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The Effectiveness Differences Between The Guided Imagery and Mozart Music Toward The Anxiety of Pregnant Women With The Pre-eclampsia Risk

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A B S T R A C T

Pregnant women suffer from pre-eclampsia risk. This matter is strongly correlated to various influential factors, such as the anxiety of pregnant women. Thus, this matter must receive immediate care to maintain the emotional condition and blood pressure of the women. One of the given care is - providing non-pharmacological care to manage anxiety. The realization could be administering guided imagery relaxation and listening to Mozart's music. This research determined the effectiveness differences between guided imagery relaxation and Mozart music toward the anxiety of pregnant women with pre-eclampsia risk. This experimental research applied two group pretest-posttest design. The researchers took 32 samples with purposive sampling. The applied questionnaire instrument was HARS. The results showed that the first intervention group, receiving Mozart music, suffered from severe anxiety (43.8%). After the intervention with Mozart's music, a percentage of 56.3% of respondents did not suffer from anxiety. In the second group, receiving the guided imagery intervention, 40.6% of respondents suffered from mild anxiety. After the intervention of guided imagery, 68.8% of patients did not suffer from anxiety. The Mann-Whitney statistic of both non-paired groups found a p-value of 0.148, indicating no effectiveness difference between the guided imagery and Mozart's music intervention toward the anxiety of pregnant women with pre-eclampsia risk. The researchers concluded the intervention of guided imagery and Mozart's music therapies could relieve the anxiety of pregnant women with pre-eclampsia risk. The researcher recommends the results as the reference and further implementation by respondents to manage the pre-eclampsia risk factor.

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INTRODUCTION

Preeclampsiais a multisystemic disorder specific to pregnancy characterized by the onset of hypertension and proteinuria after 20 weeks of gestation. Meanwhile, until now the cause of preeclampsia is not known for certain. However, the risk of preeclampsia is known to increase in pregnant women aged less than 20 years or more than 35 years, primigravida, previous history of pre-eclampsia, pregnancy interval less than 2 years and more than 5 years, parity number 1 and more than 3, multiple pregnancies, comorbid diseases such as hypertension, diabetes, kidney failure and obesity during pregnancy.

Pregnant women at risk of preeclampsia must undergo routine and integrated antenatal care checks carried out by health workers. This effort is carried out as an early detection to determine existing signs of pre-eclampsia, in order to minimize worsening of the condition and complications that occur due to pre eclampsia (Setyawati et al., 2018). Apart from that, health services for pregnant women are not only focused on maintaining physical health but also the mother's psychological health. Basically, physical and psychological changes influence each other. One of the factors of maternal psychological health is anxiety (Resmaniasih et al., 2013) where the incidence of anxiety occurs more often in pregnant women with a risk of preeclampsia, because pregnant women with a risk of preeclampsia have factors that trigger greater anxiety. Anxiety in pregnant women with a risk of preeclampsia can be caused by changes in body condition, especially hormonal changes, fear of childbirth, concerns about the condition of the fetus and themselves and the transition to the role of parent. Walking is done regularly for 30 minutes a day, 3-4 times per week which uses muscles, especially leg muscles to move from one place to another (CPHA, 2019). Anxiety that occurs in pregnant women with the risk of pre eclampsia, if not handled properly, will affect the mother's emotional condition. Excessive anxiety experienced by pregnant women is related to increased blood pressure. This happens because when someone is anxious they release stress hormones which make blood vessels narrow so that blood pressure also rises (Setiani & Official, 2020). Hypertension in pregnancy can be an opportunity for pre-eclampsia (Meihartati et al., 2019).

Referring to this, efforts need to be made to overcome the anxiety that occurs during pregnancy. Efforts to overcome anxiety can be done through pharmacological and non pharmacological management (Hidayati et al., 2018). There are many types of non pharmacological therapy, including guided imagery & Mozart music therapy, this therapy has a fairly simple method of presenting therapy, equipment that is easy to obtain, compared to other therapy models (Djohan, 2009).

