



Original Research

The Effect of a Combination of Oxytocin Massage and Music Therapy on Breast Milk Production and Breastfeeding Self Efficacy in Primipara Post Partum Mothers

Sri Wulandari, Mira Triharini, Sylvia Dwi Wahyuni

Faculty of Nursing, Universitas Airlangga, Surabaya, Indonesia

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CORRESPONDING AUTHOR

Sri Wulandari

sriwulandari2402@gmail.com

Faculty of Nursing,
Universitas Airlangga,
Surabaya, Indonesia

ABSTRACT

Introduction: The low coverage of exclusive breastfeeding is a picture of the failure of breastfeeding. Factors that influence mothers not to breastfeed infants include stress, uncertainty, or lack of confidence in the mother, which can interfere with exclusive breastfeeding and cause inadequate production. This study aimed to determine the effects of a combination of oxytocin massages and music therapies on breastfeeding and lactating infertility on the mothers of the post primipara.

Methods: research design uses a quasy experiment with pre-post test design. The research population was the mother primipara post mortem in the Surabaya workstation, Surabaya. The sample used was 80 respondents, divided into 2 groups: 40 intervention groups and 40 control groups with a sampling. An independent variable is a combination of oxytocin massage and music therapy. The dependent variable is the production of breast milk and self-feeding efficacy. The instruments used were the breast-feeding questionnaire and its lactation of self-feeding that had been tested for its validity and credibility. Research data was analyzed with wilcoxon signed rank test and mann withney test.

Results: Studies indicate that a combination of oxytocin massage and music therapies in milk production ($p=0.000$) and self-nursing efficacy ($p=0.000$) affect treatment groups. There is a significant difference between the treatment and control groups in breast production ($p = 0,000$) and self-nursing efficacy ($p=0.000$).

Conclusion: The effects of a combination of oxytocin massage and music therapy effectively increase breast milk production and self-nursing efficacy.

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1. INTRODUCTION

Breastmilk is the best food for babies until the age of 0-6 months because it contains a

variety of nutrients that babies need to grow and develop optimally (Riordan, 2010). The low coverage of exclusive breastfeeding is a picture of the failure of breastfeeding caused

by several factors. Factors that influence mothers not to give milk to babies include the condition of mothers who are sick, tired, unsure or lack confidence that can interfere with exclusive breastfeeding. The mother's confidence will increase if the breast is healthy. If the mother's condition is healthy and feels comfortable when breastfeed, it will cause smooth milk production. If a mother's breasts are problematic, like nipples that are not protruding or are too small, it will make the mother insecure (IDAI, 2013). Some of the most common reasons related to this are stress, anxiety, and working outside the home, mothers who are anxious and stressed can inhibit the expenditure of milk because the expenditure of milk will take place well on mothers who feel relaxed and comfortable (Dennis, C. & McQueen, 2009). For primipara mothers who stopped breastfeeding, they were closely associated with their experiences as mothers with less knowledge of the fundamentals of breastfeeding, less nursing skills, and painful early experiences when they're not ready for Lactating. Primipara's mother was a woman who had a child who was alive and only a mother for the first time. A primipara mother has a strong desire to breastfeed the baby (Smith & Paige, 2012). Based on an interview with one of the Kalijudan Community Health Center officers on April 9, 2019, a monthly nutritional report was obtained in February 2019, 6 babies received exclusive breastfeeding. The results of the interviews and reports indicate that other babies have been given other foods besides breast milk for less than 6 months. The main cause of mothers not giving exclusive breastfeeding is because of the small milk production. Another reason is the mistrust of the mother breastfeeding her baby because the mother works.

Coverage of exclusive breastfeeding in infants less than 6 months old worldwide is only around 36% in the 2007-2014 period (WHO, 2018). The results of the Breast milk Health Research show that there was a 46% decrease in Indonesia's exclusive breastfeeding coverage in 2017. In 2016, 54% gave exclusive breastfeeding until the age of 5 months (Riskasdas, 2018). The coverage of exclusive breastfeeding in East Java province decreases every year. In 2016 the coverage of exclusive breastfeeding from

the age of 5 months 48% (Kemenkes, 2017), then down in 2017, there was 41% (Kemenkes, 2018). Infants receiving exclusive breastfeeding in Surabaya reached 71.53% in 2017, an increase of 6.43% from 2016, which was only 65.10%. There are several primary health care in Surabaya whose coverage of exclusive breastfeeding is still low; one of them is the primary health care Kalijudan (Dinkes, 2018).

