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EFFECTIVENESS OF COMBINATION OF MEDITATION AND POSITIVE AFFIRMATIONS ON LABOR DURATION AND APGAR SCORE

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ABSTRAK

Latar Belakang: meditasi dan afirmasi positive merupakan bagian terapi non-farmakologis untuk mengatasi cemas pada ibu hamil. Rasa cemas/takut pada ibu hamil trimester tiga umum terjadi dibanding trimester sebelumnya. Cemas dapat meningkatkan hormon kotekolamin yang berdampak buruk bagi ibu maupun janin baik dimasa hamil maupun bersalin.

Tujuan: Untuk menganalisis efek kombinasi meditasi dan afirmasi positif terhadap lama persalinan dan nilai APGAR


Hasil: Ada perbedaan signifikan lama persalinan dengan p-value = 0,017 (p<0,05) dan nilai APGAR dengan p-value = 0,020 (p<0,05) dibandingkan antara kelompok kontrol dan kelompok perlakuan.

Kesimpulan: kombinasi meditasi dan afirmasi positif efektif mempersingkat lama persalinan dan meningkatkan nilai APGAR

Saran: diharapkan bagi pemberi layanan kebidanan agar dapat menerapkan kombinasi meditasi dan afirmasi positif bagi ibu hamil trimester tiga guna meminimalisir masalah yang berdampak pada lama persalinan dan nilai APGAR bayi baru lahir.

Kata Kunci: Meditasi dan afirmasi positif, Lama Persalinan, Nilai APGAR

ABSTRACT

Background: Meditation and positive affirmations are part of non-pharmacological therapies to treat anxiety in pregnant women. Anxiety generally occurs in third trimester pregnant women. Anxiety can increase catecholamines which have a negative impact on the mother and fetus both during pregnancy and childbirth.

Purpose: This study was to analyzed the combined effect of meditation and positive affirmations on labor duration and APGAR scores

Method: This study uses a quasi experimental design with a post test only control group approach. The research subjects were third trimester primigravida, totaling 24 people who were divided into 2 groups. Data were analyzed using the Independent sample t-test.

Results: There was a significant difference in the length of labor with p-value = 0.017 (p<0.05) and APGAR scores with p-value = 0.020 (p<0.05) compared between the control group and the treatment group.

Conclusion: the combination of meditation and positive affirmations is effective in shortening the length of labor and increasing the APGAR scores.

Suggestion: midwifery service providers can apply a combination of meditation and positive affirmations for third trimester pregnant women in order to minimize problems that affect the length of labor and the APGAR scores of newborns.

Kata Kunci: APGAR Score, Duration of labor, Combination Meditation and Positive Affirmations.

INTRODUCTION

The maternal and child mortality ratio is one indicator of the success of health efforts. Maternal death occurs as a result of the management of pregnancy, childbirth and postpartum. In 2015, data from SUPAS showed that the MMR in Indonesia was 305/100,000 live births while the 2015 MMR MDG target was 102/100,000 live births. This can be
interpreted that the MMR in Indonesia is still very high, reaching 3 times the target, even though it has shown a decline compared to the previous year. Most maternal deaths are due to bleeding, pregnancy hypertension, and infection cases (Kemenkes RI, 2020).

The results of a study on 60 mothers giving birth at RSU Dr. Saiful Anwar Malang proved that the longer the labor duration is, the mother will tend to experience early postpartum hemorrhage (Baktiyani et al., 2016). According to Sofiyati (2016), the dominant factor that affects the length of labor is psychology. This is based on the results of her study on 87 post partum mothers at RSUD’45 Kuningan, West Java. Mothers who give birth with poor psychology can experience labor for a longer time than mothers who give birth with good psychology. Mothers who give birth with poor psychology have a chance of 13.2 times having longer labor duration than those who have good psychology (Sofiyati, 2016).

