



The effect of listening to the recitation of Qur'an (Murottal Ar-Rahman surah) on the level of anxiety of pregnant women in Siti Fatimah maternal and child hospital[☆]



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KEYWORDS

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Abstract

Objective: This study aimed to investigate the effect of listening to the recitation of Qur'an, specifically Ar-Rahman surah, on the level of anxiety and the time of the first stage of labor in pregnant women.

Method: This study was a quasi-experiment using non-randomized pre- and post-test with control design. The study was conducted in Siti Fatimah Maternal and Child Hospital, a public hospital in Makassar City, Indonesia. Total 40 samples were selected purposively, and they were divided into two groups, 20 respondents in the intervention group and 20 respondents in the control group. Chi-square test was performed for data analysis.

Results: This study shows that there were significant changes in the level of anxiety after listening to Ar-Rahman surah ($p < 0.001$). Meanwhile, no changes in the level of anxiety in the control group ($p = 0.50$). The result of this study also showed that the score of anxiety, cortisol level and time of labor were significantly lower in the intervention group than in the control group ($p < 0.001$, $p = 0.001$, and $p < 0.001$, respectively).

Conclusion: Listening to the recitation of Qur'an, especially Ar-Rahman surah, could reduce the anxiety burden of pregnant women in facing the labor process. This treatment may also give benefit to the cortisol level and reduced time for labor. A further study with a randomized controlled trial in a large-scale sample can robust the findings of this study.

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Introduction

Normal labor is the process of fetal expulsion that occurs in the full-term of pregnancy, which is born spontaneously within 18 h. This process is without complications for both mother and the fetus indicating by pain symptoms, more mucus mixed with blood due to small tears in the cervix, and membranes rupture.¹ During the labor process, there are four stages that will be staged by a mother. The first stage is the occurrence of the uterine contraction softening and stretching the cervix. In average, this phase will have happened 13–14 h in primipara and 6–7 h in multipara pregnancies. This phase ends if the cervix has opened about 10 cm.²

The Indonesian government, through their priority program, is trying to reduce maternal mortality and neonatal mortality by increasing the quality of obstetric emergency services and newborns, as well as strengthening an efficient and effective referral system between community health services (Puskesmas) and hospitals. Also, the government and the community are responsible for ensuring that all mothers have access to a good quality of health services, starting from pregnancy, childbirth assistance by trained health personnel, post-natal care for mothers and babies, special care and referral for complications, and access to family planning.

The first stage of labor is the most challenging stage faced by mothers during parturition. In this stage, the mother will spend much energy, begin to feel great pain as the uterine begins to be more active. In this phase, the contraction occurs more often and more prolonged, causing anxiety for the mother. Anxiety in the first phase of labor can increase in adrenaline secretion affecting oxygen supply to the fetus decreases. The decrease of blood flow, in turn, causes weakening of uterine contractions and results in a longer process of labor.³

A recent study suggests a non-invasive therapy that can be used to reduce anxiety. The use distraction technique with the Qur'anic verses is hypothesized can stimulate the delta wave causing the listener to be more relax. The religious relaxation developed by Benson combines relaxation with belief factors that can create inner strength that helps a person relax. By analogizing that Qur'an reading also has a slow, orderly, and gentle tempo as well as a belief factor, it is expected that listening to the reciting of Qur'an can lead to relaxation. A study reports that recitation Qur'an therapy affected labor pain and maternal anxiety during the first stage of labor. This study indicates a reduced level of anxiety after the therapy of Qur'an. Another study also shows a similar result in which the rhythm (in music) influenced the first stage progress of labor.⁴

The reciting the Holy Qur'an with regular rhythm and correct reading can bring calm and minimize anxiety to 97% for those who hear it, and about 65% of them got peace from reading the Qur'an. Chanting of Qur'an physically contains elements of the human voice, which is an amazing healing instrument. This theory is supported by a study by Cooke et al. which shows a positive psychological impact of reciting Quran.⁵ It is mainly due to the recite, when listening to it, can reach the brain, and it will be then translated by our brain, forming our perception.⁶ When listening to the voice of the Al Qur'an, it will create confidence, a sense

of optimism, bring calm, peace, and feel the presence of God Almighty. Therefore, such a Qur'an recitation therapy can be used by a mother to minimize the anxiety in labor, resulting in a shorter duration for the labor process.⁷ This study aimed to determine the effect of Qur'an recitation, specifically Ar-Rahman surah, on the level of anxiety during the first stage of labor. This study also addresses the effect of this therapy on the time of labor and cortisol hormone level.

