Improving Delivery Outcomes with the Application of Murottal Therapy Al-Qur'an on Length of Second Stage of Labor and Apgar Score.

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Abstract

Introduction: The second stage of labor is called the expulsion period, starting when the opening of the cervix is complete (10 cm) and ending with the birth of the baby with his force and straining the fetus is pushed out until birth. Childbirth is a stress response that the body responds to. Anxiety in pregnant women is caused by psychosocial factors such as the need for security and comfort. Al-Qur'an stimulants can generate delta waves of 63.11% with reduced anxiety in the mother making the muscles more relaxed and the mother can go through labor easily so there are no cases of prolonged labor and can improve the welfare of the fetus. Method: This type of research is a quasi-experimental study that aims to determine the increase in labor outcomes by applying the Murottal Al-Quran to the Length of the Second Stage of Labor and the APGAR Score. While the research design used was a pre-experimental design with a posttest only with a control group design to measure the effect of murottal QS. Ar-Rahman in the experimental group by comparing it with the control group. The population in this study were all mothers giving birth during the first active phase at the Ar-Rahmah Indaralaya Maternity Clinic in Palembang. Results: There were 66 respondents (55.5%) who applied Murottal Al-Quran with a duration of 2 under 1 hour, while 53 respondents (44.5%) did not apply Murottal Al-Quran with a duration of 2 under 1 hour. Respondents who applied Murottal Al-Quran in the absence of asphyxia were 64 people (66%) while respondents who did not apply Murottal Al-Quran in the absence of perineal rupture were 33 people (34%). Discussion: There was a difference in the length of stage II between the intervention group and the control group after the application of Murottal Al-Qur'an and there were differences in APGAR scores between the intervention group and the control group after the application of Murottal Al-Qur'an. Keywords: Murottal Al-Qur'an, Lama Kala II, APGAR Score
INTRODUCTION

Childbirth presents both physiological and psychological challenges for women. As labor gets closer, this can be when the conflicting emotions of fear and dread can combine with joy and happiness. Pain associated with labor has been described as one of the most intense forms of pain one can experience (Melzac 1984), although otherwise some women do not experience severe pain during labour. Labor involves three stages, related to dilation of the cervix, delivery of the baby and delivery of the placenta. The latent phase is the early part of labor when there are irregular contractions and slight cervical dilatation. The first stage of labor consists of regular contractions of increasing strength and frequency accompanied by a more significant cervical dilatation of at least 4 cm to 6 cm. The transition may or may not be observed anywhere between 7 cm to 8 cm and is fully dilated. The second stage of labor starts from full dilatation of the cervix until the baby is born. The third stage of labor involves expulsion of the placenta. The pain experienced by women in labor is caused by uterine contractions, cervical dilatation and, at the end of the first and second stages, stretching of the vagina and pelvic floor to accommodate the baby. Tension, anxiety, and fear are factors that contribute to women's perceptions of pain and can also influence their labor and birth experiences (Buckley 2015). The neuromatrix theory of pain understands the influence of many factors including past experience and memory (Seifert 2015). Childbirth is a condition in which the cervix is thinned and the cervix is dilated, followed by the descent of the fetus through the birth canal, followed by birth, namely the process of releasing the products of conception (fetus and placenta). Most (90%) of mothers experience pain during the delivery process. Incidence of pain in 2,700 birthing mothers, 15% experienced mild pain, 35% moderate pain, 30% severe pain and 20% very severe pain. In labour, pain theory incorporates elements of gate control theory, but also past experience, cultural factors, emotional states, cognitive input, stress regulation and the immune system, as well as direct sensory input. Childbirth is a condition in which the cervix is thinned and the cervix is dilated, followed by the descent of the fetus through the birth canal, followed by birth, namely the process of releasing the products of conception (fetus and placenta). Most (90%) of mothers experience pain during the delivery process. Incidence of pain in 2,700 birthing mothers, 15% experienced mild pain, 35% moderate pain, 30% severe pain and 20% very severe pain. In labour, pain theory incorporates elements of gate control theory, but also past experience, cultural factors, emotional states, cognitive input, stress regulation and the immune system, as well as direct sensory input. Most (90%) of mothers experience pain during the delivery process. Incidence of pain in 2,700 birthing mothers, 15% experienced mild pain, 35% moderate pain, 30% severe pain and 20% very severe pain. In labour, pain theory incorporates elements of gate control theory, but also past experience, cultural factors, emotional states, cognitive input, stress regulation and the immune system, as well as direct sensory input. Most (90%) of mothers experience pain during the delivery process. Incidence of pain in 2,700 birthing mothers, 15% experienced mild pain, 35% moderate pain, 30% severe pain and 20% very severe pain. In labour, pain theory incorporates elements of gate control theory, but also past experience, cultural factors, emotional states, cognitive input, stress regulation and the immune system, as well as direct sensory input. Most (90%) of mothers experience pain during the delivery process. Incidence of pain in 2,700 birthing mothers, 15% experienced mild pain, 35% moderate pain, 30% severe pain and 20% very severe pain. In labour, pain theory incorporates elements of gate control theory, but also past experience, cultural factors, emotional states, cognitive input, stress regulation and the immune system, as well as direct sensory input. Most (90%) of mothers experience pain during the delivery process. Incidence of pain in 2,700 birthing
mothers, 15% experienced mild pain, 35% moderate pain, 30% severe pain and 20% very severe pain. In labour, pain theory incorporates elements of gate control theory, but also past experience, cultural factors, emotional states, cognitive input, stress regulation and the immune system, as well as direct sensory input. (S et al., 2015).

