



Short report

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A study on the effect of Yoga therapy on menstrual disorders with reference to Hormonal discrepancy.

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ABSTRACT

The present study is entitled 'A study on the effect of Yoga therapy on menstrual disorders with reference to Hormonal discrepancy'. For this purpose, 18 girls who were suffering from menstrual disorder were selected from the Mangalore University Hostel, Mangalagangothri, Konaje. Duration was 40 days from 7th February to 27th march 2014. The subjects were randomly divided into an experimental group and a control group. Yogic practices were progressively introduced on the basis of gradient theory to the experimental group on six days in a week for one hour from 7 to 8 am. The control group was not admitted to any yogic practices. Both the groups underwent test for BP, weight measurement and an Estradiol hormone test at baseline, of pre and post test. A set of questionnaire was also administered to both the groups at the baseline and at 40 days. The results of various tests were analyzed using "Students t test". After the yoga therapy every variable underwent the test showed significant improvement among experimental group when compared to control group. Estradiol test showed the significant improvement with $p=0.02162$, similarly in questionnaire 1 of their health status, the mean score value increased from 2.4129 to 3.521 with $p=0.000166$ and the questionnaire 2 of the self evaluations, the mean score value increased from 5.9814 to 9.0651 with $p=0.0046$. as $p < 0.05$ the result is significant. This study depicts that yogic practices are helpful in managing menstrual disorders.

Keywords: Yoga therapy, Hormonal Discrepancy, menstrual disorders.

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INTRODUCTION

Health confers longevity, firmness and strength by this the entire terrestrial will become affluent fully. The wealth of a nation and the health of the future generation depend upon the physical and mental well – being of women. It is because; nature has endowed her with the responsibility of perpetuating mankind.

When a girl matures, the physiological functions taking place to develop the body to complete womanhood are at their peak to enable her to fulfill the responsibilities which nature has entrusted upon her. There are two ovaries situated at the sides of the uterus and begin to function by producing ova, the female sex cells, one of which matures every month. The maturing process begins between the ages of ten and fifteen years and stops between forty five to fifty years. The endometrium becomes soft and swollen to receive an ovum. When the ovum is not fertilized and the blood is not needed for its nourishment, the swollen membrane and blood are expelled from the uterus through the vagina in the form of blood discharge. This discharge takes place once in a month and is called menstruation. Hence, menstruation is a periodic changes occurring in a female in which discharge of blood takes place from the cavity of the womb. It is purely physiological process preparing the female body for reproduction. Regularity of menstrual cycle in any women depends upon lot internal and external factors effecting mind and body. Many a time, due to several factors the menstrual process may be absent, excessive, irregular or may cause discomfort and severe pain. It is then considered to be a disorder in menstruation.

The common menstrual complaints include irregularity, excessive flow and associated physical symptoms. Menstrual disorders and their adverse symptoms represent an important health issue for many women of child – bearing age. Aside from a deleterious effect on the individual's private life, menstrual disorders are being increasingly recognized as having significant implications at work.

A woman has various roles to be played in her life. She has to take care of her children, look after the needs of her family members. Apart from these, she has an additional part to play in society. In this stage of all – round competition, she has become doctor, lawyer, politician, professor and has acquitted herself worthily. In between all these the health of women is often neglected. She faces many physical and psychological disturbances in her day to day life. These may lead into the emergence of disease both at physical and mental level. Due to many reasons she is not in a position to acquire the required nutrition to her body. As a result of all these factors she may develop the symptoms of anemia. This will adversely affect her routine life. She can get fatigue soon, weakness, dizziness, lack concentration in her work, etc.

The health of future depends upon her physical and mental well being. Yoga helps woman to fulfill her tasks as well to maintain her complexion, luster and femininity. Yogic practices help her in all conditions and circumstances of her daily life. It is not only curative, but also preventive. It activates the internal organs and makes them function harmoniously. It strengthens the body's natural defense to fight against diseases.

Yoga can make her emotionally stable and make her free from psychological disturbances. It helps to control and check emotions, it gives balance of mind. It makes her physically fit and healthy and makes her to approach the future life without any disturbances. Therefore this study was done to test the effectiveness of Yogic practices in the management of menstrual disorders.

