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Combination Effectiveness ofListening to Music and Listening Murottal to Reduce Postpartum Depression

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ABSTRACT It was reported that 50% of Postpartum women experience symptoms of stress/anxiety known as postpartum blues, with the level of depressive symptoms continuing to increase to postpartum depression. This condition cannot be cured without clinical intervention. Music iscreated to influence the psychological condition of humans, as well as to provide a sense of security, comfort and fun. To describe the effect of a combination of natural and murotal music to reduce postpartum depression. The contribution of this study is to explain the effect of the combination of natural and murottal music to reduce postpartum depression. This study used a Quasi-Experiment method through pretest-posttest design with a control group and a treatment group. In this case, the intervention group was given a combination of natural and *murottal* music therapy, in which each intervention was given for 30 minutes for three consecutive days. The number of samples involved was 60 people who were divided into 2 groups of postpartum mothers. The intervention group consists 30 people, while the control group consists 30 people. Data was collected using the EPDS (Edinburgh Postnatal Depression Scale) questionnaire. Data analysis used independent t-test. Results: There were 9 mothers with mild depression and 21 moderate depressions in the intervention group. On the other hand, there were 17 normal mothers and 13 moderately depressed mother in the post-intervention group with t test value of 27.17 and sig of (p) 0.00 v(value) 0.36. Meanwhile in the control group, there were 1 (one) normal mother, 27 mothers who had mild depression and 2 mothers who had moderate levels. There were 19 mothers with low depression and 11 mothers with moderate depression. The results of the t-test obtained 22.13 with sig(p) 0.01 v(value) 0.001. There was an effect of music therapy on the reduction in the incidence of postpartum depression which was very significant after three days of being given music therapy. There was an increase in the level of depression by two levels higher from pre to post in the control group. Furthermore, the results of the t-test on the postpartum blues pretest and posttest showed that there was a significant difference in the incidence of postpartum blues between the control and intervention groups after the intervention period. There is a difference in the value of t 5.04 sig (p) 0.01, even though the value is smaller than t table (0.05). The difference obtained shows that the control group has a risk of experiencing postpartum blues by 2 (two) times compared to the intervention group. Music therapy was given to all postpartum primiparous mothers immediately after delivery. Health services need to prepare facilities and human resources to provide relaxation therapy, namely music therapy as an alternative therapy.

INDEX TERMS Natural music, *murottal*, postpartum blues, depression, stress

I. INTRODUCTION

It is reported that 50% of postpartum women experience depressive symptoms known as postpartum blues, with the rate of depressive symptoms continuing to increase to postpartum depression and usually cannot be cured without clinical intervention (1). In addition, postpartum blues is almost 80 percent experienced by mothers who give birth for the first time (2).

The incidence of postpartum blues is strongly influenced by many factors, namely internal factors and external factors (3). Internal factors can be caused, among others, by hormonal fluctuations. The first hormone is estrogen which increases

during pregnancy and decreases during childbirth, causing depression. The second hormone is endorphinsthat can trigger feelings of pleasure and happiness, and decrease during childbirth. This hormone also contributes to the incidence of depression. The third hormone is thyroid hormone, which is unstable after giving birth, making the mother less excited (4). Another internal factor is the disease that accompanies the mother during pregnancy and childbirth. External factors are cultural practices that limit maternal activities and the lack of support that mothers receive during pregnancy, childbirth, and postpartum (5). The research method used a quasi-experimental design with a pretest-posttest design for the control group and the treatment group, the intervention group was given a combination of natural and murotal music therapy for 30 minutes three days in a row. The number of samples was 60 people which were divided into 2 groups, the intervention group was 30 people and the control group was 30 people. Data was collected using the EPDS (Edinburgh Postnatal Depression Scale) questionnaire. Data analysis used independent t-test.