The process of giving birth for a pregnant woman is like a process of life and death, all the feelings spilled out at that time. Feelings during childbirth include fear, worry, pain, embarrassment, impatience, fatigue and weakness. The birth process only lasts a few hours, but this period is a critical period for both mother and baby. According to Maternal and Neonatal Health (MNH) in 2002, most maternal deaths in Indonesia occurred within two hours during / postpartum, caused by bleeding (45.2%), complications of abortion (11.1%), postpartum sepsis (9.6%) and prolonged childbirth (6.5%), the rest due to eclampsia (12.95) and anemia (1.6%). (Kasdu, 2017).

The SDGs use higher achievement indicators than the MDGs. The goal of SDGs related to the health sector is goal 3, which is to ensure a healthy life and promote well-being for all at all ages. Goal 3 consists of 13 achievement indicators, one of which is the MMR target by 2030 to reduce the maternal mortality ratio to less than 70 per 100,000 live births. This shows that it takes extra hard work for all health workers and the community to achieve this (Bappenas, 2015).

Many problems in Indonesia are still found, including prolonged labor which is one of several causes of maternal and neonatal death. In the process of childbirth, it passes through four stages, during the first stage it is divided into two phases, namely the slow phase and the active phase. The latent phase is the period from the start of labor to the point when dilatation begins to progress progressively. The active phase is the initial time period from the active progress of dilatation until dilatation is complete (Fitriahadi, 2019).

The progress of labor is the stage of the process in labor that can be measured using centimeters by how wide the cervix has expanded or perhaps by the number of fingers (one finger is equal to 1 cm). Dilation is usually measured from 1-10 cm. (Kurniarum, 2016).

Second stage of labor begins when the cervical dilatation is maximal (10cm) and ends with the baby's entire body coming out, which is supported by his strength and mother's strength. In the process of giving birth, all women will also experience pain, although the reaction that occurs for each individual is different. Pain is an unpleasant stimulus that can cause worry and is usually caused by ignorance of the process that will occur, causing the mother to feel afraid and stressed. Another factor in the delivery process is a burden for the mother, this is a stressor where the body will respond to the stressor in the form of a stress response. Anxiety in pregnant women is caused by psychosocial factors such as the need for security and comfort (Ghiasi & Keramat, 2018).

The survey results found that prolonged pertussis can cause emergencies in the mother and baby, the mother can experience bleeding and shock, fetal distress, asphyxia and caput can occur in infants. This illustrates the importance of delivery assistance by skilled health personnel because most of the complications occur during delivery. According to the World Health Organization (WHO) in 2013, in terms of midwives as birth attendants, in general there are still many mothers who experience prolonged first stage and more mothers go through the first stage lying in bed because they cannot stand the pain of contractions and some patients for other reasons. Actions that can be taken to deal with labor pain are pharmacological and non-pharmacological therapies (Susanti et al., 2019).

