Proceedings of the International Conference on Nursing and Health Sciences, Volume 4 No 1, January - June 2023
e-ISSN 2774 – 5104, Global Health Science Group
http://jurnal.globalhealthsciencegroup.com/index.php/PICNHS

THE EFFECTIVENESS OF MUSIC THERAPY ON REDUCING ANXIETY LEVELS IN MATERNITY MOTHERS

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ABSTRACT

Anxiety during labor can be a comorbidity and lead to low birth weight, preterm or preterm labor, hypertension and an increased risk of asthma. The effects of music therapy have been studied and promise a decrease in anxiety levels. The purpose of this study was to analyze the effect of Mozart's classical music therapy on the anxiety level of maternity mothers at UPT Puskesmas Ciomas. Research design quasy experimental one group pre-post test. 31 maternity mothers who entered the latent phase 1 to the end of the active phase 1 during the study period were studied with the HARS instrument. Bivariate analysis will be performed with an independent t test. Based on bivariate analysis, it was reported that Mozart's classical music therapy could reduce anxiety levels and was statistically significant (p value 0.012 < 0.05). Mozart's classical music therapy can calm and reduce anxiety levels in maternity mothers.

Keywords: anxiety; classical music; mozart

INTRODUCTION

Anxiety during pregnancy and childbirth has been reported to be a very strong comorbidity to negative impacts or adverse effects on mother and baby including can cause low birth weight for gestational age, preterm or premature labor, hypertension and changes in physical outcomes such as an increased risk of asthma (Isnaini, 2020) . Children born to mothers who experience anxiety during pregnancy, are also accompanied by emotional problems, hyperactivity disorders, decentralization, and disturbances in their cognitive development (Pratiwi, 2019). Research conducted by (Oktaviani, 2019) with the title "Identification of Risk Factors, Impact and Intervention of Anxiety Facing Childbirth in Third Trimester Pregnant Women" reported that anxiety in labor can cause various negative impacts including: (1) mothers in labor experience an increase in blood pressure and babies experience mild asfection (2) maternity mothers who experience high anxiety or stress can lead to labor duration of inadequate contractions. Hormones such as adrenaline, interact with receptors in the uterine muscles and inhibit contraction, slowing down the labor process (3) The impact of anxiety can cause pain in labor and result in improper dilation of serix and cause prolonged labor. Thus, reducing anxiety at the time of labor is very important and should be done without causing negative effects on the mother. One of the recommended therapies is non-pharmacological by seeking care that calms the feelings of maternity mothers, such as music therapy.

The World Federation of Music Therapy defines music therapy as the use of music and/or musical elements (voice, rhythm, melody, or harmony) to facilitate and enhance the fulfillment of physical, emotional, mental, social, and cognitive needs. In medicine, music is used to improve the psychological condition of humans and bring about the union between emotions and cognitive (van der Steen et al. 2018). Music therapy is used as a complement to physical, mental, and surgical therapy (Miranda et al. 2017). Music therapy is evolving, and has the potential to ensure better intrapersonal integration and improve patients' quality of life through prevention, rehabilitation,

and treatment efforts (Van der Steen, 2018). The effects of music therapy have been studied for pregnancy and childbirth. Various previous studies have shown promising results of decreasing anxiety and stress levels in mothers, and improving fetal parameters (such as heart rate variability) (Garcia-Gonzalez, 2018). However, these results cannot be generalized to the general population due to the degree of variability between studies, the small number of patients or subjects, and the varying risks of bias. Peru recognizes music therapy as part of the services provided during psycho-prophylactic childbirth, especially during sessions that instruct mothers on how to prepare for labor and puerperium, and also as a mind-body therapy included in the health system (García González et al. 2018).

One of the classical music that has been medically proven to provide a relaxing and calming effect is music by Mozart. Mozart's music has a soft tone that can stimulate alpha waves so that it gives the effect of calm, comfort, tranquility and releases tension and pain (Permatasari, 2021). The principle of using music in medical therapy is that all music with a soft rhythm will be able to provide a calming effect as well as Mozart's music (Rodiani, 2016). Based on data from visits of 150 mothers who gave birth at the Ciomas Health Center in 2022, around 60% (100 people) experienced high anxiety problems before the delivery process. Most health workers at Ciomas Health Center are not familiar with classical music therapy for maternity mothers. Based on the description above, the author is very interested in conducting research on the effect of Mozart's classical music therapy on the anxiety level of maternity mothers at UPT Puskesmas Ciomas.

