International Journal of Advanced Research in Gynaecology and Obstetrics
Volume 3, Issue 1 - 2025, Pg. No. 1-4
Peer Reviewed & Open Access Journal

Research Article

A Study to Assess the Effectiveness ofPranayama to Reduce Level of Anxiety and Stress Among Antenatal Women Attending Antenatal Opd of Selected Hospitals at Jabalpur, Madhya Pradesh

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DOI: https://doi.org/10.24321/30505364.202501

I N F O

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How to cite this article:
Shrivastava Y, Thampy B S, Anjum S. A Study to Assess the Effectiveness of Pranayama to Reduce Level of Anxiety and Stress Among Antenatal Women Attending Antenatal Opd of Selected Hospitals at Jabalpur, Madhya Pradesh. Int J Adv Res Gynaecol Obstet 2025;3(1): 1-4.

Date of Submission: 2025-02-01
Date of Acceptance: 2025-03-12

A B S T R A C T

Introduction: Pregnancy involves physiological changes due to hormonal shifts. While most women remain healthy during pregnancy, they may experience minor symptoms. Recognizing symptoms that could indicate more serious problems is important, as pregnancy impacts every aspect of a woman's daily life.

Objective of the Study: This study aims to assess the effectiveness of pranayama in reducing anxiety and stress among antenatal women attending the antenatal OPD of selected hospitals in Anuppur (M.P.). The study will evaluate the pre- and post-test levels of anxiety and stress and determine pranayama's effectiveness in reducing them.

Methodology: An evaluative research approach with a one-group pre-test, post-test design was used. The sample included 60 antenatal women attending the gynae OPD, selected through non-probability convenience sampling. The study was conducted at Civil Surgeon Govt. Anuppur District Hospital (M.P.).

Results: The study found a statistically significant difference between pre-test and post-test anxiety and stress levels. The t test value ($t = 27.01$, $p < 0.05$) showed a highly significant reduction in anxiety and stress after pranayama intervention.

Conclusion: The study concluded that pranayama significantly reduces anxiety and stress among antenatal women. This indicates that pranayama can be an effective intervention for managing these conditions during pregnancy.

Keywords: Pranayama, Anxiety, Stress, Pregnancy

Introduction

Pranayama helps in better management of stress and ensures an overall feeling of well-being. Pranayama breathing exercises are the connection between the physical and mental disciplines of pranayam. Because the breath, body, and mind are so closely linked, a change in one immediately affects the other. By developing control of one's breathing, it can bring about beneficial changes in the body and mind. Yogic breathing energizes and cleanses the body, calms and relaxes the mind, and serves as a perfect warm-up for practicing pranayam poses. It strengthens respiratory and immune systems, reduces stress, and energizes greater alertness to body and brain. It promotes healing on emotional, physical, and psychological levels.

Problem Statement of Study

Study to assess the effectiveness of pranayama to reduce level of anxiety and stress among Antenatal women attending antenatal OPD of selected hospitals at Anuppur (M.P)".

Objectives of the Study

- Assess the pre-test level of anxiety and stress among antenatal women.
- Assess the post-test level of anxiety and stress among antenatal women.
- Determine the effectiveness of pranayama to reduce the level of anxiety and stress among antenatal women.
- Find out the association between the level of anxiety and stress with selected demographic variables.

Assumption

- Stress and anxiety may be highest during the pregnancy period.
- Pranayama may help to reduce stress and anxiety.
- Increased levels of stress and anxiety may lead to pregnancy-related complications.

Research Hypothesis

H1: There will be significant difference between pre-test and post-test scores of anxiety and stress among antenatal women.

H2: There will be significant association between level of anxiety and stress with selected demographic variables.

Methodology

The research method adopted for the study was a quantitative approach. Non-probability convenience sampling technique was used. In this study, anxiety and stress will be the dependent variables. In this study, pranayama is the independent variable.

Result

Level of Anxiety

In pre-test, the majority of samples, that is, 88.3% had moderate anxiety, and the remaining 11.7% of samples had severe anxiety. While in post-test, around 63.3% of antenatal women had moderate anxiety, and the remaining 36.7% of pregnant women had mild anxiety Table 1.