Breast-feeding is one of the behaviors that encourage mothers to reduce stress and to improve foster behavior toward their infants, and nursing can also maintain a mood (Tackett, 2007). One method that can increase the breast-feeding calm can and can improve the production of milk is oxytocin massage. Oxytocin massage is a massage that runs across the spine until costa the sixth, sixth, and is an effort to stimulate the hormones of prolactin and oxytocin after giving birth (Prasetyono, 2009). Music is known through research as a safe, inexpensive, and effective therapeutic facility. Mozart's music therapy has been proved to be relaxation therapy. It can affect the diaphragm functions that lower the axis of hypothalamus, hypophysis and adrenal glands for inducing stress hormon (epinephrine, norepinephrine, corticosteroid). It is thus producing more high-value oxytocin and prolactin hormones (Dewi, 2016). Based on the theory of self-dependence on lactation by Cindy lee Dennis, there are four sources of information (antecedent) that can influence mother self-feeding. They are previous breast feeding experiences, others' experiences as if by themselves, verbal persuasion, or inviting others, including staff health and individual physiological states such as stress, anxiety, exhaustion (McQueen, 2011). One method that can be used is music therapy that can relieve stress (Dewi, 2016), With a collaborative message of oxytocin and music therapy, it can be done to increase mother's breast-feeding production and mother's trust for breastfeeding. This study aimed to determine the effects of a combination of oxytocin massages and music therapies on breastfeeding and lactating infertility on the mothers of the post primipara.

2. METHOD

2.1 Design

The research used a combination of oxytocin massage and listening to music with a quantitative research design that uses quasi-experiment design methods with the type of pre-programmed posttest. The design uses the whereas treatment group. The control group is not being treated.

2.2 Population, Samples, and Sampling

The population in this study are 99 mothers listed in the workplace of Kalijudan Surabaya. The sample in this study meets the criteria of inclusion and has been divided using the Slovin formulas among them: 0-6 months of mothers with infants, mothers of postpartum primipara, households living at home, and mothers who have been involved. That study was 80 respondents. Respondents went from divide to 2 control groups with 40 and group treatment with 40. The sampling used in this research is sampling impressive.

2.3 Variables

The independent variable in this study is the demographic characteristics of the mother's age, mother's education, mother's occupation, the baby's age at this time. The independent variable is a combination of oxytocin massage and music therapy. The dependent variable is the production of breast milk and breastfeeding self-efficacy.

2.4 Instruments

The instruments in this study were questionnaire demographic characteristics, milk production, and breastfeeding self-efficacy.

2.5 Procedure

The data-collecting stage of researchers is requesting early data collection from the faculty. Researchers continue to request recommendations for initial data collection at the national association and politics and Surabaya community protection. The caller identified the location for the initial data collection point at Kalijudan's health center in Surabaya. Researchers coordinated with the medical center to screen nifas primipara's mother on April 12, 2019, with some predetermined criteria. Entering the mother

post mortem primipara with officials, upon obtaining the results, researchers analyzed the screening results. After coming to Kalijudan Surabaya headquarters, then the researcher look for data on the number of posyandu and the nursing mother with 0-6 months of infant life. Researchers are also collaborating with the human center to find the number and determine whether or not to responders are consistent with the inclusion criteria, with 99 new mothers according to 0-6 mothers who fit the criteria of inclusion. A mother with an infant who fit the criteria of inclusion was then assigned a take code was calculated by Slovin's way of finding each of the 40 responders heard of the control and treatment groups, where 80 mothers under the age of five as responders. Researchers submit to a college of nursing at the Universitas Airlangga to determine whether a qualified researcher does research. Ethical tests are performed to benefit respondents and to minimize injury and error in analysis. On June 25, 2019, researchers came to the cadres of posyandu associated with the study and gave them permission and approval for the response. Researchers ask cadre to provide information to those who meet the criteria for inclusion. Researchers offer explanations, sheets willingly become research respondents, and researchers explain that the study is free. On July 6, 2019, starting at 9:00 to 10:30, research began with a treatment group conducted at RW 4 Kalijudan. It is suggested that the first responders and escort families gather in room RW 4 to fill out a study instrument sheet in the form of a pretest for 40 of the respondents accompanied by the family according to the inclusion criteria made in the appendix.

