



Volume 14 Nomor 1 (2023) 32-37

JURNAL KEBIDANAN

p-ISSN: 2089-7669 ; e-ISSN: 2621-2870

<https://doi.org/10.31983/jkb.v14i1.8932>



The Influence of Psychological Factor on Breast Milk Production in Breastfeeding Mothers with COVID-19 Survivors in Tegal

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Received: July 25th 2022; Revised: October 31th 2023; Accepted: April 30th 2024

ABSTRACT

The role of breastfeeding mothers very important, not only for the baby's growth but also for their own health. Lactation offers numerous health benefits, including preventing infectious diseases and reducing depression among mothers. One of the factors that affect the worsening of exclusive lactation is the anxiety felt by mothers, especially during the COVID-19 pandemic. The anxiety experienced by breastfeeding mothers is due to their thoughts or knowledge, will transmit the COVID-19 virus to her baby through breast milk, while one of the effects of anxiety on breastfeeding mothers is that milk production isn't smooth or doesn't come out. This study aims to determine the effect of psychological factors on breast milk production in COVID-19 survivors. It's an analytic design using an observational research design with a cross sectional approach. The population study involved 46 breastfeeding mothers with COVID-19 survivors in Tegal with purposive sampling and Chi Square analysis test. The results showed that in mothers who didn't experience anxiety, their milk production didn't decrease, while in mothers who experienced anxiety there was reduced milk production. The results showed that there was an influence of psychological factors on breast milk production in breastfeeding mothers COVID-19 survivors with a P-value of 0.011. It's hoped that the Tegal City government will cooperate with health workers to make breastfeeding mothers with COVID-19 calmer and less anxious.

Keywords: psychology; milk production; breastfeeding; COVID-19 survivors

Introduction

The role of breastfeeding is very important, not only for the baby's growth and development but also for her own health. Breastfeeding has many benefits, from preventing infectious diseases to reducing maternal depression. This should be taken into consideration by mothers to not hesitate in breastfeeding. Breast milk is more than just food and is a living tissue with many immune factors that will continuously provide active protection against infection when the baby's body cannot yet protect itself. Breast milk contains the right amount of energy, protein, vitamins, water and other nutrients for infants. WHO and UNICEF recommend that

children should only be breastfed for at least six months and continue until the child is two years old in order to reduce morbidity and mortality in children [1].

According to WHO and UNICEF in 2018, the global exclusive breastfeeding rate is quite low at only 41 percent. In Indonesia itself, the exclusive breastfeeding rate only reached 37 percent. The factors that influence the worsening of exclusive breastfeeding are due to the anxiety felt by mothers which causes them not to breastfeed their babies. The anxiety experienced by breastfeeding mothers is due to the thought or knowledge that the mother will transmit the Covid 19 virus to her baby through breast milk.[2]. According to WHO, the Covid 19 virus is not transmitted through breast milk for

mothers who are confirmed or suspected COVID-19 patients, UNICEF and WHO continue to encourage the continuation of breastfeeding during the pandemic without separating mothers from their babies [3].

The IDAI COVID-19 Task Force reported that at the end of July 2021, 447 children under 1 year of age died due to COVID-19, of which 16% were newborns. Therefore, breastfeeding activities should not be interrupted regardless of the mother's status, even though the breastfeeding mother has been confirmed positive for COVID-19. If the current condition does not allow, mothers who are identified with Covid-19, breast milk can still be given by continuing to carry out strict health protocols, meaning that mothers can still breastfeed directly and if the mother is treated, she must be supported so that she can express breast milk [4].

Women who are positive for COVID-19 should be encouraged to safely breastfeed, hold their babies in skin-to-skin contact, and be nursed together. Infants born to mothers with suspected, or confirmed COVID-19 should be breastfed according to standard infant feeding guidelines, while exercising the necessary PPI precautions. Parents and caregivers who need to be separated from their child, and children who need to be separated from their parents/caregivers should have access to appropriately trained health or non-health personnel for mental health and psychosocial support. If a mother who has contracted Covid-19, feels too unwell to breastfeed, then she can be supported to safely breastfeed her baby through a variety of other means including: pumping, relactation and obtaining donor breast milk [5].

The results of Ratih's research state that the anxiety of breastfeeding mothers during the covid 19 pandemic is an unpleasant feeling and is a normal reaction to situations that cause anxiety, conflict is subjective and arises because individuals experience anxiety. The Covid 19 pandemic situation causes anxiety in breastfeeding and the symptoms will be visible as long as the situation still exists [6].

