

Implementation of Prenatal Yoga Exercises on Reducing Anxiety Levels in Pregnant Women in the Third Trimester

Ambarwati ^{1*}, Moza Marchiano ², Heny Prasetyorini ³

^{1,2} Institut Teknologi Kesehatan Cendekia Utama Kudus, Indonesia

³ Universitas Widya Husada Semarang, Indonesia

*Corresponding Author: Ambarwati

Abstract. Anxiety is a natural occurrence in pregnant women, especially those experiencing their first pregnancy (primigravida). Although it is normal, if not managed properly, it can affect the health of the fetus. Anxiety can be managed through physical exercise, one of which is prenatal yoga. Yoga is a physical exercise that focuses on breathing and body movements that are safe and comfortable for pregnant women in their third trimester. The purpose of the study was to determine the effect of Prenatal Yoga Gymnastics on Reducing Anxiety Levels in Pregnant Women in the Third Trimester. The type of pre experimental research with the design of one group pretest and posttest with sampling technique is purposive sampling by taking samples in the treatment group are 10 respondents who fit the inclusion and exclusion criteria. Inclusion criteria are the characteristics that will be used as research subjects. Implementation of prenatal yoga exercises for 3 meetings in 2 weeks with a duration of 30 minutes, the level of anxiety in 10 respondents can be reduced with a pre-test average of 35.10 (moderate anxiety) to decrease with an average of 26.80 (mild anxiety), as well as the results Wilcoxon test showed significant results (0.014). This shows that the application of prenatal yoga exercises to third trimester pregnant women can reduce the anxiety felt by third trimester primigravid pregnant women.

Key words: [Anxiety, Prenatal Yoga Exercises, Primigravida Pregnant Women, Third Trimester]

INTRODUCTION

The pregnancy period starts from the first trimester, the second trimester, and the third trimester. Most pregnant women in the third trimester will experience higher anxiety because pregnant women often feel worried and afraid of the baby in their womb. Causes of anxiety felt by pregnant women include fear of bleeding, babies born abnormally or deformed, fear of feeling extraordinary pain during childbirth, and so on (Setyani, 2015).

Anxiety is one of the most common psychiatric disorders in pregnancy. The scale of anxiety experienced by women during pregnancy can reach almost 50%, even clinical anxiety can increase the risk of postpartum depression. Anxiety not only interferes with the mother's psychology but can affect the development and growth of the fetus in the womb. In normal pregnancy, there is also a risk factor for death. These risk factors usually occur in mothers who are less than 20 years old or more than 35 years, previous disease history, pregnancy distance, and so on (Mardjan, 2016)

Based on research that has been conducted in several countries in 2022, it is stated that anxiety in pregnant women occurs in both developed and developing countries. The average incidence of anxiety in pregnant women in developed countries ranges from 7-20%. In Sweden 10% of pregnant women experience anxiety, in France 7.9% of primigravida mothers experience anxiety during pregnancy, while in the Netherlands the incidence of anxiety in pregnant women is 12.3% in Finland the incidence rate is 7.3%, and in Canada there are 6.7% of pregnant women who experience anxiety (Mitchell R.A, et al, 2023) (Hadfield et al, 2022).

In developing countries, the prevalence of anxiety in pregnant women ranges from more than 20%. In Malaysia it shows that 23.4% of pregnant women experience anxiety, in China the level of anxiety in pregnant women is 20.6%, in Bangladesh 29% of pregnant women experience depression or anxiety, in Pakistan 70% of pregnant women experience anxiety and depression, in Central America-Nicaragua 41% of pregnant women have anxiety symptoms, and in Indonesia itself the incidence rate of anxiety in pregnant women amounts to 28.7% (Eline, 2019).

