

SYSTEMATIC REVIEW OF YOGASANA AND PRANAYAM IN GARBHINI AND ITS  
EFFECTS ON PREGANACY AND BIRTH OUTCOMES-REVIEW ARTICLEKaklij P. Vivek<sup>\*1</sup>, Kinage Pradip<sup>2</sup>, Bagul Aparna<sup>3</sup> and Vasudevan Asokan<sup>4</sup><sup>1</sup>P.G. Scholar Dept. of *Prasooti Tantra Evum Stri Roga*,<sup>2</sup>Asso. Professor and Guide Dept. of *Prasooti Tantra Evum Stri Roga*,<sup>3</sup>Professor Dept. of *Swathyavrittya*,<sup>4</sup>Professor and Head of Dept. of *Prasooti Tantra Evum Stri Roga*,Parul Institute of *Ayurveda*, Parul University, Waghodia, Vadodara, Gujrat India.**\*Corresponding Author: Kaklij P. Vivek**P.G. Scholar Dept. of *Prasooti Tantra Evum Stri Roga*, Parul Institute of *Ayurveda*, Parul University, Waghodia, Vadodara, Gujrat India.

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**ABSTRACT**

Pregnancy and child birth have great importance in every woman's life. *Ayurveda*, A holistic way of living, documented *Garbhini Paricharya* i.e. *Ahara* (diet), *Vihara* (lifestyle), *Vichara* (psychological aspect) to be followed during pregnancy with respect to each month. The proper *Garbhini Paricharya* would result in proper development of foetus, its delivery, the health of mother and thus the ability to withstand the strain of labour and have an eventless postnatal care. It is necessary to know "why there is specific regimen explained in respective month by *Ayurvedic* classics?" Hence, an attempt is made through this article to highlight the importance and review the concept of *Garbhini Paricharya*. *Yoga* is an ancient mind-body unifier practice that originated in India and is becoming increasingly recognized and used in developed nations as a health practice for a variety of immunological, neuromuscular, psychological, and pain conditions. Most recognized for its potential to create balance among emotional, mental, physical, and spiritual dimensions, *Yoga* is a comprehensive system that uses physical postures, breathing exercises, concentration and meditation.

**KEYWORDS:** *Garbhini*, *Garbhini Updrava*, *Garbhini Paricharya*, *Sukha-Prasava*, *Yogasana* and *Pranayama*, Pregnancy, Ante-natal care, Normal delivery.

**INTRODUCTION**

*Yoga* is an ancient mind-body unifier practice that originated in India and is becoming increasingly recognized and used in developed nations as a health practice for a variety of immunological, neuromuscular, psychological, and pain conditions. Acharya *Charka*, *Sushruta* and *Kashyapa* have mentioned about benefits for yoga on life events.<sup>[1,2,3]</sup> Most recognized for its potential to create balance among emotional, mental, physical, and spiritual dimensions.<sup>[4]</sup> *Yoga* is a comprehensive system that uses physical postures, breathing exercises, concentration and meditation.

Pregnancy and child birth have great importance in every woman's life. *Ayurveda*, A holistic way of living, documented *Garbhini Paricharya* i.e. *Ahara* (diet), *Vihara* (lifestyle), *Vichara* (psychological aspect) to be followed during pregnancy with respect to each month. The proper *Garbhini Paricharya* would result in proper development of foetus, its delivery, the health of mother and thus the ability to withstand the strain of labour and have an eventless postnatal care. It is necessary to know "why there is specific regimen explained in respective

month by *Ayurvedic* classics?" Hence, an attempt is made through this article to highlight the importance and review the concept of *Garbhini Paricharya*.<sup>[5]</sup>

Pregnancy is a condition in which women undergo distinct physiological changes and stress and is accompanied by unique physical and psychological demands. There is a need to manage the various physical, emotional, mental, and pain states that arise throughout the stages of pregnancy and labor.

