



## ORIGINAL RESEARCH PAPER

## Unani Medicine

### CLINICAL STUDY TO EVALUATE THE THREE PARAMETERS VIZ., AGE, MARITAL STATUS AND OCCUPATION IN RELATION WITH PCOS (POLYCYSTIC OVARIAN SYNDROME).

**KEY WORDS:** PCOS, Age, Marital status, Occupation.

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#### ABSTRACT

**BACKGROUND:** PCOS is one of the commonest metabolic disorder. It is the lifestyle syndrome characterized by menstrual disturbances, acne, hirsutism, weight gain and obesity. The prevalence is 61.18 % in young Kashmiri women. It occur in one in five women, the current incidence of PCOS is 5-6% is fast increasing due to change in the lifestyle and stress. It is also becoming a common problem amongst adolescents, developing soon after puberty. It is prevalent in young reproductive age group (20-30%).

**OBJECTIVE:** To estimate the determinants of health viz Age, Marital status and occupation have relationship with PCOS.

**METHODS:** The Study was conducted in the Regional Research Institute of Unani Medicine after ethical approval. An Open Randomised clinical study was conducted on 66 patients divided into two groups 33 patients in group A and 33 patients in group B. Diagnosed females of PCOS between age 14 to 43 years were taken in the study after obtaining written informed consent. There were some social parameters and some clinical parameters that were taken in the study. The follow up was carried out after every 15 days. The results were taken after two months.

**Results:** It is found that maximum PCOS patients were present in the age group of 20 – 25 years. Out of 66 patients 56 were unmarried and 10 were married. It is found that occupation/ work load has effect in PCOS, students, scholars, working women suffers more in comparison to homemaker.

**CONCLUSION:** The determinants of health viz Age, Marital status and occupation have relationship with PCOS.

#### INTRODUCTION:

The term poly is derived from Greek word "Polus" which means numerous (Kalimuddin, 1997). Cyst is derived from Greek word "Kystis" which means *Tukhm daan* or *Baiza daan* (Kalimuddin, 1994). Ovary is female gonad that produce ova (Singh, 2014 & Singh, 2011). In Latin it is called ovarium (Gosling, 1991). Syndrome is derived from Greek word "Syndromos" meaning running together (Aziz, 2002).

It is clinically defined as a syndrome manifested by amenorrhoea, hirsutism and obesity associated with enlarged polycystic ovaries (Dutta, 2013).

It is heterogeneous disorder, characterised by excessive androgen production by the ovaries mainly. It is polygenic and multifactorial condition (Dutta, 2013).

Presence of any two out of the three following criteria is essential to define PCOS (ESHRE / ASRM): European society for human Reproduction and Embryology / American Society for Reproductive medicine.

1. Oligo- and/or anovulation
2. Hyperandrogenism (clinical or biochemical).
3. Polycystic Ovaries (Dutta, 2013).

#### METHODOLOGY

The Study entitled "Clinical Study to evaluate the three parameters Viz., Age, Marital Status and Occupation in relation with PCOS (Polycystic Ovarian Syndrome)." The research were held in Regional Research Institute Of Unani Medicine, Naseem Bagh Campus, University of Kashmir, Srinagar after approval from Institutional Ethical committee (IEC). In this study 89 patients were screened and 77 were enrolled for the research which are divided in two groups Viz control group (n=33) and test group (n=33), 10 were dropouts and one gets adverse reaction. The social and clinical parameters has been evaluated, in this paper three parameters Viz Age, marital status and occupation of a female is concerned and their relation in PCOS (polycystic Ovarian Syndrome), would be evaluated. The patients were enrolled in this study after obtained written informed consent that was explained to patient verbally as well. The patient record were kept confidential on the case Record form (CRF) that were submitted to the institute at the end of the study. For statistical analysis, recorded data was compiled and entered in a spread sheet and then exported to data editor of SPSS version 20.0

and Graph pad prism software's. The continuous variables were expressed as mean  $\pm$  standard deviation and categorical variables were expressed in terms of frequency and percentage. Student's independent t-test was employed for inter-group analysis of continuous data and for intra-group analysis paired t-test was applied. Chi-square test and Fisher's exact test was employed for inter group analysis of categorical data and for intra- group analysis of proportioned categorical data, McNemar's test was applied. The graphical representation of data was presented by means of bar graphs. A p value of  $< 0.05$  was considered statistically significant.

#### OBSERVATIONS AND RESULTS

The study findings are:

#### DISTRIBUTION OF PATIENTS ACCORDING TO AGE

Table 1*: Showing age distribution among test group and controls					P value
Age(years)	Test group		Control		1.0
	No	%age	No	%age	
14-19	4	12.1	5	15.2	1.0
20-25	19	57.6	20	60.6	
26-31	8	24.2	6	18.2	
32-37	1	3.0	2	6.1	
38-43	1	3.0	0	0.0	
Total	33	100.0	33	100.0	
Mean $\pm$ SD	23.81 $\pm$ 4.63		23.64 $\pm$ 4.48		

