



Effect of Yoga on Selected Physiological and Haematological Variables among Irregular Menstrual Women

Dr.S.Selvalakshmi

Assistant Professor, Department of Yoga, Tamilnadu Physical Education and Sports University, Chennai, Tamilnadu, India.

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Abstract

The purpose of the study was to investigate the effects of yogic practices on physiological and biochemical variables among irregular menstrual women. To facilitate the study, 30 irregular menstrual women were selected from various hospitals, Chennai as subjects at random. In this study yogic practices were given to experimental group for the period of six weeks. The pre test was taken from the subjects before administering the training. The subjects were involved with their training for a period of six weeks. The subjects were monitored throughout the sessions. At the end of the six weeks training post test with respect to body mass index, hemoglobin were measured by using the standardized tests and methods. The significant difference between the means of the experimental group and control group for the pre test and post test scores were determined by 't' test. The level of significance was fixed at 0.05 level of confidence. The result of this study proved that significant differences were recorded due to six weeks of yogic therapy for irregular menstrual women. Hemoglobin of the experimental group showed significant Increase when compared to the control group. BMI (Body mass Index) showed significant decrease when compared to the control group.

Keywords: Yoga, Physiological, Menstruation, Women.

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Introduction

Women's health in India can be examined in terms of multiple indicators, which vary by geography, socioeconomic standing and culture (Chatterjee and Paily, 2013). To adequately improve the health of Women in India multiple dimensions of wellbeing must be analysed in relation to global health averages and also in comparison to men in India. Health is an important factor that contributes to human wellbeing and economic growth (Ariana, Proochista and Arif & Naveed 2009). Currently women in India face a multitude of health problems, which ultimately affect the aggregate economy's output. Addressing the gender, class or ethnic disparities that exist in health care and improving the health outcomes can contribute to economic gain through the creation of quality human capital and increased levels of savings and investment (Ariana, Proochista and Arif Naveed 2009).

Gender is one of many social determinants of health which include social, economic, and political factors that play a major role in the health outcomes of women in India (Balarajan and Selvaraj et al. 2013). Therefore, the high level of gender inequality in India negatively impacts the health of women. The role that gender plays in health care access can be determined by examining resource allocation within the household and the public sphere.

Gender discrimination begins before birth, females are the most commonly aborted sex in India (Raj and Anitha 2013). If a female fetus is not aborted, the mother's pregnancy can be a stressful experience due to her family's preference for a son (Patel, Vikram and Merlyn Rodrigues, et al. 2013).

Irregular cycles or irregular periods is an abnormal variation in length of menstrual cycles in a female. A female usually experiences cycle length variations of up to eight days between the shortest and longest cycle lengths. Lengths ranging between eight and 20 days is considered as moderately irregular cycles. Variation of 21 days or more is considered very irregular (Kippley, John and Sheila Kippley 1996). Irregular menstruation is a menstrual disorder whose manifestations include irregular cycle lengths as well as metrorrhagia (vaginal bleeding between expected periods).

Yogic practices are the various yogic techniques used for the purification of the body and mind. These techniques help to create an absolute balance of the interacting activities and process of the physical body, mind and the energy. The main yogic practices are Suryanamaskar, pavanamuktasana, shashankasana, Bhujangasana, ustrasana, pachimottasana, pranayama such as nadishudhi, ujjayi pranayama and relaxation. Yoga in itself is a therapy and lifestyle. The modern way of life imbalances the natural equilibrium of man with nature. This will also lead to decay of moral standard of man. The purpose of the study was to find out the effect of yogic practices on selected physiological and

Correspondence

Dr.S.Selvalakshmi,

E-mail: selvishakthi1212@yahoo.co.in, Ph. +9198412 91923

hematological variables among irregular menstrual women.

Methods

The purpose of the study was to investigate the effects of yogic practices on physiological and biochemical variables among irregular menstrual women. To facilitate the study, 30 irregular menstrual women were selected from various hospitals, Chennai as subjects at random. In this study, yogic practices were given to the experimental group for the period of six weeks. The pre test was taken from the subjects before administering the training. The subjects were involved

with their training for a period of six weeks. The subjects were monitored throughout the sessions. At the end of the six weeks training, post test with respect to body mass index, hemoglobin were measured by using the standardized tests and methods. The significant difference between the means of the experimental group and control group for the pre test and post test scores were determined by 't' test. The level of significance was fixed at 0.05 level of confidence. The result of this study proved that significant differences were recorded due to six weeks of yogic therapy for irregular menstrual women.

Results

Table I. Mean, standard deviation and mean difference of the groups and the "t" test of the control group and the experimental group for body mass index

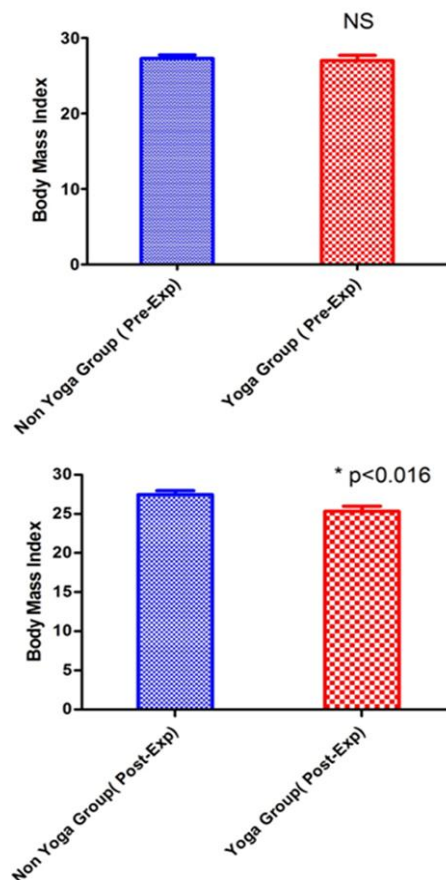
Group	Test	N	Mean	SD	MD	t
Control	Pre Test	15	27.28	1.91	0.212	1.049
	Post Test	15	27.5	1.92		
Experimental	Pre Test	15	27	2.66	1.20	7.972*
	Post Test	15	25.3	2.48		