Based on data from the Ministry of Health of the Republic of Indonesia (Ministry of Health of the Republic of Indonesia) in 2022, there are 373,000,000 pregnant women and as many as 107,000,000 pregnant women (28.7%) experience anxiety during pregnancy. Meanwhile, on the island of Java there are 679,765 pregnant women and those who experience anxiety during pregnancy, namely 355,873 people (52.3%) (Ministry of Health of the Republic of Indonesia, 2022) (Central Java Health Office, 2020). The Kudus Regency Health Office said that in November 2023 in Kudus City there are 15,045 pregnant women and the number of pregnant women in Wergu Wetan Kudus Village is 342 people

(DKK, 2023)

Anxiety management in pregnant women can be in the form of pharmacological and non-pharmacological therapy. To overcome this anxiety, one of them is using antidepressants. Antidepressants are drugs that can reduce or eliminate symptoms of depression. Based on how the drug works in the body, antidepressants are divided into tricyclic antidepressants (ATS), monoamine oxidase inhibitors (IMAOs) and selective serotonin reuptake inhibitors (SSRIs). One of the antidepressants that is the first choice because of its safety for the treatment of depression in pregnant women is the SSRI group. Drugs that are included in the SSRI class are Citalopram, Fluvoxamine, Paroxetine, Fluoxetine, and Sertraline. This drug works by increasing the levels of the hormone serotonin in the brain. The hormone serotonin functions to regulate a person's mood from depression, anxiety, and anxiety so that it can handle depression (Nadhifa, 2020). However, the use of pharmacological therapy will certainly have negative effects if used continuously and can result in dependence. Complications that may occur due to the use of antidepressants in pregnancy include an increased risk of spontaneous abortion, premature birth and low birth weight, neonatal adaptation syndrome, and persistent pulmonary hypertension, and so on (Wielgos, 2017).

In addition to drug therapy, there are also non-pharmacological therapies that can be applied to reduce anxiety levels in pregnant women, including aromatherapy, meditation/yoga, hydrozone therapy, and so on. Practicing prenatal yoga exercises is the right solution to help pregnant women themselves which can help in the process of pregnancy, birth and even facilitate childcare activities later. Yoga exercises in the prenatal stage of pregnant women help pregnant women focus on regulating the breathing rhythm, which still focuses on the feeling of comfort, safety and calm that pregnant women feel in practicing (Rusmita, 2015). Yoga exercises that are carried out include various relaxations, regulating postures, and breathing exercises. Relaxation movements, regulating posture and breathing exercises are the same as movements done during pregnancy exercises, because the movement technique focuses on exercising muscles (Mediarti, 2014).

Prenatal yoga (yoga during pregnancy) is a type of modification of hatha yoga that is adapted to the condition of pregnant women. The purpose of prenatal yoga is to prepare pregnant women physically, mentally, and spiritually for the labor process. With careful preparation, the mother will be more confident and gain confidence to undergo childbirth smoothly and comfortably (Pratignyo, 2014).

Research by Yuniza et al. "The Effect of Prenatal Yoga on Anxiety in Pregnant Women in the Third Trimester in Plaju District" with a total sample of 35 respondents. The results of the study showed that there was an effect of prenatal yoga on anxiety in pregnant women in the third trimester as seen from the average value of the respondents' anxiety before participating in prenatal yoga was 21.3. And after participating in prenatal yoga, respondents' anxiety levels decreased with a result of 18.7 (Yuniza, 2021). Another study by Nerlita A.H "The Effect of Prenatal Yoga on Reducing Anxiety Levels in Primigravida Pregnant Women" with a sample of 10 people. The results showed that there was an effect of prenatal yoga on reducing anxiety levels in pregnant women. Before prenatal yoga, 3 respondents experienced low anxiety with a score of 1-25, 6 respondents experienced moderate anxiety with a score of 26-40, and 1 respondent experienced high anxiety with a score of 41-50. After doing prenatal yoga, the number of respondents with low anxiety increased to 7 respondents with a score of 1-25, respondents with moderate anxiety to 2 people, and respondents with high anxiety to 1 person (Nerlita, 2022).