Pharmacological action that can be done is to provide drug therapy such as...
analgesics, non-narcotic analgesics. While non-pharmacological techniques can reduce pain and have no side effects, non-pharmacological therapies can be given in various ways, namely; acupressure, acupuncture, cold compresses, warm compresses, hydrotherapy, hypnotherapy, endoprine massage, relaxation and distraction techniques (Hueslmann, 2013).

Care is carried out with non-pharmacological techniques, such as massage, Murotal Quran is one of the solutions in active labor that has been carried out and as one of the midwifery care during labor to help prolonged parturition (Fatimah & Fadilah, 2020).

Therapy that is carried out by reciting the holy verses of the Qur'an, such as Murottal Al-Qur'an can be another way of doing therapy, can be used as a relaxation therapy even better than other audio therapies. Because the stimulant of the Qur'an can generate delta waves of 63.11% (Abdurrachman & Andhika, 2018).

Audio surah Ar-Rahman has been studied before and has been shown to be effective in reducing levels of violent behavior and helping patients express their emotions in a more adaptive way (Widhowati, 2014). The use of this audio is also an inexpensive therapy and does not cause side effects.

Murottal is a sound recording of the Koran sung by a qori' (reader of the Koran) Purna (2006). According to Ad-Dihami (2015), reciting the Koran is a complete remedy for all kinds of ailments, both heart ailments and physical ailments, both worldly and hereafter diseases. Meanwhile, according to Yani (2012) states that the Koran is useful as a medicine, antidote and healer of various problems in human life.

Based on this background, the researcher was moved to continue research on "Improving Labor Outcomes with Murottal Therapy", previously this research had been carried out by the researchers themselves with the result that there was an effect of murottal therapy on anxiety in birthing mothers which was conducted in 2018 at the Ar Rahmah Maternity Clinic Indralaya Ogan Ilir Palembang.

MATERIALS AND METHODS

The data collection technique used in this study is an observation technique. Observation (observation) is a data collection method in which researchers or their collaborators record information as they witness during research (Hartono, 2014).

In this study using crosstab data analysis method. Crosstab data analysis displays the relationship between two or more variables, or up to calculating whether there is a relationship between the row (a variable) and the column (another variable).

Data processing is one of a series of research activities after data collection. Data that is still raw (raw data) needs to be processed so that it becomes information that can ultimately be used to answer research objectives (Hastono, 2017).

The population in this study were all mothers giving birth during the first active phase at the Ar-Rahmah Indaralaya Maternity Clinic in Palembang.

The sampling technique used in this study was to use a purposive sampling technique by first establishing predetermined inclusion criteria (samples based on criteria/criterion based sampling) (Afiyanti & Rachmawati, 2014).

This type of research is a quasi-experimental study that aims to determine the increase in birth outcomes by applying the Murottal Al-Quran to the Length of the Second Stage of Labor and the APGAR Score.

While the research design used was a pre-experimental design with a posttest only with a control group design to measure the effect of murottal QS. Ar-Rahman in the experimental group by comparing it with the control group. The treatment group and the control group were measured after being given treatment. The effect of the treatment can be seen from the differences
in the measurements of the two groups (Notoatmodjo: 2010, Saryono: 2018).

RESULTS

that of the 78 respondents in the control group, the dominant socio-demographic respondents were 65 mothers aged 21-35 years (83.3%), 44 mothers with low education (elementary and junior high schools), 55 mothers with no work or as IRT (housewives), 49 mothers with primiparous parity (62.8%).

Meanwhile, of the 78 respondents in the intervention group, the characteristics of the respondents who were more dominant were 64 mothers aged 21-35 years (82.1%), 44 mothers with low education (elementary and high school), 50 mothers who did not work (as housewives) (64.1%), 42 mothers with multipara parity (53.8%).