*Significant at 0.05 level of confidence

't' ratio at 0.05 level of confidence for the degree of freedom (df) at 28=2.0484

The data from the pre test and post test on body mass index levels of the control group and experimental group have been statistically analyzed using dependent 't' test and the results are presented in Table I. Table I shows that the pre test means of control group and experimental group were 27 and 25.3 respectively. The pre test standard deviation of the control group and the experimental group were 1.91 and 2.66 respectively. Table I shows that the post test means of the control group and the experimental group were 27.5 and 25.3 respectively. The post test standard deviation of the control group and the experimental group were 1.91 and 2.66 respectively. The mean difference between the control group and the experimental group were 0.212

and 1.20 respectively. Table V shows that the pre test mean and the post test mean of the experimental group were 27 and 25.3 respectively. The standard deviation of the pre test and the post test of the experimental group were 2.66 and 2.48 respectively. The obtained 't' value 0.02 of the experimental group with respect to the body mass index level was significantly higher than the obtained 't' value 0.76 of the control group. It is proven that there is a significant difference in the body mass index levels of the experimental group. The obtained mean values in pre-test and post-test values of control group and the experimental group are represented through bar diagram figure for better understanding of the results.

Figure I. Bar diagram showing post-test values of control group, experimental group on body mass index

*p<0.016 compared to Non Yoga Groups of post experiment group

Table II. Mean, standard deviation and mean difference of the groups and the 't' test of the control group and the experimental group for hemoglobin

Group	Test	N	Mean	SD	MD	t
Control	Pre Test	15	10.59	4.8	0.07	2.35
	Post Test	15	10.49	1.66		
Experimental	Pre Test	15	10.9	1.30	1.18	2.74*
	Post Test	15	12.7	1.70		

*Significant at 0.05 level of confidence

"t" ratio at 0.05 level of confidence for the degree of freedom (df) at 28=0.0484

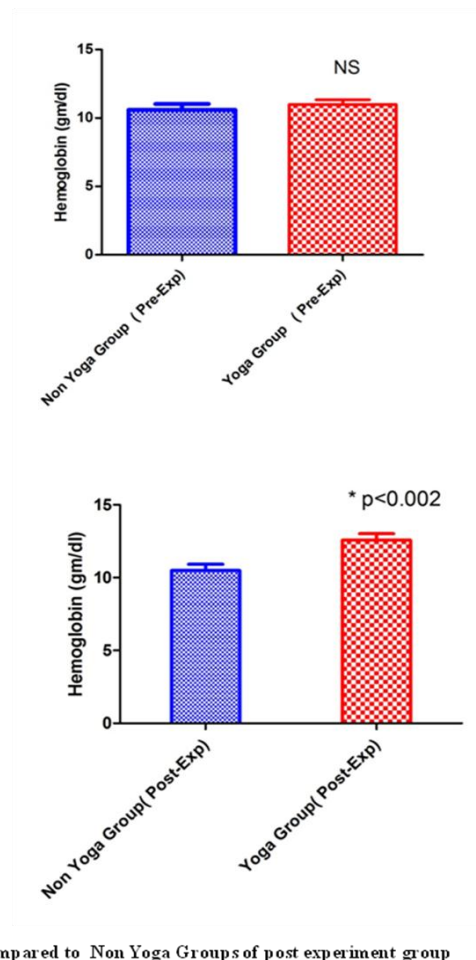
The data from the pre test and post test on hemoglobin levels of the experimental group and the control group have been statistically analyzed using dependent 't' test and the results are presented in the Table II. Table II shows that the pre test means of control group and the experimental group were 10.59 and 10.49 respectively. The pre test standard deviation of the control group and the experimental group were 4.8 and 1.30 respectively. Table II shows that the post test means

of control group and the experimental group were 10.49 and 12.7 respectively. The post test standard deviation of the control group and experimental group were 1.66 and 1.70 respectively. The mean difference between the control group and the experimental group were 0.07 and 1.18 respectively, Table II shows that the pre test means and the post test mean of the experimental group were 10.9 and 12.7 respectively. The standard deviation of the pre test and post test of the experimental group were 1.30

and 1.70 respectively. The obtained 't' value (0.002) of the experimental group with respect to the hemoglobin levels was significantly higher than the required 't' value (0.5) and it is proven that there is a significant difference in the hemoglobin levels of the experimental group. The

obtained mean values in pre-test and post-test values of control group and the experimental group are represented through bar diagram figure for better understanding of the results.

Figure II. Bar diagram showing post-test values of control group, experimental group on hemoglobin



Conclusion

Within the limitation of the present study, the following conclusions were drawn:

1. Hemoglobin of the experimental group showed significant Increase when compared to the control group.
2. BMI (Body mass Index) showed significant decrease when compared to the control group.
3. The level of irregular menstruation has significantly reduced in yogic practice group and control group.

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