The first responders and accompanying families gathered at the RW 4 hall suggested that they fill out a questionnaire (pretest) sheet of the study instrument for 40 of those escorted by see-through families with the criteria made by the incision in the appendix. The researchers conducted the study were assisted by eight fellow researchers from the Universitas Airlangga, school of nursing, and education with the same level of ability and knowledge since before the study. It explained research procedures and research materials. Each of the respondents got one

Table 1. Respondent's Characteristic

Characteristics of Respondents	Treatment group		Control group	
	n	%	n	%
My mother's age				
17-20 years	17	42.5	15	37.5
21-25 years old	14	35	9	22.5
26-35 years old	9	22.5	16	40
Total	40	100	40	100
Baby age				
Neonates	5	12.5	3	7.5
1-3 months	20	50	26	65
4-6 months	15	37.5	11	27.5
Total	40	100	40	100
Mother's Education				
Not completed in primary school	0	0	0	0
Elementary school	5	12.5	2	5
Middle School	5	12.5	10	25
High school	18	45	18	45
College	12	30	10	25
Total	40	100	40	100
Mother's job				
Government employees	2	5	0	0
Trader	8	20	10	25
Employee	15	37.5	5	12.5
Housewife	15	37.5	25	62.5
Total	40	100	40	100

headset, a rag, and a leaflet, for music to be given through a file placed on the respondents' mobile phone. After leaflets have been given by researchers and fellow researchers, researchers explain and demonstrate research techniques, to do so at the respondents. After an intervention, researchers conducted an evaluation of respondents and families for interventions observed by researchers and fellow researchers, after the assessments of researchers left an observation sheet for the measuring of interventions, the researcher explained that it was done 6 times in 3 days. During interventions, researchers went door to door to the home of the respondents who were assisted by their partners to make sure they were done. After exactly three days on July 10, 2019 responders came to RW 4 hall to turn the observation sheet. Also, give souvenirs and filling out posttest form with questionnaires to measure the production rate and feeding. After the treatment group was completed, researchers conducted the implementation of the control group, which took place on July 12, 2019, from 9:00 to 11:00 a.m. Researchers distributed pretests to control groups of 40 respondents who fit the criteria of inclusion. Researchers were

helped by cadre posyandu and to educate about breast milk and boost maternal confidence. Researchers gave a posttest of a questionnaire from which to measure breastfeeding and feeding. Control groups were given a combination of oxytocin massage and music therapy. Then each mother gets one headset, a couple of washers, and leaflets at home.

2.6 Analysis

Descriptive as well as statistical analysis data for distribution descriptions and variations of each variable are done with the software. Researchers are screening data using wilcoxon signed rank test to analyze the differences in breastfeeding self literacy before (pretest) and after (posttest) of treatment groups and control groups. Mann Whitney's test to analyze the differences in breastfeeding. Calculating the average production of milk and breastfeeding self literacy of both posttest groups was given at significant value. The data analysis rule: value 0.05 and reject, which means an effective combination of oxytocin massage and music feeding feeding

Table 2. Distribution of breast milk Production Level Parameter Treatment and Control Groups

Breast milk Production Rate	Treatment group				Control group			
	pre		Post		pre		Post	
	n	%	n	%	n	%	n	%
Good	1	2.5	40	100	-	-	-	-
Moderate	38	95	-	-	37	92.5	38	95
Less	1	2.5	-	-	3	7.5	2	5
Homogeneity Test					p = 0.174			
Wilcoxon Test	p = 0.000				p = 0.000			
Mann-Withney Test					p = 0.000			

Table 3. Parameter of Breastfeeding Self Efficacy Level for treatment and control groups

Breast milk Production Rate	Treatment group				Control group			
	pre		Post		pre		Post	
	n	%	n	%	n	%	n	%
Good	-	-	40	100	-	-	-	-
Moderate	38	95	-	-	37	92.5	38	95
Less	2	5	-	-	3	7.5	2	5
Homogeneity Test					p = 0.931			
Wilcoxon Test	p = 0.000				p = 0.000			
Mann-Withney Test					p = 0.000			

2.7 Ethical Clearance

This research was conducted in accordance with research ethics through the Airlangga University Faculty of Nursing Health Research Ethics Commission with No. 1508-KEPK.

