



ROLE OF SATVAVAJAYA CIKITSA IN STRESS, QUALITY OF LIFE, PSYCHOSOCIAL WELL-BEING AND SEXUAL SATISFACTION IN WOMEN WITH POLYCYSTIC OVARY SYNDROME

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ABSTRACT

Polycystic ovary syndrome is a multisystem disorder having a great impact on psychological and social functioning. It may attribute poor QOL and reduced sexual satisfaction. A non-randomized controlled clinical trial to evaluate the add-on effect of *Satvavajya Cikitsa* in stress, QOL and Psychosocial wellbeing in 30 eligible women in the age group of 18-40 receiving treatment for PCOS from a tertiary care Ayurvedic hospital was tried. 30 participants were consecutively divided into trial group receiving counseling along with conventional treatment for PCOS symptoms and the control group receiving conventional treatment alone. The trial group underwent three sessions of supportive counseling incorporating Ayurvedic principles, each of one-hour duration with 15 days gap. Main outcome measures included psychological stress, PCOS related QOL and general QOL in psychosocial domains and sexual satisfaction. Changes were significantly different in two groups in stress scores ($p<0.001$), PCOS related QOL ($p<0.001$) and general QOL in the Psychological ($p<0.01$) and social ($p<0.05$) domains and sexual satisfaction ($p<0.05$) after the intervention. Better clinical efficacy was also noticed in the trial group.

Keywords: Ayurveda, supportive psychotherapy, holistic approach

INTRODUCTION

Ayurveda renders diverse pharmaceuticals with potent action on physical and psychological functions simultaneously. Especially in majority of the medicines for reproductive system disorders, indications include wide spectrum of psychological disorders too. The well-known holistic approach of *Ayurveda* is actualized by the apt permutation of the three-basic type of treatments viz *Daivavyapasraya*, *Yuktivyapasraya* And *Satvavajaya Cikitsa*. So, *Ayurvedic* approach to reproductive system disorders becomes more efficient with appropriate utilization of *Satvavajaya Cikitsa*, especially in females. Polycystic ovary syndrome is such a multisystem disorder that causing a great stress to feminine identity and hence requires *Satvavajaya Cikitsa* as an essential step of management. Evidence-based methodology workshop on polycystic ovary syndrome had identified Quality of Life (QOL) as an important area of concern. The Consensus concluded that increased prevalence of psychological disorders in women with PCOS was evident; hence psychological issues should be considered in all women with PCOS. It is unclear if this increased prevalence is due to the disorder itself or its manifestations (e.g., obesity, hirsutism, irregular menses, and infertility). Many studies report pronounced psychological and psychosocial problems affecting HRQL of patients with PCOS [Elsenbruch et al., 2003¹; Veltman-Verhulst S et al., 2012²]. Based on the consultation and the patient's perception of her problems, appropriate counseling and intervention should be offered³. Promisingly, lifestyle intervention comprising dietary, exercise and behavioral therapy improve fertility and reduce costs per birth significantly⁴. In the combined management with physical as well as psychological interventions too, better results in the group that had initial counseling sessions before the physical intervention⁵. Experienced distress in PCOS is attributed by change in appearance, menstrual irregularities, infertility and adverse influences on feminine identity. Constructive coping may change the person's percep-

tion about the illness and self. So the addition of psychological therapy as a permanent element in the PCOS treatment plan is highly recommended⁶. In spite of strong evidences on associated psychological distress in PCOS and the efficacy of psychotherapies, most of the accessible published clinical works in Ayurvedic literature on PCOS reported neither psychological intervention nor interventions modifying psychological functions. But, it is seen that, majority of the patients have increased concern to their health condition resulting in severe anxiety on each symptoms, especially on hirsutism, delayed periods and infertility. Stress impacts in the symptoms of PCOS and its further impacts in the quality of life. Further, many of the Ayurvedic medicines used in the gynecological/ reproductive issues bear additional indications in psychological distress. But an additional individual support in their distress and empowering their self-esteem will also help the treatment as a whole and improve their QOL. So, the add on effect of counseling on *Ayurvedic* PCOS treatment regime had to be studied.