The results of a study on 29 primigravida in Pontianak showed a correlation between moderate and severe levels of anxiety with the duration of labor in the active phase of the 1st stage (Difarissa et al., 2016). Sagita in her study (2018) also reported that there was a significant relationship between the level of anxiety and the length of the second stage of labor. The higher the level of maternal anxiety during childbirth, the longer the duration of the first stage of labor. The results of another study also showed that there was a significant relationship between the level of anxiety and the length of labor at the health center and the Midwife’s Independent Practice which was tested on 74 primigravida mothers (Hayati et al., 2018). In addition, the second stage of labor that is more than 3 hours is also associated with a low APGAR score in the first spontaneous labor (Altman et al., 2015). Therefore, efforts are needed to reduce maternal anxiety in order to minimize the impact that can occur afterward.

Pregnant women experience physiological and psychological changes caused by hormonal changes in the body. Physiologically, it can be seen that there are changes in the mother’s physical body and psychologically, symptoms of anxiety in pregnant women also can be seen (Suristyawati et al., 2019). In terms of gravida status, the results of a study conducted by Shodiqh & Syahrul (2014) showed a significant difference in the level of anxiety between primigravida and multigravida in facing labor. Primigravida experience a higher level of anxiety than multigravida. If further studied, pregnant women in the third trimester often experience higher levels of anxiety than before. The higher level of anxiety in the third trimester may be related to the closer time to delivery (Silva, Nogueira, Clais, & Leite, 2017).

This anxiety causes several changes in the body such as a faster breathing rate and also increased body muscle pressure. Therefore, efforts are needed to overcome anxiety so that the impact can be minimized (Shodiqh & Syahrul, 2014).

The results of a qualitative study carried out by Suristyawati et al. (2019) showed that meditation carried out by pregnant women is able to provide a sense of comfort, relax, improve sleep quality, and make mothers think more positively and actively engage in daily activities. Meditation is an effort to unite the soul and mind to reach a calm point. A calm mind is allegedly able to improve the balance of hormones in the body of pregnant women and support the immune system. It affects on the comfort experienced by the mother during her pregnancy.

The results of another study also proved that deep breathing relaxation therapy has a significant effect on anxiety levels and the duration of the first stage of labor (Istikhomah & Murwati, 2016). According to Astuti & Bangsawan (2019), relaxation deserves to be used as a standard of care for normal childbirth because it can reduce pain, shorten the length of the first stage of labor and prevent childbirth complications.

Cholifah et al. (2017) in their study reported that there was a significant effect of positive affirmation on the psychological changes of pregnant women with pre-eclampsia. Positive affirmations affect the regulation of the limbic system by producing opioids, serotonin and GABA in the amygdala, in addition to improving cortisol regulation. This effectively minimizes pain and anxiety, decrease heart rate, and creates a comfortable feeling (Karatzias et al., 2011). Based on the reasons explained, the researchers are interested in conducting a study on the effect of meditation and positive affirmations on labor duration and APGAR scores.

Previous studies have provided meditation interventions with yoga techniques to assess the effect or the relationship between meditation and air and labor duration in the second stage, and the application of positive affirmations in pregnancy was separated. Meanwhile in this study, although the researchers also provided meditation intervention, it was combined with positive affirmations. In this study, the researchers investigated the effect of the intervention of the combination of meditation and positive affirmations on the labor duration (counting from stage 1 to 3) and also assessed the effect on the APGAR scores of newborns.
The purpose of this study was to analyze the effect of a combination of meditation practice and positive affirmations in primigravida on the labor duration and the APGAR score of newborns.

**RESEARCH METHODOLOGY**

This study was a quasi-experimental research using a post-test only control group approach. The independent variable in this study was the combination of meditation and positive affirmation, and the dependent variables were labor duration and the APGAR score of the newborns. The variable of labor duration was measured from the accumulated time of the first, second and third stage of labor in minutes. The variable of APGAR score was measured based on the observation of the APGAR score of newborns in the first minute.