3. RESULT

Analysis suggests that control group age groups and groups the earliest treatment of adults with 16 respondents (40%) and 17 respondents (42.5%). Infant in control groups and treatment groups mostly within the age range of 1-3 months. There are 26 respondents (65%) and 20 respondents (50%). A mother's education is the highest school (high school) with 18 respondents (45%). The work of most mothers is at 25 respondents (62.5%) on the control group and on the group of 16 respondents (40%) (Table 1).

Based on the analysis of the combination of oxytocin massage and music therapy in the treatment group on pretest, it is mostly 38 respondents (38%) are good. The control group showed that on pretest, all respondents have a category of being 37 (92.5%), level Milk production in less than 3 people (7.5%) category, and no good category. Of the 40 respondents who were experiencing increased breastfeeding scores,

the amount is 39 after the intervention, while the control group increases Breast milk production on respondent number 13. The results of Wilcoxon test analysis on treatment groups are from $p = 0,000$ below. This suggests a difference between before and after a combination of oxytocin massages and music therapy. Wilcoxon test results on control groups gained a value of $p = 0,000$ less than $p = 0.05$, which suggests a significant difference between pretest and posttest. Posttest respondents on the treatment and control group with significant value $p = 0,000$ ($p < 0.05$). Pretest homogeneity analysis is known that between those responding to treatment and control groups with a value of $p = 0.174$ can conclude that the data is homogeneous because of a value of $p > 0.05$ (Table 2).

Based on table 3 shows that the effect of a combination of oxytocin massage and music therapy in the treatment group at the pretest was mostly 38 respondents (95%), while at the posttest, all respondents were good. The control group showed that at the pretest all respondents had a moderate category of 37 respondents (92.5%), the level of Breastfeeding self-efficacy in the category of less than 3 people (7.5%), and there was no good category. It is known that 40 respondents who experienced an increase in Breastfeeding self-efficacy scores can also

affect mothers' education in the control group, namely respondents with number 10. Wilcoxon test analysis results in the treatment group obtained p-value = 0.000 less than the p-value <0.05. This shows that there are differences before and after the intervention of a combination of oxytocin massage and music therapy. Wilcoxon test analysis results in the control group obtained $p = 0.000$ less than $p = 0.05$. These results indicate that there are significant differences between pretest and posttest. Mann-Whitney test analysis results show that there are significant differences in breastfeeding self-efficacy between respondents' posttest results in the treatment group and the control group with a significant value of $p = 0.000$ ($p < 0.05$).

4. DISCUSSION

4.1 Effect of a Combination of Oxytocin Massage and Music Therapy on Breast Milk Production

The results of the analysis of breast milk production in the treatment group and the control group of respondents before the intervention combination of oxytocin massage and music therapy in postpartum primiparous mothers. Based on the results of data collection during the pretest, most of the control group and control group were moderate. After being given a combination intervention of oxytocin massage and music therapy in the treatment group, there were differences before and after the intervention.

Oxytocin massage and music therapy were performed at each respondent's home with a duration of 30 minutes performed by a family who lived in the same house for 3 days. In this study conducted at home for 6 times in 3 days, measured by observation sheets that have been given by researchers conducted by families who live in the same household with respondents. There were 1 respondent in the breast milk production before the intervention number 15 because the mother's education supported the mother's knowledge for breastfeeding, while the control group was on average. After being given a combination intervention of oxytocin massage and music therapy in the treatment group, there was an increase in the mother's breast milk production, so as many as 40

respondents in the treatment group increased.

Post test results show an increase in the value of breast milk production, an increase in the average value of the most frequently found in questions number 2, 4, and 6. Questions number 2, and 4 relate to the mother's breast while breastfeeding, while number 6 relates to how often the baby is given Exclusive breastfeeding. In the control group number 21 and 32 which did not increase due to mother's work, with questions related to the expulsion of urinating and defecating infants.