Maternal stress and anxiety during pregnancy is associated with a host of negative consequences for the fetus and it leads to complication for children later in life, such as the development of attention deficit hyperactivity disorder or lowered performance on aspects of executive function. Maternal stress also affects the intra-uterine environment and alters fetal development during critical periods, through either activation of the placental stress system, causing the release and circulation of corticotropin releasing hormone, or through diminished blood flow and oxygen to the fetus.<sup>[6]</sup>

### OBJECTIVES OF THE STUDY

- To do a conceptual study on *Yogasanas and Pranayama* useful in 2<sup>nd</sup> & 3<sup>rd</sup> trimester of Pregnancy.
- To assess the effects of *Yogasana and Pranayam* on maternal physiology
- To assess the effects of *Yogasana and Pranayam* on labour
- To assess the effect of *Yogasana and Pranayam* on foetus.
- To assess the effect of *Yogasana and Pranayam* on neonate
- To compare the results of control and trial groups

### MATERIALS AND METHODS

**Source of the data:** A minimum of 30 in between 16-18 weeks of POG, diagnosed as normal pregnancy will be recruited for the study from OPD of Parul Ayurved Hospital and Parul Sevashram hospital, Limda, Vadodara.

#### Methods

It is a randomized comparative study and selected patients were divided into two groups of 15 each.

#### Intervention

The selected patients were divided into two groups of 15 each.

#### 1) Group A(In Trial group)

Pregnant women were taught certain *Yogasana and Pranayama (Tadasana, Ardhakati Chakrasana & Vakrasana, Swathikasana, Bhadrasana, Vajrasana, Savasana, Anulom-vilom)*<sup>[7]</sup> along with their routine

**antenatal care** and then made to practice them everyday throughout antenatal period.

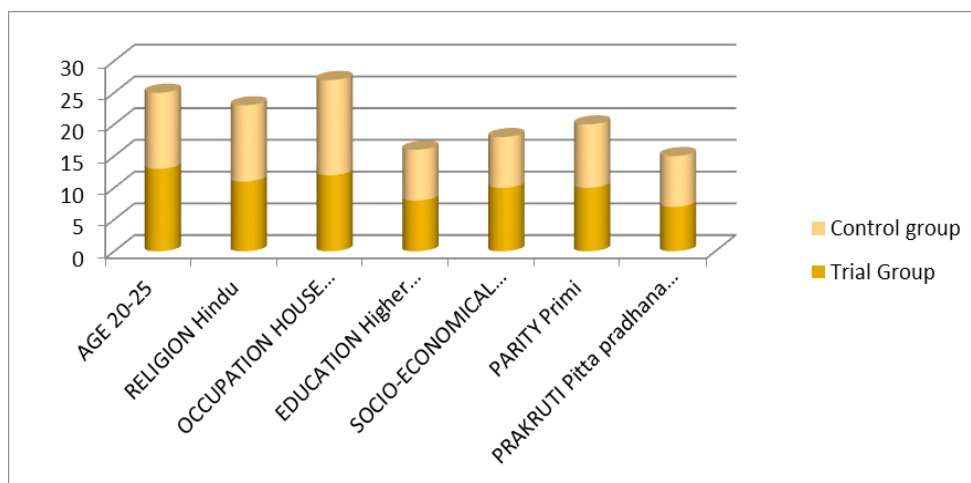
#### 2) Group B(In Control group)

Pregnant women were advised to follow their routine dietary and physical activities and follow their **routine physical activities with 30 min walking exercise** till the onset of labor.

### OBSERVATION

Complete history was obtained as per the specific prepared proforma, observations were made regarding Age, Education, Occupation, Religion, Socio-economic status, Marital status, Parity, *Prakruti, Saara, Samhanana, Pramaana, Saatmya, Satwa, Aahaara Shakti, Vyaayaama Shakti, Vaya*, Mode of Assistances during Labour, Complications during Antenatal period and Labour complications. After obtaining a complete history as per the special Performa, observations were made with regard to age, religion, occupation, dietary habits, *Prakruti*, mood, sleep, anxiety, Bishop's scoring etc.

In the present study, out of 30 women 83.33% women belonged to age group of 20-25 years, maximum i.e. 76.66% women were following Hindu religion, Occupation wise maximum i.e. 90% women were housewives, 50% women were educated up to Higher Secondary, Socio-economy status wise 50% women belonged to Upper Middle class, majority of women i.e. 66.66% were Primiparous, were Multigravidae, maximum i.e. 50% women were of *Pitta Pradhana Kapha Prakriti*.



Graph No. 01: Highest incidence of demographic data.

**Incidence of Age:-**Age wise distribution of 30 patients shows that 53.33% patients were belonging to the age group 20-25 years, 33.33% patients were belonging to age group of 26-30 years and 13.33% of patients were from 31-35 years, as shown in table no.1.

