Abstract---Introduction: Prenatal yoga is a modified type of Hatha yoga that is adjusted to the condition of pregnant women. This study aims to determine the effect of prenatal yoga on the anxiety level of pregnant women in the third trimester during the Covid-19 pandemic in Purbalingga. Methods: This study used Pre-Experimental Design with One Group Pretest-Posttest Design. The sample in this study was 576 pregnant women in clinics in Purbalingga. It used the total sampling technique. Data analysis used univariate and bivariate analysis. Results: The results showed that the pretest results of anxiety scores of pregnant women who take prenatal yoga classes are 16.48 with a standard deviation of 5.598, a median of 16.00 (minimum 3- maximum 33). Then, after prenatal yoga, the anxiety score is 4.67 with a standard deviation of 2.862, and a median of 4.67 (minimum 0- maximum 11). Then, the Wilcoxon test obtains a p-value of 0.000 (<0.05). Conclusion: It can be concluded that there is a difference in the level of anxiety before and after the intervention in the form of prenatal yoga. Prenatal yoga reduces anxiety levels in pregnant women in the third trimester during the Covid-19 pandemic.

Keywords---prenatal yoga, anxiety, pregnant women.
Introduction

Anxiety is an emotional psychological problem of individuals who feel worries or fear about about uncertain and unclear things about an object specifically. First pregnancy often appears fearful, especially when facing childbirth and events in the third trimester. A high anxiety level can affect the delivery process and even can result in complications for both the mother and infant. Based on the prevalence data of anxiety in pregnant women, 81% of women in the United Kingdom have experienced psychological disorders during pregnancy. Meanwhile, in France, primigravida mothers experienced anxiety (7.96%), depression (11.80%), and anxiety and depression (13.24%) during pregnancy (Ibanez, 2018). However, in Indonesia, the incidence of anxiety in pregnant women reaches 373 million. A total of 107,000,000 or 28.7% of them experience anxiety before the delivery process. A study conducted on primigravida mothers showed different levels of anxiety during pregnancy, namely mild anxiety (22.57%), moderate anxiety (30%), severe anxiety (27.53%), and very severe anxiety (20%).

COVID-19 pandemic in Indonesia has made the government apply social restriction policies such as restriction of all routine services, including maternal and child health services. Restrictions on health services cause pregnant women afraid and reluctant to have antenatal care due to fear of getting infected with the virus. The COVID-19 attacks the respiratory system with symptoms ranging from mild to severe. The virus has not been shown to indicate a risk of miscarriage, but there is evidence of mother-to-child transmission during pregnancy or after birth. This problem makes pregnant women feel anxious and fear to have antenatal care due afraid of getting infected. In the third trimester of pregnancy, the anxiety can lead to a decrease in the birth weight of the baby.

Indeed, pregnant women can take preventive measures such as exercise, cycling, and yoga to keep both mother and infant health and to be able to have a normal birth delivery process. Pregnancy exercises cover some techniques such as yoga, Pilates, Kegels, and hypnotherapy. Prenatal yoga is one exercise modification from hatha yoga that is adapted to the conditions of pregnant women. Prenatal yoga aims to prepare pregnant women physically, mentally, and spiritually for a smooth delivery process. Careful preparation can increase self-confidence to have a smooth and comfortable delivery process. Prenatal yoga has a range of movements including relaxation, adjusting posture, breathing and meditation for one hour each day. Movement during relaxation can regulate posture and breathing. For pregnant women, the movement technique focuses on exercising the muscles of the body. The form of meditation carried out during this exercise is guided imagination in which pregnant women are suggested to have the most relaxed position, then they are asked to close their eyes and follow the imagination directed by the trainer.

A study by Sulistiyaningsih (2020) regarding the Effect of Prenatal Yoga on Increased Anxiety in Third Trimester Primigravida Pregnant Women shows that the P-value is 0.000 < 0.05. It means that there is an effect of prenatal yoga on reducing anxiety in primigravida mothers. Yoga can reduce discomfort during pregnancy and increase confidence in the birth process. Thus, Yoga has a positive
impact on reducing discomfort during pregnancy. Increased muscle strength provides many benefits such as preventing back pain, helping mothers become more agile and active, and changing body weight to balance with the gravity during pregnancy. In this study, yoga does not only strengthens the muscles of the shoulders, back and legs but also helps to obtain the correct body position in order to reduce back pain in pregnant women.  