Level of stress

In pre-test, the majority (75%) of samples had moderate stress, and the remaining 25% had severe stress. But in post-test, the majority (83.3%) had moderate stress, and the remaining 16.7% had mild stress. This shows changes in the level of stress. (Table 2)

Effectiveness of pre-test and post-test level of anxiety and stress among antenatal women

The obtained post-test mean value (23.42) was lower than the pre-test mean value (33.72). The mean difference of 10.3 indicates a reduction in anxiety after intervention. The obtained 't' test value is 24.99, which is found to be more than the 't' table value (2.0). Since the obtained t value is highly significant at $p < 0.05$, the hypothesis is accepted. It is inferred that there is a significant difference in anxiety levels before and after Pranayama.(Table 3)

The obtained post-test mean value (35.32) was lower than the pre-test mean value (47.72). The mean difference of 12.4 indicates a reduction in stress after intervention. The obtained 't' test value is 18.1, which is found to be more than the 't' table value (2.0). Since the obtained t value is highly significant at $p < 0.05$, the hypothesis is accepted. It is inferred that there is a significant difference in stress levels before and after Pranayama. (Table 4)

Table 1.Frequency and percentage distribution of pre-test and post-test level of anxiety among antenatal women

Categories	Pre-test		Post-test	
	Frequency	Percentage	Frequency	Percentage
mild (0 – 20)	0	0%	22	36.7%
moderate(21–40)	53	88.33%	38	63.3%
severe(41–60)	7	11.7%	0	0%
TOTAL	60	100%	60	100%

ISSN : 3050-5364
DOI: https://doi.org/10.24321/30505364.202501

Table 2.Frequency, percentage, distribution of pre-test and post-test level of stress among antenatal women

Categories	Pre-test		Post-test	
	Frequency	Percentage	Frequency	Percentage
Mild (0– 25)	0	0%	10	16.7%
Moderate (26–50)	45	75%	50	83.3%
Severe (51 – 75)	15	25%	0	0%
Total	60	100%	60	100%

Table 3.Mean, median, standard deviation, mean difference, t-value regarding pre-test and post-test anxiety among pregnant women

Observation	Mean	SD	Mean Deviation	Standard error	Paired t test value
Pre-test	33.72	4.65	10.3	0.39	t =24.99 P= 0.0001 Df = 59S
Post-test	23.42	5.17			

Level of significance=0.05

Table 4.Mean, median, standard deviation, mean difference, t-value regarding pre-test and post-test stress among pregnant women

N-60

Observation	Mean	Median	SD	Mean deviation	Standard error	Paired t test value
Pre-test	47.72		3.56	12.4	0.73	t =18.1 P= 0.001 Df = 59S
Post-test	35.32		6.39			

Level of significance=0.05

Association between the level of anxiety with selected demographic variables among antenatal women

Association between age and pre-test level of anxiety among antenatal women-

The calculated χ^2 is greater than the table value and the p value is less than 0.05. This means there is a significant association between age and the pre-test level of anxiety.

Association between educational status and pre-test level of anxiety among antenatal women. The calculated χ^2 is less than the table value and the p value is greater than 0.05, which is not significant at the 0.05 level. This means there is no significant association between educational status and pre-test level of anxiety.

Association between occupation and pretest level of anxiety among antenatal women. The table shows that the calculated χ^2 is more than the table value and the p value is less than 0.05, which is significant at the 0.05 level. This means there is a significant association between occupation and pre-test level of anxiety.

Association between socio-economic status and pre-test level of anxiety. The calculated χ^2 is greater than the table value and the p value is less than 0.05, which is significant at the 0.05 level. This means there is a significant association between socio-economic status and pre-test level of anxiety.

Conclusion

The present study assessed the effectiveness of Pranayama to reduce the level of anxiety and stress among antenatal women attending antenatal OPDs. The results revealed that in the pre-test, the majority (75%) of samples had moderate stress, and the remaining 25% had severe stress. In the pre-test, most samples (88.3%) had moderate anxiety, and the remaining 11.7% of samples had severe anxiety.

Regarding the level of post-test anxiety and stress, around 63.3% of pregnant women had moderate anxiety, and the remaining 36.7% of antenatal women had mild anxiety. Regarding the level of stress among antenatal women, the obtained post-test mean value (35.32) was lower than the pre-test means value (47.72). The mean difference of 12.4 indicates a reduction in stress after intervention. The obtained post-test mean value (23.42) was lower than the pre-test means value (33.72). The mean difference of 10.3 indicates a reduction in anxiety after intervention.

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Recommendations

While there are many aspects of yoga, there is also a need to examine more of the styles and specific aspects of yoga on stress and anxiety. These will merit the full or exact understanding of the impact that yoga has on stress and anxiety. Research on pranayama should be conducted to study stress and anxiety among groups such as race and ethnicity, cultures, youth and young adults, and socioeconomic status in various geographic locations and conditions. Studies can be conducted to find out the effectiveness of pranayama for the treatment of various diseases. A similar study can be replicated on a large scale and for a longer period for more reliability and effectiveness. Factorial designs may be adopted with other indigenous interventions. Randomization of the groups needs to be done.

Limitations

The study is limited to antenatal women who are attending the antenatal OPD in selected hospitals of Anuppur (M.P.). The study is limited to women who are willing to participate in this study.

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ISSN : 3050-5364
DOI: https://doi.org/10.24321/30505364.202501