INTRODUCTION

Anxiety disorders during pregnancy are one of the most common complications of pregnancy. The form of anxiety felt by pregnant women is usually nervous, sweating profusely, depression, poor sleep quality, tense muscles, easily emotional, and feeling uncomfortable. The health of the mother and the unborn child may be impacted if it is excessive and rising. A total of 107,000 (28.7%) of Indonesia's 373,000 expectant mothers experience anxiety before giving birth.

Third trimester pregnant women experience excessive anxiety due to feelings of worry and fear if the baby is born abnormally and feeling uncomfortable as a result of their pregnancy. Pregnant women who experience anxiety will produce catecholamine hormones with very high levels. This catecholamine hormone will cross the placenta so that the body system will feel afraid. If this happens continuously, the fetus will get used to being in a stressful condition so that it will have an impact on the baby being born such as experiencing emotional disturbances, digestion, hypoxia and bradycardia. Therefore, anxiety in pregnant women must be overcome with the best treatment.

Handling to reduce anxiety levels is by pharmacological and non-pharmacological therapy, but pharmacological therapy with the use of drugs if used for a long time can cause side effects such as kidney disorders. In order to develop a safer substitute or supplemental therapy, such as non-pharmacological therapy, numerous studies have been conducted. Relaxation treatment is one of the alternatives to medication. A method to lessen worry is to relax. Deep breathing, Benson, progressive, musical, aromatherapy, and modified relaxation techniques are among the relaxation methods that can be applied.

The Benson relaxation technique involves using the patient's trust in the ability to calm themselves to establish a deep breathing relaxation technique. By concentrating on specific words or phrases that are stated repeatedly in a regular rhythm and with an attitude of surrender to God Almighty, along with taking a deep breath, the Benson relaxation technique can help you relax. Long breaths can provide enough energy, because when exhaling exhale carbon dioxide (CO2) and...
when inhaling long breaths get oxygen that is needed by the body to clean the blood and prevent damage to brain tissue due to lack of oxygen, so that O2 is fulfilled in the brain and body becomes relax.9

According to Abu Bakar et al’s research, Benson relaxation can help heart patients feel less anxious and have slower heartbeats.10 The Benson relaxation technique is a technique that may be utilized safely, profitably, and without adverse effects, according to research by Jalal et al. This is further reinforced by that study’s findings.11 Besides Benson relaxation, another non-pharmacological therapy that can reduce anxiety is aromatherapy relaxation.12 Lavender fragrance is among the most well-liked aromas. Linalool and linalyl acetate are found in lavender flowers. One component of aromatherapy employed by inhalation is linalool. The region of the brain responsible for developing aromatherapy’s calming effects and the nose are directly connected.13 According to studies by Toktam et al lavender helps lessen depression because it has an antidepressant impact.14 This is corroborated by studies done by Tafazoli et al., who found that the intervention group’s anxiety level decreased after inhaling lavender.15

There are many ways to treat anxiety, which has been facilitated by the advancement of health science. Benson relaxation and aromatherapy relaxation can help pregnant women unwind; they also have the advantages of being simpler to use and having a potential to lower medical expenses. The goal of this study was to evaluate the effectiveness of the combination of Benson relaxation and lavender aromatherapy relaxation on changes in anxiety in pregnant women in their third trimester. As a result, the researchers wanted to combine Benson relaxation and lavender aromatherapy relaxation to reduce anxiety.

METHODS

Study Design

The design of this study used a quasi-experimental design with a one group pretest posttest design. This study was conducted on third trimester pregnant women in Wonokromo Surabaya as many as 52 third trimester pregnant women. The independent variable is Benson relaxation technique and lavender aromatherapy relaxation, and the dependent variable is changes in anxiety in third trimester pregnant women. The research question is how effective the combination of Benson relaxation and lavender aromatherapy relaxation can effectively reduce anxiety in third trimester pregnant women.

Data Collection Procedures

Respondents were taken using the Consecutive sampling technique by determining the inclusion criteria, namely: the subject is a third trimester pregnant woman, is willing to take a series of therapies given by signing the research informed consent, the subject has a moderate to high anxiety score, the subject has never participated in Benson relaxation and aromatherapy relaxation. Lavender previously and the subject was not undergoing any psychological treatment.