The results of research by Setyowati and Riska in 2006 at RSU Dr. Soetomo Surabaya identified that out of 31 postpartum mothers, 54.84% experienced postpartum blues using the EPDS (Edinburgh Postnatal Depression Scale). Meanwhile, the incidence of postpartum blues abroad is quite high for mothers who have just given birth, around 75–80%. In addition, there were other 5 (five) previous studies which have proven that music relaxation is very useful for reducing pain, accelerating the first stage, and reducing anxiety in pregnant women giving birth and having an impact on the welfare of the fetus.

There are several alternative therapies as relaxation therapy to prevent postpartum blues, one of which is music therapy. In the past two decades, music therapy has been widely used to treat emotional tension, namely individual anxiety and pain during the pregnancy phase and facilitate the birth process. Related to this, some women really like art and music (6).

Music iscreated to influence the psychological condition of humans, as well as to provide a sense of security, comfort, and fun(7). The types of meaningful music used include classical music, natural, and murottal music. Mozart's classical music has the right tone, rhythm, speed, soft meter, and disposition to stimulate alpha waves, calmness, and relaxation(8). In addition, there is natural music to create inspiration, relaxation and optimism and murrotal, namely reading the Koran which focuses on two things, namely the truth of reading and singing the Koran quietly so that it causes relaxation and calm. Therefore, this music therapy can be done to help prevent and overcome postpartum blues and postpartum depression (9). The purpose of this study was to explain the effect of a combination of natural and murotal music to reduce postpartum depression.

II. RESEARCH METHODS

This research is a quasi-experimental research with pretest-posttest with control group design. This study gave intervention to 1 (one) intervention group and 1 control group. In this case, the intervention group was given a music therapy intervention according to the type of music for approximately 30 minutes every day for 3 (three) consecutive days. Before the intervention was provided, the subjects were previously given a questionnaire according to the EPDS scale (Edinburgh Postnatal Depression Scale) group (A): music with a combination of natural and murottal, group (B): No music. After the intervention was conducted for three times (3 days), measurements were made again using the EPDS (Edinburgh Postnatal Depression Scale) questionnaire. Data was collected using the EPDS questionnaire. Data analysis used independent t-test.

III. RESULT

A. CHARACTERISTICS OF RESPONDENTS

Based on table 1. 3.3% of mothers aged below 20 years old, 78.3% were at the range of 21-34 years old, while the remaining 20% were above 35 years old. Furthermore, 90% of the mothers haveprimary education from elementary to high school, 1.7% has intermediate education of D1-D3, while the remaining 8.3% has higher education of S1 and S2. In addition, 33.3% of the mothers is primiparity, 61.7% is multiparity, and 5% is grand multiparity. The gestational age of the most mothers were 37-40 weeks (term) of gestation.This age was a good age for labor so that labor could proceed normally.

B. DEPRESSION RATE RESULTS

Based on Table 2 above, the intervention group obtained normal results at the post-intervention by 56.7%, which was not previously obtained. In the pre-intervention, thelow depression was 30% and reached 43.3% in the post-intervention. Furthermore, in the same group, the moderate depression during the pre-intervention was 70%, while during the post-intervention, it was not found. Meanwhile, in the control group during the pre-intervention, 3.3% was normal, while during the post-intervention, it was not found. In addition, the low depression during the pre-intervention was 90%, while during the post-intervention was 63.3%. Furthermore, the moderate during the pre-intervention was 6.7%, while during the post-intervention was 36.7%.

C. RESULTS OF T-TEST IN THE INTERVENTION GROUP AND CONTROL GROUP

Based on the table above, in the intervention group, the mean value of the pre-test was 20.87 ± 1.43, while after the music therapy intervention for 3 (three) days, the mean post-test became9.47 ± 2.432. In this case, the correlation value

obtained was 0.385, while the value of the test results was 0.36. Meanwhile, in the pre-test control group, the mean was 14.70 ± 2.73, while in the post-test the mean was 17.7 ± 7.28, with the correlation value was 0.033 and the p value was 0.001.

