

---

## The relationship between the anxiety level of breastfeeding mothers and the amount of milk production in Mothers who have babies aged 1-12 Months in Sigumpar Dangsina Village, Sigumpar Health Center Working Area

Melva Epy Mardiana Manurung <sup>1\*)</sup>, Lidia Silaban <sup>2)</sup>, Veronica Silalahi <sup>3)</sup>

<sup>1,3)</sup> STIKes Arjuna Prodi D3 Keperawatan

<sup>2)</sup> STIKes Kesehatan Baru Prodi D3 Keperawatan

\*Corresponding Author

Email : [manurungmelva275@gmail.com](mailto:manurungmelva275@gmail.com)

---

### Abstract

Breast milk is a liquid that contains white blood cells, immune substances, enzymes, hormones, and proteins that are suitable for babies. Breast milk is an ideal source of nutrition, rich in food essences that can accelerate the growth of brain cells and the development of the nervous system. In breastfeeding, mothers often experience anxiety caused by milk production. Breast milk production can be influenced by several factors, namely infant birth weight, gestational age, maternal age and parity, maternal stress/illness, smoking, alcohol consumption, consumption of contraceptive pills, maternal diet, husband and family support, breast care, type of delivery and hospitalization. when giving birth. Mothers who experience anxiety will cause the let-down reflex to occur, resulting in disruption of breast milk production due to inhibition of the production of the hormones prolactin and oxytocin. This study aims to The relationship between the anxiety level of breastfeeding mothers and the amount of milk production in Mothers who have babies aged 1-12 months in Sigumpar Dangsina Village, Sigumpar Health Center Working Area. This research is a quantitative research with cross sectional data collection approach. The population of this study were all breastfeeding mothers who had babies 1-12 months. The sampling technique used is a total sampling of 17 respondents. The data was processed by Spearman correlation test. The results showed p value = 0.003 so  $p < 0.05$  which means that there is a relationship between the level of anxiety of mothers who breastfeed their babies to the amount of milk production in mothers who have babies aged 1-12 months in Sigumpar Dangsina Village, Sigumpar Health Center Work Area. Mothers/Communities and their families support each other in breastfeeding so as not to cause anxiety in breastfeeding mothers

**Keywords:** Anxiety, Breast Milk Production

---

## INTRODUCTION

Mother's Milk is a liquid that contains white blood cells, immune substances, enzymes, hormones, and proteins that are suitable for babies. Breast milk is an ideal source of nutrition because in breast milk there is a balanced composition and according to the needs of the baby's growth, with breast milk the baby will be at the best level. Breast milk is rich in food essences that accelerate the growth of brain cells and the development of the nervous system, therefore it is recommended that every mother only give breast milk (exclusive) until the baby is 6 months old (Musrifa, 2018). The growth and development of infants and toddlers is largely determined by the amount of breast milk obtained, including energy and other nutrients contained in breast milk (Rayhana & Sufriani, 2017).

The Ministry of Health (2021) noted that the percentage of exclusive breastfeeding for infants aged 0-5 months was 71.58%. This figure shows an improvement from the previous year which was 69.62%. However, most provinces still have a percentage of exclusive breastfeeding below the national average. Gorontalo was recorded as the province with the lowest percentage of only 52.75%, followed by Central Kalimantan and North Sumatra at 55.98% and 57.83%, in West Papua at 58.77%, in Riau Islands at 58.84%, DKI Jakarta by 65.63%. This shows that the coverage of exclusive breastfeeding has not been maximized.