**Table no. 01: Incidence of Age.**

AGE	TRIAL GROUP	CONTROL GROUP	TOTAL	%
20-25	8	8	16	53.33
26-30	6	4	10	33.33
31-35	1	3	4	13.33

**Incidence of Prakriti:-** Distribution of incidence of Prakriti in the groups, 50.00% of women had *Pitta-Kapha*, 36.66% of women had *Kapha-Pitta*, and 13.33%

of women had *Pitta-Vataprakriti*. The same is shown in the table no.2

**Table no. 02: Incidence of Prakriti.**

Sharira Prakriti	Number of Patients			%
	Trial group	Control group	Total	
<i>Pitta-Kapha</i>	7	8	15	50.00
<i>Kapha-Pitta</i>	5	6	11	36.66
<i>Pitta-Vata</i>	3	1	4	13.33
<i>Vata-Pitta</i>	0	0	0	0

**Table No. 04: Symptoms wise distribution of 30 pregnant women.**

Symptoms	Number of Patients			%
	Trial group	Control group	Total	
Backache	13	12	25	83.33
Leg Cramps	13	13	26	86.66
Dyspnoea	10	12	22	73.33
Fatigability	13	12	25	83.33
Sleep disturbances	14	14	28	93.33
Anxiety	10	13	23	76.66
Pain in lower limbs	12	12	24	80.00
Hyperacidity	6	12	18	60.00
Constipation	14	15	29	96.66

**Incidence of complaining symptoms wise distribution on Enrolments of pregnant women:** 83.33% women had Backache sometime during pregnancy. 86.66% of women had Leg cramps during pregnancy. 73.33% women had dyspnoea sometime during pregnancy. 83.33% women had fatigability sometime during pregnancy. 93.33% women had sleep disturbances sometime during pregnancy. 76.66% women had anxiety sometime during pregnancy. 80.00% women had pain in lower limbs sometime during pregnancy. 60.00% women had hyperacidity sometime during pregnancy. 96.66% women had constipation sometime during pregnancy. No incidence of Haemorrhoids or Varicosities was found either in the trial or control groups.

## RESULT

There was no statistically significant difference between the trial and control during the 1<sup>st</sup> and 2<sup>nd</sup> visit. However, during the 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> visits, the difference in the mean values of the two groups were statistically significant. There was 75.01% reduction in the backache, 100% reduction in leg cramps, 100% reduction in dyspnoea, 100% reduction in fatigability, significantly disturbances in sleep disturbance, 89.95% reduction in anxiety, 72.25% reduction in pain in the lower limbs, 100% reduction in hyperacidity, 90.93% reduction in constipation and no incidence of Haemorrhoids and Varicosities in the patients of both, trial and control

groups. There was no statistically significant difference between the trial and control groups regarding the duration of gestation, fixation of head and engagement of head. The Bishop's score in the trial group was 41.4% higher than that of the control group. There was a statistically significant difference found between the Bearing down efforts, Breathing during Labour, Leg Cramps during labour, Anxiety in Labour, Pain during Labour, Effect on Duration of Labour (in minutes) of Trial and Control groups. Quantity of Oxytocin drip and Inj. Tramadol hydrochloride the difference in the mean values of the two groups was greater than that would be expected by chance; there was a statistically significant difference found between the Trial and Control groups. Effect on Birth Weight (in Grams) of Baby the difference in the mean values of the two groups was greater than that would be expected by chance; there was a statistically significant difference found between the birth weights of the babies in Trial and Control groups. Distribution according to Mode of Assistance used during labour was 80% of patients belonging to both, Trial and Control group delivered with assistance of Episiotomy alone. 6.66% patients of each group delivered with Vacuum assisted Forceps. One patient from control group underwent Caesarean section, while no assistance was required in 2 patients i.e. 13.33% in Trial group. Incidence of Complications during Labour, cervical tear was seen in 14.28% out of 14 patients in

Control group, No complications were seen in all the 15 patients of Trial group.