Methodology

The target population was the group of patients who receive conventional Ayurvedic treatment for PCOS. In the clinical study, eligibility for the study was a diagnosis of PCOS as per Rotterdam Criteria 2003 in 18-40 age group and with a stress score >14 in the IS-MA questionnaire. Those with recent stressful life events or trauma, on psychiatric/ other medication were excluded. Eligible 30 participants were consecutively allocated into two groups of 15 each; the group receiving counseling was the intervention (trial) group and the other group was the control group. Conventional Ayurvedic medicines for the symptoms of PCOS were given in both groups. In the trial group, *Satvavajaya Cikitsa* utilizing the principles of supportive psychotherapy was employed in 3 sittings each of one-hour duration was given in addition. Those who requested psychological help were directly recruited

to the intervention group. Those who were in the control group were offered counseling after the final assessment. Anybody who failed to attend any of the three counseling sessions and the final assessment were considered as drop-outs.

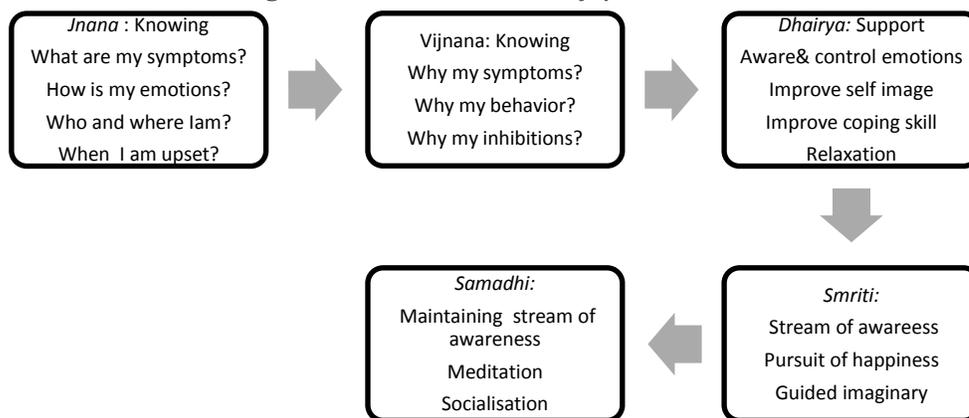
Variables and measures

A prepared case record form (CRF) gathered information on demographic and socioeconomic factors, presenting complaints, menstrual history, marital history, obstetric history, personal history, general survey and vital data. Stress was assessed with the ISMA stress questionnaire, PCOS specific QOL with PCOSQ⁶⁴, general QOL and psycho-social well-being were measured by WHO QOL BREF especially with its psychological and social domain and Sexual satisfaction in the married PCOS women by Visual analogue Scale (VAS). Data collection was done before intervention (0th day) and 4^{5th} day by direct interview.

Data analysis: The scores of these questionnaires were tabulated in Microsoft excel worksheet and mean, standard deviation and standard error were calculated. Normality of data was analyzed with GraphPad INSTAT software by Kolmogorov – Smirnov test (K-S test). The pretest and post test data set were compared within the group with paired t test. The differences of post test data between two groups were tested by unpaired t test. The subset of domain scores which were not distributed normally were analyzed by non-parametric tests Wilcoxon Signed ranks-test for within group comparison and Mann Whitney’s test for between group comparison. A p value <0.05 was considered as significant.

Ethical clearance was obtained from Institutional ethical committee of VPSV Ayurveda College, Kottakkal with the number IEC/ Doc/ 05/ 14

Figure 1: Scheme of Satvavajaya Cikitsa in PCOS:



RESULT: The groups were comparable in terms of demographic details as well as presenting complaints as shown in the table below:

Table1: Demographic details in both groups:

