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# EFFECTIVENESS OF TURMERIC DECOKE ON BREAST MILK PRODUCTION FOR POSTPARTUM MOTHERS

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**ABSTRACT**
Every mother can breastfeed, but there are obstacles that hinder breastfeeding. Low exclusive breastfeeding rates can be influenced by several other factors such as socio-cultural, psychological, physical, health workers, knowledge, and family/community organization support. Compounds in turmeric are useful as a stimulus to facilitate the release of breast milk from the body so that breast milk will be quickly produced by the body through the performance of the hormone prolactin. The general objective of this study was to determine the effectiveness of turmeric decoction on breast milk production in postpartum mothers at PMB Sari Meryandi. This research method used Quasi-Experimental with a one-group pretest-posttest research design. Sampling was carried out using an accidental sampling technique with a total of 15 respondents.The sampling technique used was a questionnaire and an interview as the instrument. The population of this study was postpartum mothers on days 3-5 who were exclusively breastfeeding and experiencing irregular milk production. This study was conducted for 7 consecutive days by giving 100 grams of boiled turmeric water, followed by 200cc of water, to their babies, and drinking it either cold or warm. Smooth breastfeeding was categorized as having an average milk production of >50cc/24 hours.The data analysis used was the Wilcoxon test (data with non-normal distribution). The results of the univariate analysis showed an average knowledge level in the intervention group. The results of the 2-tailed Sig value <0.05, which means there is a significant difference in the pre-test and post-test values after the administration of turmeric boiled water in the intervention group.

Keywords: breast milk; breast milk production; postpartum; turmeric decoction

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## INTRODUCTION

Breastfeeding is a physiological process of providing optimal nutrition to babies. Breastfeeding from birth to six months has many benefits and can reduce the risk of infant mortality due to malnutrition. Around 800,000 children's lives will be saved each year if they are breastfed within one hour of birth, then only breastfed for the first six months of life, and continue breastfeeding until the age of two.(Anon, 2019). Breastfeeding mothers should get an additional 20 grams of protein every day, because 100 cc of breast milk contains 1.2 grams of protein. In addition to forming protein in breast milk, protein is also needed for the synthesis of breast milk production hormones (Prolactin) and breast milk secretion hormones (Oxytocin)(Sulistyoningsih, 2017).

According to the dataWHOinfant mortality in 2023 was recorded at 29,945. From these data it can be seen that the infant mortality rate continues to increase. Exclusive breastfeeding has many benefits for babies, breast milk can reduce the risk of various infectious diseases, Sudden Infant Death Syndrome (SIDS), asthma and allergic diseases, cancer, obesity, cardiovascular and metabolic diseases. Meanwhile, for mothers, breastfeeding can increase bonding with their babies, weight loss after giving birth and is a natural contraceptive method(Anggryni et al., 2021). Exclusive breastfeeding is the provision of breast milk to babies aged 0-6 months without providing additional fluids such as formula milk, orange, honey and tea. In addition, additional food is also not recommended either in solid or liquid form (Maryunani, 2018)

Every mother can breastfeed, but there are obstacles that hinder breastfeeding. Some common problems encountered include sore nipples caused by poor breastfeeding attachment, swollen breasts due to less than optimal breast emptying, mastitis, yeast infections, unbalanced breast enlargement due to non-alternating breastfeeding, too little/too much breast milk production, sore breasts during breastfeeding, blocked milk ducts, and babies having difficulty breastfeeding due to the size of the mother's breasts.(Holc et al., 2017).

The low rate of exclusive breastfeeding can be influenced by several other factors such as socio-cultural, psychological, physical, health workers, knowledge, and support from family/community organizations.(Windayanti, Hapsari & Astuti, 2021). As WHO research has stated, the most common reason mothers stop giving exclusive breastfeeding is because they feel their breast milk is not sufficient for their baby's needs. Around 35% of mothers stop giving exclusive breastfeeding in the postpartum weeks because they feel their breast milk is not enough and their baby is not satisfied.(Sutanto & Fitriana, 2017).

