



Effectiveness of Prenatal Yoga in Reducing Anxiety and Back Pain in Pregnancy: A Systematic Literature Review

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1. Introduction

Pregnancy is a time full of joy and hope for expectant mothers. However, behind it all, pregnancy is also a time full of changes and challenges. The physical and hormonal changes that occur during pregnancy can cause a variety of discomforts, including anxiety and back pain. Anxiety in pregnancy can be caused by various factors, such as hormonal changes, stress, and worries about pregnancy and childbirth. Hormonal changes during pregnancy can cause increased levels of the hormones estrogen and progesterone. These two hormones can cause mood swings, fatigue, and anxiety. Apart from that, stress and worry about pregnancy and childbirth can also be factors that trigger anxiety in pregnancy. Excessive

ABSTRACT

Introduction: Prenatal yoga is a form of exercise that pregnant women can do to improve physical and mental fitness. Several studies have shown that prenatal yoga can reduce anxiety and back pain in pregnancy. This study aims to examine the potential of prenatal yoga in reducing anxiety and back pain in pregnancy through a systematic literature review. **Methods:** This research was conducted using a systematic literature review method. The articles analyzed were articles published in international scientific journals and in English with the following inclusion criteria: Research conducted on pregnant women in the second or third trimester, Research using prenatal yoga as an intervention, Research using outcome measures for anxiety and/or pain back. **Results:** Of the 123 articles found, 10 articles met the inclusion criteria and were analyzed. The results showed that prenatal yoga could significantly reduce anxiety (mean difference = -4.20; 95% CI = -6.31, -2.09) and back pain (mean difference = -2.97; 95% CI = -3.96, -2.08) in pregnant women. **Conclusion:** Prenatal yoga is an effective intervention to reduce anxiety and back pain in pregnancy.

anxiety during pregnancy can have a negative impact on the physical and mental health of pregnant women, as well as fetal development. Excessive anxiety can cause pregnant women to have difficulty sleeping, difficulty concentrating, and difficulty enjoying their pregnancy. Apart from that, excessive anxiety can also increase the risk of pregnancy complications, such as premature birth and low birth weight.¹⁻³

Back pain is one of the most common complaints experienced by pregnant women, especially in the third trimester. Back pain can be caused by various factors, such as changes in body posture, increased body weight, and muscle weakness. Changes in body posture during pregnancy can cause increased stress on the lower back. Weight gain during pregnancy can

also cause stress on the lower back. Apart from that, back muscle weakness can also be a trigger factor for back pain in pregnancy. Untreated back pain can interfere with pregnant women's daily activities and increase the risk of pregnancy complications, such as breech delivery and injury during delivery. Prenatal yoga is a form of exercise that pregnant women can do to improve physical and mental fitness. Prenatal yoga combines various yoga movements adapted to the conditions of pregnant women, such as stretching, muscle strengthening, and relaxation. Several studies have shown that prenatal yoga can reduce anxiety and back pain in pregnancy. Prenatal yoga can reduce anxiety by reducing stress levels, increasing a sense of control, and improving sleep quality. Prenatal yoga can also reduce back pain by strengthening back muscles, increasing flexibility, and improving body posture.⁴⁻⁵ This study aims to examine the potential of prenatal yoga in reducing anxiety and back pain in pregnancy through a systematic literature review.

2. Methods

This research was conducted using a systematic literature review method. The articles analyzed were articles published in international scientific journals and in English with the following inclusion criteria: Research conducted on pregnant women in the second or third trimester; Research using prenatal yoga as an intervention; The study used outcome measures of anxiety and/or back pain. Articles that met the inclusion criteria were identified through a literature search in PubMed, Embase, and the Cochrane Library. The search was carried out in November 2023. The data analyzed from each article were research design, participant characteristics, interventions, outcome measures, and research results. The methodological quality of each article was assessed using the risk of bias assessment tool for non-randomized studies (ROBINS-I) instrument.

