-value of 0.040. The statistical test results yielded a p-value of <0.01, where  $p < 0.05$ . This indicates that the relationship between anxiety and breast milk production is statistically significant.

## 4. Discussion

### 4.1. The Relationship Between Anxiety and Breast Milk Production in Postpartum Mothers

Anxiety is a mood disorder characterized by feelings of fear or excessive worry with no clear cause [10]. The symptoms are generally dominated by psychological factors, but they may also involve physical factors. This condition often occurs when an individual is unable to cope with psychosocial stress. A good psychological condition in mothers can positively affect the smooth production of breast milk. Stable psychological conditions will motivate mothers to breastfeed their babies, thereby increasing the hormones involved in breast milk production. A calm mental and emotional condition greatly influences the breastfeeding process. Mothers who experience stress, depression, anxiety, sadness, and tension may experience difficulties in breastfeeding [3].

The results of this study showed that among 42 respondents, 54.8% did not experience anxiety, while 52.4% or 22 respondents experienced inadequate breast milk production. The analysis using the Spearman rho test obtained a p-value of 0.040 ( $p < 0.05$ ), indicating a significant relationship between anxiety and breast milk production among postpartum mothers at UPTD Puskesmas Manduro, Ngoro District, Mojokerto Regency. Respondents with lower anxiety levels tended to have smoother breast milk production compared to respondents with moderate to severe anxiety. The correlation coefficient value of 0.318 indicated a moderately strong relationship.

These findings highlight the importance of specific programs focused on managing anxiety among postpartum mothers at UPTD Puskesmas Manduro. Currently, UPTD Puskesmas Manduro already has a program that supports breast milk production called the "Jari Piton" program. This program is an oxytocin massage method performed after childbirth to help increase breast milk production in breastfeeding mothers. However, there is still no program specifically aimed at managing anxiety in postpartum mothers. Considering the significant influence of anxiety on breastfeeding success, the development of educational and psychological assistance programs for postpartum mothers is very important to improve the quality of healthcare services and the success of breastfeeding.

This study supports previous findings stating that postpartum mothers with lower anxiety levels have better breast milk production [11]. To improve the smooth production of breast milk, it is important for healthcare workers to identify psychological factors affecting postpartum mothers. Educational and counseling programs regarding stress management, relaxation techniques, and the importance of family support can be effective interventions to reduce anxiety in breastfeeding mothers. Healthcare providers can also provide information about proper breastfeeding techniques, time management, and the importance of adequate rest to support the breastfeeding process.

In conclusion, the relationship between anxiety and breast milk production in postpartum mothers is a complex phenomenon involving interactions between biological, psychological, and social factors. A multidisciplinary approach is needed to provide optimal support for breastfeeding mothers so that the negative effects of anxiety can be minimized and the breastfeeding process can run smoothly.

## 5. Conclusion

Based on the data analysis and discussion regarding the relationship between anxiety and breast milk production in postpartum mothers at UPTD Puskesmas Manduro, Ngoro District, Mojokerto Regency, the following conclusions can be drawn: First, the majority of postpartum mothers at UPTD Puskesmas Manduro, Ngoro District, Mojokerto Regency

do not experience anxiety. Second, most of these mothers face difficulties with breast milk production, as it is not smooth. Third, there is a relationship between anxiety and breast milk production in postpartum mothers at UPTD Puskesmas Manduro, Ngoro District, Mojokerto Regency.

---

## Compliance with ethical standards

### *Acknowledgements*

The author would like to thank all parties who contributed to this research, especially the head and staff of UPTD Puskesmas Manduro, all respondents, and the supervisors who provided guidance and support during the completion of this study.

### *Statement of ethical approval*

This study received ethical approval from the Health Research Ethics Committee, Faculty of Medicine, Universitas Airlangga (No. 07/EC/KEPK/FKUA/2025)

### *Statement of informed consent*

Written informed consent was obtained from all individual participants involved in this study prior to data collection.

