

# EFFECTIVENESS OF SURYANAMASKARA AND ASHTANGYOGA ON PREMENSTRUAL SYNDROME- A SYSTEMIC REVIEW

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## **ABSTRACT:**

### **Introduction and purpose:**

Premenstrual syndrome (PMS) is a cyclic recurrence of distressing somatic and affective symptoms in the luteal phase of menstrual cycle and in the few days (1-3 days) of the next follicular phase. The aim of this systemic review is to examine the effectiveness of Suryanamaskara and Ashtangyoga on premenstrual syndrome.

### **Methods:**

In this systemic review, International databases (PubMed, Google scholar) Were searched from the start of databases to 2013-2019. Keywords used included “Premenstrual syndrome”, “Suryanamaskara”, “Ashtangyoga”, “Medical Subjects Headings” were used, for this Keywords. Article were screened by the three authors independently, and in case of disagreements, items were discussed until consensus was reached. All studies evaluating the effectiveness of Suryanamaskara and Ashtangyoga on premenstrual syndrome.

### **Results:**

A total 8 publication in accordance with the inclusion criteria were included in the study and evaluated. Studies in India have shown positive impacts of Suryanamaskara and Ashtangyoga on women with PMS on decreasing heart beats, blood pressure, stress, negativity, Anxiety, massage the internal organs, stimulate endocrine glands, enhances muscle strength, cardiovascular health, blood pressure (BP), sleep and functioning of other system.

### **Conclusion:**

Suryanamaskara and Ashtangyoga is an effectiveness intervention for alleviating Premenstrual Symptoms in women with premenstrual Syndrome.

**Key words:** Premenstrual syndrome, Suryanamaskara, Ashtangyoga.

## **I. INTRODUCTION**

Premenstrual syndrome (PMS) is a cyclic recurrence of distressing somatic and affective symptoms in the luteal phase of menstrual cycle and in the few days (1-3 days) of the next follicular phase. The most important somatic symptoms are feeling overwhelmed, food craving, insomnia or hypersomnia, headache, pelvic pain and discomfort, breast tenderness, joint pain, bloating; and the most common and distressing affective symptoms are irritability, anxiety, depression, mood swing, hostility, poor concentration, confusion, social withdrawal and interpersonal conflicts.<sup>[1]</sup>

The world Health Organization estimates that 199 million women have premenstrual syndrome as of 2010(5.8%) of the female population. While 80 of menstruating women experienced at least one symptom that could be attributed to PMS, estimates of prevalence range from as low as 3% to as high as 30%.<sup>[2]</sup>

Yoga is a Sanskrit word, meaning connection of the mind body, emotions, logic and attention to the action. Yoga exercise is composed of physical (Asana), breathing (Pranayama) and mental (Pratthara) practices, resulting in health, relaxation and positive awareness, Yoga stretching practices with deep breathing and meditation strengthens muscles and protects the spine and joints of body. Evidences indicated that physical and mental health benefits of yoga occur through negative moderation of hypothalamic-pituitary-adrenal axis in association with sympathetic nervous system (SNS). Additionally, *Yoga* exercise reduces harmful inflammatory secretions, which make women with PMS, comfortable. It relaxes the body by relaxing the tense muscle, massage the internal organs, stimulate endocrine glands, enhances muscle strength,

cardiovascular health, blood pressure, sleep and functioning of other system. Studies in India have shown positive impacts of Yoga exercise on women with PMS on decreasing heart beats, blood pressure and anxiety. [3,4,5]

Although there are studies examining the effect of Yogasana in the literature, there is no study that compiles the results of this study. It is important to evaluate the effect of alternative methods to reduce pharmacological treatments.

The Aim of this review is to systematically evaluate the effectiveness of Suryanamshkara and Ashtangyoga on premenstrual syndrome.

## II. METHODS

### DESIGN AND ELIGIBILITY CRITERIA

This systematic review was conducted according to the Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) guidelines. All Clinical trial studies (with or without a control group), Comparative Study, Randomised control trial studies that examine the effect of Suryanamshkara and Ashtangyoga were included. The target population included women with premenstrual syndrome. Review and qualitative studies, non-English articles and non-full text articles were excluded. All articles were included without time restrictions.

### SEARCH STRATEGY

The electronic databases were searched from the start of databases to May, 2019. These databases included PubMed, Google scholar. Keywords used included “Premenstrual syndrome”, “Suryanamshkara” and “Ashtangyoga”. The search strategy was prepared using the Medical Subject Heading terms. Further details regard with search strategies used for each database are as follows:

- Google Scholar: “Premenstrual Syndrome”, “Suryanamshkara”, “Ashtangyoga” (Title/Abstract)
- PubMed: “Premenstrual Syndrome”, “Suryanamshkara”, “Ashtangyoga” (Full text articles)
- For quality assessment, articles were screened by the three authors independently, and in case of disagreements, items were discussed until responding full-text articles were retrieved and reviewed to determine whether they met the inclusion criteria. Details on the study selection process are reported in flowchart (fig.1). There was no restriction in the assessment of physical and psychological symptoms. The exposure of interest was Suryanamshkara and Ashtangyoga, and the outcome of interest was PMS. Ethical approval was not required for this study since no primary data was being collected (Fig. 2).

