

Impact of Yoga on Quality of Life in Women with Polycystic Ovarian Disorder

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Running Title: Impact of yoga on PCOD

Abstract: Objective: The objective of the study is to analyze and discuss about the impact of yoga on women's Poly Cystic Ovarian Disorder (PCOD) and their quality of life. Materials & Methods: The methodology is based on selected 32 subjects of PCOD out of 409 infertility patients from Patanjali Hospital, Haridwar, India. Subjects are selected in the reproductive average age group of years. Two groups are formed 16 in each of experimental and control groups. The experimental group followed 40 minute yoga practices daily for 6 days in a week for 12 weeks. Result: The results show significant difference ($p < 0.001$) between control and yoga groups of PCOD patients. Those who practiced yoga have significantly reduced their weight, number of cysts in uterus, irregular menstrual cycle length and emotional disorders and with a general perception of overall quality of life. Conclusion: We may conclude that yoga is a valuable alternative, supplementary therapy in reducing the PCOD women's to manage their disease symptoms and its possible cure and have better quality of life. The benefits found in the emotional satisfaction of the women are related with the WHO's quality of life and wellness.

Keywords: PCOD, Women, Infertility, Yoga, Quality of life.

1. Introduction

The Poly Cystic Ovarian Disorder (PCOD) prevalence rate across the globe (1, 18) is about 6-10 % based on US National Institute of Health percentage, while in India (2) it is about 2.2 to 26 %. The questionnaire developed by WHOQOL (3) are based on WHO's world health instrument criteria focusing on a) Physical b) Mental c) Independency or self report d) Social and e) Environmental aspects are considered in our PCOD self-reported questionnaire. In addition we have also applied Rotterdam inclusion criteria (4) related to PCOD a) Anovulation b) number of cyst c) body weight d). All these features in women are well defined reason of infertility (5) exclusion criteria of PCOD excess of androgen hormone in women is the most common cause if ovulatory failure, medically androgen excess found in hirsutism and acne (6). Anovulation is not only, physical but also psychological. PCOD affect mental dysfunction and psychiatric problems more than without PCOD cases (7, 8). Depression in women with PCOD gets associated invariably with biochemical correlations (9). The relationship between biochemical characteristics and psychiatric distress in young women with PCOD is discussed (10, 11) elaborately. Various studies have shown that PCOD women suffer from a marked reduction in quality of life, impaired emotional well being and reduced sexual dissatisfaction (12, 13, and 14). Healthy women are compared with PCOD cases and are shown how both emotionally and physically get drained (15). Yoga is found to be an effective tool in the ovary syndrome cases (2). Anjali Verma et al (16) discusses in how to manage the PCOD through specific yoga techniques such as badhrakonasana (butterfly posture), suptabhadra-konasana (reclined bound angle), bharadvajasana (twisting the parts) chakkichalanasana (mill churning posture), shavasana (corpse posture), padmasadhana (flower). Surya Namaskar (sun postures). Potdar VV (19) exclusively mentions the

role of suryanamaskarin managing the syndrome. The common benefit of all the above mentioned asanas, one gains a well fit pelvic region (uterus, ovaries) without fats and with better and balanced production of endocrine hormones. A protocol is also suggested in this article. Pallav Sengupta (17) talks about the medical reasons such as hyperprolactinemia, Mullerian anomalies, and decreased secretion of hormones by the hypothalamus region of the brain are some of the causes for the syndrome. Bamaed L (20) reported PCOS is assisted by the quality of life based questionnaire having seven factors (emotional disturbance, weight, infertility, acne, menstrual symptoms, menstrual predictability and hirsutism) founded low quality of life women suffering from PCOD.

2. Materials and Methods

Out of 407 infertility cases, we have selected 32 cases of infertility related to PCOD from the data bank of Patanjali chikitsalaya, Haridwar Uttarakhand, India. The selected cases are from July 2017 to September 2017. Randomly, we have divided the patients into two groups @ 16 each. One is experimental yoga group and the other is control. The protocol for the experimental group yoga practices is given in Table 1. The daily schedule is about 40 minutes during the day time – either in the morning or evening hours. The process is repeated for 12 weeks under the expert guidance of Yoga supervisor.