Methods

This study used a pre-experimental design research design with a one-group pretest-posttest design. The sample of the study was pregnant women in the third trimester who were willing to be respondents. It involved a total of 576 pregnant women. Inclusion criteria was pregnant mother on third semester, with good communicate skill, also pregnant mothers with no illness. The research was conducted at maternal and child health clinics in the Purbalingga during the period of July-December 2021. Yoga training was carried out by certified trainers. Pre-test and post-test for measuring the anxiety level used a questionnaire proposed by the Hamilton Rating Scale for Anxiety (HARS). Before beginning collecting data, the researcher distributed document to respondent for informed consent. Researcher had to tell respondent about how to fill the questionnaire. Pregnant mothers who submitted respondent consent with the signature were include in this study. The training was done 2 times per week with 90 minutes of each session. After doing Yoga for two weeks, then the post-test used HARS was measured again. Univariate and Bivariate analysis were include in this study. Univariate analysis was described the number and percentage each variable. Bivariate analysis test used the Wilcoxon test to measure the difference in mean of anxiety score before and after prenatal yoga. The analysis used to determine effect of prenatal yoga on anxiety level following the decision with significant level was >0.05. this research was approved by Health Research Ethics Committee STIKES Muhammadiyah Gombong (No.530.6/II.3.AU/F/KEPK/VI/2021).

Results

Based on table 1, most of the pregnant women aged 21-30 (50.18%) with 408 of the pregnant women have elementary and junior high school education levels (70.84%). The average income of respondents is higher than the district government minimum wage standard (58.51%).

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≥20 years old</td>
<td>123</td>
<td>21.35</td>
</tr>
<tr>
<td>21-30 years old</td>
<td>289</td>
<td>50.18</td>
</tr>
<tr>
<td>&gt;31 years old</td>
<td>164</td>
<td>28.47</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elementary and Junior High School</td>
<td>408</td>
<td>70.84</td>
</tr>
<tr>
<td>Senior High School</td>
<td>168</td>
<td>29.17</td>
</tr>
</tbody>
</table>
Table 2 shows that the average anxiety level before receiving prenatal yoga intervention is 16.48 with a standard deviation of 5.598. Then, after the intervention, the anxiety level decreases to 4.67 with a standard deviation of 2.862. The mean before the intervention is 16.00 and after the intervention, it is 4.50. For the 95% confidence level, the lower bound before the intervention is 15.04 and the upper bound is 17.93. Then, after the intervention, the lower bound is 3.93 while the upper bound is 5.41.

Table 3 shows that before the intervention, the median value is 16.00 with a minimum value of 3 and a maximum value of 33. After the intervention, the median value decreases to 4.67 with a minimum value of 0 and a maximum value of 11. A total of 59 respondents out of 60 respondents experience a decrease in their level of anxiety and 1 respondent’s level of anxiety remain the same. The statistical results obtain a p-value of 0.000 (<0.05). It can be concluded that there is a difference in the level of anxiety before and after the intervention of prenatal yoga.
Table 3
Differences in anxiety levels before and after Prenatal Yoga

<table>
<thead>
<tr>
<th>Anxiety level</th>
<th>Median (Min-max)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest</td>
<td>16.00 (3-33)</td>
<td>0.000</td>
</tr>
<tr>
<td>Posttest</td>
<td>4.67 (0-11)</td>
<td></td>
</tr>
</tbody>
</table>

Discussion

This study reveals that prenatal yoga can reduce anxiety. The results of this study are in line with the previous study with the p-value of 0.004 < = 0.05, which means that prenatal yoga can reduce anxiety levels in pregnant women in the third trimester. Another study by Nurfaizah et al (2017) regarding the Effect of Yoga on Anxiety Levels of Pregnant Women in the Third Trimester in Puskesmas in Yogyakarta City obtained a p-value of 0.012 (p < 0.05). It means that there is an effect of prenatal yoga on the anxiety level of pregnant women in the third trimester in Puskesmas in Yogyakarta City.