The subjects of this study were primigravida with gestational age ≥ 36 weeks from three Independent Midwife Practices in Aceh Barat. According to Sugiyono (2014) the sample size of an experimental research using a control group is 10-20 subjects in each group. The researchers calculated the sample size after correction with an estimated drop out proportion of 0.1 so that the number of subjects in this study was 24 subjects. The subjects were determined using a consecutive sampling technique, namely the primigravida mothers who came consecutively and met the criteria to be included as subjects in this study. The inclusion criteria included primigravida, gestational age ≥ 36 weeks, pregnant women who are not more than 35 years, planning for vaginal delivery, estimated fetal weight of 2500-4000 grams, singleton pregnancy and pregnant women who are willing to be the respondent in this study. The exclusion criteria were primigravida with complications, primigravida who do not do meditation and affirmations for 14 days if they are included in the intervention group.

Before collecting the data, this study had received ethical approval (Ethical Approval) from the Health Research Ethics Commission of the Health Polytechnic of the Ministry of Health of Aceh based on No. LB.02.03/003/2021. The study was conducted from July to August 2021. The selection of research subjects had to meet the predetermined criteria and be divided into two groups according to the order of visits. Then, the control group and intervention group were determined randomly. The control group consisted of 12 research subjects and was only given normal pregnancy care according to standard operating procedures at Independent Midwife Practices and the treatment group consisted of 12 research subjects who were given meditation exercises and positive affirmations in the hypnotherapy practice room which had been prepared and continued with exercises at home every day until 14 days with a duration of 15 minutes per training session. The exercises were recorded on the meditation practice notes sheet and positive affirmations notes sheet. Then, while waiting for the time to give birth, a post test for all research subjects was conducted to assess the accumulation of the labor duration of the 1st stage, 2nd stage, and 3rd stage in minutes and the APGAR score of newborns in the first minute.

The data collected was analyzed using SPSS for Windows 23. Firstly, a parametric prerequisite test was carried out using the Shapiro-Wilk test. Secondly, after the test results showed that the research data were normally distributed, it was continued with the homogeneity test of variance using Levene's test. Then, after the prerequisite test was met, an analysis was carried out using the Independent sample t-test.

**RESEARCH RESULTS**

Based on the results of the study, it was found that the characteristics of the research subjects were as shown in the table 1.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Group</th>
<th>Control</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td></td>
<td>F</td>
<td>%</td>
</tr>
<tr>
<td>Primary</td>
<td></td>
<td>2</td>
<td>16,7</td>
</tr>
<tr>
<td>Secondary</td>
<td></td>
<td>1</td>
<td>8,3</td>
</tr>
<tr>
<td>Higher</td>
<td></td>
<td>9</td>
<td>75</td>
</tr>
<tr>
<td>Occupation</td>
<td></td>
<td>3</td>
<td>25</td>
</tr>
<tr>
<td>Having an occupation</td>
<td></td>
<td>9</td>
<td>75</td>
</tr>
</tbody>
</table>

Table 1.
Frequency Distribution of Research Subjects’ Characteristics
The table 1 above shows that regarding the education variable, the control group subjects and the majority of the intervention group are highly educated. In terms of occupation variable, the subjects in the intervention group and the control group have no occupation. Then, regarding the age variable, the majority of the subjects in both the control group and the treatment group are in the late teenage age range. In terms of anxiety level, the majority of the subjects in both the control group and the treatment group have mild anxiety.

Before conducting statistical analysis, the data normality test was conducted using the Shapiro-Wilk test. The data are normally distributed if \( p > 0.05 \) and abnormally distributed if \( p < 0.05 \). By using SPSS software, the results of the normality test are presented in the table 2 below.

### Table 2. The Results of Normality Test

<table>
<thead>
<tr>
<th>Variables</th>
<th>Group</th>
<th>p-value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor Duration</td>
<td>Control</td>
<td>0.333</td>
<td>Normal</td>
</tr>
<tr>
<td></td>
<td>Intervention</td>
<td>0.306</td>
<td>Normal</td>
</tr>
<tr>
<td>APGAR Score</td>
<td>Control</td>
<td>0.105</td>
<td>Normal</td>
</tr>
<tr>
<td></td>
<td>Intervention</td>
<td>0.123</td>
<td>Normal</td>
</tr>
</tbody>
</table>

The table 2 above shows that both the variable labor duration and the APGAR score are obtained \( p \)-value >0.05. It shows that the assumption of normality in both variables had been met so that it could be continued with the independent sample t-test.