Table 1: Protocol for Yoga

S.No	Name of Asana/ Pranayama	Time (minutes)	Duration
1	Padmasana/sukhasana	5	12 weeks
2	Suryanamkar (sun posture)	15	12 weeks
3	Butterfly posture	5	12 weeks
4	Savasana (corpse posture)	5	12 weeks
5	Anulom Vilome	5	12 weeks
6	Bhramari pranayam	5	12 weeks

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3. Results

The data obtained from the yoga and control groups are given in Fig. 1. The data were analyzed using SPSS paired 't' test analysis. The results are given for PCOD cases comprising pre and post studies data on emotional disturbances (considered only anxiety and depression parameters only), number of cysts using ultra sound technique, menstrual cycle, and weight.

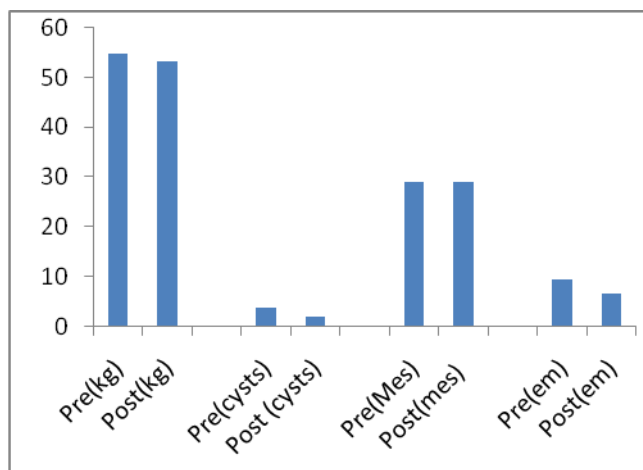


Figure 1: PCOD pre and post measurements shown in the form of a bar diagram

Table 2: WHOQOL relation with PCOD yoga

Test	Weight in kg	Cyst	Menstruation	Emotions	Observations
WHOQOL PCOD with Yoga	53 52	7 4	30 days 28 days	8 units 7 units	General quality of life values are greater because of extra WHO protocols

The Table 2 shows the PCOD with yoga and its association with the self report modified WHO questionnaire. The data shows overall health and wellness compared to PCOD Yoga and WHOQOL. Yoga works on both physical as well as mental health and PCOD is a type of psychosomatic disorder (14) needs treatment at both levels. Medical sciences predominantly work on biochemical changes and rarely at psychological level. Yoga helps in boosting mental health and relaxes the nervous system and possibly it may be cured also (6).

4. Discussion

Poly cystic ovarian syndrome is a type of endocrinal disorder which can cause hormonal imbalance in the physical body. In the present research study, the results of yoga group were found to be statistically significant at $p < 0.0001$. Every member felt improvement after the yoga therapy practice. But there was no improvement among control group subjects. In the subjects with PCOD, experimental groups, after 3 months of yoga practice the symptoms like weight gain, cyst or fibroids in uterus, irregular menstrual cycle, unwanted facial hairs, and emotions are reduced. At the end of the study, the subjects in

the yoga group have shown significant difference in the PCOD. From the graph it may be said that there is significant difference in the Cysts level from 3.50 to 1.81, at a level of significance $p < 0.0001$, decrease in weight from at a level of significance $p < 0.0001$, emotional levels from 9.38 to 6.56, menstrual cycle at a level of significance $p < 0.0001$. But in case of the subjects in the control group have shown no significant values. WHO quality of life (3) has five broad domains of instruments covered in our 'self report' PCOD questionnaire. Validity and reliability of the scale is tested and retested. These domains are;

- Physical health (body states and functions)
- Psychological health
- Level of independence
- Social relationships and
- Environment

The general improvement in the quality of the life is reflected in the form of symptoms like weight reduction, abnormal hair loss, excess menstruation bleeding, cramps, fat, constipation, emotional disturbances may be reduced (Table 2).

5. Conclusions

This study had shown a significant impact of yoga on women PCOD cases of infertility with $p < 0.0001$. These patients were usually suffering from overweight, unwanted facial hairs, tinny cyst in uterus, irregular menstrual disorders and emotional imbalance. The patients of PCOD with infertility are usually depressed and they have low quality of life. This emotional instability causes hormonal imbalance which leads to PCOD. In our selected list of patients, most of these problems were reduced by yoga practices with the improved quality of life. Our results encourage further research work in the field of Poly Cystic Ovary Disorders.