Method

This study was a quasi-experimental with a non-randomized pretest–posttest control group design and has been received ethical clearance from the Medicine Faculty ethics committee of Hasanuddin University. The measurement was carried out in both groups, before (O1 and O3) and after the treatment period (O2 and O4). The population in this study was all mothers hospitalized in Maternal and Child hospital of Siti Fatimah with primigravida and in the first stage of labor. A total of 50 mothers were recruited as respondents based on the inclusion and exclusion criteria.

Univariate and bivariate were conducted for the statistical analysis. Univariate analysis is a procedure for processing data by describing data in the form of tables including categorical data that is searched for frequencies and proportions, namely the demographic data of respondents, namely age, education, occupation, and gestational age.

Results

Table 1 shows the characteristic of respondents. The number of respondents in treatment and control group were not significantly different, between 20 and 30 years (85% vs. 75%), high school education (70% vs. 75%), and unemployed (90% vs. 100%).

Table 2 reveals that the treatment (listening to recitation Ar-Rahman surah) improved the anxiety level. There were a declined number of severe anxieties after the treatment, which was from 30% to 5%. Similarly, moderate anxiety was also decreased from 70% to 25%. There were no significant changes in the control group ($p=0.50$).

The changes in anxiety score, level of cortisol, and time of labor are shown in **Table 3**. There was a significant difference of mean rank between treatment and intervention groups in terms of anxiety score changes (10.95 vs. 30.05, $p<0.001$), cortisol level (15.50 vs. 25.50, $p=0.001$), and time of labor (12.50 vs. 28.50, $p<0.001$).

Discussion

Maternal anxiety is a critical factor which indirectly impacts the offspring health.⁸ However, this symptom is often experienced by the mother and increases the risk of adverse pregnancy outcomes. In this study, pregnant mothers with severe anxiety were high. Different rate is shown by a study in which only 18.8% of pregnant women presented severe anxiety symptoms.⁹

A large number of pregnant women with severe anxiety indicate that many pregnant women might be stressful. Anxiety in women during pregnancy is partially associated with

Table 1 Characteristics of respondents ($n = 40$).

Characteristics	Treatment		Control		<i>p</i> -Value
	<i>n</i>	%	<i>n</i>	%	
<i>Age</i>					
17–19	1	5	1	5	0.560*
20–30	17	85	15	75	
31–40	2	10	4	20	
<i>Education</i>					
Primary school	0	0	1	5	0.154*
Secondary school	4	20	4	20	
Tertiary school	14	70	15	75	
Diploma	1	5	0	0	
University	1	5	0	0	
<i>Occupation</i>					
Unemployed	18	90	20	100	0.154*
Employed (government officer)	0	0	0	0	
Employed (private company)	2	10	0	0	
<i>Total</i>	20	100	20	100	

* Chi-square test.

Table 2 The changes in anxiety level in both groups.

Level of anxiety	Treatment ($n = 20$)				<i>p</i>	Control ($n = 20$)				<i>p</i> -Value
	Pre		Post			Pre		Post		
	<i>n</i>	%	<i>n</i>	%		<i>n</i>	%	<i>n</i>	%	
Low	0	0	14	70	0.000	0	0	0	0	0.500*
Moderate	14	70	5	25		6	30	4	20	
Severe	6	30	1	5		14	70	16	80	

* Friedman-test.

Table 3 Differences of anxiety score, cortisol level, and the time of labor between treatment and control groups ($n = 40$).

Variable	Treatment		Control		<i>p</i> -Value*
	Mean rank	Sum of ranks	Mean rank	Sum of ranks	
<i>Anxiety</i>					
Pre	19.33	386	21.68	433	0.523
Post	12.05	241	28.95	579	<0.001
Diff.	10.95	219	30.05	601	<0.001
Cortisol level	15.50	310	25.50	510	0.001
Labor time	12.50	250	28.50	570	<0.001

* Wilcoxon-test.

self-blame and denial.⁹ Maternal anxiety will be gradually increased along with the more frequent of contractions, and this condition will make the mother stress and get pain, resulting in less cooperative. Labor stress spontaneously causes an increase in maternal catecholamine levels exceeds the levels found in non-pregnant women or pregnant women before delivery. The labor process is summative and psychosomatic process affected by many psychological elements. Every woman who experiences labor is always

afflicted with a sense of anxiety and fear, potentially inhibiting the labor process.¹⁰