Based on the description above, the author is interested in conducting a study entitled "Implementation of Prenatal Yoga Gymnastics on Reducing Anxiety Levels in Pregnant Women in the Third Trimester".

METHODS

The type of pre experimental research with the design of one group pretest and posttest with sampling technique is purposive sampling by taking samples in the treatment group are 10 respondents who fit the inclusion and exclusion criteria. Inclusion criteria are the characteristics that will be used as research subjects. The following are included in the inclusion criteria, among others: Primigravida pregnant women in third trimester, Pregnant women who experience moderate anxiety and severe anxiety, Productive age between 20 - 35 years, No history of complications during pregnancy, and Pregnant women who can communicate well, The client is willing to be given prenatal yoga nursing procedures.

Exclusion criteria are criteria that are not used as research subjects, including: Pregnant women who are at high risk, Pregnant women who have low blood pressure, Pregnant women who experience hearing loss, Pregnant women who have a bad obstetric history in Wergu Wetan Village, Kudus Regency City District. According to Sugiono, providing a general reference for determining sample size for simple experimental research with strict experimental control is 10-20 respondents (Sugiyono, 2015). Statistical analysis used SPSS 25.0 software, and the type of hypothesis test that might be used in this study is the Paired T Test if the data is normally distributed, but if the data is not normally distributed you can use the Wilcoxon (Dahlan, 2011).

Independent Variable in research is Application of Prenatal Yoga Exercises Prenatal yoga or yoga during pregnancy is a modification of hatha yoga which is adapted to the condition of pregnant women. The goal of prenatal yoga is to prepare pregnant women physically, mentally and spiritually to face the birthing process. Done 2 times every week for 30 minutes. Dependent Variable: Primigravid pregnant women in the third trimester who experience anxiety. Anxiety is an emotional state characterized by physiological stimulation, unpleasant feelings of tension, and feelings of prejudicial fear (premonition). PRAQ-R2 (Pregnancy Related Anxiety Questionnaire-Revised 2) Mild anxiety: 1-25 Moderately anxious: 26-40 Severe anxiety: 41-50

RESULTS AND DISCUSSION

Table 1. Frequency Distribution of Respondents by Age (n=10)

	Mean	Median	Minimum	Maximum
Age (years)	25.70	25.50	20	31

Based on table 1. Showing the age characteristics of respondents are the average age of 25,70 years, the youngest age 20 years and the oldest age 31 years. Age is the length of a person's life in years calculated from birth and age influences knowledge. The older a person is, the more knowledge and knowledge they have. We will be increasingly able to make decisions, be wiser, be able to think rationally, control our emotions and be tolerant of other people's opinions (Sani, 2018).

Table 2. Frequency Distribution of Respondents based on anxiety (n=10)

	Mean	Median	Minimum	Maximum
Pre test	35,10	36	27	43
Post test	26,80	27	20	35

Based on table 2. Showed that the average anxiety of 10 respondents was getting better, the post test average 26,80, minimum 27 and maximum 35

Table 3. Frequency Distribution of Respondents based on anxiety (n=10)

	Mild anxiety	Moderately anxiety	Severe anxiety	Wilcoxon Signed Rank Test Result
Pre test	0	8	2	0,014
Post test	4	6	0	

Based on table 2 and 3. Showed a significant effect on anxiety with Implementation of Prenatal Yoga Gymnastics on Reducing Anxiety Levels in Pregnant Women in the Third Trimester. Pregnant women usually experience psychological changes, one of which is anxiety about facing childbirth and starting a new phase in life as a mother-to-be. In the third trimester of pregnancy, pregnant women will often feel worried or afraid if the baby they are about to give birth to is not normal. A mother may begin to fear the pain and physical danger that will arise during childbirth. The closer to the birthing process, the pregnant mother's feelings will definitely become more exciting, including happiness because she can't wait to welcome the future baby and also feelings of anxiety because she is afraid of facing the birth process (Awistami, 2017).