IV. DISCUSSION

A. CHARACTERISTICS OF AGE

Based on the age, most mothers were at the age of 21-34 years old (78.3%). This age is classified as a healthy reproductive age, where this period is the best time to reproduce because all organs of the body, especially reproductive anatomy and physiology, function properly and maturely, so as to create a quality generation (10). This age also allows them to think carefully in dealing with problems or discomfort problems due to the physiological changes of postpartum so that they are expected to be able to cope and try to seek help from health workers (11).

B. CHARACTERISTICS OF EDUCATION

Based on the education characteristics, 90% of the mothers have basic education (Elementary School – Senior High

TABLE 1
Characteristics of Age, Education, Parity and Gestational Age.

Characteristics of Respondents	Group Intervention	Group Control	Total
	F(x) (%)	F(x) (%)	F(x) (%)
Age (Years):			
⎩ **< 20**	13.3	- -	1 1.7
⎩ **21 – 34**	24 80	23 76.7	47 78.3
⎩ **>35**	5 16.7	7 23.3	12 20
Education :			
➢ **Basic (Elementary School– Senior High School)**	26 86.7	28 93.3	54 90
➢ **Intermediate (D1–D3)**			
➢ **High(S1–S2)**	1 3.3	- -	1 1.7
	3 10	2 6.7	5 8.3
Parity :			
▪ **Primi**	10 33.3	10 33.3	20 33.3
▪ **Multi**	20 66.7	17 56.7	37 61.7
▪ **Grand**	- -	3 10	3 5
Gestational Age:			
⎩ **< 36**	- -	- -	- -
⎩ **37-40**	30 100	27 90	57 95
⎩ **>40**	- -	3 10	3 5

TABLE 2
Depression Level Results Ex. Intervention and Ex. Control

Depression Level	Intervention Group		Control Group	
	Pre-Post			
	F(x) (%)	F(x) (%)	F(x) (%)	F(x) (%)
Normal	- -	17 56.7	1 3.3	- -
Low	9 30	13 43.3	27 90	19 63.3
Moderate	21 70	- -	2 6.7	11 36.7
High	- -	- -	- -	- -
T total	**30 100**	**30 100**	**30 100**	**30 100**

TABLE 3
Results of t-test in the intervention and control groups.

Group	Pre Test		Post Test		T	Sig (p)	v (values)
	Min-Max	Mean ± SD	Min-Max	Mean ± SD			
Intervention	18-23	20.87 ± 1.43	6-15	9.47 ± 2.43	27.17	0.00	0.36
Control	8-21	14.70 ± 2.73	11-24	17.7 ± 7.28	22.13	0.01	0.001

School), 1.7% have intermediate education (D1-D3), while the remaining 8/3% have higher education (S1 and S2). Therefore, the results obtained that most of the respondents' education is basic education (SD - SMA) because the people still live in a simple manner and do not consider the importance to higher education. The level of formal education that a person has makes it possible to improve his self-concept in solving the problems faced (12). In this case, the level of knowledge of postpartum mothers plays a very important role in the efforts to reduce postpartum depression, child development, and improve health status, because knowledge-based behavior is more sustainable (13).

C. CHARACTERISTICS OF PARITY

Based on parity, the number of respondents was primi by 33.3%, multi by61.7%, and grand multi by 5%. The results of parity of the most respondents were multigravida respondents (having 2-4 children). In multigravida, the level of anxiety was lower than in primigravida because they were more experienced (14). In primigravida, the anxiety level was higher so that postpartum depression often occurred, so assistance and training were needed by the family and health workers (15).

D. CHARACTERISTICS OF GESTATIONAL AGE

Based on the gestational age, the highest results were 37-40 weeks (term) of gestation. This age is a good age for labor so that labor can proceed normally (16).

1. DEPRESSION RATE RESULTS

The level of depression in the intervention group was obtained through the EPDS instrument. Based on the results, it was obtained that 9 mothers have low depression, while 21 mothers have moderate depression. After the music relaxation was given for 3 (three) consecutive days for 30 minutes, then measurement was conducted again, obtained 17 mothers were normal and 13 mother have low depression. Therefore, it can be concluded that the postpartum depression scores decreased.