Milk secretion will be hampered if the mother feels pain when breastfeeding or emotional stress. This is the role of oxytocin massage that reduces pain and nursing mothers and helps reduce emotional stress, with oxytocin massage stimulating the muscles around the breast to squeeze out milk. This drop in milk reflex is important in maintaining the stability of milk production. This shows that there are psychological factors that affect the lack of milk production, among others, mothers who are in a state of stress, chaos, anger and sadness, lack of support and attention of the family and spouse to the mother (Lawrence, 2004).

Oxytocin massage according to research conducted by Faizatul (2014) is a stimulation that can be given to stimulate the expenditure of breast milk. Oxytocin massage is a massage in the back area of the spinal region to the fifth or sixth rib, using both thumbs in a circular motion (love movement). This massage is done twice a day (Depkes, 2007). Breast milk production is strongly influenced by several factors including age, nutrition, emotional, psychological, physiological, mother and others.

4.1 The Effect of Combination of Oxytocin Massage and Music Therapy on Breastfeeding Self Efficacy

The results of breastfeeding self-efficacy analysis showed that when the pretest was conducted respondents in the treatment group were mostly at the level of self-efficacy that was less and moderate, whereas in the control group it was at the level of self-efficacy. The posttest results of respondents in the treatment group were at good

breastfeeding self-efficacy levels, while the control group was at moderate breastfeeding self-efficacy levels.

From the results of breastfeeding self-efficacy research after being given a combination intervention of oxytocin massage and music therapy in the treatment group, there were differences before and after the intervention. It can be seen from this study that mothers are more capable and confident of breastfeeding when mothers when their partners support it verbally and are actively involved in the process of breastfeeding to give milk to their babies. A combination of oxytocin massage and music therapy was carried out at the respondent's home each with a duration of 30 minutes carried out by a family who lived at home for 3 days. In this study conducted at home for 6 times in 3 days, measured by observation sheets that have been given by researchers conducted by families who live in the same household with respondents.

Breastfeeding self efficacy mothers before intervention and the majority group is good. After being given a combination intervention of oxytocin massage and music therapy in the treatment group, there was an increase in breastfeeding self-efficacy in the mother, so that as many as 40 respondents in the treatment group increased. Post test results showed an increase in the value of breastfeeding self-efficacy, the increase in value after the intervention all increased in the treatment group. In contrast, in the control group there was no increase in respondents number 38 and 40, with questions number 8 and 9 related to breastfeeding and breastfeeding beliefs at the time there are family members.

Breastfeeding self efficacy influenced by four factors. The first factor is previous experience. The next factor is the experience of others in breastfeeding (Bandura, 1997). Then the factor of support from influential parties, such as friends, family, lactation consultations. The last factor is physiological responses, such as fatigue, anxiety, stress (Blyth, R. and Dennis, 2002)

A nursing mother tends to give breast milk when she feels she has a good ability, if she has great confidence to give breast milk to her baby, then she will choose to give breast milk instead of giving formula milk to her baby.

Breastfeeding self-efficacy is a factor in mothers that is very important in breastfeeding because it can predict a mother's decision to breastfeed her baby (Astutik, 2014). BSE determines whether a mother chooses to breastfeed or not, how much effort a mother makes to breastfeed her baby, how the mother's mindset for breastfeeding her baby, and how she responds emotionally to the difficulty of breastfeeding her baby (Dennis, 2003).

Researcher's opinion in the study of the combination of oxytocin massage and music therapy is that it has a significant impact on breastfeeding self-efficacy. Self-efficacy in mothers when breastfeeding and mothers having high breastfeeding self-efficacy will tend to show more effort than mothers having low breastfeeding self-efficacy.

5. CONCLUSION

The combination of oxytocin massage and music therapy can increase milk production in postpartum primiparous mothers. Before the intervention, the average respondent was moderate. After the intervention, all respondents improved. The combination of oxytocin massage and music therapy can increase breastfeeding self-efficacy in primiparous post partum mothers. Before the intervention, the average respondent was moderate. After being given a response, all respondents improved.

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