
“To Study The Effect Of *Yoga* On Post-Partum Stress And Depression In Selected Hospitals Of Ambikapur (C.G).”

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INTRODUCTION

Postpartum Depression (PPD) is a significant public health issue (Melissa 2020).¹ Postpartum depression can start soon after childbirth or as a continuation of antenatal depression and needs to be treated. *Postpartum Depression* usually predisposes to severe or recurrent depression, which may affect the mother-infant relationship and child growth and the developmental process Children of mothers with *Postpartum Depression* have greater cognitive, behavioral and interpersonal problems compared with the children of non-depressed mothers (JAMES).¹⁷ Three psychiatric disorders may arise in the postpartum period such as postpartum blues, *Postpartum Depression* (PPD), and postpartum psychosis.^{17&1}

The major difference between postpartum psychosis and PPD is their symptomatology. Postpartum psychotic symptoms are more complex at onset and decrease after 90 days following delivery (Dr. Sumitra 2013).²² Motherhood is marked by an array of emotions. Some emotions comprise of excitement, fear and anxiety. Although the emotions of fear and anxiety are common, they might well indicate that the other is experiencing PPD

Increased stress and depression are the trends of modern lifestyle. Due to lack of effectiveness of drugs in the treatment of these afore-mentioned conditions, there is more proclivity now-a-days for adoption of non-pharmacological treatments.⁷ For example, in the original placebo-controlled clinical trials of fluoxetine in depressed patients, sexual dysfunction was reported in 1.9% of trial participants receiving fluoxetine (Claudia M 2021).¹⁸ Stress is a type of physical, mental or emotional factor that causes bodily or mental tension. Depression is a mental health disorder characterized by persistently depressed mood or loss of interest in activities, causing significant impairment in activities of daily living. As per indicated in the aforementioned paragraph, aggrandized stress and depression are the features of modern lifestyle (Masoumeh Sohani, 2018).⁷ It is particularly common in women of child bearing age (Dr. Lisa Burke 2013).⁸ Child bearing age is the age where technically the woman can get pregnant and start having children when her menstruation starts (Stephanie Watson 2018).¹⁵

Postpartum Depression (PPD) or postnatal (PNC) depression is a type of mood disorder associated with childbirth which can affect both sexes, but particularly common in females. PPD is a significant public health issue.¹ *Postpartum stress* is mainly referred to as ‘*Postpartum stress Syndrome*’ 3 weeks postpartum often faced by 1 in 5 new mothers.¹⁰ The World Health Organization has identified depression as the fourth leading cause of burden among all diseases, and the leading cause of years lived with disability as of 2018 (Michelle F Motolla 2018).¹⁶

Pharmacological therapy is often recommended for women with severe *Postpartum Depression*. E.g.- Some research results indicate that sertraline is a highly efficacious and well-tolerated treatment for women with *Postpartum Depression*.²⁴

Non-pharmacological treatments include interventions like ‘Psychotherapy’. Results indicate that interpersonal psychotherapy adapted for a group model has positive implications for the treatment of *Postpartum Depression* (Khadyga Sayed 2016).¹⁹

CAM therapies are a distinct category of treatments and interventions not included in modern medicine.⁷ Yoga is identified as one of the top 10 CAM therapies used among adults for depression. *Yoga* is an ancient holistic practice that originated in India. (Derivation- *Yog-* to yoke or unite).¹

The philosophy of *Yoga* is based on 8 limbs that are better described as ethical principles for meaningful and purposeful living. It is a process of uniting the body via mind and spirit to promote physical and mental wellness.¹¹ The concept of *Yoga* includes a terminology called ‘*chakra*’. *Yoga* maintains that chakras are the center points of energy, thoughts, feelings and the physical body. When the flow of energy tends to get blocked in a *chakra* it is said to trigger physical, mental or emotional imbalances. The practitioners who practice *Yoga*, free that blocked energy and are supposed to get rid of physical imbalances.¹⁴