METHODS

This research is a quantitative research with Experiment Two Group Pretest Post test design. The sampling technique used was purposive sampling, with a total of 32 samples for each sample. The population in this study was 177 respondents in 2023. The data collection tool used was the HARS (Hamilton Anxiety Rating Scale) questionnaire. The test used is the Wilcoxon test. This research was conducted in the working area of the Ngaliyan Community Health Center and Purwoyoso Community Health Center. It took place from April 15 – June 4 2023.

RESULT AND DISCUSSION

Result

Univariate Analysis

1. Respondent Characteristics

a. Age

Table 1
Frequency Distribution of Respondent Characteristics of 2 intervention groups based on age at Ngaliyan Health Center and Purwoyoso Health Center in April – June 2023 (n=32May 2023 (n=16)

Variable	Age	f	(%)
Mozart's music	< 20 years	2	6.3%
	20 - 35 years	29	0.6%
	> 35 years	1	3.1%
Total		**32**	**100.0**

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Guided Imagery	< 20 years	4	2.5%
	20 - 35 years	18	6.3%
	> 35 years	10	1.3%
Total		**32**	**100.0**

The research results showed that the majority of respondents in the Mozart music intervention group were 20-35 years old, with the remaining 29 respondents (90.6%). In the guided imagery group, the majority were aged 20-35 years with 18 respondents (56.3%). This research is in line with Rinata and Andayani (2018) showing that the majority of pregnant women experience anxiety at the age of 20-35 years. Subsequent research conducted by Siallagan and Lestari (2018) showed that the majority of pregnant women experienced anxiety at the age of 20-35 years. Meanwhile, research conducted by Murdayah et al (2021) shows that the majority of pregnant women experience anxiety at the age of 20-35 years.

Age influences an individual's personality maturity. This is in line with research conducted by Handayani (2015) that a person's ability to respond to anxiety can be influenced by age. Pregnant women aged 20 - 35 years, the age considered mature, can also experience anxiety, this is influenced by other supporting factors such as hormonal changes, parity and comorbid diseases which can increase anxiety in pregnant women. And it can be concluded that the age of most respondents who experience anxiety is 20- 35 years.

b. Parity

Table 2
Frequency Distribution of Respondent Characteristics for 2 intervention groups based on parity at the Ngaliyan Health Center and Purwoyoso Health Center in April – June 2023 (n=32)

Level of education	Frequency (f)	%
Elementary School	1	6.3%
JUNIOR HIGH SCHOOL	9	12.5%
SMA/SMK	4	36.3%
College	1	25.0%

Based on the table above, the research results show that the majority of respondents in the Mozart music intervention group were multigravida, with 19 respondents (59.4%). In the guided imagery intervention group, the majority of respondents were multigravida with 19 respondents (59.4%). This research is in line with Musahib et al., (2015) showing that pregnant women who experience anxiety are multigravida. This research is in line with Purwantari (2013) showing that pregnant women who experience anxiety are multigravida.

This research is also in line with Utami and Lestari (2013) showing that the majority of multigravida mothers at Arifin Achmad Pekanbaru Regional Hospital experienced more anxiety. According to Musahib et al., (2015) multigravidas can experience anxiety due to several factors, one of which is the mother's psychological factors in dealing with the current pregnancy. Further factors could be due to the distance between previous pregnancies, unplanned pregnancies or unpleasant experiences of respondents in previous pregnancies and births. It could even be because the mother doesn't want another pregnancy, which will cause stress for the mother. So it can be concluded that parity can influence anxiety because it is related to psychological aspects, especially in mothers at risk of pre-eclampsia (Rohmin, 2020). Cancer Stages

c. Birth Distance

Frequency Distribution of Characteristics of the 2 intervention groups based on birth distance at Ngaliyan Health Center and Purwoyoso Health Center in April – June 2023 (n=32)

Variable	Birth interval	f	(%)
Mozart's music	No distance	14	43.8%
	Distance < 2 years	13	40.6%
	Distance 2-5 years	4	12.5%
	Distance > 5years	1	3.1%
Total		**32**	**100.0**
Guided Imagery	No distance	14	43.8%
	Distance < 2 years	6	18.8%
	Distance 2-5 years	3	5%
	Distance > 5years	9	9.4%
			28.1%
Total		**32**	**100.0**

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Most of the respondents in the Mozart music intervention group were pregnant women whose pregnancies were not separated from their previous child or were primigravida, namely 14 respondents (43.8%). In the guided imagery group also showed the same results, most of the respondents were pregnant women whose pregnancies were not separated from their previous child or were primigravida, namely 14 respondents (43.8%). This research is in line with Intan and Ismiyatun (2020) showing that the majority of respondents are at a safe and risk-free pregnancy. Nurlaelah's (2021) research shows that the majority of respondents are at a safe and risk-free pregnancy. This research is also in line with Mulyati et al., (2021) showing that the majority of respondents are at a safe and risk-free pregnancy.