As for the data from univariate analysis in this study, the variables resulting from labor included the duration of the second stage and the APGAR Score. All of these variables were categorical variables, so they were analyzed using a percentage or frequency distribution.

Based on table 5.2 above, of the 78 respondents in the control group, it can be seen that the duration of stage 2 under 1 hour was 53 people (67.9%), mild asphyxia was 45 people (57.7%).

Meanwhile, from 78 respondents in the intervention group, it was seen that the duration of the 2nd stage under 1 hour was 66 people (84.6%), 64 people (82.1%) were not asphyxic.

Based on table 4.9 it can be seen that 66 respondents (55.5%) applied Murottal Al-Quran with a duration of 2 under 1 hour, while 53 respondents (44.5%) did not apply Murottal Al-Quran with a duration of 2 under 1 hour. Based on the results of the chi-square test, it was found that the value of \( p = 0.014 \) with \( \alpha <0.05 \). So it can be concluded that statistically there is a difference between the length of stage 2 in labor under 1 hour.

Based on table 4.11 it can be seen that 64 respondents (66%) applied Murottal Al-Quran without asphyxia, while 33 respondents (34%) did not apply Murottal Al-Quran. Based on the results of the chi-square test, it was found that the value of \( p = 0.000 \) with \( \alpha <0.05 \). So it can be concluded that statistically there is a difference between the APGAR scores in the intervention group and the control group after the application of Murottal Al-Quran. In the above analysis, the OR value was also found to be 6.234. This can be interpreted that respondents who apply Murottal Al-Quran have a 6.234 chance that their babies will not experience asphyxia.

DISCUSSION

The results of the study found that 66 respondents (55.5%) applied Murottal Al-Quran with a duration of 2 under 1 hour, while 53 respondents (44.5%) did not apply Murottal Al-Quran with a duration of 2 under 1 hour. Based on the results of the chi-square test, it was found that the value of \( p = 0.014 \) with \( \alpha <0.05 \). So it can be concluded that statistically there is a difference between the length of stage 2 in the intervention group and the control group after the application of Murottal Al-Quran. In the above analysis, the OR value was also found to be 2.594. This can be interpreted that respondents who apply Murottal Al-Quran have a chance of 2.594 times the length of stage 2 in labor under 1 hour.

This is in line with Johariyah's research in 2014 which showed that there was an effect of Mozart's classical music therapy on the duration of stage II labor (\( p=0.009 \)) with a difference in delivery time of 10-15 minutes. Childbirth is a process that ends with the expulsion of the products.
of conception by the mother. This process begins with true labor contractions, which are marked by progressive changes in the cervix, and ends with delivery of the placenta (Varney, 2008) and according to Sarwono P, childbirth is the process of opening and thinning the cervix and the fetus descends into the birth canal. Meanwhile, according to Manuaba, childbirth is a process of expelling the products of conception (fetus & uterus) that are full-term or can live outside the womb through the birth canal or through other means, with assistance or without assistance / own strength.(Ulfiana et al., 2020).

Parity has an important role in the duration of the first stage of labour, multiparas show a shorter duration of first stage of labor compared to nulliparas. The observation results of a study stated that the sequence between the time of spontaneous rupture of the membranes and the start of midwifery care also affected the duration of the first stage of labour. The labor process was much shorter if the midwifery care was carried out after the amniotic membranes ruptured rather than before the amniotic linings ruptured, but again the greatest and most powerful effect that could affect the duration of labor was multiparous and nulliparous status.(Yulianti et al., 2022).

The average time required for cervical dilatation to increase from one centimeter to the next is shorter in nulliparas (eg, 1.2 hours at 3-4cm dilatation to 0.4 hours at 7-8cm dilatation). Nulliparous women have the longest and most gradual labor curve, multiparous women of other parities have nearly the same curve. In nulliparous women the active phase begins after 5 cm dilatation and may not be clearly marked because of rapid dilatation.(Dahliani et al., 2020).