Methods to increase breast milk production in mothers can be done through various techniques, including consuming katuk leaves, consuming breast milk-stimulating medicines, consuming herbal (traditional) medicines such as turmeric herbal medicine, breast massage, breast compresses.(Azizah, 2019). Turmeric is one of the plants of the ginger family (ziniberaceae) which is often used as a traditional herb for various diseases. Turmeric also contains high antioxidants. Compounds in turmeric are useful as stimulation to facilitate the release of breast milk from the body so that breast milk will be quickly produced again by the body through the performance of the prolactin hormone. The lactogogum compound contained in turmeric can also function to increase the rate of secretion and increase breast milk production so that the intensity of breastfeeding increases (Ariescha & Tryaningsih, 2019).

Turmeric is not like temulawak which has a high antioxidant content, the antioxidant content in turmeric is not too large. The chemical compounds in turmeric are useful as a stimulation to facilitate the release of breast milk from the body so that breast milk will be quickly produced again by the body through the performance of the hormone prolactin(Mayasari & Jayanti, 2022). The lactogogum compound found in ginger and turmeric increases the rate of secretion and increases breast milk production, this is based on previous research, thus increasing the intensity of breastfeeding.(Ariescha & Tryaningsih, 2019). Based on this phenomenon, researchers are interested in conducting a study entitled "The Effectiveness of Turmeric Decoction on Breast Milk Production in Postpartum Mothers at PMB Sari Meryandi". The purpose of this study was to determine the effectiveness of the benefits of giving boiled turmeric on breast milk production in postpartum mothers at PMB Sari Meryandi in 2024.

## METHOD

This research method used Quasi-Experimental with a one-group pretest-posttest research design. Sampling was carried out using an accidental sampling technique with a total of 15 respondents.The sampling technique used was a questionnaire and an interview as the instrument. The population of this study was postpartum mothers on days 3-5 who were exclusively breastfeeding and experiencing irregular milk production. This study was conducted for 7 consecutive days by giving 100 grams of boiled turmeric water, followed by 200cc of water, to their babies, and drinking it either cold or warm. Smooth breastfeeding was categorized as having an average milk production of >50cc/24 hours.The data analysis used was the Wilcoxon test (data with non-normal distribution). The results of the univariate analysis showed an average knowledge level in the intervention group.

## RESULT

### Univariate Analysis

Univariate analysis in this study was conducted to describe the frequency and categories of respondents, before giving boiled turmeric water to the breast milk production of postpartum mothers, and after giving boiled turmeric water to the breast milk production of postpartum mothers.

Table 1.
Distribution of frequency of breast milk production before and after giving turmeric decoction

| *Breast milk production* | Turmeric decoction | | | |
|---|---|---|---|---|
| | Before Given | | After Given | |
| | f | % | f | % |
| Fluent | 5 | 66.7% | 9 | 40% |
| Not smooth | 10 | 33.3% | 6 | 60% |

Based on the SPSS results, it can be seen that out of 15 respondents who have a category of postpartum mothers' breast milk production level before giving turmeric boiled water with the Not Smooth category as many as 10 (66.7%) respondents, followed by the Smooth category as many as 5 (33.3%) respondents. breast milk production category after giving turmeric boiled water with the Not Smooth category as many as 6 (40%) respondents, followed by the Smooth category as many as 9 (60%) respondents.

### Bivariate Analysis

This analysis was conducted to determine the effect of giving boiled turmeric on breast milk production in postpartum mothers where the method used by the researcher was the T-test statistical test. The level of significance (α) was 0.05 if the p value ≤ 0.05 means that there is a significant effect between the independent variable and the dependent variable and p value ≥ 0.05 means that there is no significant effect between the independent variable and the dependent variable.

Table 3.
Normality Test Results

| *Shapiro Wilk* | Asymp.sig.(2-tailed) | |
|---|---|---|
| | *Pre-Test* | *Post-Test* |
| Intervention Group | 0.708 | 0.128 |

The results of the study of 15 respondents who were given warm ginger decoction first, the author conducted a Shapiro Wilk normality test because the number of respondents was <50 people. This was done in order to meet the requirements to determine what type of statistical test would be used next. Based on the results of the data normality in the table above, significant results were obtained in the SPSS output where the frequency of breast milk production before being given turmeric decoction was 0.708 and the frequency of breast milk production after being given turmeric decoction was 0.128. From the results above, a p value> 0.05 was obtained, so it was stated that the distribution data was included in the normal category. So the author conducted a paired t-test statistical test to find the p-value.