It is important to pay attention to the spacing of pregnancies, repeated pregnancies at intervals that are too short will make pregnancy & childbirth risky (Nurlaelah, 2021). A safe distance for subsequent pregnancies is at least 2 years to reduce adverse risks to the mother, perinatal and baby. Anxiety can also occur in mothers with pregnancies that are not at risk, because there are many influencing factors. Several other supporting factors such as hormonal changes, parity and comorbid diseases can increase anxiety in pregnant women. So it can be concluded that mothers with a safe pregnancy distance can also experience anxiety during pregnancy.

d. Comorbid Diseases

Table 4
Frequency Distribution of Respondent Characteristics for 2 intervention groups based on comorbid diseases at the Ngaliyan Community Health Center and Purwoyoso Community Health Center
April – June 2023
(n=32)

Variable	Comorbid Diseases	f	(%)
Mozart's music	There isn't any	17	53.1%
	Hypertension	10	31.3%

The research results showed that the majority of respondents in both groups were pregnant women who did not have comorbid diseases. In the Mozart music group, out of 32 respondents, there were 17 (53.1%) respondents, in the guided imagery group, out of 32 respondents, there were 16 (50%). This research is in line with Yonne Astria and Irma Nurbaeti (2013) who found that the majority of respondents who experienced anxiety were pregnant women in good health without comorbidities. This research is also in line with Isworo et al., (2013), which found that the majority of respondents who experienced anxiety were pregnant women who were in good health without comorbidities. This research is also in line with Viviana et al (2023), which found that the majority of respondents who experienced anxiety were pregnant women who were in good health without comorbidities.

A mother who does not have comorbid diseases during pregnancy does not rule out the possibility of experiencing anxiety. There are many other supporting factors that encourage mothers to feel anxious even though they do not have comorbid diseases, such as hormonal changes, physical changes, the age of the pregnant woman, parity, birth spacing and many other supporting factors (Murdayah et al., 2021).

Meanwhile, pregnant women with comorbid diseases, their anxiety tends to lead to fear of the impact of the disease on their babies. Pregnant women with comorbidities are at greater risk of experiencing serious illness, morbidity and mortality, and death rates compared to the general population. So it can be concluded that even pregnant women at risk of preeclampsia without comorbid diseases can experience anxiety which is contributed to by other factors.

d. Current weight

Frequency Distribution of Respondent Characteristics for 2 intervention groups based on weight at time This is at the Ngaliyan Community Health Center and Purwoyoso Health Center month April – June 2023
(n=32)

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Variable	BB at the moment	f
Mozart's music	Normal	29
	Obesity	3
Total		32
Guided Imagery	Normal	29
	Obesity	3
Total		32

The research results showed that the majority of respondents in both groups, namely pregnant women, did not experience significant changes in their current weight gain. In the Mozart music intervention group, out of a total of 32 respondents, the results were 29 respondents (90.6%). In the guided imagery group, from a total of 32 respondents, the results were 29 respondents (90.6%). This research is in line with Nurhasanah (2017), which found that the majority of respondents who experienced anxiety were pregnant women who were not obese. This research is in line with Marlina et al., (2021), which found that the majority of respondents who experienced anxiety were pregnant women who were not obese. Mariati et al., (2022), found that the majority of respondents who experienced anxiety were pregnant women who were not obese.