The data collection method used in this study refers to previous research conducted by Abu Bakar et al with slight modifications.16 In brief, the stages of data collection are as follows. In the treatment group, Benson relaxation and lavender aromatherapy relaxation were carried out 2 times a day for 1 week. The first meeting with the respondent was measured for anxiety (pretest). The first step in Benson’s relaxation exercise is to find a comfortable posture, close your eyes, breathe slowly and freely, and relax your muscles from your feet to your face. The next step is to inhale lavender aromatherapy, which is instilled up to 5 drops with 30 ml of water that has been evaporated for inhalation, done twice daily for about 10 minutes at a time, while exhaling through the lips while reciting the dua. Researchers accompanied the respondents 2 times a week doing Benson relaxation exercises and lavender aromatherapy relaxation. First, the respondent’s anxiety scores was measured using the HARS scale for the pre-test scores. Respondents were given Benson relaxation exercise procedures and lavender aromatherapy relaxation and an observation sheet on the patient’s ability to perform Benson relaxation exercises and lavender aromatherapy relaxation filled in by respondents during and after doing Benson relaxation exercises and lavender aromatherapy relaxation. After the last meeting, the respondents were measured for anxiety scores using the HARS scale for the post-test scores.

Anxiety level data was collected using a HARS (Hamilton Anxiety Rating Scale) questionnaire according to the level of anxiety felt by the respondents. With a questionnaire grid consisting of 14 statement items with scoring values as follows: score 0: no symptoms at all, score 1: one of the symptoms present, score 2: half of the symptoms present, score 3: more than half of the symptoms present and a score of 4: all symptoms are present. Assessment of the results is by adding up the scores of items 1 to 14 items as follows: score <14: no anxiety, score 14-20: mild, score 21-27: moderate and score 28-41: severe.

Data Analysis

The Wilcoxon signed-rank test was employed in this study’s research to compare third trimester pregnant women’s anxiety levels before and after intervention. The SPSS program will be used to process all of the collected data.

RESULTS

Table 1 shows that the characteristics of most respondents are between 20-35 years old amounted to 25 people (48.1%), the characteristics according to parity were mostly primigravida as many as 30 people (57.7%), high school education amounted to 30 people (57.7%), and most of the respondents worked were 32 people (61.5%).

Table 2 shows that most of the respondents experienced moderate levels of anxiety before being given a combination of Benson relaxation and lavender aromatherapy relaxation with a total of 30 respondents (57.7%).

Table 3 shows that most of the respondents experienced mild anxiety levels after being given a combination of Benson relaxation and lavender aromatherapy relaxation with a total of 35 respondents (67.4%).

Table 4 shows that most of the respondents were 35 people (67.4%) felt a decrease in anxiety levels after being given a combination of Benson relaxation.
and lavender aromatherapy relaxation to reduce anxiety in third trimester pregnant women. The results of the analysis using the Wilcoxon test showed the results of p value = 0.000 < 0.05, meaning that H0 was rejected and H1 was accepted so that there was an effect of the combination of Benson relaxation and lavender aromatherapy relaxation on reducing anxiety in third trimester pregnant women.

**DISCUSSION**

Physical and psychological changes that occur during pregnancy make pregnant women more susceptible to psychological disorders such as anxiety, stress, and depression. Anxiety can be caused by one of the factors, namely parity, the majority experienced by primigravida where they have not had previous experience of pregnancy or childbirth. This is evidenced by the characteristics in this study mostly primigravida as many as 30 respondents (57.7%). Meanwhile, in the distribution of respondents according to maternal age, the majority were aged 20-35 years, namely 25 respondents (48.1%). At this age it can be said that the respondent is in the mature age category and the age is not at risk for pregnancy, so that when the age increases, the person becomes more mature in making choices so that it does not cause anxiety.

At the level of education, most respondents are high school as many as 30 respondents (57.7%). The level of education a person has can affect a person's level of knowledge, if a person's education is high, his knowledge also increases so that it can be expected to take advantage of the health facilities that are already available. Higher education possessed by pregnant women will affect their knowledge about pregnancy so that they are able to control anxiety during pregnancy. This is because respondents with higher education can think more objectively and have broad insight and can accept problem explanations given by health workers. This is supported by research by Heriani which states that the higher a person's education, the higher the person can respond rationally, have a mindset and responsiveness to information that has been given is easily accepted so that anxiety can be controlled.

