



## PILOT STUDY TO ASSESS THE EFFECTIVENESS OF CLUSTER OF CARE ON PHYSICAL, PHYSIOLOGICAL, PSYCHOLOGICAL AND BIOCHEMICAL PARAMETERS AMONG MARRIED WOMEN WITH POLYCYSTIC OVARIAN SYNDROME IN SELECTED SETTINGS

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### ABSTRACT

Polycystic ovary syndrome (PCOS) is a multifactorial endocrine disorder which is characterized by chronic anovulation. Irregular periods, hirsutism, weight gain are the common symptoms of PCOS. It is the most prevailing female endocrine disorder and the pre-eminent cause of infertility, with the worldwide range of 6-26%, and in India it is 3.7-22.5%. Risk factors that contribute to the development of PCOS include genetics, neuroendocrine alterations, sedentary lifestyle, diet, and obesity. Though there are synthetic drugs such as metformin and oral contraceptive pills available for treatment, their side effects cause concern. After an extensive review, it has been well documented that proper diet, yoga, hip bath and exercise help a lot to decrease the symptoms and severity of PCOS. **Methods:** The present study was carried out at Annai Velankani fertility centres, Trichy. 25 Experimental and 25 control samples were selected as study participants by simple random sampling technique. The data was collected by the tool which was prepared and retrieved from books by the investigator with expert's guidance and opinion. **Results:** The study findings revealed that the comparison of pre and post test BMI (Pretest SD 28.4 ± 3.1 ) (Posttest 26.7 ± 2.9 ) (t=5.12 and p.value 0.000), Stress (Pretest SD 23.1 ± 4.9) (Posttest SD 15.2 ± 3.7 ) (t=7.15 and p.value 0.000) LH/FSH (Pretest SD 2.4 ± 0.6) (Posttest SD 1.6 ± 0.5 ) (t=4.23 and p.value 0.002) . The result of the pilot study concludes that there is a significant reduction of BMI, Physical parameters like frequency, duration, flow of menstrual regulation, Psychological parameter like stress and biochemical parameters like ovarian cyst were reduced in size in experimental group. **Conclusion:** PCOS being the leading cause for infertility among women and lack of awareness among women about the modifiable risk factors was the major issue. Cluster of care like hip soak, diet, yoga and walking is a simple and easy way to follow and by practicing these interventions, polycystic ovarian syndrome is effectively managed and further complication like infertility,

**KEYWORDS :** PCOS, Women, BMI, Weight, Stress, Menstrual Flow, FSH, LH, Prolactin, Hip Soak, Yoga, Walking And Diet

### INTRODUCTION

Women are always privileged; the almighty is pleased. Women are the incarnation of love, compassion, benevolence, selflessness and courageousness. Women beautifully craft her family by taking care of each and every one of them. Yet there is an immense requisite in the society to educate them about maintaining their own physical and mental health. First, women have specific health needs related to the sexual and reproductive function. Second, women have an elaborate reproductive system that is vulnerable to dysfunction or disease. The lack of priority given to these gynaecological health's and research is resulting in a large burden of unrecognised illness, preventable suffering and poor quality of life for women and girls. Therefore women need to have more knowledge about pcos.

### Statement of the Research Problem

Pilot study to assess the effectiveness of cluster of care on physical, physiological, psychological and biochemical parameters among married women with polycystic ovarian syndrome in selected settings.

### Objectives of this Study

1. To assess the effectiveness of cluster of care on physical, physiological, psychological and biochemical parameters among married women with polycystic ovarian syndrome.
2. To correlate the mean differed score of physical, physiological, psychological and biochemical parameters among married women with polycystic ovarian syndrome in study and control group.
3. To associate the selected demographic variables of married women with mean differed scores of physical, physiological, psychological and biochemical parameters in study and control group.

### Null Hypothesis

1. **NH<sub>1</sub>:** There will be significant difference in level of physical, physiological, psychological and biochemical parameters among married women with polycystic ovarian syndrome.
2. **NH<sub>2</sub>:** There will be significant correlation between the mean difference of physical, physiological, psychological and biochemical parameters among married women with polycystic ovarian syndrome
3. **NH<sub>3</sub>:** There will be significant association of mean difference of physical, physiological, psychological and biochemical parameters with their selected demographical variables.

### METHODS AND MATERIALS

Pilot study was conducted among 25 study group and 25 control group among married women with polycystic ovarian syndrome in Trichy. Samples were selected by simple random sampling technique method. The background variables were collected and the pretest level of physical, physiological, psychological and biochemical parameters were assessed among women in study and control group. Physical parameters includes height and weight for Body mass index.