Anxiety can also occur in pregnant women with normal weight. This is influenced by many factors, one of which is hormonal changes, the age of the pregnant woman, comorbid diseases, parity, birth spacing and many other supporting factors (Moekroni & Analia., 2016). So it can be concluded that mothers at risk of pre-eclampsia with normal weight and not obesity can also experience anxiety due to other supporting factors.

e. Frequency Distribution of Mozard Music

Frequency distribution of anxiety scores before and after being given Mozart music intervention at the Ngaliyan Health Center and Purwoyoso Health Center in April – June 2023 (n=32)

	Information	Pretest		Posttest	
		f	%	f	%
Music Mozart	No anxiety	0	0%	18	56.3
	Mild anxiety	12	7.5%	11	34.4
	Moderate anxiety	5	5.6%	2	6.3
	Severe anxiety	14	3.8%	1	3.1
	Very serious anxiety	1	3.1%	0	0
	Total	**32**	**100**	**32**	**100**

The results of this study show that the results of anxiety before being given the Mozart music intervention, the majority of respondents experienced severe anxiety, there were 14 respondents (43.8%). Meanwhile, after being given Mozart music intervention, the majority of respondents experienced a change to no anxiety, 18 respondents (56.3%).

This is supported by research conducted by Liliana et al., (2022) showing the results that the average anxiety decreased after being given Mozart music intervention from a pretest of 10.38 (2.574) decreased with a posttest result of 7.50 (1.862) p-value 0.000. Research by Oktavia & M. Hasinuddin (2018) also showed similar results that the average anxiety in pregnant women decreased after being given Mozart music intervention from the pre test with a mean of 19.88, decreasing with a post test result of a mean of 15.22. Similar research conducted by Hartati (2018) showed the results that the average anxiety in pregnant women decreased after being given Mozart music intervention from the pre test with a result of 9.53 decreasing to 4.47.

g. Guided Injury Frequency Distribution

	Information	Pretest		Posttest	
		f	%	f	%
Guided Imagery	No anxiety	0	0	10	31.3
	Mild anxiety	13	40.6	22	68.8
	Moderate anxiety	6	18.8	0	0
	Severe anxiety	12	37.5	0	0
	Very serious anxiety	1	3.1	0	0
Total		**32**	**100**	**32**	**100**

The results of this study show the results of anxiety before and after being given guided imagery intervention. Before being given the intervention, the results showed that 12 (37.5%) respondents

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experienced severe anxiety and this decreased after being given the intervention to mild anxiety, 22 (68.8%).

This is supported by research conducted by Murni et al., (2014) which explained that anxiety in pregnant women decreased after being given guided imagery intervention with different test results obtained with a significance value of <0.001, meaning that there was a significant difference in the average anxiety score before and after providing intervention. Research conducted by Susanti & Rizki (2023) also presented similar results, there were 17 respondents who experienced moderate anxiety after being given intervention, 15 respondents whose anxiety decreased to mild anxiety. The results of another study conducted by (Purnama, 2015) explained that there was a decrease in anxiety after being given the intervention from a pre-test score of 54 to a post-test of 34.

Based on the results of data analysis of respondents, there was a decrease in anxiety levels from an average level of severe anxiety before the intervention was given to an average of no anxiety after the guided imagery and mozard music intervention. Anxiety is an unpleasant feeling of uncertainty from an individual where the cause is uncertain or there is no real object (Rasmun, 2021). Anxiety in pregnant women at risk of pre-eclampsia can result in increased adrenaline secretion. One of the effects of adrenaline is to constrict blood vessels so that the oxygen supply to the fetus decreases. Not only does adrenaline secretion increase but ACTH (Adrenocorticotropic hormone) secretion also increases, causing an increase in serum cortisol levels and blood sugar (Mc Kinney, 2020).

Bivariate Analysis

1. The effect of providing Mozart and music therapy

Guided Injury

Group	N	P
Mozart music	32	0,000
Guided imagery	32	0,000

a. The results of this study used the Wilcoxontest (pre-test and post-test). In the Mozart music group, p value = 0.000 < 0.005, so it can be concluded that Mozart music is effective in reducing anxiety in pregnant women with the risk of pre-eclampsia.

This research is in line with the results of research conducted by Editha, D. (2019) in her research explaining the results of the Wilcoxon test with a p value of 0.000 < 0.005. Sabda Nirwana & Mulyani's research (2022) presents the results of the Wilcoxon test with a p value of 0.001 < 0.005. The research results of Asmara et al (2017), the Wilcoxon test results with p value 0.001 < 0.005 also show similar results.