Almost every woman who goes through the process of pregnancy and childbirth definitely feels

anxious. Anxiety is a natural disorder, feeling deep and continuous, feeling of fear or worry, not experiencing problems in assessing reality (reality preserving ability), still good, personality still intact, not experiencing personal breakdown (splitting personality), behavior can be disturbed but still within normalist limits (Manurung, 2016). Anxiety is an emotional response where a person feels afraid of a threat that is not yet clear. Not everyone who experiences psychosocial stressors will suffer from anxiety disorders, this depends on the personality structure. People with anxious personalities are more susceptible to suffering from anxiety disorders (Salafas, 2016).

Based on the questionnaire assessment in the pre-test using PRAQ-R2 (Pregnancy Related Anxiety Questionnaire-Revised 2) on 8 respondents, the results showed that the client experienced moderate anxiety and client 2 experienced severe anxiety. PRAQ-R2 is a global instrument that is often used to measure anxiety levels in pregnant women. In PRAQ-R2 there are 10 questions which are divided into 3 subscales, namely; afraid of the birth process, worried about defects in the fetus, and worried about experiencing physical changes. Each question in the PRAQ-R2 has a value of 1 to 5 points which will later be totaled to determine the respondent's level of anxiety. The maximum score for measuring anxiety with the PRAQ-R2 is 50 points. A score of 1-25 indicates that the respondent experiences mild anxiety, while a score of 26-40 means the respondent experiences moderate anxiety, and a score of 41-50 means the respondent experiences severe anxiety (Nerlita, 2022).

Anxiety in third trimester pregnant women can be overcome by doing deep breathing relaxation and applying prenatal yoga exercises. Yoga is a process of unification of the body, mind and soul. Yoga combines breathing, relaxation and meditation techniques as well as stretching exercises. Yoga is recommended because it has a relaxing effect that can improve blood circulation throughout the body. Smooth blood circulation indicates good heart function, this causes pregnant women to feel physically healthy and ultimately psychologically healthy. Pregnant women who do prenatal yoga will release more relaxin hormones, making the mother's body feel more comfortable, which ultimately can provide calm (Yulinda, 2017) (Aprilia, 2017). Prenatal yoga exercises will be more effective if done in the long term, namely when pregnant women begin to enter the third trimester of pregnancy until the time of delivery. The aim of prenatal yoga is to prepare pregnant women physically, mentally and spiritually to face the birthing process (Pratignyo, 2014). Prenatal yoga exercises can also help minimize complaints such as pain in the limbs, improve sleep quality, regulate heart and respiratory rhythms.

After implementing prenatal yoga exercises for 3 meetings over 2 weeks with a duration of 30 minutes, respondents said they felt calmer and ready to face childbirth. The author then assessed the degree of anxiety again using the PRAQ-R2 anxiety level questionnaire with an average post-test result of 26.80, meaning that the respondent's anxiety was reduced to a mild or moderate degree of anxiety. The application of prenatal yoga exercises was also carried out in conjunction with deep breathing exercises so that it was hoped that respondents would feel more relaxed. Apart from that, the author has also provided education to respondents regarding the birth process and how to care for babies so that respondents have sufficient knowledge so that they will be ready to face the birth process.

The results of this research are in line with the results of research conducted by Nerlita in 2022, stating that the application of the prenatal yoga exercise method is effective in reducing anxiety levels in third trimester pregnant women. Based on research conducted by Lisa and Siti in 2019, it was stated that prenatal yoga exercises had an effect on reducing anxiety levels in third trimester primigravida pregnant women. Research by Ashari et al in 2019 also stated that prenatal yoga exercises can help reduce anxiety levels in third trimester pregnant women by 10% over a period of 2 weeks. According to research by Yuniza in 2021, prenatal yoga exercises can be used as an exercise during pregnancy. These prenatal yoga exercises can be done at least 4 times during pregnancy to help focus on the rhythm of breathing while remaining focused on feeling comfortable and calm when practicing.