Today, several incidents have been found in mothers after giving birth. Postpartum mothers are very susceptible to anxiety and depression. Anxiety in mothers is caused by several things, for example, the baby's complaint is often crying or refusing to breastfeed, sore nipples so that they do not give breast milk, often mean that the milk is not enough or the breast milk is not good. This will be a factor causing the low coverage of exclusive breastfeeding for newborns (Naziroh, 2017). After giving birth, mothers experience physical and physiological changes that result in psychological changes. This condition can affect the lactation process. Facts show that the way the hormone oxytocin works is influenced by psychological conditions. Mother's psychological preparation before breastfeeding is an important factor that affects the success of breastfeeding. Anxiety, stress, excessive worry, unhappiness in the mother play a very important role in the success of exclusive breastfeeding. Mothers who are always in a state of anxiety, lack of confidence, feeling depressed and various forms of emotional tension, may fail to breastfeed their babies (Hastuti, P., & Wijayanti, 2017).

Breast milk production is influenced by the hormone oxytocin, prolactin hormone, prolactin reflex and let-down reflex. When the baby sucks the nipple, there will be a prolactin reflex which will stimulate the prolactin hormone to produce breast milk and a let-down reflex which will stimulate milk flow. The correct breastfeeding technique will facilitate the production of breast milk. The impact of mothers who do not give breast milk to babies will cause babies to be at risk of various infectious diseases such as respiratory infections, ear infections, low immunity, resulting in less intelligent future generations.

Based on the results of research by Aidha, Wahyutri, E., & Imamah, I. N. (2019), it was shown that there was a relationship between anxiety and pain on breast milk production on Day 0-3 in Post Sectio Caesaria Mothers in Gemma Room 2, Dirgahayu Hospital. Efforts to keep breast milk smooth are starting from the mother's strong desire to provide the best nutrition, namely breast milk for her baby. Strong motivation will affect the mother's physical and emotional ability to produce breast milk, by having a strong desire and sincere and high affection, breast milk production can be stimulated. One of them is support from husband and family, because support from the closest people can affect the smooth flow of breast milk and avoid anxiety so as to create a comfortable atmosphere in the family and the mother feels relaxed and comfortable.

Exclusive breastfeeding may be a problem and requires a struggle, for that every agency or office provides concessions in the form of three months of leave for pregnancy, childbirth and breastfeeding. In general, working women have to carry out various roles, namely as wives, housewives, mothers taking care of children, and as staff or workers in agencies. Women with multiple roles face many demands that cause mental stress and anxiety. In mothers who experience anxiety, the hormone oxytocin usually does not come out. Though this hormone is one of the hormones that play a role in the process of milk production. Conversely, if the mother feels calm, her heart is happy that the oxytocin hormone can come out and work well (Hastuti, P., & Wijayanti, 2017).

Based on a preliminary study conducted in the Sigumpar Dangsina Village, the Sigumpar Health Center Working Area, it was found that 17 mothers were breastfeeding. Based on the results of interviews with breastfeeding mothers with dual roles, it was found that 10 people experienced mild anxiety, 7 people experienced moderate anxiety and 3 people did not experience anxiety. So based on the data above, the authors are interested in conducting a study on "The relationship between the level of anxiety of mothers who breastfeed their babies to the amount of milk production in mothers who have babies aged 1-12 months in Sigumpar Dangsina Village, Sigumpar Health Center Work Area.

## RESEARCH METHODS

This study used a quantitative research method with a cross sectional study approach to determine the relationship between the level of anxiety of breastfeeding mothers and the amount of milk production in mothers who have babies aged 1-12 months in Sigumpar Dangsina Village, Sigumpar Health Center Work Area. The study was conducted in Sigumpar Dangsina Village, Sigumpar Health Center Working Area in July 2022 on 17 mothers with babies 1-12 months old using total sampling technique. This study uses a questionnaire consisting of 3 parts, the first part consists of demographic data of respondents which includes name (initials), age, parity, gestational age, education, type of delivery. The second part is about knowledge Anxiety level questionnaire using Hamilton rating scale for anxiety (HARS) with 14 statements. The third part is the Breast Milk Production Observation Sheet. Data analysis was done by Bivariate with Spearman correlation test.