Factors affecting anxiety levels in pregnant women are age, occupation and education level. Age will affect a person’s psychological status and the older the person, the better the emotional maturity level. Safe pregnancy and childbirth are at a healthy reproductive age between 20-35 years. Under 20 years old or older than 35 years are high-risk pregnancy age which can lead to anxiety. The results of this study are in line with the previous study (Muria, 2017) in which young age is a risk factor for anxiety during pregnancy. Age relates to the psychological immaturity of women to get pregnant and give birth. Another study (Fauziah, 2016) reveals that age > 35 years is associated with certain pregnancy-related risks and these risks cause anxiety. A study by Sibuea et al., (2013) states that pregnant women aged >35 years can face various risks such as difficult and long labor processes and infant mortality.

The factor causing the decrease in anxiety levels in pregnant women is prenatal yoga. It can have a relaxing effect on pregnant women because when doing prenatal yoga, pregnant women are required to focus their minds and regulate their breathing patterns. This relaxation effect helps reduce their anxiety. This study obtains a p-value of 0.000 (< 0.05) meaning that there is an effect of prenatal yoga on anxiety levels in pregnant women in the third trimester. It is in line with the previous study by Aswitami (2017) that prenatal yoga helps to facilitate the delivery process. Yoga practice can help relax the muscles of the body by regulating the pattern of breath.

Through body movements combined with breathing techniques and concentration, the body will feel fitter, healthier, and more balanced emotions. Besides, yoga also has benefits for managing chronic diseases related to lifestyle and yoga performed during pregnancy can reduce problems related to complications. In addition to giving relaxation effects, prenatal yoga also has a physiological effect on the body in every movement. The movements in prenatal yoga are also beneficial in strengthening the muscles of the thigh and pelvic
which are beneficial during the delivery process. This physiological effect makes mothers more confident during the delivery process and decreases the level of anxiety.\(^{27}\) This is in line with a previous study (Bara, 2021) in which squat and Kegel exercises used to strengthen the pelvic floor muscles and thigh muscles are useful during the labor process.\(^{28}\) Prenatal yoga practice for pregnancy focused on the rhythm of breathing, prioritizing safety and comfort so that provides many benefits for pregnant women. Prenatal Yoga is a kind of body and mind exercise and mother’s mentality which really helps mothers pregnant in flexing joints and calm the mind especially in the third trimester. Prenatal Yoga practice will get benefits during pregnancy can help smooth in pregnancy and natural and healthy birth of children.\(^{20}\) Prenatal yoga exercise during pregnancy could increased birth weight and reduce premature and deliveri complication.\(^{23}\)

Another physiological effect is smoother blood flow, both to the mother’s body and to the fetus which functions to supply nutrients. According to (Purnami & Dewi, 2018), the benefits of doing yoga are helping lower blood pressure and increasing blood flow in removing the remnants of toxins in the body. Meanwhile, the benefits of yoga practice for pregnant women are increasing blood flow and nutrients to the fetus adequately, and improving reproductive and pelvic health to strengthen the perineal muscles in preparing for childbirth. Anxiety is a natural feeling disorder characterized by feeling of fear or deep and ongoing concern.\(^{29}\) Yoga improved mood during pregnancy so that the mothers is more comfortable in her pregnancy and prepares her birth.\(^{21}\) A systematic review and meta-analysis stated that prenatal yoga can reduce depressive symptom.\(^{30}\) Prenatal Yoga is done in groups makes mothers can interacted with other pregnant mother and tell how their feeling each other.\(^{31}\) This makes mothers feel that she has a friend, have the same problem with other pregnant mothers. This made mother’s mind become calmer.\(^{26}\)

**Conclusion**

Based on the results of the study, the average anxiety level before prenatal yoga is 16.48 with a standard deviation of 5.598, a median of 16.00 (minimum 3-maximum 33). Then, after the prenatal yoga, the anxiety is 4.67 with a standard deviation of 2.862, a median of 4.67 (minimum 0-maximum 11). The Wilcoxon test results obtain p = 0.000, meaning that there is a significant difference in anxiety levels before and after prenatal yoga in pregnant women in the third trimester during the covid-19 pandemic. Prenatal Yoga decreases anxiety levels after practicing it twice a week for 2 weeks with 90 minutes per session.

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**Conflict of interest**

Authors declare there is no conflict of interest in this research.
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