---

## References

- [1] Solama, W., & Alvionita, P. (2021). MENYUSUI YANG BENAR PADA BAYI BERDASARKAN PENGETAHUAN DAN SIKAP IBU. 13(1), 126.
- [2] Alfaridh, A. Y., Azizah, A. N., Ramadhaningtyas, A., Maghfiroh, D. F., Amaria, H., Mubarakah, K., Arifatuddina, M., Shafira, N., Widyasanti, N., Kumala, S. S., Program, A. N., Ilmu, S., Masyarakat, K., & Masyarakat, K. (2021). Peningkatan Kesadaran dan Pengetahuan tentang ASI Eksklusif pada Remaja dan Ibu dengan Penyuluhan serta Pembentukan Kader Melalui Komunitas "CITALIA." Jurnal Pengabdian Kesehatan Masyarakat (Pengmaskesmas), 1(2), 119–127.
- [3] Rohma, Annisa Nur. (2022). HUBUNGAN ANTARA KECEMASAN DENGAN KELANCARAN PENGELUARAN ASI PADA IBU MENYUSUI DI KECAMATAN SLAHUNG KABUPATEN PONOROGO.
- [4] Saputri, I. N., Ginting, D. Y., & Zendato, I. C. (2019). PENGARUH PIJAT OKSITOSIN TERHADAP PRODUKSI ASI PADA IBU POSTPARTUM. JURNAL KEBIDANAN KESTRA (JKK), 2(1), 68–73
- [5] WHO. (2021). Infant and young child feeding. . World Health Organization.
- [6] WHO. (2023). Exclusive breastfeeding coverage in Indonesia. World Health Organization.
- [7] Rafika, Y. S., Ermawati, iit, & Sary yessy Nur Endah. (2023). Faktor – faktor yang Memengaruhi Produksi ASI pada Ibu Menyusui di RSB Harifa Kabupaten Kolaka Provinsi Sulawesi Tenggara. Jurnal Ilmia Obsgin, 15(3).
- [8] saraswati, putu mas, hartati, ni nyoman, suratiah, & runiari, nengah. (2023). HUBUNGAN TINGKAT KECEMASAN IBU MENYUSUI DENGAN KELANCARAN PENGELUARAN ASI DI MASA PANDEMI COVID-19. Jurnal Gema Keperawatan, 16, 111–123.
- [9] Zakia, I. F. (2024). HUBUNGAN TINGKAT KECEMASAN IBU POSTPARTUM DENGAN KEJADIAN BABY BLUES SYNDROME DI RUMAH SAKIT UNIVERSITAS AIRLANGGA. In Universitas Airlangga.
- [10] Winarno, F. A. (2020). HUBUNGAN TINGKAT KECEMASAN DENGAN PRODUKSI ASI PADA IBU POST SECTIO CAESAREA DI RSUD MUNTILAN. Universitas Muhammadiyah Magelang.
- [11] Mardjun, Z. (2019). Hubungan Kecemasan dengan kelancaran Pengeluaran ASI Pada Ibu Postpartum Selama Dirawat di Rumah Sakit Ibu dan Anak Kasih Ibu Manado . E-Journal Keperawatan (e-Kp), 7.
- [12] Azizah, N., & Rosyidah, R. (2019). Buku Ajar Mata Kuliah Asuhan Kebidanan Nifas dan Menyusui. (cetakan pertama). Umsida Press.
- [13] Benjamin, N., Kaplan, V. A., & Sadock, J. (2007). SYNOPSIS OF PSYCHIATRY BEHAVIORAL SCIENCES/CLINICAL PSYCHIATRY. Lippincott Williams & Wilkins.
- [14] Bersama-Sama, Dukung Ibu Sukses Menyusui Dan Bekerja (2023).

