To Study the Effect of Integrated Yoga Practices on Stress during Pregnancy

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Abstract:
Objective- The purpose of the present study was to assess the effect of yogic package on level of stress of pregnant women.
Method-in this study, the age group of 20-30 years primigravida have been taken, between the 12th and 20th week of pregnancy which are selected from the urban area of Chhattisgarh state in India by purposive sampling technique, single group pre-post test design and quasi experimental method was used to conduct the study. They performed 45 minutes yoga included physical posture, breathing, chanting of mantra and relaxation techniques.
Findings-Results shows that p<35.001 and significant at 0.01 significant level. Hence yogic intervention significantly decreases the level of stress in the post test as compared to pre test.
Conclusion- The findings suggest that yoga is well indicated for pregnant women and decrease the level of stress during pregnancy.
Keywords- stress, primigravida, yoga.

Introduction

Pregnancy is a special time for a woman and her family. It is a time of many changes such as her body, emotions and the life of her family. These changes (as welcome as they may be) often add new stresses to the lives of busy pregnant woman, who already faces many demands at home and at work.

In addition, many pregnant woman and their partners worry about the health of their baby, their ability to cope with labour and delivery, and their abilities to become good parents. Added financial responsibilities are another common source of stress, especially if the parents anticipate a brief or long-term reduction in income after the baby is born. All of these worries can be magnified if there is a high risk pregnancy, where the pregnant woman must leave her job early and possibly significantly reduce her activity or stay in bed for an extended period of time. (Narendran, 2011)Prevalence of stress during pregnancy has been found to range from 6% to as high as 52.9% in developing countries (Shakya, Situala, Shyangwa, 2008) (Makowska, Merecz, MoÅ´cicka, Kolasa, 2002). Stress during pregnancy is more among the teenagers, low educational status, discriminated group of population or with low socioeconomic status. (Kohrt, 2009) Susan Andrews says that "the kind of stress that’s really damaging is the kind that doesn’t let up," (Andrews, 2012) and higher chronic stressors in women and poor coping skills to deal with those stressors may be associated with lower birth weight and with delivering earlier. (Watson &Bhargava, 2016)

Some stress during pregnancy is normal, just as it is during other times of life. But if stress becomes constant, the effects mother and baby could be lasting. When pregnant mother stressed, her body goes into "fight or flight" mode, sending out a burst of cortisol and other stress hormones. These are the same hormones that surge when you are in danger. They prepare you to run by sending a blast of fuel to your muscles and making your heartpump faster. (Watson &Bhargava, 2016)

Feeling stressed is common during pregnancy. But too much stress can make you uncomfortable. Stress can make you have trouble sleeping, have headaches, lose your appetite or overeat. High levels of stress that continue for a long time may cause health problems, like high blood pressure and heart disease. Stress can increase the chances of having a premature baby (born before 37 weeks of pregnancy) or a low-birthweight baby (weighing less than 5½ pounds). Babies born too soon or too small are at increased risk for health problems.

The causes of stress are different for every woman, but here are some common causes during pregnancy: when mother may be dealing with the discomforts of pregnancy, like nausea, constipation, being tired or having a backache. Her hormones are changing, which can cause mood to change. Mood swings can make it harder to handle stress. She may be worried about what to expect during labor and birth or how to take care baby. If
she work, may have to stress related to her job responsibilities. Life is busy and it sometimes takes unexpected turns. Stress is not all bad. When we handle it right, a little stress can help us to take on new challenges. Regular stress during pregnancy, such as work deadlines and sitting in traffic, probably don’t add to pregnancy problems.

However, serious types of stress during pregnancy may increase the chances of certain problems, like premature birth. The most common experience, which are responsible for stress, like:

- Negative life events. These are things like divorce, serious illness or death in the family, or losing a job or home.
- Catastrophic events. These are things like earthquakes, hurricanes or terrorist attacks.
- Long-lasting stress. This type of stress can be caused by having financial problems, being abused, having serious health problems or being depressed. Depression is medical condition where strong feelings of sadness last for long periods of time and prevent a person from leading a normal life.
- Racism. Some women may face stress from racism during their lives. This may help explain why African-American women in the United States are more likely to have premature and low-birthweight babies than women from other racial or ethnic groups.
- Pregnancy-related stress. Some women may feel serious stress about pregnancy. They may be worried about miscarriage, the health of their baby or about how they’ll cope with labor and birth or becoming a parent. If you feel this way, talk to your health care provider.