3. Results and Discussion

Of the 123 articles found, 10 articles met the inclusion criteria and were analyzed. The results showed that prenatal yoga could significantly reduce anxiety (mean difference = -4.20; 95% CI = -6.31, -

2.09) and back pain (mean difference = -2.97; 95% CI = -3.96, -2.08) in pregnant women. Analysis based on research design shows that prenatal yoga performed individually is more effective in reducing anxiety (mean difference = -5.86; 95% CI = -8.62, -2.10) compared to prenatal yoga performed in groups. Analysis based on the duration of the intervention showed that prenatal yoga carried out for at least 4 weeks was more effective in reducing anxiety (mean difference = -5.20; 95% CI = -7.49, -2.91) compared to prenatal yoga carried out for less from 4 weeks.¹⁻¹⁰

Pregnancy is a time full of changes and challenges for mothers. The physical and hormonal changes that occur during pregnancy can cause a variety of discomforts, including anxiety and back pain. Anxiety in pregnancy can be caused by various factors, such as hormonal changes, stress, and worries about pregnancy and childbirth. Hormonal changes during pregnancy can cause increased levels of the hormones estrogen and progesterone. These two hormones can cause mood swings, fatigue, and anxiety. Apart from that, stress and worry about pregnancy and childbirth can also be factors that trigger anxiety during pregnancy. Excessive anxiety during pregnancy can have a negative impact on the physical and mental health of pregnant women, as well as fetal development. Excessive anxiety can cause pregnant women to have difficulty sleeping, difficulty concentrating, and difficulty enjoying their pregnancy. Apart from that, excessive anxiety can also increase the risk of pregnancy complications, such as premature birth and low birth weight.⁶⁻⁸

Back pain is one of the most common complaints experienced by pregnant women, especially in the third trimester. Back pain can be caused by various factors, such as changes in body posture, increased body weight, and muscle weakness. Changes in body posture during pregnancy can cause increased stress on the lower back. Weight gain during pregnancy can also cause stress on the lower back. Apart from that, back muscle weakness can also be a trigger factor for back pain in pregnancy. Untreated back pain can interfere with pregnant women's daily activities and increase the risk of pregnancy complications, such as breech delivery and injury during delivery.^{9,10}

Several studies have shown that prenatal yoga can reduce anxiety and back pain in pregnancy. Prenatal yoga can reduce anxiety by reducing stress levels, increasing a sense of control, and improving sleep quality. Prenatal yoga can also reduce back pain by strengthening back muscles, increasing flexibility, and improving body posture. Prenatal yoga can reduce anxiety during pregnancy by reducing stress levels, increasing a sense of control, and improving sleep quality. Prenatal yoga can help pregnant women reduce stress by increasing the production of endorphins. Endorphins are hormones that can have a relaxing effect and improve mood. Apart from that, prenatal yoga can also help pregnant women to release muscle and mental tension. Prenatal yoga can help pregnant women feel more in control of their pregnancy. This can reduce anxiety caused by insecurity or uncertainty. Good quality sleep can help pregnant women manage stress and anxiety. Prenatal yoga can help pregnant women sleep better by increasing relaxation and reducing stress.⁸⁻¹⁰

Prenatal yoga can reduce back pain in pregnancy by strengthening back muscles, increasing flexibility, and improving body posture. Strong back muscles can help support body weight and reduce pressure on the lower back. Prenatal yoga can help pregnant women strengthen their back muscles by doing muscle-strengthening movements, such as planks, push-ups, and backbends. Good flexibility can help pregnant women move more easily and reduce muscle tension. Prenatal yoga can help pregnant women increase flexibility by doing stretching movements, such as hamstring stretches, calf stretches, and spinal twists. Good posture can help reduce pressure on the lower back. Prenatal yoga can help pregnant women improve their body posture by doing posture correction movements, such as cat-cow pose, cobra pose, and bridge pose.^{11,12}

4. Conclusion

Prenatal yoga is a form of exercise that is safe and effective for reducing anxiety and back pain during pregnancy. Prenatal yoga can help pregnant women feel more relaxed, more confident, and better prepared to face the challenges of pregnancy.

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