Following *Yoga* interventions would be taken into consideration-Relaxation, breathing, mindfulness and *Yoga* poses.¹ A relaxation technique (also known as relaxation training) is any method, process or activity that helps a person to relax; to attain a state of increased calmness; or otherwise reduce levels of anxiety, stress or anger. It is often employed as an element of a wider stress management program and can decrease muscle tension, lower the blood pressure and slow heart and breath rates, among other health benefits.²⁹ Meditation is a form of relaxation. It is a form of mental training that has been shown to increase mental focus and reduce stress, has become an increasingly used technique in both the medical and clinical psychology arena. It is considered a family of techniques, which have in common a conscious attempt to focus attention, e.g., by observing the breath and avoiding every day thoughts.²⁰

Keywords: *Yoga*, Post-partum stress and depression.

Relaxation - *Savasana* (corpse pose), Meditation (10 minutes). Literally, a dead pose, *Shavasana*, is one of the foremost yogic relaxation techniques, eulogized in *Hatha Pradipika* as the technique that endows its practitioners with the relaxation of *Citta* (i.e., mind, intellect, and ego) and freedom from psycho-physiological fatigue.²¹

Mindfulness training- Some *Yoga* practitioners believe there is a relationship between the mind and breath, and furthermore, that one can affect the mind and consciousness through the manipulation of their breath.²⁶

Breathing Techniques- *Pranayama* exercises for controlled breathing.⁵ The *pranayama* patterns which would be practiced would include slow paced techniques- *Nadishuddhi* and *Savitri*.²⁵ *Pranayama* involves manipulation of the breath that is a dynamic bridge between the body and mind.²⁸

It consists of three phases: “*puraka*”(inspiration); “*kumbhaka*” (retention) and “*rechaka*” (expiration) that can be either fast or slow.²⁸ Poses (asanas)- *Balasana* (child’s pose), *Padmasana* (lotus pose). *Bal-asana* relieves tension in the back, shoulders and chest, reduce fatigue this asana can be performed in between other asanas to avoid fatigue.^{23&28} *Padmasana* helps keep joints and ligaments flexible, it stimulates spine, pelvis, abdomen and bladder. It increases awareness and attentiveness.²⁸ Poses (asanas) - *Balasana* (child’s pose), *Padmasana* (lotus pose). The scales and questionnaires which would be considered are – Perceived stress scale (PSS)³ and Edinburgh postnatal depression scale (EPDS).⁶ Perceived stress scale is the most widely used instrument for the perception of stress. It is a measure of the degree to which situations in one’s life are seen as stressful. It indicates the feelings of the subject in the past month.³ EPDS is an intervention to indicate the feelings of the mother during the previous week.⁴ This self-report measure is designed to screen women for symptoms of emotional distress during pregnancy. The EPDS includes one question (Item 10) about suicidal thoughts and should be scored before the woman leaves the office in order to detect whether this item has been checked.²⁷

Need for the study:

Postnatal (PNC) depression is becoming more and more prevalent since the last two-three decades. The stress and depression in combination suffered by a Post-natal female is also termed as Baby blues in a non-medical sense. During labor, the hormones associated with psychological stress-epinephrine and cortisol hormone rise by whopping levels. Usually the PNC female finds herself plagued by Poor sleep, fears and anxieties about the baby’s health, worries about the post-pregnancy body and sexuality, Disappointment about the quality of support received from one’s partner, guilt over having negative thoughts about the baby or parenthood, financial worries or pressures related to the workplace. This study will help to alleviate the stress and eventual depression caused due to such above listed factors.

Problem Statement

Objectives of the study

- ◆ To study effectiveness of *Yoga* on post-natal depression
- ◆ To study effectiveness of *Yoga* on stress.

Hypothesis

Null Hypothesis (H0): There will be no significant effect of *Yoga* of postnatal depression and stress.

Alternative Hypothesis (H1): There will be significant effect of *Yoga* on depression and stress.

Source of Data

The sample of study will be selected from the Department of Obstetrics and Gynecology, Rural Hospital, in the age group of 20-35.