Table 1. Determination of the degree or level of anxiety

Total Skor	<14	no anxiety
	14 – 20	mild anxiety
	21 – 27	moderate anxiety
	28 – 41	severe anxiety
	42 – 56	very heavy anxiety

Table 2. Breast milk production observation sheet

No	Statement	Value	
		0	1
1	The mother's breasts are taut before feeding. This is done by palpating the breast area to determine the condition of the mammary glands that are full of breast milk	No	Yes
2	Visible milk seeping from the nipple. Done by looking directly or by squeezing the mother's nipple	No	Yes
3	The frequency of feeding the baby at least 6 times a day. This(<6x/hari)/ (>6x/hari)/ can be asked of the mother	>2 jam	2 jam
4	Babies urinate more often about 6-8 times a day. This can be(<6x/hari)/ (>6x/hari)/ asked to the mother, how many times to change diapers in a>2 jam	>2 jam	2 jam
5	The condition of the baby after breastfeeding, it will fall asleep(,2 jam) or calm for 2-3 hours. This condition can be seen directly on the baby's response and asked the mother about the response	(,2 jam)	(>2 jam)

## RESULTS AND DISCUSSION

**A. Description of Respondents Characteristics**

Table 3. Frequency Distribution of Respondents Based on Demographic Data in Sigumpar Dangsina Village Working Area of Sigumpar Health Center 2022

No.	Characteristics of Respondents	Frequency (n)	Percentage (%)
1	Age		
	18-25 years old	6	35.31
	26-35 25 years old	8	47.05
	36-45 25 years old	3	17.64
	Total	17	100.0
2	Types of Childbirth		
	Sectio Caesarea	4	23.52
	Normal	13	76.48
	Total	17	100.0
3	Education		
	SMA	12	70.59
	D3	2	11.76
	S1	3	17.65
	Total	17	100.0
4	Gestational age		
	<32 weeks	1	5.8
	33-40 weeks	13	94.2
	Total	17	100.0
5	<b>Parity</b>		
	Primipara	4	23.52
	Multipara	13	76.48
	Total	17	100.0

The results showed that the characteristics of breastfeeding mothers based on demographic data showed that the majority of mothers were in the age range 26-35 (47.05%), normal delivery type was 76.48%, with high school education 70.59%, gestational age 33-40 weeks 94.2% and parity multipara (76.48%)

**B. Distribution of Anxiety Frequency Distribution of Breastfeeding Mothers about breast milk production in Sigumpar Dangsina Village, Sigumpar Health Center Work Area 2022**

Table 4. Distribution of Anxiety Frequency Distribution of Breastfeeding Mothers about Breast Milk Production in Sigumpar Dangsina Village, Sigumpar Health Center Work Area 2022

Anxiety	Frequency (n)	Percentage (%)
Moderate anxiety	8	47.05
Mild anxiety	9	52.95
<b>Total</b>	<b>17</b>	<b>100.0</b>

The results of data analysis on 17 respondents obtained maternal anxiety about milk production showed as many as 9 people (52.95%) with moderate anxiety, as many as 8 people (47.05%) with mild anxiety.

**C. Frequency distribution based on breast milk production in Sigumpar Dangsina Village Working Area of Sigumpar Health Center 2022**

Table 5. Distribution of Breast Milk Production Frequency for Breastfeeding Mothers in Sigumpar Dangsina Village, Sigumpar Health Center Work Area 2022

Breast milk production	Frequency (n)	Percentage (%)
Currently	14	<b>82.36</b>
Lots	3	<b>17.64</b>
	<b>17</b>	<b>100</b>

From table 5 the results of data analysis on 17 respondents show that the majority of mothers have moderate milk production (82.36%).