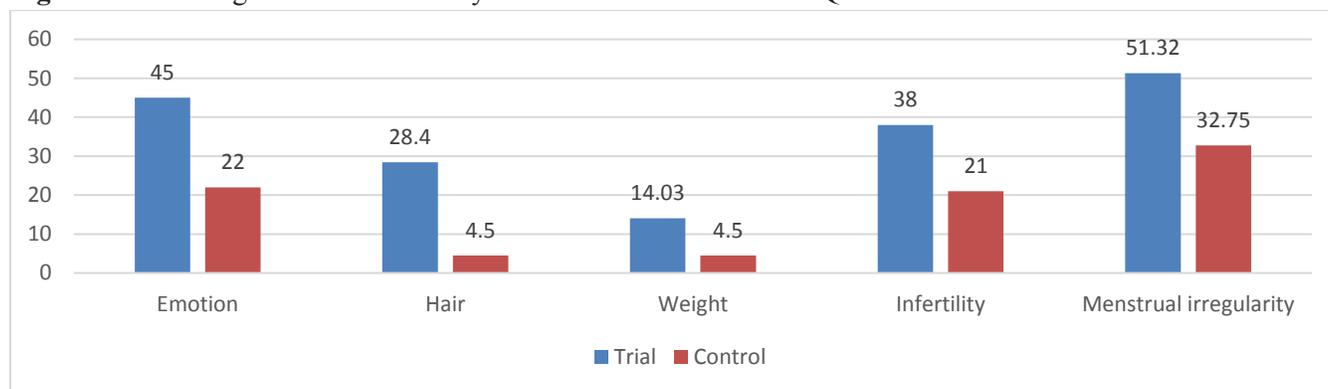
Item	Trial (n=15)	Control (n=15)
Age: Mean (SD)	25.27 (4.06)	26.33 (4.01)
Married	60% (n=9)	73% (n=11)
Graduates	53% (n=8)	60% (n=9)
Unemployed	73% (n=11)	60% (n=9)
Middle class	60% (n=9)	60% (n=9)
Rural	73% (n=11)	73 (n=11)
Irregular menstruation	100%	100%
Hirsutism	67%	67%
Present state of unfulfilled wish to have a child	53.3%	46.7%

All participants in both groups had taken modern medicines for varying symptoms, which was not regular and discontinued before coming to Ayurvedic treatment. 7 participants of both groups were fresh cases and others had average treatment duration of 2.8 months in the trial group and 2.9 months in the control group. The mean BMI in the trial was 23.72 ± 4.5 in the trial group and 23.2 ± 2.9 in the control group. The higher standard deviation in the trial group was due to one highest value (33.7). The BMI was almost similar in both groups. **Stress Score:** Both groups had a highly significant difference in stress score after the intervention. Mean difference of trial group (5.6 ± 1.40) was better than that of control (3.27 ± 0.79). Clinically also, trial group had better outcome (34%) against control group (20.3%). The difference was statistically

highly significant; implying that counseling adds on the efficacy of conventional treatment in relieving stress.

PCOS specific QOL: On comparing the total scores of PCOSQ, trial group had better results. On analyzing the efficacy in domains, trial group had significant difference in pretest and post-test value in all the 5 domains- menstrual irregularities, hirsutism, weight, infertility and emotional domain. The control group had highly significant changes ($p < 0.001$) in emotional, infertility and menstrual irregularity domains and significant changes ($p < 0.01$) in body weight domain. Clinical efficacy was better in trial group in all five domains. The differences in mean of both groups were also statistically significant

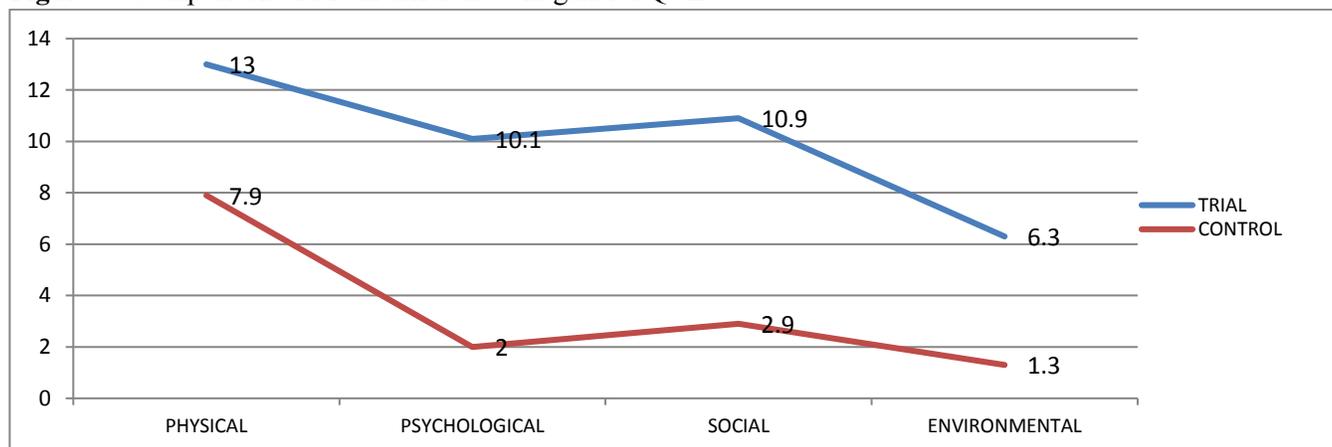
Figure 2: Percentage of clinical efficacy of the intervention in PCOSQ:



General QOL: QOL, which is not directly related with the symptoms of PCOS, was measured by WHOQOL- BREF. The mean differences of trial group showed significant change in all four domains- physical, psychological, social and relationship and environmental health. The control group showed sig-

nificance only in physical health domain. The mean difference was as low as 2 in psychological, 2.9 in social and 1.3 in the control group. In the trial group also, mean difference was very low while comparing to the total scores.

