EFFECTS OF PRENATAL YOGIC EXERCISES ON PSYCHOLOGICAL PARAMETERS OF PREGNANT WOMEN DURING 2ND AND 3RD TRIMESTER

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ABSTRACT

The study was conducted to find out the psychological effects of prenatal yogic exercises on pregnant women during their 2nd and 3rd trimesters. For this the data of 20 pregnant women were collected from the tri-city i.e Mohali, Panchkula and Chandigarh to find out the impact. Out of 20 women, 10 women were experimented and 10 women were controlled. The yoga exercises and tests were practiced under the supervision and guidance of authorized and experienced Dr. Sushma Noheria (General Physician, Gynaecologist, and Obstetrician) and her team. The administration of yoga exercises was done after pre- screening of the subjects. Data collection was done with the consultation of doctor. Sequence of prenatal yogic exercises was based on individual needs and limitations. ADSS (Anxiety Depression and stress Scale) was used to collect the data. ADSS-BSPSA (By Palvi Bhatnagar, 2011, Anxiety, Depression and Stress Scale). This test has three sub scale-namely: Anxiety, Depression and Stress. This 48 items scale is developed on adult population measures all the factors.

Keywords: *Pregnant women 2nd and 3rd trimester, Psychological parameters, Tri-city.*

INTRODUCTION

Yoga, a form of physical activity, is gaining in popularity among the general population. Yoga work together to strengthen the body, correct the flow of energy through the body and allow the yoga participant to become more in tune with their body in order to allow it to guide them their actions and movements (White, 2001). Recent studies have shown the positive effects and its benefits on health. Practicing yoga on daily basis will not only improve your body functioning but will help you work off negative energy. Yogic exercises create balance in the body and helps increase level of flexibility and strength.

Yoga is an ancient mind and body practice that was originated in India. The word yoga is originated from the Sanskrit word- *yug* which means 'to unite', broadly means to maintain or to create physical, mental, emotional and spiritual balance. Yoga is a holistic approach to health promotion that focuses on inter-connectedness of the body, mind and spirit (Narendran, Nagarathan, & Gunasheela, 2005).

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Pregnancy is the beginning of new phase of life for a woman. Pregnancy could be a great challenge if a mother is not mentally prepared. Pregnancy is a condition in which women undergo various psychological and physiological changes. The well being and quality of life of mother is curtailing for optimal pregnancy outcomes. Maternal stress, anxiety and depression are associated with the negative consequences with the fetus, which can also affect the child after birth in later life. Negative pregnancy outcomes associated with increased prenatal maternal stress levels include increased risks for spontaneous abortions, prematurity, fetal malformation, asymmetric intrauterine growth restrictions (Satyapriya et al., 2009). Earlier, women during pregnancies used to perform vigorous household activities due to which the rate of normal, painless delivery was very high. Changing trends and living conditions have changed the scenario of women health. Engaging in physical activity was once considered as a risky behaviour. Pregnant women were adhered to perform any kind of physical activity due to the risk of abortion and preterm pregnancy. But fortunately, the attitude towards pregnancy is changing and doctors recommend daily physical activity for a healthy pregnancy and antenatal care. In the past few years, various studies have shown the impact of exercise during pregnancy. Improved mood, relaxation, less stress, and appropriate weight gain are some of the outcomes. Jackson et al. (1995) says that fetal growth Physical exercise may increase fetal growth due to an overall beneficial effect of exercise on the circulatory system, resulting perhaps in a larger placenta. According to Alderman et al. (1998) Exercise also has a hypoglycemic effect which may prevent the development of gestational diabetes in the mother and thereby decrease the prevalence of LGA-babies in exercising mothers.