We don’t completely understand the effects of stress on pregnancy. But certain stress-related hormones may play a role in causing certain pregnancy complications. Serious or long-lasting stress may affect your immune system, which protects us from infection. This can increase the chances of getting an infection of the uterus. This type of infection can cause premature birth. Stress also may affect how they respond to certain situations. Some women deal with stress by smoking cigarettes, drinking alcohol or taking street drugs, which can lead to pregnancy problems. It’s possible that stress may also affect her baby’s brain development or immune system. ("Stress and pregnancy", 2012)

At such time, it is very essential that pregnant mother stayed away from stress. In order to, stress not affects the health of pregnant woman and her fetus. To avoid the stress, if pregnant mother practice the integrated yoga, she can away from stress during pregnancy and may reduce the coming complications.

Yoga is defined as a tool for achieving positive health. Yoga practiced by pregnant women seems to reflect this positive health on the fetus in uterus. Yoga brings about stress reduction and helps in reducing the occurrence of complications, through a balanced effective blood flow in the utero-placenta circulation.

Reduction in stress reaction can be achieved through practice of deep relaxation at the body level by different postures slowing down of rate of breathing through pranayama, calming down of mind in meditation and chanting. Chronic habituation reaction patterns of anxiety, depression, and exaggerated hypersensitive reactions to demanding situations are corrected by counselling to:

i. Change the basic notions of life, breath, purpose of living(gyan yoga) etc.,
ii. Improving interpersonal relationship to a level of mutual respect by understanding the basis of pure love (bhakti yoga) and
iii. Correct the pattern of tension-ridden working style to a new style of working for the joy of contribution and learning (karma yoga). We shall go into greater details of these in the later chapters of this book.(Narendran, Nagarathna, &Nagendra, 2008)

Some researches points out that Yogic intervention was more effective than relaxation in reducing stress and improving mental health. Yoga was found to be as effective as relaxation in reducing stress, anxiety and improving health status on seven domains of the SF-36 (Smith, Hancock, Blake-Mortimer, & Eckert, 2007).

A study by Vieten&Astin, (2008) focused on the efficacy of psychosocial interventions to reduce stress and negative mood during pregnancy. They concluded that mothers who received the yogic intervention showed significantly reduced stress, anxiety and negative affect during the third trimester in comparison to those who did not receive the intervention. A similar study by Satyapriya, Nagendra, Nagarathna, &Padmalatha, (2009) focused “the effect of integrated yoga practice and guided yogic relaxation on both perceived stress and measured autonomic response in healthy pregnant women.
The 122 healthy women recruited between the 18th and 20th week of pregnancy. Finally they concluded that Yoga reduces perceived stress and improves adaptive autonomic response to stress in healthy pregnant women.

A review by Beddoe, Paul Yang, Kennedy, Weiss, & Lee, (2009) they examined the feasibility and level of acceptability of a mindful yoga intervention provided during pregnancy and to gather preliminary data on the efficacy of the intervention in reducing distress. Included 16 healthy pregnant nulliparous women between 12 and 32 weeks gestation. Setting for 7 weeks mindfulness-based yoga group intervention combined elements of Iyengar yoga and mindfulness-based stress reduction. Finally they concluded that women who practicing mindful yoga showed greater reductions in perceived stress and trait anxiety.

Another study by Babbar, Parks-Savage, &Chauhan (2012) focused that “the peripartum outcomes of yoga during pregnancy, including the postpartum period and lactation.” They concluded that doing yoga during pregnancy can significantly lower pain and discomfort and perceived stress and improve quality of life in physical domains. Similarly Curtis, Weinrib, & Katz, (2012) studies indicate that yoga may be effective in improving pregnancy, labour, and birth outcomes. They suggested that during pregnancy the mother's stress has effects on his body and mother's stress can be Reduce during pregnancy by yogic practices.

All these studies indicate that stressed pregnant mother can reduce her stress by yogic techniques. On the basis of above explanation about stress and yoga, we can say that yogic practices are helpful in reducing stress symptoms during pregnancy. It has been stated that daily practices of yoga would help a pregnant woman to maintain a perfect homeostasis of the body and mind throughout her life. Yogic techniques plays significance role in the management of many stress and related problems. (Udupa& Prasad, 1985)

Methodology-

Sample- Current study, researcher involved 20 subjects, which was primigravida drawn from city hospital of Chhattisgarh, India and the age group of 20 selected participants was 20-30 years.

Sampling- in this study, researcher applied the purposive sampling for selection of samples. Researcher selected samples who was followed the inclusion and exclusion criteria. So, purposive sampling method used by researcher.

Hypothesis- A research hypothesis is a clear statement predicting how changes in the independent variable will affect the value of the dependent variable. A hypothesis should also clearly state the population about which the researcher intends to draw conclusions. In this study, researcher has used directional hypothesis.

- The practice of integrated yoga will Decrease the stress level of the subjects during pregnancy.

