



THE IMPACT OF YOGA AND MEDITATION ON PREGNANT WOMEN'S PERCEIVED STRESS AND ANXIETY

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ABSTRACT *Background:* Pregnancy is a particular time when women go through a lot of changes. A challenging period might come up for pregnant moms. A woman's body undergoes ongoing changes to care for the developing foetus. An extensive spectrum of physical and mental symptoms can be associated with pregnancy, and each woman will experience it uniquely. Yoga unites the mind and body by including stretching postures, breathing exercises, and meditation. Modern urbanisation and fast-paced lifestyles have raised the likelihood of having a difficult pregnancy. In general, inhabitants in metropolitan areas are more likely to experience emotional stress. **Objective:** This study examined how pregnant women's perceptions of stress and anxiety changed after a one-month yoga intervention that included OM-based meditation. **Method:** For the yoga intervention, a total of (n=40) forty pregnant women getting prenatal care at a particular obstetrics and gynaecology institution in Patna, Bihar, were chosen. The chosen women, aged 25 to 35 and between 20 and 28 weeks pregnant, were randomly assigned to the yoga or control group. Twenty participants from the yoga group and twenty from the control group were randomly separated. Blood pressure, weight, pulse rate, and psychological Perceived Stress Scale (PSS) and State-Trait Anxiety Inventory (STAI form -X) tests were used to evaluate both groups' pre- and post-physiological parameters. **Result:** The results of the yoga intervention and control groups on the PSS, STAI, and other variables are displayed here. A thorough analysis of the findings indicates that the intervention group advanced significantly. **Conclusion:** Pregnant women's perceptions of stress and anxiety were considerably reduced by yoga intervention-based *OM* meditation.

KEYWORDS : Pregnancy, Women, Yoga, *Om* meditation, Stress, Anxiety.

INTRODUCTION

The pregnancy of a woman is a unique and vital event. Physical, mental, and social adaptation are all required to handle the current physiological stress. Human pregnancy has been the subject of the most significant research of all animal pregnancies. With recent advancements in obstetrics, observing the growing baby in the womb from the first day of life until birth is feasible. The vivid and intricate new life developing and becoming active inside the mother is imaginative, precise, and exquisite. The risk of having a problematic pregnancy has increased due to modern urbanization and hectic lifestyles. Emotional stress is more prevalent generally among urbanized populations.

Both maternal and foetal variables can indeed have an impact on a baby's growth. The foetus can suffer from the negative consequences of hypertension, diabetes, starvation, and excessive levels of stress in the environment. Infections in the mother and chromosomal abnormalities in the embryo can result in several birth problems. These are susceptible to several issues throughout pregnancy and even later in childhood. In addition to these psychological strains, a mother's dread and anxiety might result in significant issues and a bad outcome. Stress triggers psycho-neuro-immunological changes in the body that might complicate pregnancy, as is now widely acknowledged. It may result in painful, erratic uterine contractions resulting in surgical intervention. Due to the mother's hypersensitivity, she develops an intolerance to pain, necessitating high doses of dangerously addictive painkillers. Prenatal stress and outcomes-pregnant Mother's stress and anxiety have been linked to Preterm births occurring more frequently due to shorter gestations. Birth weight and length that are smaller have a higher chance of miscarriage. Prospective studies have demonstrated that maternal stress and concerns during pregnancy are connected to newborn outcomes, including behavioural issues and increased fussiness, issues with focus, attention management, and emotional reactivity, and worse scores on mental development tests.

Our ancient teachings and techniques from Yoga and Meditation are found to be more effective. Many yogic relaxation techniques can minimize emotional stress and create a harmonious environment for the coming child.

Yoga is an age-old holistic technique from India utilized for ages to lower stress and improve health. Women with high-risk pregnancies have benefited from integrated yoga modules. Still, no research has examined how a one-month yoga intervention centred on *OM* meditation affects emotional stress and anxiety.

According to World Health Organisation (WHO) estimates, 13% of new mothers and 10% of pregnant women worldwide experience

mental health issues, trauma, or depression. Meanwhile, research from several nations, including Malaysia, reveals that 23.4% of pregnant women experience anxiety, 20.6% of pregnant women in China do as well, and in Nicaragua in Central America, 41% of pregnant women exhibit symptoms of anxiety, and 57% are depressed. According to studies, 29% of pregnant women in Bangladesh and Indonesia alone report experiencing anxiety, while 70% of women in Pakistan and Pakistan alone report experiencing both anxiety and depression.