Yoga during pregnancy can be beneficial if performed properly. It balances the body physically and emotionally. Deep breathing calms the nervous system, which can help digestions to operate properly, increases circulation of blood and enhances the immunity. In 2005 survey, 52% off all obstetric healthcare provider survey reported that they would recommend complementary and alternative medicines, including yoga for pregnancy related back pains (Wang et al., 2005). Prenatal Yoga helps alleviate aches and build strength in legs, back and abdominals to prepare one for giving birth. Yoga during pregnancy eases the labor pain and delivery, with the moves that relax the lower back muscles and uses the gravity as an advantage. Prenatal Yoga is very much safe and beneficial if implemented properly. Difficulty in breathing and discomfort during pregnancy is very much common. Gentle yoga moves, motions and breathing can help relaxing the body. Continues prenatal yoga practice tones the body and increase the flexibility, which is the basic aspect for delivery.

Lasater (1978) A pregnant woman can benefit physically from the practice of yoga. The practice of yogic thought explains that each person is a vessel of consciousness through which the life is manifesting- if a woman understands that so much more is occurring inside

her than just the growth of a human being- if she can become sensitive to the fact that another soul is coming through her- a greater peace and joy will pervade her.

Babbar, et al. (2016) yoga is a mind body practice that encompasses a system of postures, deep breathing and meditation. A prenatal yoga practice has been shown to benefit woman who suffers from anxiety, depression, stress, low back pain and sleep disturbances.

Narendran, et al. concluded that benefits of prenatal yoga that warrant discussions are reduction of maternal stress level, reduction of pregnancy related pains, improved quality of sleep during pregnancy and improved overall birth outcomes.

Objectives of the study

1. To study the effect of prenatal yogic exercises on the level of anxiety among controlled and experimental groups.
2. To study the effect of prenatal yogic exercises on the level of depression among controlled and experimental groups.
3. To study the effect of prenatal yogic exercises on the level of stress among controlled and experimental groups.

Hypotheses of the study

1. There will be no significant difference between the controlled and experimental group on anxiety.
2. There will be no significant difference between the controlled and experimental group on depression.
3. There will be no significant difference between the controlled and experimental group on stress.

Methodology and Procedure

For this study 20 pregnant women were selected, out of whom 10 women were experimented with prenatal yogic exercises and 10 women were controlled. The yoga exercises and tests was practiced under the supervision and guidance of authorized and experienced Dr. Sushma Noheria (General Physician, Gynaecologist, and Obstetrician) and her team. The administration of yoga exercises was done after pre- screening of the subjects. Data collection was done with the consultation of doctor. Sequence of prenatal yogic exercises was based on individual needs and limitations. ADSS (Anxiety Depression and stress Scale) was used to collect the data. ADSS-BSPSA (By Palvi Bhatnagar, 2011, Anxiety, Depression and Stress Scale). This test has three sub scale-namely: Anxiety, Depression and Stress. This 48 items scale is developed on adult population measures all the factors. The data was analysed using appropriate statistical technique. Further, descriptive statistics has been used for detailed description.

Results and Discussion

The scoring of the sub-scale has been done. Further, Independent t-test was applied among controlled and experimental groups for the purpose of statistical interpretation to test the significance of difference between two means.

The following table (Table No.-1) showing difference between controlled and experimental groups on anxiety.

Table-1

Groups	N	M.D	S.M.D	S.D	t-value
Controlled	10	6.90	46.90	5.21	5.24
Experimental	10	2.20	25.60	2.84	

*significant level at 0.05 (df=9)

Results summarised in table-1 indicates that the there is a significant difference between controlled and experimental groups. The t-value on the dimension of anxiety was 5.24. The p-value is 0.000056, which shows that the result is significant at p<0.5. The controlled group has mean difference of 6.90, square mean difference of 46.90 and standard deviation of 5.21 as compared to 2.20, 25.60 and 2.84 of experimented group. Thus, controlled group has found to higher dimension of anxiety as compared to experimented group.

The following table (Table No.-2) showing difference between controlled and experimental groups on depression.