6. Acknowledgment

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References

- [1] Fauser, Bart CJM, et al. "Consensus on women's health aspects of polycystic ovary syndrome (PCOS)." *Human Reproduction* 27.1 (2012): 14-24.
- [2] Nidhi, Ram, et al. "Effect of yoga program on quality of life in adolescent polycystic ovarian syndrome: a randomized control trial." *Applied Research in Quality of Life* 8.3 (2013): 373-383.

- [3] WHOQoL Group. "Study protocol for the World Health Organization project to develop a Quality of Life assessment instrument (WHOQOL)." *Quality of life Research* 2.2 (1993): 153-159.
- [4] Fauser, Bart CJM, et al. "Consensus on women's health aspects of polycystic ovary syndrome (PCOS)." *Human Reproduction* 27.1 (2012): 14-24.
- [5] Fleming, Richard, et al. "Ovarian function and metabolic factors in women with oligomenorrhea treated with metformin in a randomized double blind placebo-controlled trial." *The Journal of Clinical Endocrinology & Metabolism* 87.2 (2002): 569-574.
- [6] Barry, John A., Andrew R. Kuczmierczyk, and Paul J. Hardiman. "Anxiety and depression in polycystic ovary syndrome: a systematic review and meta-analysis." *Human reproduction* 26.9 (2011): 2442-2451.
- [7] Månsson, Mattias, et al. "Women with polycystic ovary syndrome are often depressed or anxious—a case control study." *Psychoneuroendocrinology* 33.8 (2008): 1132-1138.
- [8] Farrell, Kristen, and Michael H. Antoni. "Insulin resistance, obesity, inflammation, and depression in polycystic ovary syndrome: biobehavioral mechanisms and interventions." *Fertility and sterility* 94.5 (2010): 1565-1574.
- [9] Rasgon, Natalie L., et al. "Depression in women with polycystic ovary syndrome: clinical and biochemical correlates." *Journal of affective disorders* 74.3 (2003): 299-304.
- [10] Trent, Maria E., et al. "Quality of life in adolescent girls with polycystic ovary syndrome." *Archives of pediatrics & adolescent medicine* 156.6 (2002): 556-560.
- [11] Elsenbruch, Sigrid, et al. "Quality of life, psychosocial well-being, and sexual satisfaction in women with polycystic ovary syndrome." *The Journal of Clinical Endocrinology & Metabolism* 88.12 (2003): 5801-5807.
- [12] Rasgon, Natalie L., et al. "Depression in women with polycystic ovary syndrome: clinical and biochemical correlates." *Journal of affective disorders* 74.3 (2003): 299-304.
- [13] Adali, E., et al. "The relationship between clinico-biochemical characteristics and psychiatric distress in young women with polycystic ovary syndrome." *Journal of International Medical Research* 36.6 (2008): 1188-1196.
- [14] Adali, E., et al. "The relationship between clinico-biochemical characteristics and psychiatric distress in young women with polycystic ovary syndrome." *Journal of International Medical Research* 36.6 (2008): 1188-1196.
- [15] Shafti, Vida, and Sara Shahbazi. "Comparing sexual function and quality of life in polycystic ovary syndrome and healthy women." *Journal of family & reproductive health* 10.2 (2016): 92.
- [16] Verma, Anjali, et al. "Management of PCOS: A psychosomatic disorder by yoga practice." *International Journal of Innovative Research and Development* 4.1 (2015).
- [17] Sengupta, Pallav. "Challenge of infertility: How protective the yoga therapy is?." *Ancient science of life* 32.1 (2012): 61.
- [18] Zarb, P., et al. "The European Centre for Disease Prevention and Control (ECDC) pilot point prevalence survey of healthcare-associated infections and antimicrobial use." *Euro Surveillance Monthly* 17.46 (2012): 20316.
- [19] Potdar, Vinaya V., and J. J. Pawar. "Role of Suryanamaskara in Polycystic Ovarian Disease-A Case Study." *International Journal of Ayurvedic Medicine* 8.1 (2017).
- [20] Barnard, L., et al. "Quality of life and psychological well being in polycystic ovary syndrome." *Human reproduction* 22.8 (2007): 2279-2286.
- [21] Kumarapeli, V., et al. "A simple screening approach for assessing community prevalence and phenotype of polycystic ovary syndrome in a semiurban population in Sri Lanka." *American journal of epidemiology* 168.3 (2008): 321-328.