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|------------------|---|
| • P-Population   | All women with a premenstrual syndrome. |
| • I-Intervention | Suryanamshkara and Ashtangyoga.         |
| • C-Comparison   | All types of comparison.                |
| • O-Outcomes     | All relevant premenstrual symptoms.     |
| • S-Study Type   | All study types                         |

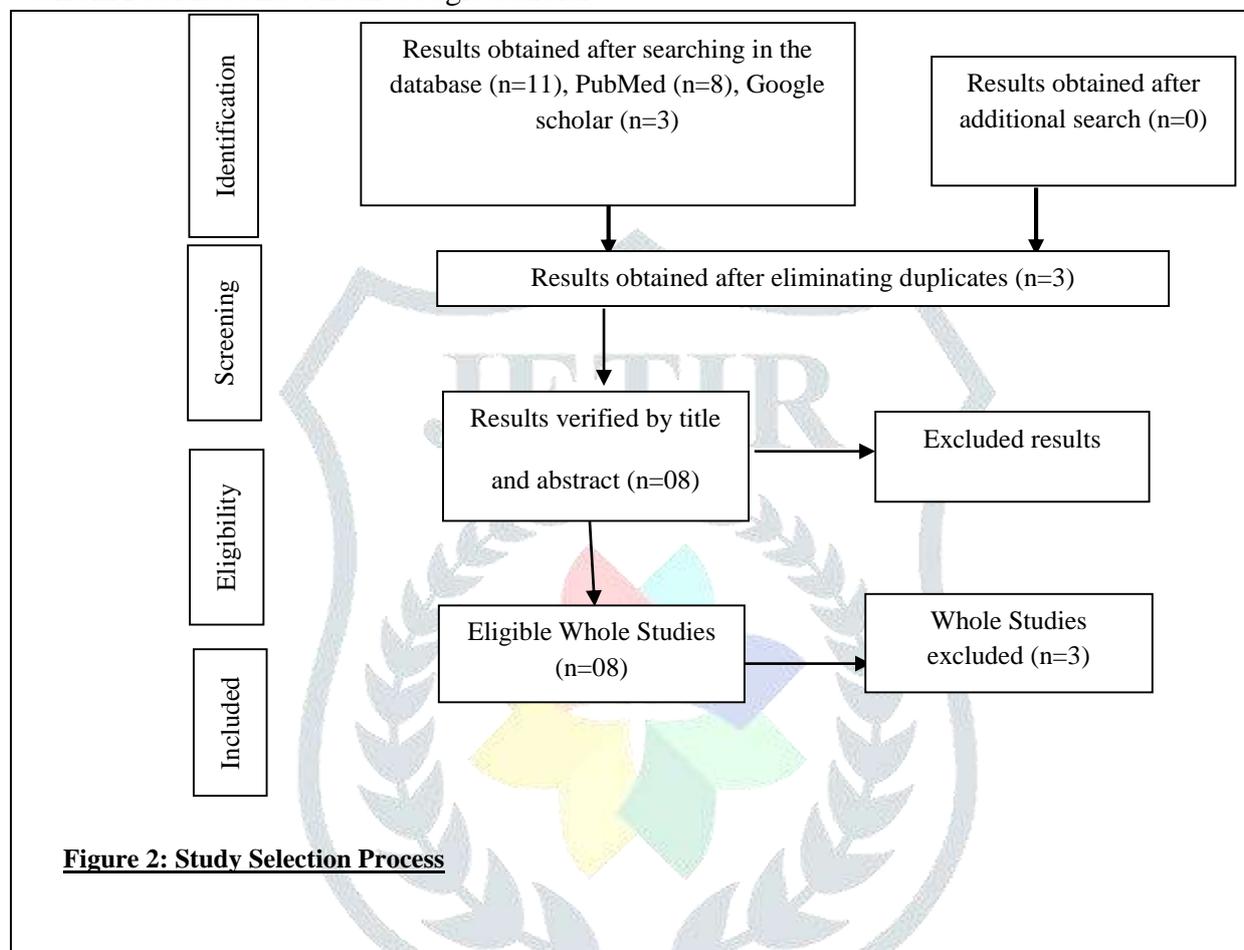
**Fig.1 PICOS criteria for inclusion and exclusion of studies**

### III. Results

#### 3.1. Study selection

A total of 8 articles were retrieved from the search of databases:

4 from PubMed and 4 from Google Scholar



#### 3.2. Study characteristics

A total 8 studies that were carried out on 371 women entered the research. Finding in terms of author, research aims, sample. Measurement tools used, type and duration of Suryanamshkara and Ashtangyoga and types of research are given in the Table 1.