Table 4.
The Effect of Giving Turmeric Boil on Breast Milk Production in Postpartum Mothers

| | N | Mean | *P-Value* |
|---|---|---|---|
| Before | 15 | 48.33 | 0,000 |
| After | 15 | 51.40 | |

Based on the table above, the results show that 15 respondents got a mean Pre-test score of 48.33 and a mean after giving turmeric decoction of 51.40, which shows an increase in the average score of breast milk production before and after giving turmeric decoction. Based on the output above, it is known that Asymp.sig.(2-tailed) has a value of 0.000 because the value of 0.000 is less than ≤ 0.05, so it can be concluded that "Ha is accepted" meaning that there is a difference in the results of giving turmeric decoction on the level of breast milk production of postpartum mothers at PMB Sari Meryandi in 2024.

## DISCUSSION

**Univariate Analysis**

The results of the study showed that the average age of respondents consisted of an age range of 25 - 30 years as many as 10 (67%) respondents, 31 - 35 years as many as 5 respondents (33%). In line with research conducted byGoddess (2020)which found that mothers aged 25-30 years had less smooth breast milk production compared to mothers aged 20-24 years. The research was conducted byThe Greatest Showman (2019)also found that mothers aged 25-30 years had lower breast milk production compared to younger mothers. At the age of 25-30 years, estrogen and progesterone hormone levels begin to decline. These two hormones play an important role in regulating breast milk production.(Aprilia & Krisnawati, 2020).

**Bivariate Analysis**

The results of statistical tests showed that there was a difference in the category of breast milk production levels before giving boiled turmeric water to the increase in the level of breast milk production of postpartum mothers with the Not Smooth category of 10 (66.7%) respondents, followed by the Smooth category of 5 (33.3%) respondents. After giving boiled turmeric water, the Not Smooth category was obtained as many as 6 (40%) respondents, followed by the Smooth category of 9 (60%) respondents.

Based on the results of the Hypothesis test using the Wilcoxon method, the Sig 2 Tailed value was obtained <0.05, which means that there is a difference in significance values between the Pre-test and Post-Test after giving turmeric boiled water, which can be concluded that there is a significant effect of giving turmeric boiled water on increasing breast milk production in postpartum mothers. The results of this study are in line with research conducted by Nurhayati (2021) where this study found that turmeric boiled water can increase breast milk production in postpartum mothers.

In line with other studies showing that giving boiled turmeric water every morning to postpartum mothers is effective in increasing breast milk production (Sari, 2022). The content contained in turmeric consists of curcumin which is an active compound that has anti-inflammatory and anti-oxidant properties that can help increase breast milk production, turmeric also contains Volatile Oil which can help increase breast milk production by stimulating the mammary glands, other content is Glycosides where the glycoside content in turmeric can help increase breast milk production by stimulating the mammary glands (Yanti & Suci, 2023).

Research by Nugroho (2019) found that turmeric can increase levels of the hormones prolactin and oxytocin, thereby increasing breast milk production in postpartum mothers. According to Widowati (2020) also found that turmeric can increase antioxidant levels and reduce oxidative stress in breastfeeding mothers, thereby increasing breast milk production. According to the researcher's assumption, the increase in the amount of breast milk production before and after giving turmeric decoction to postpartum mothers indicates that consuming turmeric decoction can increase breast milk production in postpartum mothers. The increase in breast milk production in postpartum mothers is influenced by the awareness of postpartum mothers in consuming herbal drinks such as turmeric which contain substances that are beneficial in increasing breast milk production.

## CONCLUSION

Based on the results of the research and data analysis that has been carried out, it can be concluded that the effect of boiled turmeric water on increasing the production of postpartum mothers is:

1. Before the administration of turmeric decoction, the distribution of the frequency of breast milk production of postpartum mothers at PMB Sari Meryandi was in the smooth category for 5 respondents (66.7%), and not smooth for 10 respondents (33.3%), Mean: 1.33.
2. After giving boiled turmeric, the distribution of the frequency of breast milk production of postpartum mothers at PMB Sari Meryandi was in the smooth category for 6 respondents (40%), and not smooth for 9 respondents (60%), Mean: 1.60
3. The statistical test of t-test obtained a value in respondents with the provision of turmeric decoction obtained a p value of 0.000 (<0.05) so it can be said that there is an effect of giving turmeric decoction on breast milk production. with the analysis results of Sig.2-Tailed: 0.000 <α0.05.

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