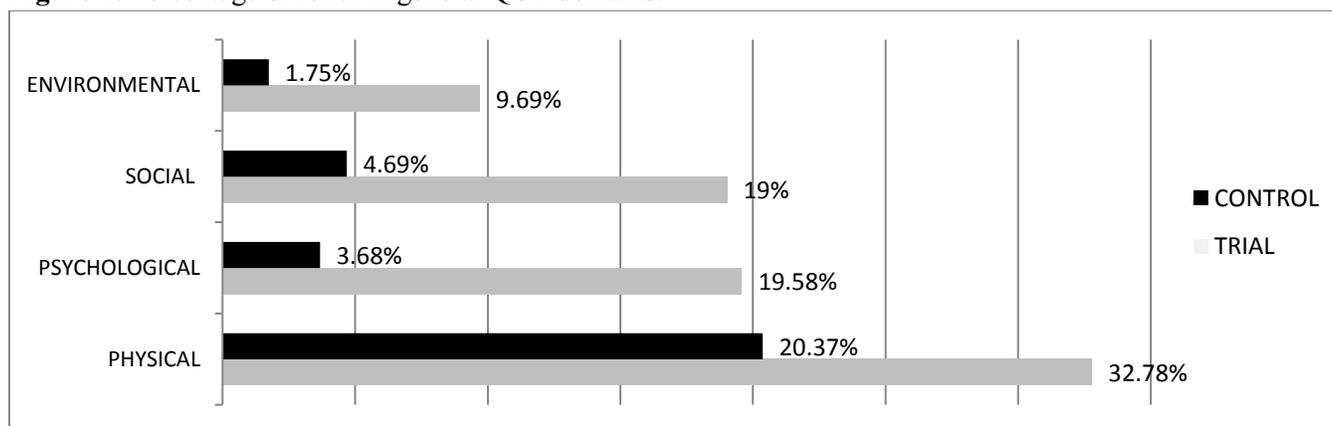
Figure 3: Comparison of Mean differences in general QOL:



The clinical significance was more in the domain of physical health - 32.7% and 20.3% respectively in trial and control. Their difference was also found to be insignificant statistically. In the psychological and social relationship domains, percentage of relief in

trial group was around 19%. In the control group, clinical efficacy was very less. In environmental domain also, changes were very minimal in the controlled group. The mean domain score was higher in control group (72.5) than trial group (64.7).

Figure 4: Percentage of relief in general QOL domains:



In the present study, general QOL was not improved much. In the physical domain, changes were attributed by modifying the physical symptoms. The difference between groups was non-significant; implying that counseling had no additional effect on physical health. But in the other three domains, control group had no significant changes. In the trial group too, despite the statistical significance, clinical significance was comparatively less in psychological (19.58%), social and relationship domain (19%) and environmental do-

main (9.69%). So, probably these areas required an extensive and planned psychological support.

Sexual Satisfaction: 9 participants of the trial group and 11 participants of the control group had active sexual partner during the study period. Sexual satisfaction was comparatively higher in the present sample. Changes were significantly different in two groups ($p < 0.05$) after the intervention in the trial group. As the dataset of both groups passed normality test, paired t test was done. The MD was higher in the

trial, which was statistically significant. But in the control group, the change was non-significant.

DISCUSSION

In PCOS, the experienced distress may be by change in appearance, menstrual irregularities, infertility and adverse influences on feminine identity. So, imparting constructive coping will impact person's perception about the illness. One clinical study looked at the effectiveness of meditation with levels of stress being compared before and after; and the results showing stress levels were reduced as a result⁷. In trial group, participants are advised to relax in *savaasana* with guided imagination followed by meditation from the second sitting (on 15th day) and to practice the same at home.

A pilot study by Roffey et al., with a manual-based CBT approach modified for adolescents with PCOS in physical & psychological parameters was found to be feasible and promising. Primary outcome variables were depression and obesity and they had seen decreased rates of physiological co morbidities such as menstrual irregularity, high percent of fat mass, blood pressure, and sleep-related breathing disorder, and mid-region adiposity associated with PCOS⁸.