Anxiety in postpartum mothers has an impact on breast milk production, breast milk that is not smooth or breast milk does not come out. Based on the results of Salat & Suprayitno's research, (2019) stated that more than 50% of breastfeeding mothers who experience anxiety result in breast milk production that is not smooth [7]. The impact when breast milk production is not smooth is like the mother experiencing pain due to swollen breasts, mastitis and even abscesses in the breast which can

cause infection. Infected breasts cannot be given as a result, the baby's nutrition is not fulfilled, the baby's lack of immunity, the lack of Bounding attachment between mother and baby, and the baby has a risk of death due to diarrhea 3.94 times greater than babies who receive exclusive breastfeeding. [8].

From the results of research conducted in the Margadana area of Tegal City in May 2021, there were 6 breastfeeding mothers suffering from Covid-19. Based on the results of the survey in the community, it was stated that breastfeeding mothers who were confirmed with Covid-19 experienced many obstacles including the fear that the baby would be infected, this could interfere with the mother's psychic so that it could reduce milk production, symptomatic mothers felt unable to provide breast milk. Thus, support for breastfeeding mothers is very important to increase the mother's confidence in providing breast milk. Based on the background of the problem above, there are several factors that influence Covid-19 survivor mothers in providing breast milk. Thus, it is necessary to conduct a study that aims to determine the effect of psychological factors on breast milk production in COVID-19 survivor mothers.

Methods

This type of research is analytic using observational research design with a cross sectional approach. The population in this study were 230 breastfeeding mothers with COVID-19 who lived in Tegal in 2022. The sample in this study amounted to 46 people with purposive sampling technique, namely sampling using certain considerations in accordance with the desired criteria to be able to determine the number of samples to be studied.[9] The sample criteria in this study were mothers who had suffered from COVID-19 while still breastfeeding their babies aged 0-12 months and lived in Tegal and were willing to become respondents. In this study, the data analysis was univariate analysis to produce frequency distributions and presentations, while the univariate variables included respondent characteristics including: mother's age, baby's age, education, occupation, parity. Psychological factors that include: anxious and not anxious and breast milk production factors which include reduced or not reduced breast milk. While the bivariate analysis compares the cross distribution between the two variables concerned using the Chi Square analysis test. The hypothesis in this study is the Alternative Hypothesis (H_a): $\rho \neq 0$ there is an influence of

psychological factors on breast milk production or Null Hypothesis (H0): $\rho = 0$ there is no influence of psychological factors on breast milk production. The ethical eligibility letter was issued by the

research ethics commission of the Poltekkes Kemenkes Semarang with ethical number No. 0329/EA/KEPK/2022.

Results and Discussion

Table 1.
Respondent characteristics

No	characteristic	F	%
1	Mother's age		
	20-35years	40	87
	>35 years	6	13
2	Baby's age		
	<=6 months	20	35,5
	>6 - 12 months	26	56,5
3	Education		
	Elementary-Middle School	5	10,9
	High School	21	45,7
	College	20	43,5
4	Employment		
	Not working	24	52,2
	Working	22	47,8
5	Parity		
	1 time	23	50
	2-3 times	22	47,8
	>/=4 times	1	2,2

Table 2.
The influence of psychological factors on breast milk production

Psychology	Milk production during		<i>p-value</i>
	Not reduced	Reduced	
Not Anxious	10 (100%)	0 (0%)	<i>0,011</i>
Anxious	21 (58,3%)	15 (41,7%)	
Total	31 (67,4%)	15 (32,6%)	46 (100%)

This study was conducted in Tegal region in June 2022 online through google form. With 46 respondents of breastfeeding mothers. The results of the study are described.

Based on the research results in table 1. The characteristics of respondents based on age, education, occupation and parity showed that most respondents were aged 20-35 years as many as 40 (87%), the age of the baby was mostly >6-12 months as many as 26 (56.5%), most mothers' education was high school 21 (45.7%), most mothers did not work as many as 24 (52.2%) and parity most mothers had given birth once as many as 23 (50%). From the Covid-19 monitoring data in Jakarta in September 2020, it shows that the highest

Covid-19 cases were at the age of 30-39 years with 11,707 cases, and the age of 20-29 years was the second highest with 10,089 cases. Seeing this data, most of the positive covid-19 patients in Jakarta come from the productive age group.[10]. This is probably because 20-35 year olds who are actively working have a more dynamic lifestyle with a high social level. They often gather and discuss to complete a job in the office. Then in their break time they make a habit of eating together so they do not apply health protocols. In addition, there are still many people who think that those who are young are more resistant to Covid-19, but in reality this contributes to the number of infections among

productive age, highly educated and working people.

