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**JURNAL NERS DAN KEBIDANAN  
(JOURNAL OF NERS AND MIDWIFERY)**

<http://jnk.phb.ac.id/index.php/jnk>



## **The Correlation of Stress Level and Breastmilk Production among Breastfeeding Nurses at Panti Waluyo Hospital Malang**



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### **Article Information**

#### **History Article:**

Received, 07/10/2021

Accepted, 29/03/2022

Published, 15/04/2022

#### **Keywords:**

breastmilk production,  
nurses, stress level

### **Abstract**

The nursing profession has important duties in providing professional health services during working on health institution. The demands of professional services resulting a high workload that may increase the stress level of nurses which also have impacts on breastmilk production of breastfeeding nurses. This research aimed to determine the correlation between stress levels and the smooth production of breastmilk of breastfeeding nurses at Panti Waluya Hospital, Malang. The research design used pre-experimental with a cross-sectional approach. The simple random sampling technique was used to recruit the total sample of 44 respondents. The research was conducted at Panti Waluya Hospital. Most of the respondents (63.7%) had moderate stress levels and most of the respondents (61.3%) had non-smooth milk production. The result of the Chi-square test showed  $p$ -value  $(0.036) < (0.05)$  which meant there was a correlation between stress levels and the production of breastmilk for nurses at Panti Waluya Hospital, Malang. The nurses who had a moderate stress level would have poor breastmilk production. It is expected to the breastfeeding nurses increasing the milk production by using coping stress management and also practicing additional nutritional intake while working in high workload situation.

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DOI: [10.26699/jnk.v9i1.ART.p043-047](https://doi.org/10.26699/jnk.v9i1.ART.p043-047)

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P-ISSN : 2355-052X

E-ISSN : 2548-3811

## INTRODUCTION

The hospital is an organization that is engaged in health services that deal with patients every day. The hospital as one of the sub-systems of health services that provide health services includes medical services, medical rehabilitation and care services. These services are carried out through emergency units, outpatient units and inpatient units (Amalia, 2016). One of the professions that has an important role in providing health services is a nurse. Nurses are providers of health services, where nurses provide services in hospitals 24 hours a day and have constant contact with patients until the patient leaves the hospital. Nursing services are a form of professional service from health services, based on nursing knowledge and tips aimed at individuals, families, groups, and communities, both healthy and sick determine the quality of the hospital (Nursalam et al., 2018).

In addition, nurses have very high duties and responsibilities for the safety of human life. So that the nursing profession has a risk of experiencing stress when working. Work stress is a psychological response form of the body caused by pressures; job demands that exceed the ability required. Possessed, both in the form of physical or environmental demands and social situations that interfere with the implementation of tasks, which arise from interactions between individuals and their work, and can change normal physical and psychological functions, so that they are considered dangerous and unpleasant (Widyasari, 2010). In addition, nurses' work stress can cause a decrease in performance. Work stress is a condition that arises from the interaction between humans and work and is characterized by human changes that force them to deviate from their normal functions (Luthans et al., 2006). Work stress on nurses can cause psychological problems such as nurses who are breastfeeding have an impact on the process of releasing breast milk. Optimal growth and development in babies are something that every parent desires, to support optimal growth and development, proper nutrition is needed.

Breastmilk (ASI) is the most important nutrient and even the main food for babies where no other food can compete with it. Support for mothers is an important factor that also influences mothers to give exclusive breastfeeding. A mother who has positive thoughts of course will be happy to see her baby. All of this happens when the

mother is calm. This calm state is obtained by the mother if there is support from the environment around the mother to give breast milk to her baby. To get support from the mother, the baby will also receive support from three parties, namely husband, family, and health workers (Elsanti & Isnaini, 2018). As the most important and uncompetitive nutrition, it is certainly a loss if you don't give breast milk to your baby, especially if you prefer or replace it with other products. Breast milk production is strongly influenced by psychological factors. When breastfeeding, a mother needs peace of mind and it is best to stay away from feeling depressed (stressed) because it will affect milk production and the baby's comfort while breastfeeding. Mothers who are always in a state of anxiety, lack of confidence, feeling depressed may affect breastfeeding their babies (Annisa & Swastiningsih, 2015).