**Table 1. Characteristics of Respondents by Mother’s Age, Education and Occupation**

<table>
<thead>
<tr>
<th>Characteristics of Respondents</th>
<th>Total</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mother’s Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;20 years</td>
<td>12</td>
<td>23.1</td>
</tr>
<tr>
<td>20-35 years</td>
<td>25</td>
<td>48.1</td>
</tr>
<tr>
<td>&gt;35 years</td>
<td>15</td>
<td>28.8</td>
</tr>
<tr>
<td>Parity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primigravida</td>
<td>30</td>
<td>57.7</td>
</tr>
<tr>
<td>Multigravida</td>
<td>22</td>
<td>42.3</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Middle School</td>
<td>2</td>
<td>03.8</td>
</tr>
<tr>
<td>High school</td>
<td>30</td>
<td>57.7</td>
</tr>
<tr>
<td>Diploma/Bachelor Degree</td>
<td>20</td>
<td>38.5</td>
</tr>
<tr>
<td>Occupation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Housewife</td>
<td>32</td>
<td>61.5</td>
</tr>
<tr>
<td>Work</td>
<td>20</td>
<td>38.5</td>
</tr>
<tr>
<td>Number of respondents</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Primary Data, 2022

**Table 2. Anxiety levels in third trimester pregnant women before being given a combination of Benson relaxation and lavender aromatherapy relaxation**

<table>
<thead>
<tr>
<th>Anxiety Level</th>
<th>Total</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No anxiety</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Mild</td>
<td>15</td>
<td>28.8</td>
</tr>
<tr>
<td>Moderate</td>
<td>30</td>
<td>57.7</td>
</tr>
<tr>
<td>Severe</td>
<td>7</td>
<td>13.5</td>
</tr>
<tr>
<td>Total</td>
<td>52</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Primary Data, 2022

**Table 3. Anxiety levels in third trimester pregnant women after being given a combination of Benson relaxation and lavender aromatherapy relaxation**

<table>
<thead>
<tr>
<th>Anxiety Level</th>
<th>Total</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No anxiety</td>
<td>5</td>
<td>9.6</td>
</tr>
<tr>
<td>Mild</td>
<td>35</td>
<td>67.4</td>
</tr>
<tr>
<td>Moderate</td>
<td>10</td>
<td>19.2</td>
</tr>
<tr>
<td>Severe</td>
<td>2</td>
<td>3.8</td>
</tr>
<tr>
<td>Total</td>
<td>52</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Primary Data, 2022

**Table 4. The effect of the combination of Benson relaxation and lavender aromatherapy relaxation on reducing anxiety in third trimester pregnant women**

<table>
<thead>
<tr>
<th>Anxiety Level</th>
<th>Before Intervention</th>
<th>After Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>%</td>
</tr>
<tr>
<td>No anxiety</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Mild</td>
<td>15</td>
<td>28.8</td>
</tr>
<tr>
<td>Moderate</td>
<td>30</td>
<td>57.7</td>
</tr>
<tr>
<td>Severe</td>
<td>7</td>
<td>13.5</td>
</tr>
<tr>
<td>Total</td>
<td>52</td>
<td>100</td>
</tr>
</tbody>
</table>

Wilcoxon test <0.05, p value = 0.000

Source: Primary Data 2022
In this study, it was found that the distribution of work was 32 respondents (61.5%) as housewives, mothers who experienced higher levels of anxiety, mostly mothers who did not have much activity outside the home. Work can affect the stressor level of someone who has activities outside the home so that mothers can get a lot of information about pregnancy from friends and various information and experiences obtained from other people so that they can change a person's perspective in dealing with stressors.23

Anxiety is a feeling of worry and fear for which there is no clear cause. When anxious, imagination will appear in one's mind which will further exacerbate anxiety.24 Moderate anxiety is a condition when a person can focus on the thoughts that are of concern, whereas a person's thinking in this condition will experience a narrowing but can still respond and take action according to the direction of others, while mild anxiety is the tension experienced by a person in his daily life but are still alert, have broad thinking, may inspire themselves to learn, and they are capable of being innovative and competent problem solvers.23 In this study, respondents experienced a decrease in anxiety levels from moderate (57.7%) to mild (67.4%) and there were even some who did not experience anxiety (9.6%).