As much as 80% of postpartum mothers will experience postpartum blues due to hormonal changes, discomfort in the form of pain, and role changes, so training and relaxation assistance is needed. Postpartum breastfeeding mothers experienced a significant decrease in anxiety and behavioral changes to their babies during breastfeeding compared to postpartum breastfeeding mothers who were not treated with music. This condition has something to do with the influence of music that music affects the limbic system in the brain which suppresses the function of the hypothalamus, pituitary, and adrenal glands, thereby inhibiting the release of stress hormones (epinephrine, norepinephrine, dopa, and corticosteroids) (17).

2. RESULTS OF DEPRESSION LEVELS IN THE CONTROL GROUP

Data collection that was done using the EPDS instrument for 6 to 8 hours postpartum was not intervened and the level of depression was measured again, obtaining an increase in the level of depression from pre to post. It was found that 2 (two) mothers were moderately depressed in the pre to 11 moderate depression in the post because no intervention was carried out and the mothers were increasing their stress levels and gradually dropping and normal in the second week.

3. THE RESULTS OF THE T-TEST BETWEEN THE LEVEL OF DEPRESSION IN THE INTERVENTION GROUP AND THE CONTROL GROUP.

In the pre-intervention group, the depression level was minimal/maximum by 18 - 23 and the mean is 20.87. There is a decrease to a minimum/maximum of 6 - 15 and the mean to 9.47. There is a decrease in 2 (two) levels of depression with a t value of 27.17 with sig (p) 0.00 0.5. The results of the study can prove that there is a significant effect of music therapy in preventing and overcoming the incidence of postpartum blues after three days of receiving music therapy. The results of the multivariate analysis showed that the variable in the intervention group had a change in the score for the incidence of postpartum blues after the intervention period. These changes are caused by the influence of the effectiveness of music therapy interventions to prevent postpartum blues.

Compared to the control group, the mean result was 14.70 to 17.7. In addition, there was an increase in depression level by3%. There was an increase in moderate depression from 2 to 11 with a t-value of 22.13 and sig (p) 0.01. In addition, the results of the analysis showed that the group of mothers who were not intervened had the opportunity to experience postpartumblues 2 (two) times higher than mothers who were intervened.

Normal postpartum blues occur in the first and second weeks, so there is no need for special handling with assistance and training (18). Therefore, mothers can adapt to themselves

and act as mothers who are able to take care for their babies. Furthermore, in the second week or fourteen days, the postpartum blues disappear by it self.

This is in line with Desy's research that there is a significant influence between classical music therapy on postpartum blues symptoms in primiparous mothers (19). Fitri's research also shows that after being given the application of classical music therapy, the respondents experienced a decrease in the symptoms of the baby blues, thus the application of music therapy to both respondents was effective in reducing the symptoms of the baby blues (20). The limitations of this study are that there are some mothers who are less disciplined in carrying out therapy because the access to the training place is quite far from home and the atmosphere of the pandemic and some mothers are less painstaking in participating in the training.

V. CONCLUSION

The purpose of this study was to explain the effect of a combination of natural and murotal music to reduce postpartum depression. A new finding from this study is that there is an effect of a combination of natural and murottal music in reducing postpartum depression. This is a significant effect of music therapy on decreasing the incidence of postpartum depression after three days of being given music therapy. There was an increase in depression rates with two levels higher from pre to post in the control group. Furthermore, The results of the t-test on the postpartum blues pretest and posttest showed that there was a significant difference in the incidence of postpartum blues between the control and intervention groups after the intervention period. In addition, there is a difference in the value of t 5.04 with sig (p) 0.01, although the value is smaller than t table (0.05). The differences obtained indicate that the control group has a risk of experiencing the blues 2 (two) times higher than the intervention group. Suggestions for further research should be that music therapy should be given to all postpartum primiparous mothers immediately after giving birth, socialization about music therapy before training so that mothers are more stable and understand the purpose of giving music therapy.

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