

THE EFFECTIVENESS OF MOZART MUSIC ON THE LEVEL OF WOMEN'S PAIN IN THE FIRST STAGE LABOUR

Karlina*, Abela Mayunita

STIKES Abdi Nusantara, Jl. Swadaya No. 7, Jatibening, Pd. Gede, Bekasi, West Java 17412, Indonesia

[*linaapple2000@gmail.com](mailto:linaapple2000@gmail.com)

ABSTRACT

Pain is something that is certain in every delivery, so complementary care to reduce pain intensity is very important to consider. Mozart's music has been studied to activate physiological pathways that can modulate the body's response. The purpose of this study was to analyze the effectiveness of Mozart's music therapy in reducing the intensity of labor pain. This study was a quasi-experimental design. This research was conducted at the Independent Practice of Midwives Bd Hj. Nining Mutbaiyyah, S.ST Pamarayan, Serang – Banten in May – June 2023. The sample in this study was 30 respondents divided into 15 intervention groups and 15 control groups. Samples were selected by purposive sampling techniques. The intervention provided was the playback of Mozart's music with the title K 448 Mozart every 30 minutes. Analysis using the Mann Whitney U test . There was a difference in the average degree of pain between the control group and the intervention group (6.4 vs 4.5) In addition, the results of the Mann Whitney test also showed a p-value of $0.000 < 0.05$ which concluded that there was an influence between the administration of Mozart music intervention in reducing pain in maternity mothers and was statistically significant.

Keywords: labour; mozart; music therapy; pain

INTRODUCTION

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 emotional and cognitive. Music therapy is used as a complement to physical, mental, and surgical therapies 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 (Caponnetto, 2022)(Van der Steen, 2018)(Liang, 2021). In this way, music has a positive effect on psychological well-being, thus increasing focus and also relaxation especially during childbirth . The possibility of the so-called Mozart effect, was first described in an article published in 1993 by Rauscher who explained that the pain-reducing effect on Mozart's music therapy depended on spatial reasoning skills in a subject or person after listening to Mozart's K 448 piano sonata.(Santiváñez-Acosta, 2020)(Bojorquez, 2020)

Subsequent multidisciplinary research in the music domain has proven that musical stimuli can activate physiological pathways that can modulate bodily responses. Growing evidence suggests that listening to selected music shows beneficial effects in areas of heart and nerve function. On this basis, it makes sense that listening to pleasurable music is suitable as an adjunct therapeutic tool in the treatment of various diseases related to the heart and brain, a field known as 'music therapy' (Pauwels et al., 2014; Trappe, 2022).(Yakobson, 2021)(McPherson, 2019) 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). However, these results cannot be generalized to the general

population due to the degree of variability between studies, the low number of patients evaluated, and the risk of bias. However, Health professionals need to examine music therapy as part of the services provided during psycho-prophylactic labor, especially during sessions that instruct mothers on how to prepare for labor and puerperium, and also as mind-body therapy included in system health (Garcia-Gonzalez, 2021)(Resmaniasih, 2019). Based on this background, researchers are interested in conducting research to analyze the effectiveness of Mozart's music therapy in reducing the intensity of labor pain when 1 at PMB Bd. Hj. Nining Mutbaiyah in 2023.

METHOD

This study used a quasi-experimental design. This research was conducted at the Independent Practice of Midwives Bd Hj. Nining Mutbaiyyah, S.ST Pamarayan, Serang – Banten in May – June 2023. The sample in this study was 30 respondents divided into 15 intervention groups and 15 control groups. Samples were selected by purposive sampling techniques. The intervention provided was the playback of Mozart's music with the title K 448 Mozart every 30 minutes. Inclusion criteria were: Primipara kala I active phase. Single pregnancy, presentation of the head. Gestational age 37-42 weeks. Estimated fetal weight 2500 – 4000 grams. The mother's age is between 20 – 35 years. Have no hearing problems. Received education about labor pain by midwives. The mother did ANC at least 1 time at the study site. Pregnancy is a desired pregnancy. Loves music and is willing to be a research subject. Measurement of the degree of pain will use NRS (numerical rating scale) where respondents will give a value from 0 to 10 for the degree of pain. The difference test analysis that will be carried out is the Mann – Whitney U test

RESULT AND DISCUSSION

Table 1.
 Characteristics of Respondents (n=30)

Age	f	%
< 20 Years	12	40
20 – 35 Years	16	53.3
> 35 Years	2	6.7
Parity		
Primipara	15	50
Multiparous	15	50
Work		
Housewives	18	60
Trader/ self-employed	10	33.3
Civil servants	2	6.7
Education		
Elementary-Junior High School	8	26.7
SMA	18	60
College	4	13.3

Based on the results of research that has been conducted, the majority of pregnant women are depicted the most in productive age, namely 20-35 years a total of 16 people or equivalent to 53.3%, with parity evenly divided between primiparous and multiparous (second pregnancy) of 15 people or 50% each, high school education (SMA) 18 people (60%) and work as housewives as many as 10 people or 60%.