The conclusion from the test results in previous research was that Ha was accepted and Ho was rejected, which means there was a significant difference between anxiety before and after being given the Mozart classical music intervention. Previous researchers stated that there was a significant effect after being given Mozart music intervention on pregnant women who experienced anxiety. Therefore, Mozart music can be given to overcome anxiety in pregnant women at risk of pre-eclampsia.

b. The results of this study used the Wilcoxon test (pre-test and posttest). In the guided imagery group, p value = 0.000 < 0.005, so it can be concluded that guided imagery is effective in reducing the anxiety of pregnant women with the risk of preeclampsia. This research is in line with the results of research conducted by Wulandari et al., (2019) in their research explaining the results of the Wilcoxon test with a p value of 0.000 < 0.005. In research, Krismadhani et al., (2023) also presented similar results, namely the Wilcoxon test with a p value of 0.000 < 0.005. In research, Adhi et al., (2020) also presented similar results, namely the Wilcoxon test with a p value of 0.000 < 0.005.

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The conclusion from the test results in previous research was that Ha was accepted and Ho was rejected, which means there was a decrease in anxiety before and after being given the guided imagery intervention. Previous researchers stated that there was a significant effect after being given guided imagery intervention on pregnant women who experienced anxiety. Therefore, Mozart music can be given to reduce anxiety in pregnant women at risk of pre-eclampsia.

2. Differences in effectiveness after being given Mozart music therapy and guided imagery (n=64)

Group	*n*	*Mean Rank*	*P*
Mozart music	32	29.53	0,148
Guided imagery	32	35.47	

Based on bivariate analysis using the Mann Whitney test, the results were obtained (p value = 0.148), p value > 0.05 so that H0 was accepted and Ha was rejected, which means there is no difference in the effectiveness of guided imagery and Mozart music interventions in reducing anxiety in pregnant women at risk. pre-eclampsia. However, it can be seen from the analysis of negative ranks and ties found in the Wilcoxone test for both interventions.

Negative ranks for Mozart's music were 29, Guided imagery was 26, meaning that more respondents experienced a decrease in anxiety with Mozart's music intervention. In the Mozart music intervention ties, the number was 3, while the guided imagery number was 6, which means that more respondents with guided imagery intervention did not experience changes in anxiety or were stuck even though they had been given the intervention

CONCLUSION

Based on data analysis, in accordance with the research objectives, in this research the following conclusions can be drawn:

1. Characteristics of respondents based on age from the 2 groups, the majority were 20 - 35 years old, guided imagery (56.3%) Mozart music (90.6%). The majority of respondents' characteristics based on parity from the 2 groups were pregnant women with multigravida, guided imagery (59.4%) Mozart music (59.4%). Characteristics of respondents based on comorbid diseases from the 2 groups, the majority were pregnant women who did not have comorbid diseases, guided imagery (50.0%), Mozart music (53.1%). Characteristics of respondents based on birth distance from the 2 groups, the majority of respondents had a safe birth distance, guided imagery (43.8%) Mozart music (43.8%). Characteristics of respondents based on current weight gain, of the 2 groups the majority were respondents who did not experience excessive current weight gain (obesity), guided imagery (90.6%) Mozart music (90.6%).
2. Frequency before and after being given relaxation music therapy, it showed that the majority of respondents experienced severe anxiety, 14 respondents (43.8%) and after being given Mozart music intervention, the majority of respondents experienced a change to no anxiety, 18 respondents (56.3%).
3. Frequency before and after being given guided imagery therapy, it showed that the majority of respondents experienced mild anxiety, 13 respondents (40.6). Meanwhile, in the table, after being given the guided imagery intervention, the majority of respondents experienced mild anxiety, 22 (68.8%).
4. Mozart music was proven to be effective for pregnant women's anxiety and the risk of pre-eclampsia (p value = 0.000).
5. Guided imagery proven effective for anxiety in pregnant women with the risk of pre-eclampsia (p value = 0.000). 6. NoThere is a difference in the effectiveness of guided imagery therapy and Mozart music on anxiety in pregnant women at risk of preeclampsia (p value = 0.148).

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