CONCLUSION

Implementation of prenatal yoga exercises for 3 meetings in 2 weeks with a duration of 30 minutes, the level of anxiety in 10 respondents can be reduced with a pre-test average of 35.10 (moderate anxiety) to decrease with an average of 26.80 (mild anxiety), as well as the results Wilcoxon test showed significant results (0.014). This shows that the application of prenatal yoga exercises to third trimester pregnant women can reduce the anxiety felt by third trimester primigravid pregnant women.

REFERENCES

- Awistami, N. (2017). Pengaruh Yoga Antenatal terhadap Tingkat Kecemasan pada Ibu Hamil Trimester III dalam Menghadapi Proses Persalinan di Klinik Yayasan Bumi Sehat. *Jurnal Kesehatan Terpadu*, 1(1).
- Dahlan, M. sopiyudin (2011) *Statistik untuk Kedokteran dan kesehatan*. Jakarta: Salemba Medika.
- Dinkes Jateng, 2020. *Profil Kesehatan Provinsi Jateng Tahun 2020*. s.l.:Dinas Kesehatan Jawa Tengah.
- Eline, C., 2019. Pengaruh Prenatal Gentle Yoga dalam Menurunkan Tingkat Kecemasan pada Ibu Hamil Trimester III. *Jurnal Kesehatan*, Volume 10, p. 467.
- Hadfield et al, 2022. Measurement of pregnancy-related anxiety worldwide: a systematic review. *BMC Pregnancy and Childbirth*, Volume 22, p. 4.
- Manurung. (2016). *Terapi Reminiscence "Solusi Pendekatan Sebagai Upaya Tindakan Keperawatan Dalam Menurunkan Kecemasan Stress dan Depresi*. Trans Info Media.
- Mardjan. (2016). *Pengaruh Kecemasan pada Kehamilan Primipara Remaja*. Abrori Institute.
- Mediarti dkk. (2014). Sulaiman, Rosnani, Jawiah. Pengaruh Yoga Antenatal Terhadap Pengurangan Keluhan Ibu Hamil Trimester III. *Jurnal Kedokteran Dan Kesehatan*, 1, 47–53.
- Nadhifa, W. (2020). *Antidepresan Untuk Ibu Hamil*. Pio Gama.
- Nerlita. (2022). Pengaruh Prenatal Yoga Terhadap Penurunan Tingkat Kecemasan Pada Ibu Hamil Primigravida. *Jurnal of Innovation Research and Knowledge*, 1, 1072–1085.
- Sugiyono (2015) *Metode Penelitian Pendidikan Pendekatan Kuantitatif, Kualitatif, dan R&D*. Bandung: Alfabeta.
- Salafas, E. (2016). Efektifitas Hypno-EFT dan Pernafasan Yoga dalam Menurunkan Kecemasan Ibu Hamil di BPM Ny. Sri Kustinah. *Jurnal Ilmu Kebidanan*, 7(2), 84-94.
- Setyani, B. (2015). Hubungan Intensitas Keikutsertaan Hypnobirthing dengan Tingkat Kecemasan Ibu Hamil di Gianyar. *Jurnal Psikologi*, 116–128.
- Yulinda, Y., Purwaningsih, D., & Sudarta, C. (2017). Latihan Yoga Dapat Menurunkan Tingkat Kecemasan pada Siklus Menstruasi Remaja Puteri. *Jurnal Ners dan Kebidanan Indonesia*, 5(1), 20-26.
- Yuniza, Y., Tasya, T., & Suzanna, S. (2021). Pengaruh Prenatal Yoga Terhadap Kecemasan Pada Ibu Hamil Trimester Iii Di Kecamatan Plaju. *Jurnal Keperawatan Sriwijaya*, 8(2), 78–84. <https://doi.org/10.32539/jks.v8i2.15951>