Nidhi et al., reported significant reduction of anxiety by 12 weeks of yoga therapy in PCOS adolescent girls in contrast to a group with physical exercise only. Yoga improved the symptoms of PCOS and objective parameters too⁹.

In the present study, almost all domains showed differences of pretest and posttest values with statistical significance in both groups. But clinical efficacy was higher in the emotional, infertility and menstrual irregularity domains in the trial group. These may be due to the strong connection with infertility and menstrual irregularity with psychological factors; it was modified better in the trial group.

Hirsutism was a major concern of almost all of the participants. The difference was clinically minimal (28.4%) in the trial and insignificant and very minimal (4.5%) in the control group. Kumarapeli et al., report that main predictor of psychological distress in South

Asian women with PCOS was hirsutism¹⁰. There is conflicting evidence in the literature on the importance of the FG score denoting the severity of hirsutism and obesity in contributing to psychological distress. Hahn et al. also reported similar findings in that the FG scores correlated significantly with emotional subscales of their study instruments. As the perception of distress because of hirsutism is deeper rooted, it was difficult to change.

Another area with very minimal clinical efficacy was weight domain (14.03% in trial and 4.5% in control). The participants' BMI was not high, (23.7±4.5 in trial and 23.2±2.9 in control group), while comparing to the Asian cut off BMI ≤25 for obese. Both groups were clinically non obese, and the mean scores (14.7 and 13.8 respectively) in the weight domain were also less; less than 50% of maximum scores in the weight domain. The reduction of weight scores was not the actual reduction but the perceived weight reduction. But in South Asian women with PCOS, BMI is not a significant predictor of psychological distress. Komarowska et al., observed that PCOS women had problems with adaptation, social relations and communications due to some inherent or trait personality factors. Lower scores in psychological and social relationship domains in the present study also points towards the same. These psychological lacunae might create barriers in medical therapy. So, it would be obviously complicate their coping skills. Addition of psychological therapy should be a permanent element in the PCOS management. Women with PCOS were significantly less satisfied with their sex life and found them significantly less sexually attractive. PCOS women reported on their impression that their partners were less satisfied, too. PCOS clearly has a negative impact on sexual self-worth and sexual satisfaction. Some researchers observed that sexual satisfaction was associated with fear of infertility & psychological distress and possibly affect self-esteem and female identity¹¹. Caraka criticized *dourmanasya* as the most *avr'shya* (non- aphrodisiac). At another context, Cakrapaani clarified *dourmanasya* as a state of less mental strength (*manobalaviheena*)¹² This implies

that, those who have less mental strength will have lesser sexual satisfaction.

But in the present study, higher scores were obtained in sexual satisfaction which was in contrast to the aforesaid data. In India, the sexual attitudes of females were suppressed and less discussed than their male counterparts. Even though females were less satisfied, as part of traditional values they would not express the feeling, even to the partner. Sexual thoughts were at least explored female issue in our settings. Higher values might probably be an expression bias, which might have improved by better self-image.

Probable mode of action:

Many of the published works on Ayurvedic treatments in PCOS was found to be aiming or observing physical features only. In the current study, improvement was noted with conventional medicine alone in stress, PCOS related QOL in the emotional, weight, infertility and menstrual function domains, and physical domain of general QOL. Counseling augmented alleviation of symptoms as well as improved general QOL. This may be due to the inter relation of the symptoms with psychological derangement. So, relief from symptoms will obviously result in better psychological functioning by correcting the humors (*Dosha*) and bio-enzymatic activities (*Agni*) at various levels; *Vyaana* and *Apaanavaayu*, improving *Agni*- both *Jadharagni* and *Dhatvagni*, augmenting formation of better *rasa* and improving *Ojus*.

But counseling along with conventional treatment for PCOS, all these domains plus hirsutism domain of PCOSQ and psychological, social and environmental domains and sexual satisfaction were improved. This may be due to emotional support and advice, better self-image, better social interaction and lesser anxiety and depression. But lesser clinical significance warrants more planned CBT sections and group therapy rather than supportive counseling.

CONCLUSION

Stress is highly prevalent in PCOS women and they have poorer QOL and psychosocial functioning. *Satvavajaya Cikitsa* has significant add-on effect in reducing stress, improving QOL, psychosocial wellbe-

ing and sexual satisfaction in PCOS women. So, holistic approach of Ayurveda should be sustained for better results.

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