The second stage is also called the expulsion period, because of his strength and pushing force, the fetus is pushed out until it is born. The second stage of his becomes stronger and faster, about 2 to 3 minutes. The second stage lasts an average of 1.5 hours. Signs and symptoms of stage 2, namely: Mother feels like pushing along with contractions and Mother feels increased pressure on her rectum/vagina, including; Perineum protruding, Vulva-vagina and anal sphincter open, Increased discharge of mucus mixed with blood(Prawirohardjo, 2020).

Lack of knowledge in women about the process of vaginal delivery, often causes anxiety. This anxiety can have a negative impact on the birth process. Therefore, to reduce anxiety, audio Al-Quran is given during the active phase of labour. The result of this study is that listening to the Qur'an is effective in reducing anxiety in mothers in the active phase of labour. Listening to the Koran during labor, especially for women who are familiar with the Koran, has a positive effect on reducing anxiety(Qonitun & Betalia, 2018).

The results of the study found that 64 respondents (66%) applied Murottal Al-Quran without asphyxia, while 33 respondents (34%) did not apply Murottal Al-Quran without perineal rupture. Based on the results of the chi-square test, it was found that the value of p = 0.000 with α <0.05. So it can be concluded that statistically there is a difference between APGAR scores in the intervention group and the control group after the application of Murottal Al-Quran. In the above analysis, the OR value was also found to be 6.234. This can be interpreted that respondents who apply Murottal Al-Quran have a 6,234 chance that their babies will not experience asphyxia.

This assessment is necessary to find out whether the baby has asphyxia or not. What is assessed is heart rate, respiratory effort, muscle tone, skin color and response to stimuli by inserting a catheter into the nostril after the airway is cleared. According to Prawirohardjo, each rating is given a score of 0,1,2. From the results of this assessment it can be seen whether the
baby is normal (vigorous baby = Apgar value 7-10), mild asphyxia (apgar value 4-6), severe asphyxia (apgar value 0-3) (Prawirohardjo, 2020).

The benefits of murottal (listening to the recitation of the Qur’anic verses) include: 1) Listening to the tartil recitation of the Qur’anic verses will give peace of mind. 2) The recitation of the Qur’an physically contains elements of the human voice, which is a miraculous healing tool and the most easily accessible tool (Retna & Sumanti, 2021). Sound reduces stress hormones, activates natural endorphins, promotes relaxation and distracts from fear, anxiety and tension, improves body chemistry, thereby lowering blood pressure and slowing breathing, heart rate, pulse and brain wave activity. This deeper or slower rate of breathing is great for promoting calm, emotional control, deeper thinking, and better metabolism. Al-Qur’an reading therapy can affect changes in muscle currents, changes in blood circulation, changes in heart rate and blood levels in the skin. These changes reflect relaxation or decreased reflex nerve tone, which causes relaxation of the arteries and an increase in the level of blood in the skin, along with a decrease in heart rate. Murottal therapy works on the brain which produces chemicals called neuropeptides when stimulated by external stimuli (Quran therapy). These molecules transport it to receptors in the body and provide feedback in the form of pleasure or comfort (Susiloningtyas et al., 2022).

CONCLUSIONS AND SUGGESTIONS

It was known that of the 78 respondents in the control group, the social demographics of the respondents who were more dominant were 64 mothers aged 21-35 years (82.1%), 44 mothers with low education (elementary and high school), 50 mothers who did not work (as housewives) (64.1%), 42 mothers with multipara parity (53.8%).

Based on the results of the chi-square test, it was found that the value of \( p = 0.014 \) with \( \alpha < 0.05 \). So it can be concluded that statistically there is a difference between the length of stage 2 in the intervention group and the control group after the application of Murottal Al-Quran.

The OR value is 2.594. This can be interpreted that respondents who apply Murottal Al-Quran have the opportunity to be 2.594 times the length of stage 2 in labor under 1 hour. An OR value of 6.234 is also obtained. This can be interpreted that respondents who apply Murottal Al-Quran have a 6,234 chance that their babies will not experience asphyxia.

The results of this study can be used as an intervention in midwifery care for long-term management of labour, as additional information to develop further research and can provide information to the public that Al-Qur’an murottal therapy can affect the duration of labor and fetal well-being.

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CONFLICT OF INTEREST
No potential conflict of interest was reported by the author.

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LITERATURE