MATERIALS AND METHODS:

The study was conducted to assess the effects of yogic therapy among the adults who are suffering from menstrual disorder.

Place: The study was undertaken at the department of Human consciousness and yogic sciences, Mangalore university, Mangalagangothri.

Age: All the subjects of the study were of the age group of 21 to 23 years.

Duration of the study: The study was conducted for the period of 40 days from 7 th February to 27th march. The practices were taught six days in a week, from 7.00 to 8.00 am.

There were 18 girls, who were suffering from menstrual problems, were diagnosed by general health check – up, and are willing to undergo yoga therapy programme. A detailed case history of each subjects and taken. The subjects were divided into two group's experimental group containing 10 students, and control group containing 8 students.

RESULT: (given at the bottom of the paper)

The results of the study show significant effect of yoga on menstrual disorders. The value of the t-test for Estradiol test $p = 0.02162$, questionnaire I of $p = 0.0046$ and questionnaire II – $p = 0.0001$ at, level of significance. The results of the study are shown below in the Table No.3 & 4.

PAIR 1:

The Estradiol (hormonal test) results before and after the course of the study were used for the calculations. The results were significant and p value was less than 0.05, $p = 0.02162$

Hence the yoga practices bring an improvement in the hormonal imbalance significantly

PAIR 2:

The self evaluation questionnaire (anxiety trait) results before and after the course was used for calculations. The results were significant and p value was less than 0.05, $p = 0.0046$

Hence the yogic practices reduce the anxiety level significantly. A reduction in the anxiety shows a more stable mind and this helps in coping the day - to - day stress full situations. Because menstrual disorder is a psychosomatic disease this result has a direct bearing on it and yogic practices will help them to cope by menstrual disorders.

PAIR 3:

The questionnaire on the Health status (present sufferings of the problems) was given, before and after the course of the study were used for the calculations. The results were significant and p value was less than 0.05, $p = 0.0001$

DISCUSSION:

In the present study, the results of experimental group were proved to be statistically significant. Every member felt improvement after the Yoga therapy sessions. But there was no significant improvement among control group members except for one girl who had undergone treatment.

Regarding the experimental group participants, Sl.no.1 got muscle cramp during menses, after the beginning of the practices her pain gradually reduced by eight days of practices and finally she did not get any pain in the next menstrual cycle. Sl.no.2, when got menstruated from the first time, she will get vomit, giddiness and fatigue during the M.C, but after starting the Yoga practices she did not find any kind of these symptoms and it reduced a lot. Sl.no.3, she is suffering from severe white discharge before and after her M.C, but after starting the Yoga practices these symptoms got reduced a lot. Sl.no.4, got menses twelve days with excess bleeding and some months of without M.C, after the beginning the practices it gradually reduced to nine days and finally it reaches to seven days of normal bleeding and the M.C becomes regular

Sl.no.5, had scanty bleeding for only three days, but after practices it has increased to five days. She was not getting sleep for about one hour after going to bed, but now she gets sleep within 15 minutes. Sl.no.6, reported that after the Yoga practices her back pain got reduced and premenstrual symptoms had reduced a lot. Sl.no.7, reported that after the yoga practices her bleeding had increased from two days to six days with the normal bleeding and she had withdrawn the medications. Sl.no. 8, she gets the irregular M.C in the intervals between two to three months. Since then she gets the periods if she takes medicine, after the yoga practices her M.C gets normal. Sl.no.9, she will get irregular M.C ones in two months with severe bleeding and abdominal pain and she will take pain killer during the M.C, but after the yoga practices her pain got reduced much, bleeding becomes to normal condition and she is not taking any kind of pain killers.

As the Yoga practices was conducted every day in the early morning from 7 a.m to 8 a.m every one developed

the habit of waking up early in the morning. Also, their sleeping patterns were regularized. This made them feel active and enthusiastic throughout the day. Many subjects reported that the digestive problems which they were getting as a result of consuming hostel food reduced considerably after the Yoga practices. They were able to better handle the study pressure and tension and face the exams calmly. Most of them reported that they experienced freshness, relaxation and calmness after the practices, it showed various other positive effects such as reduced tension, improved working ability and positive thinking after the few days of the practices.