**Photographs of *Yogasanas & Pranayams***



**Fig. No. 1: *Vajrasana*.**





Fig. No. 2: *Gomukhasana.*

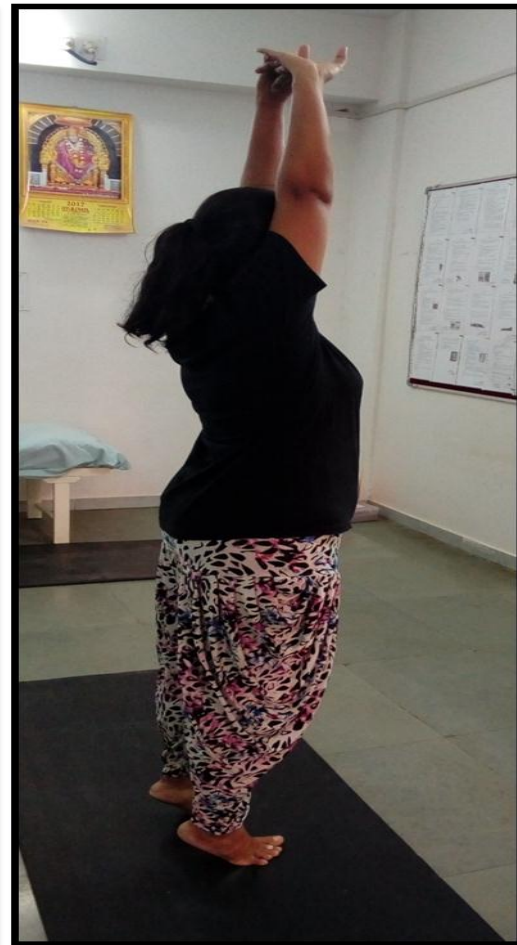
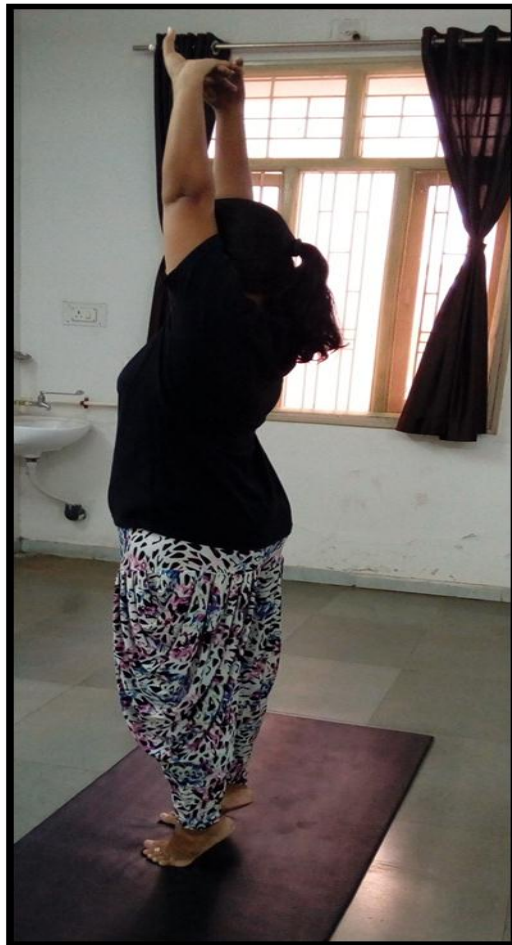
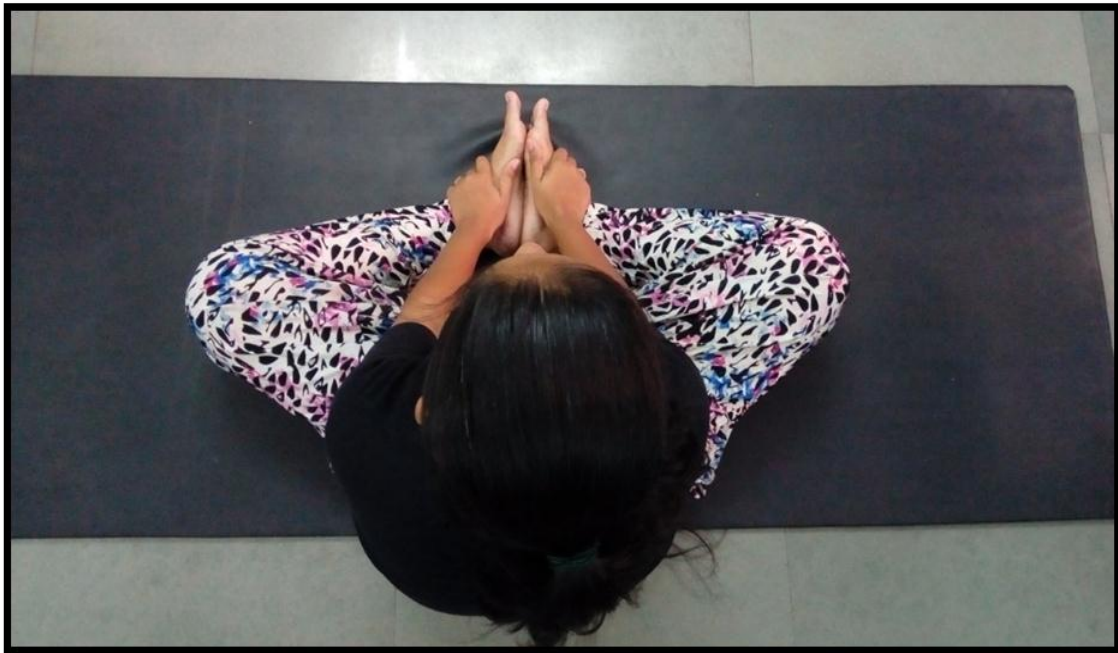