There are two important processes in the formation of breast milk and the process of expulsion of milk. The calm psychological and emotional state of the mother greatly affects milk production. Other factors that can affect milk production are stress. Mothers often experience difficulties when breastfeeding for the first time or becoming a breastfeeding mother such as fatigue, little breast milk, sore nipples, and trouble sleeping at night, and stress related to a new role, these can be a source of stress for the mother. depressed, uneasy, anxious, sad, and tense, milk production will have a significant effect. If there is anxiety and stress in breastfeeding mothers, there will be a blockade of the oxytocin hormone secretion reflex / let down reflex. If the let down reflex is not perfect, the thirsty baby is dissatisfied. This dissatisfaction is additional anxiety for the mother. This thirsty and dissatisfied baby will try to get enough milk by increasing the strength of his sucking which can often cause sores on the nipples which of course are painful for the mother. which also adds to the stress. with anxiety and stress can interfere with lactation so that it affects milk production because it inhibits the release of mother's milk very slowly.

Breast milk production is strongly influenced by maternal psychological factors, such as anxiety, lack of confidence, feeling depressed and various forms of emotional calm. The more depressed the mother feels, the less milk is released and inhibits the breastfeeding

process in the baby. In addition to stress, the smoothness of breast milk production is also influenced by many factors such as the frequency of breastfeeding, the baby's weight at birth, gestational age at birth, age and parity, stress and acute illness. In addition, the milk production is not smooth. It is suspected that the mother lacks knowledge in understanding the importance of breast care for smooth breastfeeding for the baby. And mothers must know and understand breast milk well because it contains substances needed for baby growth (Maimunah & Sitorus, 2020). Getting exclusive breastfeeding in Indonesia is caused by various factors, including the lack of support from various parties, one of which is husband's support. The success of exclusive breastfeeding will be easier if the support from the husband plays a role. Breastfeeding requires a stable emotional condition, considering the psychological factors of the mother greatly affect the production of breast milk, husband and wife must understand each other how important support is for mothers who are breastfeeding (Puspitasari & Sasongko, 2020).

Exclusive breastfeeding from birth to 6 months of age is important for the survival and optimal growth of infants. The World Health Organization (2001) that all infants should be exclusively breastfed from birth to 6 months of age. Exclusive breastfeeding is breastfeeding only until the baby is 6 months old, without additional fluids or other foods other than breast milk (Kusumaningrum et al., 2010). Based on the results of a preliminary research conducted on May 20, 2021 at Panti Waluya Hospital, Malang City, the researchers conducted interviews with

10 people where 10 nurses were breastfeeding. The results of the interview showed that out of 10 nurses who were breastfeeding said they were busy with work and little milk came out. at Panti Waluya Hospital".

## METHOD

This research used correlational analytic design by using cross sectional approach. The population was the whole breastfeeding nurses at the Panti Waluya Hospital which is located at Jl. Yulius Usman Malang. The simple random sampling technique was used to recruit the total sample of 44 respondents. Questionnaire was used for data collection on July 22, 2021. This research measures the relationship between stress levels and the smooth production of breast milk in nursing nurses at Panti Waluya Hospital, Malang.

## RESULT

The research was conducted at the Panti Waluya Hospital which is located at Jl. Yulius Usman Malang.

### General data:

The characteristics of respondents in this research including age, latest education, profession, income per month, and number of children which are presented in Table 1. Based on the distribution table, it shows that most (54.5%) of respondents were aged between 25-30 years old, 79.6% had Diploma education, all (100%) working as nurses, most (66%) of the respondents earn 3- 3.5 million, and majority (54.6%) had 2 persons of children.

**Table 1: Frequency distribution of respondents based on age, latest education, profession, income per month, and number of children among breastfeeding nurses in the Panti Waluyo Hospital in 2021**

Variabel	Category	F	(%)
Age	25-30 years	24	54,5
	31-35 years	17	38,7
	36-40 years	3	6,8
Latest education	Diploma	35	79,6
	Bachelor	9	20,4
Profession	Nurse	44	100
Income per month (Rp)	2 million	8	18,1
	2.5 million	7	15,9
	3-3,5 million	29	66
Number of children	1 person	11	25
	2 persons	24	54,6

	3 persons	9	20,4
<b>Total</b>		<b>44</b>	<b>100</b>

**Specific Data:**

Specific data in the research presented data on the stress level, smooth breastmilk production and the relationship between breastfeeding nurses

stress level with the smooth production of breast milk for nurses at Panti Waluya Hospital, Sawahan Malang.