Method of collection of data

- a) **Type of Data:** Data will be primarily collected by principal investigator.
- b) **Study Design:** Pre and post experimental study.
- c) **Sample size:** Sample size for the study will be 20 participants.

Participants: Participants admitted in district hospital kabirdham Hospital, Department of Obstetrics and Gynecology. Maternity ward no. - 1, 2 and 3.

Sampling Method: Simple Random sampling

Study Duration: 5 weeks

Inclusion criteria:

Participants included will be

- ◆ Women with Normal delivery
- ◆ Those willing to participate.
- ◆ Women in the age group of 19-28

Exclusion criteria:

Participants not included will be

- ◆ Those not willing to participate
- ◆ Uncontrolled systemic disease.
- ◆ Pre-existing neurological or other orthopedic conditions

Outcome measures

Outcome measures used for the study will be

- ◆ Perceived Stress Scale (PSS).
- ◆ Edinburgh Postnatal Depression Scale (EPDS).

Perceived Stress Scale (PSS):

The stress level among postnatal women will be evaluated with the help of Perceived Stress scale (PSS). The PSS has 10 questions. The questions in the questionnaire reflect feelings and thoughts of postnatal women. The response in the questionnaire are Graded in 4 levels-

0=Never 1=almost never 2=sometimes 3=fairly often 4=very often

Edinburgh Postnatal Depression Scale (EPDS):

The depression level among postnatal women will be evaluated with the help of Edinburgh Postnatal Depression Scale. The scale also has 10 questions. The maximum score of EPDS is 30. Score more than 10 indicate depression.

Reliability and validity of scales

The variance of EPDS accounts for 79.2% and the Content Validity Index was 0.93 which demonstrates a satisfactory consensus. The face validity and scale content were

remarkable, and the KMO coefficient was 0.82. PSS-10 has good internal consistency and reliability.

PROCEDURE

Ethical Clearance was obtained for the research proposal from the Roop Jeevan Hospital Kabirdham Ambikapur (CG). The purpose of the study and how it will be performed was first explained to the participating candidates and then informed written consent was obtained. All the Post-natal women admitted to the obstetric ward who had recently delivered a child in Jeevan Hospital Kabirdham were considered to be a part of the research. The participants were selected according to the inclusion and exclusion criteria. The participants were explained about the benefits and shortcomings of the intervention. Then informed written consent was obtained from the participants regarding the study. All the participants were thoroughly evaluated as per the inclusion and exclusion criteria prior to giving *Yoga* exercises. The intervention was given for 3 days per week for 4 weeks. In each week, in the first week onwards- two *Yoga* sessions were in presence of the therapist and 1 *Yoga*. From the start of the second week the patient were called in the hospital premise for follow-up sessions will be done at home. Telephonic/ cell phone reminders will be sent to each participant. There was warm up of 10 minutes followed by cool-down session of 5 minutes. The *YOGA* POSES were given week wise along with relaxation, mindfulness and breathing training daily, namely-

Week 1: Only breathing and mindfulness training were given to the patient along with *Shava-sana* (relaxation).

Week 2: Along with breathing and mindfulness exercises the patient were asked to perform *Balasana* (child's pose).

Week 3: Both asanas were administered (*Balasana & Padmasana*) along with week 1 & 2 exercises.

Week 4: The patients were able to perform all the taught exercises at home.

Perceived Stress scale and Edinburgh Postnatal Depression Scale were evaluated in each participant before the intervention and at the end of 4 week.

RESULTS

A total of 35 participants were sampled for the intervention out of which 20 fit into the inclusion criteria. The mean and standard deviation of both the components was calculated and, in each category, Paired t test was used. Using Graph Pad InStat3 the p-value, t-value degree of freedom and significance was obtained. For the EPDS, the pre-intervention mean was 13.900 and the post-intervention mean was found to be 6.600 the p-value was <0.0001 and the t-value was found to be 14.799 with 20 degrees of freedom which was statistically considered to be extremely significant.