- Physiological parameters assessed by checking frequency, duration, flow of menstrual regulation and ovarian cyst analysis by trans vaginal ultrasound.
- Psychological parameter - stress assessed by Modified Sheldon Cohen Perceived stress scale.
- Bio-chemical parameters include assessment of hormones like FSH, LH, and Prolactin level by ELISA method on the second day of menstruation.

On the same day, for study group cluster of care were started. The investigator started cluster of care by orienting the self. The samples were seated comfortably in a well ventilated room with adequate privacy after obtaining written informed consent and ensuring confidentiality. All the posttest parameters were assessed on the third month for study and control group. Hospital based routine care and lifestyle was followed for the control group women.

### RESULTS

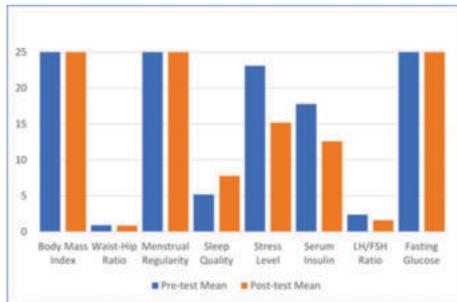
The study findings revealed that the comparison of pre and post test BMI (Pretest SD 28.4 ± 3.1 ) (Posttest 26.7 ± 2.9 ) (t=5.12 and p.value 0.000), Stress (Pretest SD 23.1 ± 4.9) (Posttest SD 15.2 ± 3.7 ) (t=7.15 and p.value 0.000) LH/FSH (Pretest SD 2.4 ± 0.6) (Posttest SD 1.6 ± 0.5 ) (t=4.23 and p.value 0.002) . The result of the pilot study concludes that there is a mild significant reduction of BMI, Physical parameters like frequency, duration, flow of menstrual regulation, Psychological parameter like stress and biochemical parameters like ovarian cyst were reduced in size in experimental group and no significant reduction of BMI, Physical parameters like frequency, duration, flow of menstrual regulation, Psychological parameter like stress and biochemical parameters like ovarian cyst.

The Pilot study revealed that the simple random sampling technique based on inclusion and exclusion criteria was appropriate for sample selection. The method for administering the cluster of care and the proposed analytical measures were suitable for the study.

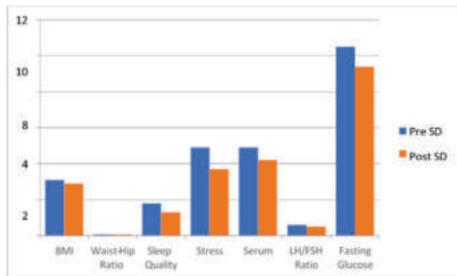
**Table 1. Comparison of Pre-test and Post-test Scores (n = 50)**

Parameter	Pre-test (Mean ± SD)	Post-test (Mean ± SD)	t-value	p-value	Inter-pretation
Body Mass Index (kg/m <sup>2</sup> )	28.4 ± 3.1	26.7 ± 2.9	5.12	0.000	Significant
Waist-Hip Ratio	0.92 ± 0.07	0.87 ± 0.06	4.68	0.001	Significant
Menstrual Regularity (%)	38	84	—	—	Improved
Sleep Quality (Score/10)	5.2 ± 1.8	7.8 ± 1.3	6.42	0.000	Significant
Stress Level (PSS Score)	23.1 ± 4.9	15.2 ± 3.7	7.15	0.000	Significant
Serum Insulin (µIU/mL)	17.8 ± 4.9	12.6 ± 4.2	6.11	0.001	Significant
LH/FSH Ratio	2.4 ± 0.6	1.6 ± 0.5	4.23	0.002	Significant
Fasting Glucose (mg/dL)	96.3 ± 10.5	88.7 ± 9.4	3.98	0.003	Significant

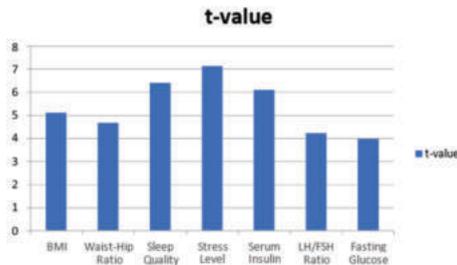
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**Figure-1**



**Figure-2**



**Figure-3**

The results clearly demonstrate significant reductions in BMI, waist-hip ratio, stress levels, insulin resistance, and LH/FSH ratio after the intervention. Moreover, menstrual regularity and sleep quality improved considerably. The findings support the effectiveness of a holistic Cluster of Care in managing PCOS symptoms and improving overall health.

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