Interesting finding of this study is that listening of recitation of Qur'an reduced the number of pregnant women suffered from severe anxiety. It is mainly due to the relaxation resulted from listening to Qur'an recitation. A systematic review indicates that Qur'an recitation was found to be useful as a non-pharmacological treatment to reduce anxiety.¹¹ In the process of delivery, pregnant

women should be in a relax and calm condition, which resulted in a better psychological effect. This effect is then able to speed up the birth process by generating a sense of empowerment.¹² Therefore, the biological function of reproduction is strongly influenced by the psychological life and emotional life of the woman concerned.¹³ Childbirth in primipara causes anxiety that continues in the onset of tension, which can hinder the relaxation of other body parts. It was also explained that anxiety when facing childbirth process is a factor that greatly influences the successfulness of labor. Thus, if the mother feels excessive anxiety, it can cause a delayed time to enter the next phase (stage 2) of labor, the cervix is dilated completely, and the baby is ready to be born. Anxiety experienced by many pregnant women, on the other hand, is reported that they will have difficulties and complication during delivery.⁹

One crucial way to avoid complications caused by anxiety is to inhibit the increase of adrenal hormones in the maternal body, leading to stress and produce anxiety. A distraction method can be used to eliminate anxiety by diverting attention about labor to other things so that the patient will forget the anxiety they experienced. Sympathetic sensory stimulation causes endorphin release, which can inhibit anxious stimulus and result in fewer stimuli being transmitted to the brain. Listening to the recitation of the Qur'an is one of the distraction methods that can reduce the stress hormones released, activate natural endorphins, increase feelings of relaxation, and divert attention from fear, anxiety, and tension. This activity can also improve the body's chemical system to reduce blood pressure and slow breathing, heart rate, pulse, and brain wave activity. Deeper or slower breathing rates are very good at causing calm, emotional control, deeper thinking, and better metabolism.

The reduction of anxiety is because the mother who listens to Qur'an reciting experiences calmness and comfort while listening to Qur'an, which affects the continued calm after listening to the Qur'an recitation. A study reports that Qur'an recitation can stimulate the parasympathetic nervous system, which has the opposite effect on the sympathetic nervous system. Thus, it created a balance in the two autonomic nervous systems. The basic principle of the emergence of a relaxation response is a balance between the sympathetic nervous system and the parasympathetic nervous system. The greatest desire and hope of a mother who will give birth is a smooth delivery, herself, and a healthy baby. The greatest need is supportive power, namely the reality of awareness of the existence of God Almighty.¹⁴

Interestingly, the anxiety score between treatment and control groups was significantly different by up to three-fold. Anxiety can lead a mother having a preterm birth or other adverse outcomes. A cohort study in Canada reports that women who have an increase in anxiety score were 2.70 times likely to experience a preterm delivery.¹⁵ In this study, the Qur'an recitation therapy could increase the awareness quality of an individual to God, despite no understanding of the meaning of Qur'an.¹¹ Thus, this awareness will cause the totality of submission to Allah SWT. in this state, the brain is in alpha waves, is a state of brain energy at a frequency of 7–14 Hz. This condition is optimal, which can get rid of stress and reduce anxiety.¹⁶ In a calm state, the brain can think clearly and do contemplation

about the existence of God will be formed coping, or positive expectations in patients.¹⁴

The results of this study are in line with the results of a study that shows the effect of Qur'an recitation therapy on pregnant women health. A study shows that Qur'an recitation can decrease labor pain and maternal anxiety during the First Active Phase.¹⁷ Cortisol levels and anxiety are directly proportional to each other, the more anxious a person is, the higher the cortisol levels. Peace and psychological readiness in primiparas mothers will help streamline the labor process. When mothers experience anxiety and stress, the brain will indirectly work and release corticotropin-releasing hormone (CHR). CHR is a master stress hormone which will trigger the release of glucocorticoid stress hormones. Stimulated by glucocorticoids and other stress hormones, such as adrenaline, the brain and body will experience tension and criticism.¹⁸

Conclusion

It can be concluded that the Qur'an recitation therapy resulted in a positive effect on the anxiety level of the pregnant mother who is facing the delivery process. This therapy also contributes to the production of cortisol hormones and reduces the time of labor.

It is suggested that the maternal and child hospital can try to implement the method of distraction to prevent excessive anxiety experienced by a mother. A further study with a randomized controlled trial in a large-scale sample can robust the findings of this study.

Conflict of interest

The authors declare no conflict of interest.

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