Literature Review

Anxiety during pregnancy can seriously affect both the mother and the unborn child. Numerous cognitive and psychomotor delays, including poor bonding, as well as an increased risk of preterm labour, have been noted (Bayrampour et al., 2015; Schetter & Tanner, 2012; Ding et al., Glover, 2014;). Pregnancy anxiety and depression have been linked to postpartum depression and a bad start to parent-child relationships (Niloufer et al., 2012; Bayrampour et al., 2015;). Healthcare professionals must consider the social and financial burden and work to reduce mother-child and society repercussions in light of the probable effects of anxiety during pregnancy.

Several pharmaceutical treatments are available for anxiety, but managing it during pregnancy is more challenging. The preferred class of drug for prescribing is often selective serotonin reuptake inhibitors. However, doctors occasionally hesitate to do so because of contradictory data regarding foetal problems or defects. It seems sense that individuals and healthcare professionals are looking for additional methods of managing their anxiety while pregnant. Additionally, modalities have been used, including psychotherapy and integrative health practices like self-help treatments. Self-help practises, including mind-body stress reduction, such as meditation, have been used to treat several psychological and physical illnesses. Multiple studies exist with positive results for Stress and anxiety in the general population, and more recently, this practice is extending to anxiety reduction in pregnancy.

There is still a knowledge vacuum regarding the integration of mantra meditation during pregnancy, despite the current research supporting meditation practice for anxiety reduction during pregnancy. It will also explore the societal and financial implications of anxiety during pregnancy and the economic effects of a potential practice change. The literature will examine screening for anxiety during pregnancy, anxiety, current treatment, barriers, and integrative health practises seen within the phenomenon of anxiety during pregnancy.

Pregnancy-related anxiety and depression are becoming more commonplace worldwide and pose a serious hazard to public health. According to WHO estimates, mood and mental illnesses will be the

second most common worldwide disease caused by 2020. In affluent nations, prenatal worry has been linked to several medical and psychological consequences for the mother, foetus, and newborn. Even though anxiety is thought to be more common in underdeveloped nations, less emphasis has been paid to maternal mental health. About eight people in the United States suffer from anxiety. According to studies by Yamamoto et al. (2014), Kinsella & Monk (2009), 20% of pregnant women smoke. Non-Hispanic Blacks had more excellent rates of anxiety than other demographic groups in the U.S., and Stress during pregnancy is linked to higher socioeconomic levels (WHO, 2016). Pregnancy anxiety has seen a mixed response to treatment. Due to several possible physical and neuroendocrine side effects that have been described (Grigoriadis, 2014; Biaggi et al.), healthcare providers frequently hesitate to employ pharmacotherapy.

Objective:

This study examined how pregnant women's perceptions of stress and anxiety changed after a one-month yoga intervention that included *OM*-based meditation.

Hypothesis:

The following hypothesis was framed for the study:

- Yoga-based interventions and *Om* meditation will help pregnant women overcome stress and anxiety.

METHOD & MATERIAL

For the yoga intervention, a total of (n=40) forty pregnant women getting prenatal care at a particular obstetrics and gynaecology institution in Patna, Bihar, were chosen. The chosen women, aged 25 to 35 and between 20 and 28 weeks pregnant, were randomly assigned to the yoga or control group. Twenty participants from the yoga group and twenty from the control group were randomly separated. Blood pressure, weight, pulse rate, and psychological PSS and STAI (form - X) tests were used to evaluate both groups' pre- and post-physiological parameters.

A psychological assessment tool is the State- Anxiety Inventory (STAI) developed by psychologists Charles Spielberg and others in 1964. Developing a series of inquiries that might be used to evaluate various forms of worry was their aim in developing the inventory. The STAI's items 1, 2, 5, 8, 11, 15, 16, 19, and 20 all had inverted codes. The pregnant women's anxiety levels were evaluated at the beginning and end of the control group's 30 days and the experimental group's 30 days using the State-Trait Anxiety Inventory (STAI).