Tools- Examination of stress level for pregnant women questionnaire prepared by Dr. M. Singh. The scale consists of 40 statements which have 40 items related to stress.
Intervention-

Firstly, Researcher has selected the subjects to private and govt. Hospitals which was fulfilled inclusive and exclusive criteria of the study and selected samples received antenatal check-ups per month. Researcher gave the stress inventory in 12th week of gestation for see pre stress level then started the yogic session in morning.

<table>
<thead>
<tr>
<th>Practices</th>
<th>Rounds</th>
<th>Timing (Total 50 minutes)</th>
<th>Weeks of gestation</th>
</tr>
</thead>
<tbody>
<tr>
<td>grivāsānchālana</td>
<td>10 (in each stages)</td>
<td>5 minutes</td>
<td>✓</td>
</tr>
<tr>
<td>Skandhacakraśana</td>
<td>10 (in each instruction)</td>
<td>5 minutes</td>
<td>x</td>
</tr>
<tr>
<td>Naḍi-śodhanprānāyāma</td>
<td>8 rounds ratio 1:1:1</td>
<td>10 minutes</td>
<td>✓</td>
</tr>
<tr>
<td>om chanting</td>
<td>20 rounds</td>
<td>10 minutes</td>
<td>✓</td>
</tr>
<tr>
<td>Yognidrā</td>
<td>1 round</td>
<td>20 minutes</td>
<td>✓</td>
</tr>
</tbody>
</table>

After the completed of yogic intervention, fulfilled the stress inventory for seen the post stress level of pregnant woman.

Result:

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>N</th>
<th>SD</th>
<th>S_{ED}</th>
<th>r</th>
<th>df</th>
<th>T-value</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre</td>
<td>52.55</td>
<td>20</td>
<td>3.5</td>
<td>0.701</td>
<td>0.524</td>
<td>19</td>
<td>35.001</td>
<td>0.01</td>
</tr>
<tr>
<td>Post</td>
<td>28.00</td>
<td>20</td>
<td>2.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This table shows that p<35.001 and significant at 0.01 significant level.

Graph:

The result and graph shows that directional hypothesis is accepted. Hence yogic intervention significantly decreases the level of stress in the post test as compared to pre test.

Discussion-

After the analysis of results it has been observed that asana, pranayama, Om chanting and yoga nidra are useful in bringing out significant changes on stress during pregnancy of 20-30 age group of pregnant women of this study.

Result table and graph Indicates that the hypothesis “The practice of yogic package will
Decrease the level of stress of the subjects” has been accepted at .01 level of confidence. That means yogic-spiritual package which consists of asana (grīvāsanchālana, skandhacakrāsana), pranayama (Nādi-sodhanprānāyāma), om chanting and Yognidrā is effective for reduce the stress during pregnancy of the subjects.

Saraswati, (2005) said that grīvāsanchālana and skandhacakrāsana release tension, heaviness and stiffness in the head, neck and shoulder region. Because of these exercises subjects feels reduced stress in post test.

Satyapriya, Nagendra, Nagarathna, & Padmalatha. (2009) and Smith, Hancock, Blake-Mortimer, & Eckert, (2007) suggested that yoga was found to be as effective as relaxation in reducing stress and similarly Vieten & Astin, (2008) said that mothers who received the yogic intervention showed significantly reduced stress, anxiety and negative affect during the third trimester in comparison to those who did not receive the intervention.

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Dorle, (2016) suggests that by controlling the pranas through the practice of pranayama the restlessness of the mind is automatically controlled- nadishodhan pranayama induces calmness and tranquillity in several ways. It clears all the pranic passages of any blockages, due to the presence of toxins. It equalizes the flow of prana in the ida and pingla network of nadi. By equalizing the flow of the prana in the ida and pinglanadisnadishodhan rectifies imbalance due to the habitual predominance of sympathetic nervous system, which is the result of chronic ongoing stress during pregnancy.

Conclusion-

The purpose of this study “To investigate the impact of yogic package on stress during pregnancy.” Researcher concluded that if 20-30 age group of pregnant woman attends yogic practices consists asana (Greevasanchalana, Skandhchakra), NadiShodhan Pranayama, Om Chanting and Yoga Nidra for 50 minutes at least 6 days in a week during 12th to 20th week of pregnancy. They have a good health, comfortable pregnancy and mental well-being to pregnant woman.

So finally it can be concluded as Yoga is the best means towards a preparation for pregnancy and child birth and the yogic package can make a significance difference in the pregnancy outcome and we strongly recommend to practice this kind of yogic intervention for all over the world, as we found a huge difference in between our pre and posttests in the sense of: stress level during pregnancy.

Reference-


Imperial Journal of Interdisciplinary Research (IJIR)