Then, the results of the independent sample t-test carried on the control and treatment group variables are presented in the table 3 below.

### Table 3. The Results of the Independent Sample T-Test of the Effect of Meditation and Positive Affirmations on Primigravida Mothers on the Labor Duration

<table>
<thead>
<tr>
<th>Group</th>
<th>Labor duration Mean ± SD</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>492.083 ± 248.9</td>
<td>0.017</td>
</tr>
<tr>
<td>Treatment</td>
<td>288.750±47.5</td>
<td></td>
</tr>
</tbody>
</table>

The table 3 above shows that the results of the independent sample t-test for the variable of labor duration are obtained \( p \)-value <0.05 at the value of \( \alpha=0.05 \). It can be interpreted that there was a significant difference between the control group and the treatment group.

### DISCUSSION

The Effect of Meditation and Positive Affirmations on the Labor Duration
This study analyzed whether there was a difference in labor duration between primigravida mothers who practiced a combination of meditation and positive affirmation exercises and those who did not. The data on the characteristics of the research subjects showed that the majority of the control group and treatment group experienced mild anxiety and some even experienced panic-level anxiety. The results of statistical tests showed that there was a significant difference between the control group and the treatment group regarding labor duration. In the treatment group, the labor duration was recorded to be shorter than the control group. These results confirm that pregnant women who practice a combination of meditation and positive affirmations routinely for 14 days since gestational age ≥ 36 weeks in Aceh Barat can lead to a shorter labor duration than those who do not. Meditation and positive affirmation exercises that were carried out since gestational age ≥ 36 weeks for 14 consecutive days also contribute to increase comfort and decrease perceived anxiety (based on direct statements of the research subjects in the treatment group).

Tang et al. (2015) stated that meditation can be applied to reduce stress, improve physical and mental health and cognitive performance. According to Subandi, (2002) meditation practice produces a relaxation response that underlies other physiological changes. Then, in terms of childbirth, fear and anxiety in pregnant women will affect their his power during labor which has an impact on the continuity of labor. The presence of his power and the strength of the mother's straining are factors that affect normal delivery (Purwaningsih & Fatmawati, 2010). It is in line with the results of a study conducted by Nisa (2015) showing that there was a relationship between the characteristics of his power and the labor duration in the second stage, in which normal his power causes 7.8 times more effective in shortening the duration of labor. It is also in line with a study conducted by Kartikasari et al. (2020) reported that meditation using prenatal yoga techniques had a significant effect on increasing levels of endorphins, shorter labor times and stronger uterine contractions than those who did not receive yoga/meditation practice during pregnancy. The implications after meditation for pregnant women can form serotonin and endorphins hormones, which have an effect on decreasing anxiety levels and blood pressure and resulting in relaxation of all muscle, nerve and mind functions (Suristyawati et al., 2019).

Cholifah et al. (2017) stated that positive affirmations are effective in providing psychological changes to pregnant women with pre-eclampsia cases. Positive affirmations are positive statements repeated to oneself to suggest the subconscious so that the negative things previously recorded in the subconscious can be replaced by new positive programs (Cahyono, 2011). Another study also reported that there was a significant effect of affirmation on the anxiety level of third trimester primigravida in the work area of the Patrang Health Center, Jember Regency (Rahmawati, 2013). Affirmations are effective in influencing the anxiety level of multiparous mothers. Nurcahyani et al. (2020) in their study also reported that Belly Breathing Technique exercises and positive affirmations in pregnant women had a significant effect on decreasing stress levels and cortisol hormone levels compared to the results of measurements before and after exercise. Jessop et al. (in Islamarida et al., 2022) describe that self-affirmation can influence attitudes towards positive and better perception control. Affirmations have an impact on a person's physic and psychology which can be seen from the emergence of relaxation and minimal tension felt (Zainiyah et al., 2018).