The Perceived Stress Scale was created to quantify how stressful a person perceives their current circumstances. This was assessed in both groups before and after a 1-month yoga session. It has ten questions that can be used to gauge one's perception of Stress. Items 4, 5, 7, and 8 on PSS were among those that were reverse-coded. Elevated psychological Stress is linked to high blood pressure, a higher BMI, a more excellent waist-to-hip ratio, a shorter Telomere length, higher cortisol levels, a weakened immune system, less sleep, and increased alcohol use.

Before and during the yoga intervention, blood pressure, weight, and pulse rate were measured using PSS and STAI (form -X). Yoga practices include OM. meditation sessions lasting 30 minutes, yogic asanas, breathing exercises, and pranayama sessions lasting one hour every other day for four weeks.

RESULT & DISCUSSION:

The means, standard deviations, percentages, and p-values for the variables measured in the Yoga and Control groups are shown before and after the intervention.

The results of the yoga intervention and control groups on the PSS, STAI, and other variables are displayed here. A thorough data analysis reveals that the intervention group achieved remarkable advancements. The yoga group's values for the mean (M) and standard deviation (S.D.) of PSS, STAI, pulse rate (P.R.), systolic blood pressure (Systolic B.P.), and diastolic blood pressure (Diastolic B.P.), respectively, were less compared to that of the control group. In both the yoga and control groups, the weight rose. In contrast to the control groups, the PSS and STAI percentage changes were significant within the group, except for weight.

The Wilcoxon Signed Rank Test was employed since the results were not normally distributed. Demonstrates that the PSS and STAI values

changed less in the yoga group (69.8% and 47.9%, respectively) than in the control group (88.7% and 61.04%) and that PSS and STAI (0.019 and 0.006) had significant p values within the group. It provided support for earlier research that exclusively considered pregnancy-related interventions.

Table 1: Means, Standard Deviations, Percentages, And P-values For The Variables Measured In The Yoga And Control Groups Before And After The Intervention.

Yoga(n=20)						
variables	Pre		Post		Percentage (%)	P value
	M	SD	M	SD		
Weight	60.455	12.75	63.460	11.90	44.51	0.000*
Sys. B. P	117.3	12.63	114.2	5.67	19.94	0.404
Dia.B. P	77.4	10.59	78.15	7.24	67.30	0.551
PR	76.6	8.82	74.65	8.2	20.7	0.090
PSS	19.85	4.28	17.8	3.22	69.8	0.019*
STAI	46	5.7	43.2	5.66	47.9	0.006*
Control (n=20)						
	Pre		Post		Percentage (%)	P value
	M	SD	M	SD		
Weight	51.1	7.40	54.5	7.59	55.55	0.000*
Sys. B. P	116.2	10.07	114.9	5.2	17.31	0.598
Dia.B. P	75.8	7.40	78.8	8.2	28.15	0.130
PR	73.6	3.96	73.6	3.6	26.4	0.638
PSS	20.3	4.6	22.0	3.19	88.07	0.107
STAI	41.6	6.49	42.7	7.69	61.04	0.123

Table 2: Wilcoxon's Signed Ranked Test.

Group	PSS		STAI	
	(P)value	Percentage (%)	(P)value	Percentage (%)
Yoga	0.019*	69.8	0.006*	47.9
Control	0.107	88.07	0.123	61.04

Table 3: Mann-Whitney Tests

Variables	WT	SYS. B. P	DIA. B. P	PR	PSS	STAI
Pre	0.021	0.799	0.820	0.718	0.383	0.015
Post	0.013	0.989	0.904	0.314	0.000*	0.602

According to the Mann-Whitney Test results, only the post-data PSS value in the yoga group, compared to the control group, has significantly changed; The remaining variables' changes do not show statistically significant trends. We may infer from these findings that there is a statistically significant difference between the Yoga and Control groups (p 0.05).

CONCLUSION:

The current study unequivocally shows that the one-month Om meditation-based yoga intervention, which was given to pregnant women in the average age range of 25-35 years between the 20th and 28th weeks of their first trimester, was both safe and effective at lowering their levels of perceived stress and state anxiety (PSS and STAI).

Participants generally noted an improvement in alertness. They have also seen other advantages, including regulated blood pressure, sharper thinking, better sleep cycle, open mussels and more straightforward actions.

However, safety guidelines should always be practised. Talking to the doctor about taking prenatal yoga sessions and seeking help from trained yoga instructors is highly recommended.

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