The examination of this study's data revealed that the combination of giving pregnant women in their third trimester Benson relaxation and aromatherapy relaxation had an effect (p value = 0.000), indicating that this was true. The development of a respiratory relaxation response technique known as Benson relaxation involves the patient's belief component and can assist patients attain better health and welfare circumstances by helping to construct an internal environment. By inhaling and then exhaling with a statement that each respondent believes, the Benson relaxation technique helps people relax. Benson's relaxation technique can induce a state of peace and relaxation because it encourages the contemplation of positive things, which prompts the hypothalamus to release endorphins, which are happy-making hormones. The parasympathetic nerve system, which has an impact on psychological circumstances, will function more diligently and the sympathetic nervous system's activity will be suppressed. The sympathetic nervous system works harder to stimulate the body's functions when a person feels anxious, which increases heart and breathing rates and causes peripheral blood vessels to constrict and central blood vessels to widen. By stimulating the parasympathetic nervous system to produce a relaxation response, sympathetic nerve inhibition can be achieved, resulting in a physiologically relaxed body.9

This is supported by research by Zenouzi which states that Benson relaxation can reduce stress, anxiety and depression levels in pregnant women.24 This is also supported by research by Ahmad said that the Benson relaxation technique can reduce levels of depression, anxiety in multiple sclerosis patients.25 Another study conducted by Wanda also said that Benson relaxation can reduce depression in high-risk pregnant women.26 A study conducted by Jalal said that Benson's relaxation technique can reduce anxiety in preoperative patients.11

In order to promote enthusiasm, make one feel refreshed, and soothe the mind and body, aromatherapy uses pure oil extracts or essential oils.27 lavender aromatherapy is one of the forms of aromatherapy that can be used to treat anxiety. Among the many beneficial components of lavender oil are monoterpene hydrocarbons, camphene, limonene, geraniol, lavandulol, and nerol. However, between 30 and 60 percent of the oil's weight is made up primarily of linalool and linalool acetate, which has the main therapeutic effect of relaxing the body and mind and lowering anxiety. According to science, the reaction happens as a result of certain signals the smell delivers to the area of the brain responsible for controlling emotions.28

This is supported by research by Toktam said that lavender has an antidepressant effect.14 lavender aromatherapy can increase the anxiolytic effect so that it can reduce anxiety.29 Using lavender by means of massage, inhalation, acupressure, compression can reduce anxiety during labor.30 lavender inhalation is a simple, low-risk and cost-effective method of reducing anxiety.31 This is also evidenced by research conducted by Ratna showing that inhalation of lavender aromatherapy can reduce anxiety, in addition to decreasing anxiety, mothers also feel comfortable, rest well, and feel refreshed.32

Pregnant women in their third trimester who are anxious can benefit from a combination of Benson relaxation and lavender aromatherapy relaxation. With enough practice, Benson relaxation can induce a quiet, relaxed state where the brain waves start to settle down, eventually allowing a person to fall asleep peacefully. This occurs when the person starts to lay down and adhere to the relaxation instructions, specifically at the stage of relaxing the muscles from the head to the feet, and then relaxation in combination with aromatherapy. Next, in a relaxed state, close your eyes, focus your mind with believed sentences and inhale lavender aromatherapy. At that time the frequency of the brain waves that appeared began to slow down and become more regular. At this stage, the individual begins to feel relaxed and passively follows the situation, thereby suppressing the feeling of tension in the body.33 This is supported by research by Zahra said that aromatherapy using inhaled lavender essential oil and breathing exercises can reduce anxiety in depressed patients.34 This is also supported by research by Leila said that the combination of the aroma of roses and the relaxation of Benson had an effect in reducing anxiety on burn pain.35

The combination of Benson relaxation and lavender aromatherapy relaxation is one of the relaxation techniques that can be done independently at home because the treatment is simple, easy to apply, inexpensive, and has few side effects.

CONCLUSION

Giving therapy the combination of Benson relaxation and lavender aromatherapy relaxation can significantly reduce anxiety levels in third trimester pregnant women. It is advised that pregnant women who experience anxiety use this combination therapy of Benson relaxation and lavender aromatherapy relaxation as an alternative or complementary therapy to lessen anxiety levels because it is a non-pharmacological therapy that is safe.
effective, can be done by themselves at home, and has few side effects. Further studies are needed to evaluate more deeply various factors that affect the effectiveness of the combination of Benson relaxation and lavender aromatherapy relaxation on changes in anxiety in third trimester pregnant women.

ACKNOWLEDGMENT

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DISCLOSURES

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Conflict of Interest

No potential conflict of interest relevant to this article was reported.

Author Contribution

All authors similarly contribute to the think about from the investigate concepts, information acquisitions, information investigation, factual investigations, changing the paper, until detailing the consider comes about through publication.

Ethical Consideration

The research procedure has received a letter from the ethics committee of the University of Nahdlatul Ulama Surabaya with a letter decision Number: 092/EC/KEPK/UNUSA/2022.

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