Thus, the application of exercises with the combination of meditation and positive affirmations (treatment group) could accelerate the process of self-suggestion using positive words to the subconscious to produce a transformation of the mind to what is expected. The application of this combination exercise in primigravida effectively resulted in shorter labor duration in primigravida. This finding also noted that the treatment group faced fewer problems during childbirth at stage 1, stage 2 and stage 3 than the control group. Therefore, this exercise should be applied consistently since pregnancy care for all primigravida in the Independent Midwife Practices as a preventive effort to minimize problems that can prolong the labor duration. However, further research is needed to thoroughly assess the effect of a combination of meditation practice and positive affirmations on the possible problems that can occur during the 4th stage of labor and the puerperium.

The Effect of Meditation and Positive Affirmations on Apgar Score

This study also analyzed whether there was a difference in the Apgar scores of newborns between primigravida mothers who practiced meditation and positive affirmations and those who did not. The results of this study showed that there was a difference in the effect of meditation and positive affirmations in primigravida on the Apgar scores of newborns. These results were in line with...
the shorter labor duration in mothers who practiced meditation and positive affirmations.

The results of this study are in line with the results of a study conducted by Altman et al. (2015) showing that the duration of the second stage of labor which was between 1 hour to < 2 hours was associated with an increase in the risk of an APGAR score <7 by 80%. Then, a longer duration of labor reaching ≥ 4 hours in the second stage of labor increased the risk by 2 times the APGAR value <7 (Altman et al., 2015).

This is closely related to the effect of psychological calm of mothers who receive meditation and positive affirmation exercises that have an impact on the labor duration and the APGAR scores of newborns. It is in line with the results of a study carried out by Suristyawati et al., (2019) showing that meditation is able to overcome anxiety in pregnant women. The presence of calm and comfort in pregnant women has an effect on the ability of the placenta to supply oxygen to the fetus. Thus, the oxygen needs of the fetus can be met. Oxygen is needed by the fetus to grow and develop (Simanungkalit & Purnawati, 2020). The APGAR scores can be one of the parameter for the fulfilment of fetal oxygen needs.

The results of this study are also in line with a study conducted by Hasanjanzadeh & Faramarzi (2017) stating that there was a negative relationship between symptoms of stress, anxiety and depression during pregnancy and the APGAR scores of newborns. It means that the psychological state during pregnancy has an impact on the APGAR scores of newborns.

The APGAR score is an appropriate method for reporting newborns’ status and response to resuscitation if necessary (American Academy of Pediatrics Committee on Fetus and Newborn & American College of Obstetricians and Gynecologists Committee on Obstetric Practice, 2015). The APGAR score can indicate an overall measure of many factors that impact newborns’ vitality (Ward Platt, 2019).

In this study, it was found that the APGAR score was higher along with the shorter duration of labor in primigravida mothers who received meditation and positive affirmation exercises. The exercise can reduce the anxiety experienced by pregnant women so that it can emerge a sense of comfort and calm which then has the effect of reducing complications occurred in the labor process. When the mother's condition is comfortable and calm, it can then have an impact on the condition of the baby born.

CONCLUSIONS
Based on the results of the study, it could be concluded that there was a significant effect of meditation practice and positive affirmation on the labor duration in primigravida and there was a significant effect of meditation practice and positive affirmation on the APGAR score of newborns in primigravida. Therefore, applying meditation exercises and positive affirmations for pregnant women on a regular basis in primigravida can be a consideration for midwives in providing midwifery care in order to minimize labor complications that have an impact on the labor duration and the health of the baby born.

SUGGESTION
It is hoped that midwifery service providers will be able to apply meditation practices and positive affirmations for primigravida women to minimize anxiety in the third trimester so that the problems that have a negative impact on the labor duration and the APGAR score of newborns can be prevented.

It is hoped that further researchers will be able to study more deeply the mechanism of meditation and positive affirmations on the labor process and the welfare of babies born using more specific parameters.

REFERENCES