- [15] Dewi, A. D. C. (2019). Faktor-Faktor yang Mempengaruhi Kelancaran Produksi ASI. *Jurnal 'Aisyiyah Medika*, 4(1), 23-30.
- [16] Durham, R., Thompson, L., & Williams, K. (2020). Postpartum Care: Essentials for Maternal and Newborn Nurses. *Journal of Perinatal and Neonatal Nursing*, 34(1), 23–25.
- [17] Jannah, S., Sari, D. P., & Sari, D. P. (2020). Hubungan Pola Makan dan Pola Istirahat dengan Produksi ASI pada Ibu Nifas di Puskesmas X. *Jurnal Kesehatan Masyarakat*, 15(2), 123-130.
- [18] Hovv, chantal E., Movva, naimisha, Rosen, V. A., & Pérez-Escamilla, R. (2019). mpact of Maternal Anxiety on Breastfeeding Outcomes: A Systematic Review. *Pubmed Central*, 10(5), 816–826.
- [19] Kaplan, H. I., Sadock, B. J., & Grebb, A. (2010). GANGGUAN KECEMASAN. DALAM KAPLAN-SADOCK SINOPSIS PSIKIATRI ILMU PENGETAHUAN PERILAKU PSIKIATRI JILID DUA. Binarupa Aksara.
- [20] Kemenkes RI. (2023). Postpartum. Perpustakaan Kementerian Kesehatan RI.
- [21] Khasanah, V. N. (2019). ANALISIS FAKTOR YANG BERHUBUNGAN DENGAN PEMBERIAN ASI EKSKLUSIF OLEH IBU PEKERJA DI WILAYAH PUSKESMAS KALIRUNGKUT SURABAYA. Perpustakaan Universitas Airlangga.
- [22] Komariah, E., Amelia, G. S., & Hersoni, S. (2022). Pengaruh Alat Kontrasepsi Hormonal terhadap Produksi ASI Ibu Menyusui: Literature Review. *Jurnal Kesehatan Bakti Tunas Husada*, 22(1), 157-165.
- [23] Kusumastuti, D. A., & Ediyono, S. (2022). PENGARUH PENDIDIKAN NUTRISI IBU PADA INISIASI DINI DAN PRAKTIK PEMBERIAN ASI EKSKLUSIF. *Jurnal Indonesia Kebidanan*, 6(2), 91–98.
- [24] Lestari, D., Rahayu, E. F., & Pramono, B. (2020). Pengaruh Asupan Nutrisi terhadap Produksi ASI dan Pelepasan Oksitosin pada Ibu Menyusui. *Jurnal Gizi Klinik Indonesia*, 16(3), 120-130.
- [25] Mansyur, N., & dahlan, K. (2014). Buku Ajar: Asuhan Kebidanan Masa Nifas. Selaksa Kelompok Penerbit Intrans Wisma Kalimetro.
- [26] Mentari, K. C. (2019). Hubungan peran suami melalui breastfeeding father dengan kelancaran pengeluaran ASI Eksklusif di wilayah kerja puskesmas Cakru Kabupaten Jember. *Digital Repository Universitas Jember*.
- [27] Mirani, M. M., Jumaina, & Marni, E. (2021). GAMBARAN TINGKAT KECEMASAN PADA LANSIA DI WILAYAH KERJAPUSKESMAS PAYUNG SEKAKI.
- [28] Nandia, J. R. D., & Anggorowati. (2020). Pendidikan Kesehatan pada Ibu Nifas (Sebuah Pendekatan Keluarga). Nuha Medika.
- [29] Purwanto, T. S. (2015). Modul Ajar Nifas dan Menyusui. Poltekkes Kemenkes Surabaya.
- [30] Putri, N. (2021). Manajemen Asuhan Kebidanan Postpartum Fisiologis pada Ny “K” di Puskesmas Antang Perumnas Tanggal 04 Oktober-15 November 2021. Universitas Islam Negeri Alauddin Makassar.
- [31] Sari, W. P., Putri, D. R., & Ramadhani, N. (2022). Hubungan Antara Nutrisi dan Hormon Stres terhadap Produksi ASI pada Ibu Postpartum. *Jurnal Kesehatan Masyarakat*, 11(2), 98-110.
- [32] Sulaeman, R., et al. (2019). Pengaruh Pijat Oksitosin terhadap Pengeluaran ASI pada Ibu Postpartum Primipara. *Jurnal Kesehatan Prima*, 13(1), 10-15.
- [33] Sumarni, D. T., & Ratnasari, F. (2021). Faktor-Faktor Yang Memengaruhi Pengeluaran ASI Pada Ibu Postpartum. *Journal for Quality in Women’s Health*, 4(1), 18–20.
- [34] Sumarni, N., & Nahira. (2019). Asuhan Kebidanan Ibu Postpartum (Cetakan Pertama).
- [35] Widyastuti, T., Rahayu, P., & Nugroho, D. (2021). Hubungan Asupan Protein dengan Kadar Prolaktin pada Ibu Menyusui. *Jurnal Gizi dan Kesehatan*, 13(1), 45-55.
- [36] Yusi, D., Pramesi, A., Toyibah, A., & Wahyu, R. (n.d.). FAKTOR-FAKTOR YANG MEMPENGARUHI ONSET LAKTASI PADA IBU POST PARTUM DI RUMAH SAKIT IBU DAN ANAK PURI BUNDA MALANG Factors That Influence Onset Of Lactation In Post Partum Mother At Mother And Child Hospital Puri Bunda Malang. In OKTOBER (Vol. 10, Issue 2).