**D. Relationship between Anxiety in breastfeeding mothers and milk production in Sigumpar Dangsina Village, Sigumpar Health Center Work Area 2022**

Table 6. Relationship between Anxiety in breastfeeding mothers and milk production in Sigumpar Dangsina Village, Sigumpar Health Center Work Area 2022

Mothers Anxiety	Breast milk production			P
	Currently	Lots	Total	
				0.003

Based on research that has been done about the relationship between the level of anxiety of mothers who breastfeed their babies to the amount of milk production in mothers who have babies aged 1-12 months in Sigumpar Dangsina Village, Sigumpar Health Center Work Area with Spearman's test, p value = 0.003 obtained p value < (0.05) . So it can be concluded Ha, which means that there is a relationship between the level of anxiety of mothers who breastfeed their babies to the amount of milk production in mothers who have babies aged 1-12 months in Sigumpar Dangsina Village, Sigumpar Health Center Work Area.

**Discussion**

Based on research that has been conducted on the relationship between the level of anxiety of mothers breastfeeding their babies to the amount of milk production in mothers who have babies aged 1-12 months in the Sigumpar Dangsina Village, Sigumpar Health Center Work Area on 17 respondents, the results of data analysis of the relationship between the level of anxiety of mothers who breastfeed their babies with The amount of breast milk production statistically using Spearman's test showed p value = 0.003 obtained p value < (0.05). So it can be concluded Ha, which means that there is a relationship between the level of anxiety of mothers who breastfeed their babies to the amount of milk production in mothers who have babies aged 1-12 months in Sigumpar Dangsina Village, Sigumpar Health Center Work Area.

Childbirth is a very worrying time for a woman who is a mother for the first time because she is required to be able to breastfeed and care for her baby (Harismayanti, Sudirman, A. A., & Supriaty, I. 2016). Breastfeeding is a natural way to provide optimal nutrition, immunity and emotional maintenance for the growth and development of babies (Rompas, 2019). There is no artificial milk (Formula Milk) that can match breast milk both in terms of nutritional content, growth factors, hormones and especially immunity. Because the baby's immunity can only be obtained from breast milk (Kemenkes RI, 2014). The birth of a child poses a fundamental challenge to the established structure of family interactions and also to the care of the newborn. When a baby is born for the first time, mothers may feel confused about how to care for them and how to breastfeed

properly. Anxiety is a mood disorder characterized by feelings of fear or worry that are deep and unclear.

The results showed that the results of data analysis on 17 respondents obtained maternal anxiety about milk production showed as many as 9 people (52.95%) with moderate anxiety, as many as 8 people (47.05%) with mild anxiety. This level of anxiety indicates that there are concerns that arise in breastfeeding mothers about milk production. The emergence of these concerns is certainly influenced by many factors, one of which is the mother's level of knowledge, education, work, emotions, physical condition. The results showed that the results of data analysis on 17 respondents obtained that maternal anxiety about breast milk production showed as many as 9 people (52.95%) with anxiety. moderate, as many as 8 people (47.05%) with mild anxiety. This level of anxiety indicates that there are concerns that arise in breastfeeding mothers about milk production. The emergence of these concerns is certainly influenced by many factors, one of which is the mother's level of knowledge, education, work, emotions, physical condition (Arfiah, 2018).

Breastfeeding mothers have an average education of 70.59% high school graduates, D3 and Srata 1. Notoadmojo (2010), that education is an effort to increase human resources to be able to obtain the broadest knowledge. Rayhana, & Sufriani. (2017) stated that the higher the level of education of a person where a person will be able to seek information or receive information well so that he will quickly understand the condition and severity of his illness and with circumstances like this it will cause an increase in anxiety in that person.

The results showed that the majority of mother's milk production had moderate milk production (82.36%). Breast milk production is influenced by the hormone oxytocin, prolactin hormone, prolactin reflex and let-down reflex. When the baby sucks the nipple, there will be a prolactin reflex which will stimulate the prolactin hormone to produce breast milk and a let-down reflex which will stimulate milk flow. Correct breastfeeding techniques will facilitate milk production (Agustin, I., & Septiyana, 2018). Breast milk production can be influenced by several factors, namely infant birth weight, gestational age, maternal age and parity, maternal stress/illness, smoking, alcohol consumption, consumption of contraceptive pills, maternal diet, husband and family support, breast care, type of delivery and hospitalization. during childbirth (Musrifa, 2018).