The results of this study are in accordance with research conducted by Vitria which shows that breastfeeding mothers who suffer from Covid-19 are mostly in the age range of 20-35 years as much as 70% and the age of the baby in the range of 6.5-12 months as much as 67% and parity in mothers who have only given birth once as much as 50%. [11] The age factor affects a person's readiness at the time of motherhood, at an age that is classified as productive pregnancy is planned and desired by young or newly married couples. So that someone is more enthusiastic about receiving information about pregnancy. Pregnancy that is desired or planned allows for lower stress and anxiety compared to unplanned pregnancies. Parity is related to the mother's experience in caring for the baby, some primiparous mothers with little experience can actually increase stress or anxiety [12].

Based on table 2. shows that psychological factors in breastfeeding mothers with COVID-19 survivors, that in mothers who do not experience anxiety their milk production is not reduced as many as 10 people (100%) while in mothers who experience anxiety there are 15 people (41.7%) reduced milk production. The results of the analysis test showed that there was an influence of psychological factors on breast milk production in breastfeeding mothers with COVID-19 survivors with a P-value of 0.011. This is in accordance with the results of Yunita S's research which states that of the 7 breastfeeding mothers who did not experience anxiety, all (100%) had smooth milk production, while of the 11 mothers who experienced mild anxiety, most (72.7%), namely as many as 8 breastfeeding mothers, had poor milk production and of the 15 breastfeeding mothers who experienced moderate anxiety, all (100%) had poor milk production. The results of the analysis show that there is a relationship between anxiety of breastfeeding mothers and the smoothness of breast milk production [7].

According to Endang Wahyuningsih, factors that affect breast milk production are the mother and baby. Factors from the mother that are very influential are the factors of peace of mind and spirit.[13] Stress such as confusion, fear, and anxiety are factors that will form a blockade in the let down reflex, this is due to the release of adrenaline which causes vasoconstriction of the alveoli vessels, so that oxytocin has little hope of reaching the myoepithelium cell organ. This is in

accordance with the theory that psychological disorders in mothers cause reduced milk production because it will inhibit the let down reflex. In the let down reflex, there are factors that can inhibit, including mothers who experience anxiety [14].

This is in accordance with the results of Prabawani's research, which states that the smooth release of breast milk is influenced by several factors, one of which is psychological factors, namely anxiety. Someone who experiences anxiety will have a negative impact on their health, such as lowering the body's immune system. That way the body will find it difficult to fight various diseases so that people will become susceptible to illness, due to the weak immune system in the body [15].

Another study conducted by Pri hastuti stated that most breastfeeding mothers experienced anxiety about Covid-19 conditions, totaling 16 people (53.3%) and not anxious about Covid-19 conditions, totaling 14 people (46.7%). Most of the breast milk has not come out until the second day after giving birth totaling 21 people (70.0%), while breast milk comes out until the second day after giving birth totaling 9 people (30.0%). The results of the analysis show that there is an effect of Covid-19 pandemic anxiety on breast milk production of postpartum mothers [16].

One of the factors affecting failure in the breastfeeding process can be caused by the absence of breast milk. The smoothness of breast milk is strongly influenced by psychological factors. The mother's psychological condition and calm emotions greatly affect the smoothness of breast milk. If the mother is stressed, depressed, uneasy, anxious, sad, and tense, it will affect the milk supply. Anxious mothers will produce less breast milk than mothers who are not anxious. Supported by the COVID-19 pandemic, people, especially breastfeeding mothers, experience anxiety, which can have an impact on breast milk production [17][18].

Based on the results of the research and supporting theories, the researcher assumes that anxiety occurs in breastfeeding mothers because they think too much about negative things during the COVID-19 pandemic. Breastfeeding mothers with COVID-19 survivors should think positively, try to love their babies, and relax when breastfeeding. When mothers think positively and stay calm, the existing hormones will work well so that it will trigger milk production and breast milk can come out smoothly, on the other hand, mothers whose psychological conditions are disturbed, such as feeling anxious, will inhibit the work of

hormones in their bodies so that it will affect milk production and milk production can decrease and cause milk not to come out.

Conclusion

Psychological factors in breastfeeding mothers with COVID-19 survivors, in mothers who did not experience anxiety their milk production was not reduced as many as 10 people (100%) while in mothers who experienced anxiety there were 15 people (41.7%) reduced milk production. The results of the analysis test showed that there was an influence of psychological factors on breast milk production in breastfeeding mothers with COVID-19 survivors with a P-value of 0.011. It is expected that the Tegal City government in collaboration with health workers to further increase its support for breastfeeding mothers, especially mothers who suffer from COVID-19 so that they can provide breast milk smoothly without any obstacles so that the mother's milk production remains smooth, does not cause anxiety and other health problems in breastfeeding mothers.

Acknowledgements

Thanks go to Harapan Bersama Polytechnic for supporting this research in providing funds and facilitating licensing. Thanks also go to breastfeeding mothers in the Tegal area who have been willing to become respondents in this study along with midwives and cadres who have helped a lot in this research.

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