**Table 2: Results Description of Stress Level and Breastmilk production among Breastfeeding Nurses at Panti Waluyo Hospital, Sawahan Malang.**

Variable	Category	F	(%)
Stress level	Low	6	13,7
	Moderate	28	63,7
	Severe	10	22,6
Breastmilk production	Smooth	17	38,7
	Poor	27	61,3
<b>Total</b>		<b>44</b>	<b>100</b>

Based on the table below, it shows that most of the breastfeeding nurses (63.7%) experience a moderate stress level, about 10 (22,6%) experience severe stress level. Also 6 breastfeeding nurses (13,7%) had low stress level while working and breastfeeding in panti Waluyo Hospital, Malang.

Tabel 2 also shows that most (61.3%) of the breastfeeding nurses had poor breastmilk

production. The cross-tabulation results with chi-square test were used to determine the relationship between stress level and smooth breastmilk production among breastfeeding nurses at Panti Waluyo Hospital, Sawahan, Malang. The decision making may be seen from the level of significance ( $\alpha$ ) less than 0.05 in the data presented as follows.

**Table 3: Results Description of Smooth Breast Milk Production of Nurses at Panti Waluyo Hospital, Sawahan Malang.**

Stress Level	Breastmilk Production				Total	Chi-square <i>p-value</i>
	Smooth		Poor			
	<i>f</i>	%	<i>f</i>	%		
<b>Low</b>	5	1,4	1	2,3	6	13,6
<b>Moderate</b>	10	2,7	18	40,9	28	63,7
<b>Severe</b>	2	4,5	8	18,2	10	22,7
<b>Total</b>	<b>17</b>	<b>38,6</b>	<b>27</b>	<b>61,4</b>	<b>44</b>	<b>100</b>

Based on the Table 3, it is known that from the majority of breastfeeding nurses who had moderate levels of stress (63.7%) also had a smooth breastmilk production as many as 17 respondents. Those who had poor breastmilk production as many as 27 (61.3%) respondents. The results of the chi -square test obtained *p*-value of (0.036) < (0.05) so the null hypothesis is rejected, which means there is a relationship between the level of stress and breastmilk production among breastfeeding nurses at Panti Waluyo Hospital, Sawahan, Malang.

**DISCUSSION**

The results showed that most (54.5%) of respondents were aged 25-30 years, almost all (79.6%) had D3 education, all (100%) worked, most (66%) of respondents earned 3-3.5 million, and most (54.6) had 2 children. Most of the 28 (63.7%) respondents had a moderate level of stress. Research shows that most (61.3%) have non-fluent milk production. The results of the research are in line with the research conducted by Puspita Ningrum, (2006) it was found that babies who were given formula milk had diarrhea

more often than babies who were exclusively breastfed. Based on the results of research by Elsanti et al. (2018), there is a significant relationship between social support and the continuity of exclusive breastfeeding with a significant value of  $0.001 < 0.05$ . Then there is a significant relationship between the level of stress on the continuity of exclusive breastfeeding with a significant value of  $0.028 < 0.05$ .

### SUGGESTION

Most of the 28 (63.7%) respondents had a moderate level of stress. The research showed that most of the 27 (61.3%) respondents had poor breast milk production.

The results of the chi-square test obtained p-value of  $(0.036) < (0.05)$  and the null hypothesis is rejected, which means there is a relationship between stress levels and the breastmilk production among breastfeeding nurses at Panti Waluyo Hospital, Sawahan, Malang.

### ACKNOWLEDGMENT

We would like to thank the Rumah Sakit Panti Waluya Malang for allowing this research, and the respondents who have cooperated well and the students who have assisted in data collection. I do not forget to thank Stikes Patria Husada Blitar for providing facilities in the publication of our research journal. Hopefully this research can be useful for the development of insight and further researchers.

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