For the PSS, the pre-intervention mean was 16.350 and the post-intervention mean was found to be 12.050 the p-value was <0.0001 and the t-value was found to be 7.583 with 19 degrees of freedom which was statistically considered to be extremely significant.

DISCUSSION

The present study “Effectiveness of *Yoga* as an intervention on *Postpartum stress and Depression*”, was conducted in the department of Obstetrics and Gynecology, In this study, 20 postnatal Females with full term normal delivery were included and pain pressure threshold were taken as outcome measures. The main purpose of the study was to find out the effect of *Yoga* therapy on stress and depression faced by postnatal females. There was an immediate reduction in the stress and depression faced by postnatal (PNC) females after the intervention. The long-term effects were not evaluated. The results of this study found that, there was a statistically highly significant decrease ($p < 0.0001$) in depression and stress after the performance of the selected relaxation techniques sessions on postpartum women.

The study indicates 4 weeks of 3 exercise sessions as a regular exercise significantly reducing stress and depression in PNC females for short-term. The conclusions and results are obtained based on the Pre and Post-reading. Findings obtained as per the EPDS and PSS Scale reading criteria. Various studies show a link between *Yoga* and positive effects after PNC stress and depression. In some studies, like (Melissa Buttner et.al. or Masoumeh Sohani et.al). comprising of the PNC females and other such references listed as well, the significant positive effects of *Yoga* have been confirmed.^{1&7} Few studies depict that, the nature of *Yoga* is controlling the mind and central nervous system and unlike other sports, it has a moderating effect on the nervous system, the hormonal emissions, physiological factors, and regulation of nerve impulses; therefore, it can be effective in improving depression and mental disorders.⁷ Also, certain works do not directly co-relate Yogic way of living with improvement in stress and depression levels in females.

For instance, Oken et al. did not observe any significant effect of *Yoga* on improvement in mood in patients with MS, the limitation of this study is the small number of intervention sessions (one session per week). In other works, it is inferred that barriers to implementing exercise as a treatment for *Postpartum Depression* also exist. Also, the postpartum period is busy and the mother may have difficulty finding the time to exercise. Other things, such as breastfeeding and physically recovering from birth, may not make exercising feasible. Lack of social support or relationship demands, may pose additional barriers making exercising difficult.⁹ Various *Yoga* methods were used in these studies with the Western adaptation of *Yoga*, mindfulness meditation. Such western adaptations were found to be highly efficacious in this project. Regardless of the length of the intervention, the interventions proved to be efficacious. For example, the shortest *Yoga* intervention with depressed patients with chronic back pain showed positive results. These findings suggest that brief *Yoga* treatment or therapy can be effective in reducing depressive symptoms.¹²

The longest intervention followed women through their pregnancy to 2 months post pregnancy. The pregnant women showed a reduction in depressive symptoms. These findings suggest that *Yoga* interventions can have long-term positive effect on depressive symptoms. Seven studies implemented some form of follow-up with participants after the intervention, only in 6 studies did effects persist.¹² The results of Dunn et al. who found 75% of participants in a mindfulness treatment group experienced a decrease in stress symptoms and 67% showed positive change in levels of stress and self-compassion at three months follow up.¹³ Hence the study imposes limitations as well as strengths at a respective level.

Statistical Analysis

In this study 20 female participants were considered with full term normal delivery. Pre and post scale assessment outcomes were taken for both scales. The results after comparison which were obtained were considered extremely significant. For the EPDS, according to the values obtained for mean, P-value and t-value, the results were found to be extremely significant. For the PSS as per the values obtained for mean, p-value and t-value, the results were found to be extremely significant.

CONCLUSION

Yoga can be given as an effective therapeutic intervention for the possible reduction of stress and depression in PNC females which would thereby help in reducing the medical cost per treatment. This would also help in reducing the cost of antidepressant medications. The current findings highlight future areas of research, including mechanisms of action such as mindfulness.

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