Table 2.
 Normality test (n=30)

Result		Kolmogrov-Smirnova			Shapiro - Wilk		
		Statistics	Df	Sig	Statistics	Df	Sig
Pre and Post	Control	,173	15	,200	,876	15	,042
	Intervention	,263	15	,011	,899	15	,091

Based on the results of the normality test analysis in both groups, the p value of the colmogor and saphiro < 0.05 in the intervention group, it can be concluded that the data is not distributed, so the next step is the Mann-Whitney U test.

Table 3.
 Uji Mann Whitney U Test (n=30)

Result	Independent T test						Df	Sig (2-tailed)
			Std error	95 Confidence Interval				
	Mean control	Mean of intervention		Lower	Upper			
Control – Intervention	6.40	4.53	0.42	1.00	2.73	30	.000	

Based on table 3, it can be seen that there is a difference in the average degree of pain between the control group and the intervention group (6.4 vs 4.5) In addition, the results of the Mann Whitney test also display a p-value of 0.000 < 0.05 which concludes that there is an influence between the administration of Mozart music intervention in reducing pain in maternity mothers and statistically significant. These results are in line with research conducted by that there is a significant effect of the effect of Mozart music therapy on labor pain p value 0.00 < 0.05.(Paninsari, 2021) Mozart's classical distraction technique is a way to distract a person from pain by listening to music can divert pain perceptions, music can divert the client's concentration on pleasant things and reduce cortisol hormone levels that increase in times of stress. Mozart's classical music distraction technique is proven to reduce pain from moderate scale (4-6) to mild scale (1-3).(Arto, 2021)(Arisdiani, 2021)

According to Campbell, classical music of Mozart is music that has a regular rhythm and regular notes, not oblique notes, containing a composition of notes fluctuating between high and low notes that will stimulate the brain. Music therapy according to Djohan (2009) is music therapy as a therapeutic activity that uses music as a medium to improve, maintain, develop mental, physical and emotional health. The music will stimulate the production of brain waves known as α waves which have a frequency of 8-12 cps (cycles per second) the brain produces serotonin which helps maintain feelings of happiness and helps in maintaining mood, helps sleep, feelings of calm and releases depression and a person feels comfortable and calm. Music is widely used to improve well-being, reduce stress, and distract patients from unpleasant symptoms, so it is thus clear that music therapy has an effect on a person's emotional state.(Pazriani, 2021)(Tridiyawati, 2022)

The effectiveness of music therapy can be explained by the mechanism theory, which explains that music therapy can increase comfort in postpartum mothers by listening to music. Smaller nerve fibers will produce stimulation from the music which will be able to get rid of pain signals and can stimulate the pituitary which works to release endorphin hormones so that pain in postpartum

mothers can be reduced. Music has several advantages, namely being able to provide peace of mind and has benefits as an emotional controller. (Angraini, 2021) Aware of tempo, rhythm and high and low tones can produce alpha waves and fibers from beta waves found in the eardrum, so as to provide comfort to the brain and be able to receive stimuli and provide a relaxing effect. Music can provide benefits to patients because it can distract them from unpleasant experiences. Music therapy has been recognized as a medical intervention linked to evidence-based clinical benefits. (Ajeng, 2023)(Rahayu, 2020) Music therapy is still rarely done at the time of labor while the results of several studies have reported its effectiveness. Listening to music is a promising non-pharmacological acceptable coping strategy at the time of delivery. For this reason, as a midwife, it is very important to update research-based science in order to provide appropriate and useful interventions. With this research, treatment in reducing labor pain is not only the use of medical drugs, but music therapy as one of the complementary therapies can also be used in terms of efficiency, convenience, has no side effects.

CONCLUSION

There was a difference in the average degree of pain between the control group and the intervention group (6.4 vs 4.5) In addition, the administration of Mozart music intervention in reducing pain in maternity mothers and was statistically significant

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