Table-2

Groups	N	M.D	S.M.D	S.D	t-value
Controlled	10	4.90	52.90	5.88	3.99
Experimental	10	1.40	16.40	1.82	

*significant level at 0.05 (df=9)

Results summarised in table-2 indicates that the there is a significant difference between controlled and experimental groups. The t-value on the dimension of depression was 3.99. The p-value is 0.00861, which shows that the result is significant at p<0.5. The controlled group has mean difference of 4.9, square mean difference of 52.90 and standard deviation of 5.88 as compared to 1.40, 16.40 and 1.82 of experimented group. Thus, controlled group has found to higher dimension of depression as compared to experimented group.

The following table (Table No.-3) showing difference between controlled and experimental groups on stress.

Table-3

Groups	N	M.D	S.M.D	S.D	t-value
Controlled	10	5.40	40.40	4.49	5.32
Experimental	10	1.20	15.60	1.73	

*significant level at 0.05 (df=9)

Results summarised in table-1 indicates that the there is a significant difference between controlled and experimental groups. The t-value on the dimension of stress was 5.32. The p-value is 0.000046, which shows that the result is significant at p<0.5. The controlled group has mean difference of 5.40, square mean difference of 40.40 and standard deviation of 4.49 as compared to 1.20, 15.60 and 1.73 of experimented group. Thus, controlled group has found to higher dimension of depression as compared to experimented group.

Conclusion and Recommendations

On plausible explanation controlled group, found to have high level of anxiety, depression and stress as compared to he experimented group. Therefore, this study has come out with the findings that prenatal yoga exercises are beneficial for anxiety, depression and stress during pregnancy. Therefore, it is recommended to perform prenatal yoga exercises under proper supervision and guidance. However, more researches are needed to be done on diverse population to substantiate the same.

References

1. Alderman, B. W. (1998). Maternal physical activity in pregnancy and infant size for gestational age. *Annual Epidemiol*;8, no. 8: 513-519.
2. Babbar, Shilpa & Shyken, Jaye. (2016). Yoga in pregnancy. *Clinical Obstetries and gynecology*. 59.10.1097/GRF. 0000000000000210.
3. Lasater H. (1978). A yogic approach to pregnancy and childhood. *Yoga Journal*, page-7, issue no. 18.
4. Lazarus R., S., and Folkman S. (1984). Stress Appraisal and Coping, *New York, Springer*.
5. Mitchell, Field, Diego, Bendell, Newton, Pelaez. (2012). Yoga reduces prenatal depression symptoms. *Scientific research*. http: //dx. doi.org/ 10.4236 /psych.201 2.329118.

6. Netsanet Fekadl, Workineh Shibeshi and Ephrem Engidawork. (2017). Major Depressive Disorder: Pathophysiology and Clinical Management, *Journal of Depression and Anxiety*, 6:1, DOI: 10.4172/2167-1044.1000255.
7. Shim and Lee. (2012). Effects of a Yoga-focused Prenatal Program on Stress, Anxiety, Self Confidence and Labor Pain in Pregnant Women with In Vitro Fertilization Treatment. *Journal of Korean Acadamy Nursing*;42(3):369-376 https :// doi.org/ 10.4040/jkan. 2012.42.3.369.
8. Satyapriya, M., Nagendra, H.,R., Nagarathan, R., & Padmalatha, V. (2009). Effect of integerated yoga on stress and heart rate variability in pregnant women. *International journal of gynechology and obstetrics*, 104,218-222.dio: 10. 1016 / j. ijgo.2008.11.013.
9. Wang, S., DeZinno, P., Fermo, L., William, K., Caldwell-Andews, A.A., Braveman, F., & Kain, Z.N. (2005). Complementary and alternative medicine for low-back pain in pregnancy: A cross- sectional study. *Journal of Complementary and Alternative Medicine*, 11,459-464.
10. White, M. (2001). Yoga for pregnancy. *International Journal of Childbirth Education*, 16(4), 5-9.