Maternal age affects milk production. Young mothers produce more breast milk than older mothers. That mothers who are younger or aged less than 35 years produce more milk than mothers who are older. Mothers who gave birth to their second child onwards produced more breast milk than those who gave birth to their first child, based on demographic data, the parity of the mother was multiparous (76.48%).

Based on the results of demographic data as many as 4 mothers (23.52%) gave birth by cesarean section. Delivery by cesarean section can cause different problems with mothers who give birth normally. In addition to experiencing physiological changes during the puerperium, especially involution and lactation, in mothers with cesarean section, when the anesthetic effect is lost, there will be pain around the surgical incision. Pain that arises can cause various problems for the mother, for example the mother becomes lazy to do early mobilization, if the pain is felt great the mother will focus on herself without caring about her baby and will also cause anxiety, so that it will inhibit breast milk production (Anggraeni, F. P, 2019).

Support from husband and family can affect the smooth flow of breast milk, a comfortable and relaxed atmosphere makes mothers avoid anxiety. Based on the results of interviews with several respondents, Mother said that she always received support from her husband and family to give breast milk to her child for at least 6 months (exclusive).

Based on the Spearman test, the results showed that there was a relationship between the level of anxiety of mothers who breastfeed their babies to the amount of milk production in mothers

who had babies aged 1-12 months in Sigumpar Dangsina Village, Sigumpar Health Center Work Area, p value = 0.003

Breast milk is a nutritious food that is easily digested by babies and is immediately absorbed (Rayhana & Sufriani, 2017). The antibody content in breast milk causes the baby to become healthier and stronger and avoids the baby from malnutrition. In its benefits for intelligence, the lactose contained in breast milk functions for the optimal brain maturation process. The formation of Emotional Intelligence (EI) will be stimulated when the baby is breastfed and is in his mother's arms. The content in breast milk can also increase the immune system which causes babies to be more immune to various types of diseases (Rayhana, & Sufriani, 2017).

Breast milk production will be produced smoothly, if the mother's mood feels comfortable and happy it will affect the smoothness of breastfeeding, on the contrary if the mother feels anxious and stressed it will inhibit the smooth flow of breast milk (Rompas, 2019).

The results of this study are in line with the results of Wiwin Sulastris's research, Sugiyono (2016) in his research said that there was a relationship between maternal anxiety and breastfeeding during the postpartum period. Anxious mothers will express less milk than mothers who are not anxious. This is also in line with the results of research by Iin Febrina (2011) which states that there is a relationship between the level of anxiety and the smooth discharge of breast milk for primiparous post partum mothers. In line with the results of Winarno Fifi ARIYANI's research (2020), it shows that there is a significant relationship between the level of anxiety and the milk production of post sectio caesarea mothers as indicated by the significance value showing p value = 0.007 so that  $p < 0.05$ .

Efforts to keep breast milk smooth are starting from the mother's strong desire to provide the best nutrition, namely breast milk for her baby. Strong motivation will affect the mother's physical and emotional to produce breast milk. By having a strong desire and sincere and high affection, milk production can be stimulated. The mother's factor that becomes a problem in breastfeeding is the production of breast milk. Problems expressing milk on the first day after giving birth can be caused by reduced stimulation of the hormone oxytocin. Psychological factors are things that need to be considered such as anxiety. After giving birth, mothers experience physical and physiological changes that result in psychological changes. This condition can affect the lactation process. The facts show that the way the hormone oxytocin works is influenced by psychological conditions. Mother's psychological preparation before breastfeeding is an important factor that affects the success of breastfeeding. Anxiety, stress, excessive worry, unhappiness in the mother play a very important role in the success of exclusive breastfeeding (Hastuti, P., & Wijayanti, 2017).