METHOD

The design of this study is a quasi-experiment or *quasy experiment one group pre-post test.* Researchers will provide Mozart music therapy to all maternity mothers who enter the latent phase 1 to the end of the active phase 1 (monitoring or pre-test is carried out at the beginning of the active phase). The study was conducted in April 2023 on 31 maternity mothers at UPT Puskesmas Ciomas. Anxiety score assessment using HARS (*Hamilton anxiety rating scale) questionnaire* (Ramdan, 2019). The initial assessment (pre-test) is carried out when the patient comes and enters the 1st latent phase, after filling out the initial questionnaire, classical music is played in the delivery room, at least 30 minutes later or When entering the beginning of the active phase, a post test is carried out. Classical music remains played with the consent of the patient and family until the end of labor. The results of the questionnaire are presented in the form of continuum for frequency distribution in the form of mean and categorical in the form of moderate to severe anxiety (score 15-30) and mild anxiety (7-14). Univariate analysis will be presented in the form of a frequency distribution table. Bivariate analysis was performed by chi-square method using SPSS. Ethical feasibility has been issued under number 1604/S1. KEB/STIKES-AN/IV/2023.

RESULTS AND DISCUSSION

Table 1.
Distribution of anxiety scores before and after music therapy

Anxiety score	Minimum	Maximum	Mean	Standard Deviation
Before music therapy	18	30	24.0	3.62
After music therapy	14	26	21.8	2.93

Table 1, it can be seen that the minimum anxiety score in patients after music therapy dropped compared to before music therapy with a minimum score of 18 and a maximum of 30 points and after therapy a minimum score of 15 and a maximum of 25 points.

Table 2.
Test data normality

	Kolmogorov- Smirnov		Saphiro-Wilk	
	Df	Sig	Df	Sig
Haemoglobin levels of pregnant women	62	0.001	60	0.016

Table 2 based on the table of data normality test results, it can be seen that the significance value is smaller than 0.05, so it can be interpreted that the data is not normally distributed.

Table 3.
Results of the analysis of the effectiveness of Mozart's music therapy on reducing anxiety

	Minimum	Maximum	Mean	Standard deviation	P value	95% Confident interval
Anxiety score before music therapy	18	30	24.0	3.62	0.012	0.49 – 3.86
Anxiety score before music therapy	14	26	21.8	2.93		

Table 3 based on the bivariate analysis table, it is known that the administration of Mozart's classical music therapy can reduce anxiety levels and is statistically significant (*p value* 0.012 < 0.05). The labor process tends to trigger unpleasant emotional experiences or excessive anxiety, especially in primiparous mothers compared to multiparous mothers, because they have not had the experience of childbirth so they are able to respond well to feelings of anxiety or fear (Betan, 2021). Music has an impact on the psyche that can help a person become more relaxed, reduce stress, cause a sense of security and well-being, and help and release pain or pain. Music listened to intensively can give full strength, in the sense of reflecting self-emotion, enlightenment of the soul and expression. Music can slow down and accelerate the electrical waves contained in the brain so that it can change the work of the body system (Ratnawati, 2014; Dewi, 2016).

Music can enhance and stimulate *ß-Endorphins*. In the peripheral nervous system *ß-Endorphin* produces analgesics by binding to opioid receptors especially in type μ. Such binding causes inhibitory interactions of *tachykinins* release specifically peptide substances, key proteins involved in pain transmission. In the peripheral nervous system opioid-μ are present along the peripheral nerves and central nervous system (CNS), ß-Endorphin also binds to opioid-μ receptors so that intercation occurs in the presynaptic nerve terminal and also inhibits substance peptides, producing analgesic effects by inhibiting the release of *Gamma Butryic Acid* (GABA), inhibitory neurotransmitters (Emilda, 2021) . In the central nervous system, opioid receptors are most produced in neurotransmitter pathways to control pain, including the amygdala, *mencephalic formation,* periaqueductal gray matter (PAG) and rostal medulla (Rositawati, 2020)

CONCLUSION

Mozart's classical music therapy can calm and reduce anxiety levels in maternity mothers.

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