All the 9 subjects who participated in Yoga therapy programme for 40 days have experienced positive results. Table no-3.1 & 3.2. Clearly shows that every variables under the Estradiol test showed significant improvement among the experimental group. It shows the significant improvement with $p = 0.02162$. as $p < 0.05$ the result is significant. Thus the first null hypothesis has been rejected.

The result is statistically significant. It is evident that from the above result that all the 9 subjects responded to the treatment positively. But the variation of the rate of success could be dependent upon regularity of practices, lifestyle and attitude.

Thus, the study clearly shows that Yoga therapy is helpful in improving the functioning of various systems in our body and thus helps to overcome menstrual irregularities

CONCLUSION:

The present study reveals that yoga therapy helps efficiently in managing the menstrual disorders and in reducing the symptoms with the minimal effort. In spite of the fact that the therapy was given only for a short duration and there was no much control over the diet, the results are encouraging. Therefore it can be concluded that Yoga therapy is fruitful in controlling menstrual disorders.

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ESTROGEN TEST AND QUESTIONNAIRE READINGS OF EXPERIMENTAL GROUP:

S.No	Est pre	Est Post	Q1- Y- pre	Q1- Y- post	Q1-N- pre	Q1- N - post	Q2- P- Pre	Q2- P- Post	Q2 – N- Pre	Q2 – N - post
1.	189	113	20	17	15	18	35	26	60	53
2.	61	55	14	10	21	25	28	27	62	56
3.	51	48	18	8	17	27	33	30	59	28
4.	75	46	16	13	19	22	42	25	58	56
5.	120	73	22	16	13	19	28	26	59	50
6.	32	12	16	12	19	23	29	24	55	44
7.	75	67	15	11	20	23	32	23	66	52
8.	48	43	19	15	16	20	28	21	53	51
9.	134	38	17	10	18	25	40	36	54	46

RESULT OF STATISTICAL ANALYSIS OF EXPERIMENTAL GROUP:

S.No:	Parameters	Mean+ _ S.D		t-value	P- value	significance
		Pre	Post			
1.	Estradial	86.88+_50.6304	55+_27.9374	2.8457	0.0216	S
2.	Questionnaire I Yes type (pre/post)	17.44+_2.4129	12.44+_3.5213	6.1592	0.0001	S
3.	Questionnaire I No type (pre/post)	17.55+_2.4129	22.44+_3.5103	-5.8891	0.0002	S
4.	Questionnaire II positive type (pre/post)	32.77+_5.1811	26.44+_4.4969	4.2056	0.0022	S
5.	Questionnaire II Negative type (pre/post)	58.44+_5.9814	48.44+_9.0651	3.735	0.0046	S

ESTROGEN TEST AND QUESTIONNAIRE READINGS OF CONTROL GROUP:

<u>S.No</u>	Est(pre)	Est (Post)	Q1- Y- pre	Q1-Y- post	Q1-N- pre	Q1- N - post	Q2- P- Pre	Q2- P- Post	Q2 - N Pre	Q2 - N post
1	93	175	20	20	15	14	31	31	51	51
2	59	72	18	21	17	14	37	35	63	63
3	51	140	7	17	28	18	35	33	46	43
4	53	71	16	26	19	9	31	30	34	33
5	61	117	20	23	15	12	44	44	69	65
6	48	280	22	24	13	11	33	35	49	39

RESULT OF STATISTICAL ANALYSIS OF CONTROL GROUP:

<u>S.No:</u>	Parameters	Mean+_ S.D		t-value	P- value	significance
		Pre	Post			
1.	Estradiol	60.83+_16.4974	142.5+_78.36	-2.6746	0.0546	NS
2.	Questionnaire I Yes type (pre/post)	17.16+_5.3820	21.83+_3.1885	-2.6746	0.0441	S
3.	Questionnaire I No type (pre/post)	17.83+_5.3820	13.0+_3.0983	2.9087	0.0334	S
4.	Questionnaire II positive type (pre/post)	35.16+_4.9159	34.66+_5.0066	0.8076	0.456	NS
5.	Questionnaire II Negative type (pre/post)	52+_12.49	49+_13.0230	1.9365	0.1106	NS

S – Significance
NS – Non significance