## CONCLUSION

Based on the results of research that has been carried out in Sigumpar Dangsina Village, Sigumpar Health Center Work Area, the conclusions of 17 respondents are obtained

1. The results showed that the characteristics of breastfeeding mothers based on demographic data showed that the majority of mothers were in the age range of 26-35 (47.05%). Type of normal delivery 76.48%, with high school education 70.59%, gestational age 33-40 weeks 94.2% and parity multipara (76.48%)
2. Mother's anxiety about breast milk production showed as many as 9 people (52.95%) with moderate anxiety, as many as 8 people (47.05%) with mild anxiety
3. Breast milk production The majority of mothers have moderate milk production (82.36%).

4. There is a relationship between the level of anxiety of mothers who breastfeed their babies to the amount of milk production in mothers who have babies aged 1-12 months in Sigumpar Dangsin Village, Sigumpar Health Center Work Area, p value = 0.003

## REFERENCES

- Agustin, I., & Septiyana, S. (2018). "Kecemasan Pada Ibu Post Partum Primipara Dengan Gangguan Proses Laktasi". *Jurnal Ilmu Keperawatan Jiwa*, 1, 99.
- Anggraeni, F. P. (2019). "Hubungan Intensitas Nyeri Dengan Produksi ASI Pada Ibu Post Sectio Caesaria Di Rumah Sakit Aisyiyah Muntilan".
- Arfiah. (2018). "Pengaruh Pemenuhan Nutrisi Dan Tingkat Kecemasan Terhadap Pengeluaran Asi Pada Ibu Post Partum Primipara". *Jurnal Kebidanan*, 8(November), 134–137.
- Harismayanti, Sudirman, A. A., & Supriaty, I. (2016). "Manajemen Laktasi Terhadap Keberhasilan Pemberian Asi Eksklusif". 1–16. 64 Universitas Muhammadiyah Magelang.
- Hastuti, P., & Wijayanti, I. T. (2017). "Analisis Deskriptif Faktor yang Mempengaruhi Pengeluaran Asi pada Ibu Nifas di Desa Sumber Kecamatan Sumber Kabupaten Rembang". *Jurnal Universitas Muhammadiyah Magelang*, 223–232.
- Kemendes RI. (2021). "Laporan Kinerja Kementerian Kesehatan Tahun 2020". In Kementerian Kesehatan Republik Indonesia Tahun 2021.
- Musrifa. (2018). "Faktor Yang Berhubungan Dengan Kelancaran Pengeluaran Asi Pada Ibu Post Partum Di Rumah Sakit Umum Daerah Kota Kendari Tahun 2018". Skripsi.
- Naziroh, U., Rosyidah, I., & Millia H.R, I. M. H. (2019). "PENGARUH PIJAT OKSITOSIN TERHADAP KELANCARAN ASI PADA IBU PRIMIPARA (Di Posyandu Balita Desa Segodobancang Kecamatan Tarik Kabupaten Sidoarjo)". *Hospital Majapahit (JURNAL ILMIAH KESEHATAN POLITEKNIK KESEHATAN MAJAPAHIT MOJOKERTO)*, 11(1), 17-23.
- Notoatmodjo, S. 2010. "Metodologi Penelitian Kesehatan". Jakarta : Rineka Cipta.
- Rayhana, & Sufriani. (2017). "Faktor-Faktor Yang Mempengaruhi Produksi Asi Dengan Kecukupan Asi". *Jurnal Keperawatan*.
- Rompas, Z. M. G. K. S. (2019). "Hubungan Kecemasan Dengan Kelancaran Pengeluaran Asi Pada Ibu Post Partum Selama Dirawat Di Rumah Sakit Ibu Dan Anak Kasih Ibu Manado". *Jurnal Keperawatan*, 7(1).