Fig. No. 3: *Tadasana.*



**Fig. No. 4: Bhadrasana.**



**Fig. No. 5: Swastikasana.**





**Fig. No. 6: Pranayam.**

## **DISCUSSION**

This systematic review suggests that yoga can be used to effectively reduce Minor elements of pregnancy and in healthy pregnant women aged 20-35 years old in their 2nd and 3rd trimesters. Present variant of antenatal consideration which concentrates just on physical health of mother and development of foetus isn't finished. Future age presumably may confront more worry from various perspectives like Education, workplace, ecological perils so it is important to make them mentally and emotionally steady. To remunerate the work over-

burden in pregnancy and work maternal physiology experiences such a large number of adjustments to make the pregnancy and work smooth and uneventful. *Yoga asana* recondition body and mind to achieve the highest possible muscular tone, emotional well-being and natural energy. It facilitates the physical and mental worry of pregnancy period, both antenatal and during delivery. Intra-natal, its impact is seen on Bishop Score, adapting aptitudes, for example, unwinding, situating and breathing mindfulness which will furnish the pregnant with the down to earth methods for overseeing work.

*Yoga* teaches pregnant women to listen to their body and reduce stress and anxiety and to quiet the mind.

Effect of *Yogasana and Pranayama* on backache, leg cramps, dyspnea, fatigability, sleep disturbance, anxiety, and pain in lower limbs, hyperacidity and constipation was assessed in each follow up. The difference in the mean values of the two groups is not great enough to reject the possibility that the difference is due to random sampling variability. There was no statistically significant difference between the trial and control during the 1<sup>st</sup> and 2<sup>nd</sup> visit. However, during the 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> visits, the difference in the mean values of the two groups were statistically significant. At the 5<sup>th</sup> visit, the t-value of backache, leg cramps, Dyspnea, Fatigability, Sleep disturbance, anxiety, Pain in lower limbs, Hyperacidity, Constipation was -6.947, -7.359, -7.483, -6.205, -9.192, -6.200, -4.707, -5.292, -7.418 respectively which was significantly greater than would be expected by chance ( $p \leq 0.001$ ). Therefore percentage wise, the reduction seen in above subjective parameters viz. backache, leg cramps, Dyspnea, Fatigability, Sleep disturbance, anxiety, Pain in lower limbs, Hyperacidity, Constipation was 75.01%, 100%, 100%, 100%, 90.85%, 89.95%, 72.25%, 100%, 90.93% respectively. It was observed that effect of *Yogasana and Pranayama* was not significant during 1<sup>st</sup> & 2<sup>nd</sup> follow up while it was significant 3<sup>rd</sup> 4<sup>th</sup> 5<sup>th</sup> follow up. It means *Yogasana & Pranayama* needs to be continued for longer duration for achieving better results. During regular examination, it was observed that no incidence of Hemorrhoid's or Varicosity occurred in either of the trial or control groups during the study phase. No complications were observed in trail group. It proves *Yogasana and Pranayama* is safety during pregnancy. *Yoga* is a more effective exercise for pregnancy than walking or standard prenatal exercises. Walking and standard prenatal exercises are safe, common physical activities for pregnant women. To demonstrate the benefits of *yogaas* compared with these other activities.

## CONCLUSION

This planned randomized controlled preliminary had the option to demonstrate that *Yogasana* practices can be utilized successfully to improve the quality of life of pregnant women who are distressed by the staggering physiological, mental, and emotional changes of pregnancy. We were likewise ready to demonstrate that yoga interventions just as other basic activities could have a specific dimension of effect on the relational connections of the pregnant women.

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