#### 3.3. Procedures

##### Description of the study characteristics, measurement and intervention.

First Author (Year)	Study Design	Sample Size	Purpose of the Study	Outcome Measures
Eda Syamala (2019)	Observational study	8	Effectiveness of Raja Yoga Meditation on Depression, Anxiety and Stress in Females with Premenstrual Syndrome	1. Depression, anxiety, stress scores

Dr. K Krishna Sharma (2017)	Randomized Controlled Study	20	A study to assess the effect of Yoga therapy on ladies with PMS (Premenstrual Syndrome) at women's Hostel	1. Luteinizing hormone level, B.P, BMI and questionnaire
Mahin Kamalifard (2017)	Randomized Controlled Study	62	To evaluate the effect of Yoga exercise on PMS	1. Premenstrual Symptoms Screening Tool questionnaire
Prem Lata (2016)	Randomized Controlled Study	60	The purpose of the present study was to examine the effects of Yoga on Premenstrual Syndrome (PMS) amongst college girl students	1. Moos Menstrual Distress Questionnaire (MMDQ)
Su-Ying Tsai (2016)	Randomized Controlled Study	64	To investigate the effects of 12 weeks Yoga exercise (Yoga interval) on premenstrual symptoms in menstruating females in Taiwan	1. Demographics, Personal Lifestyle, Behavior and Employment Status 2. Visual analog scale 3. Short-form 36- Item Health Survey
Mehta Bharati (2016)	Comparative Study	65	Study was proposed to attenuate the symptoms of PMS by simple lifestyle measures like Yoga or oral calcium	1. Premenstrual symptoms questionnaire
Dr. Anita Choudhary (2013)	Randomized controlled trial	32	Effect of 16 weeks Yogic intervention in Premenstrual Syndrome	The Women Health Assessment Questionnaire
Bhawana Sharma (2013)	Comparative Study	60	The present study to planned to investigate the effects of Anuloma-viloma and specific Yogic asanas in Premenstrual Syndrome	1. HR, SBP, DBP, EMG, GSR And RR

#### IV.DISCUSSION

A total 8 studies were reviewed and included 371 women. The studies included effect of Suryanamaskara and Ashtangyoga on premenstrual syndromes. Results from this systemic review demonstrate that regardless of Suryanamaskara and Ashtangyoga appears to be effective in relieving symptoms. However, it can be said that Suryanamaskara and Ashtangyoga is effectiveness in improving pain, constipation, breast sensitivity and

psychological symptoms in anxiety and anger, crying or rising sensitivity to negative issues, depressed mood or hopelessness, loss of interest to work activities, decreased interest to house activities, loss of interest to social activities, concentration problems or lack of focus on the lesson.

**Eda Syamala (2019):** The present study showed that Yoga exercises can decrease the symptoms of anxiety such as anxious mood, tension, fears, insomnia, depressed mood there are some explanations such as triggering of neurotransmitters by meditation practices such as Yoga that moderate psychological disorders<sup>[6]</sup>.

**MahinKamalifar (2017):** Studies have indicated that Yoga decreases the different symptoms of PMS affecting positively the effects of yoga on relaxation and controlling of the nervous system. In a study, it has been shown that Hatha yoga increases relaxation of the mind and body, reduces tension of the muscles and stress, which subsequently improves sleeping with less anxiety. This study examined vital symptoms and showed Hatha yoga exercise reduces sympathetic activity, stress pressure and increases relaxation of women with PMS<sup>[7]</sup>

**Bhawana Sharma (2012):** In the present study the relaxation response in the females suffering from PMS showed a reduction in an abnormally high basal sympathetic activity and a heightened Relaxation response<sup>[8]</sup>

## V. LIMITATIONS

Included studies involved a large number of participants, were at unclear-to-high risk of bias, and were highly heterogeneous in terms of study design. Although all efforts were made to retrieve all relevant data, the articles whose publication language is not English and the full text is not available for could not be reached. Therefore, Publication bias cannot be excluded.

## VI. CONCLUSION

A total 8 studies were carried out on 455 women entered the research. However, it can be said that Suryanamskara and Ashtangyoga is effectiveness in improving pain, constipation, breast sensitivity and psychological symptoms in anxiety and anger, crying or rising sensitivity to negative issues, depressed mood or hopelessness, loss of interest to work activities, decreased interest to house activities, loss of interest to social activities, concentration problems or lack of focus on the lesson. Suryanamskara and Ashtangyoga is an effectiveness intervention for alleviating Premenstrual Symptoms in women with premenstrual Syndrome.

## VII. Further studies

- 1) Effect of Aerobic exercise on Premenstrual Syndrome.
- 2) Effect of Pilates on Premenstrual Syndrome.

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