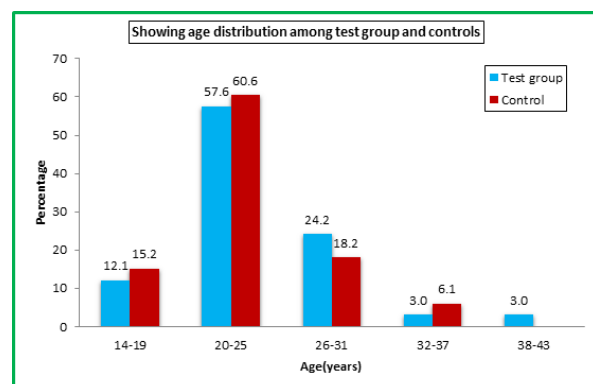


FIG.1: DISTRIBUTION OF PATIENTS ACCORDING TO AGE

A total 66 patients with a mean age of  $23.81 \pm 4.63$  in test group and  $23.64 \pm 4.48$  in control group were found in this study, out of which 9 (13.64 %) were found 14 – 19 years of age, 39 (59.09%) were found 20– 25 years of age, 14 (21.21%) were found 26 – 31 years of age 3 (4.54%) were found 32– 37 years of age and 1 (1.51%) was found 38– 43 years of age, suggests that it occurs mostly in young age group.

DISTRIBUTION OF PATIENTS ACCORDING TO MARITAL STATUS

Table 2*: Showing Marital status among test group and controls					P value
Marital Status	Test group		Control		
	No	%age	No	%age	
Married	5	15.2	5	15.2	1.00
Unmarried	28	84.8	28	84.8	
Total	33	100.0	33	100.0	
Test applied: Fisher's exact test					

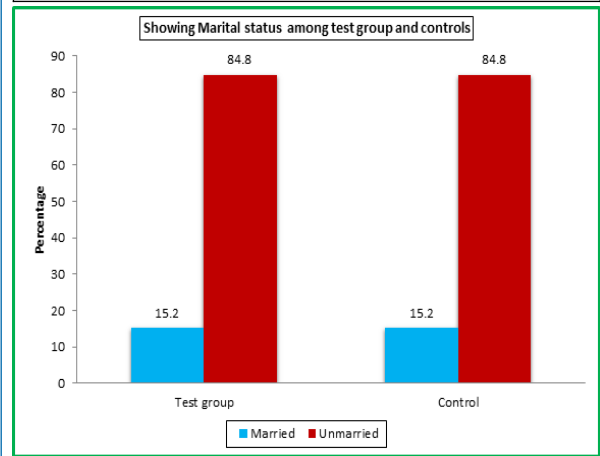


Fig.2: Distribution Of Patients According To Marital Status

Out of 66 patients 56 (84.8%) patients were unmarried and 10 (15.15%) were married.

Distribution Of Patients According To Occupation

Table 3*: Showing the type of Occupation among test group and controls					P value
Occupation	Test group		Control		
	No	%age	No	%age	
Students	22	66.7	20	60.6	0.53
Working women	5	15.2	7	21.2	
Housewife	5	15.2	5	15.2	
Unemployed	1	3.0	1	3.0	
Total	33	100.0	33	100.0	
Chi-Square = 1.267, Df=2					

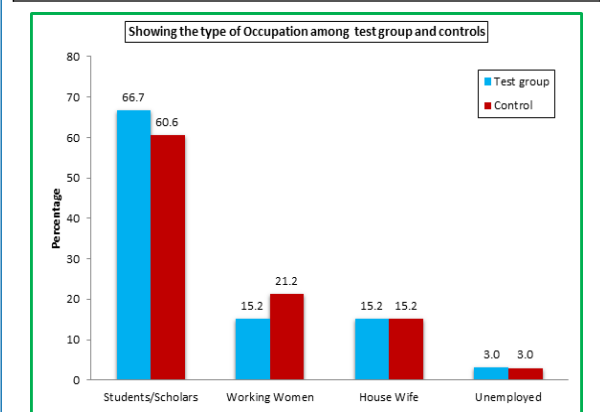


Figure No. 3: Distribution Of Patients According To Occupation

Out of 66 patients, a maximum of 42 (63.6%) patients were students/scholars followed by 12 (18.18%) working women, 10 (15.2%) housewife, and 2 (3.0%) were unemployed educated girls.

DISCUSSION

In this study out of 66 patients, 9 (13.64%) patients were found 14 – 19 years of age, 39 (59.09%) were 20– 25 years of age, 14 (21.21%) were 26 – 31 years of age 3 (4.54%) were 32– 37 years of age and 1 (1.51%) patient was 38– 43 years of age (Table No.1), suggests that it occurs mostly in young reproductive age group. This finding is in accordance to Dutta DC, Edmonds DK and Mohan H which states that the highest prevalence of PCOS is in young reproductive age group (Dutta, 2013, Edmonds, n.d, Mohan, 2015). The observation of this study was same with the observations of the studies conducted by Bhat S, Balaji and Grunwald T that it is prevalent in young age group (Bhat, 2015, Balaji, 2015, Grunwald, 2018).

A total number of 10 (15.15%) patients were married and 56 (84.8%) patients were unmarried suggests that it occurs mostly in unmarried girls. (Table No. 2) A Unani physician had mentioned a women whose husband was live stay away from her, she had secondary amenorrhoea, beard appeared and then she died (Razi 2001). Another women had many children and suddenly she became widow, during that period secondary amenorrhoea occurred and secondary sexual masculine features developed on her body, beard appeared and her voice became hoarse (Razi, 2001) suggesting that PCOS is common in those women which are sexually inactive. The finding of this study was close with the observation of the study conducted by Balaji that 100% of the patients were unmarried (n=126). The study done by the Attlee et al found 98% were unmarried and 2% were married (Balaji, 2015, Attlee, 2014).

In this study out of 66 patients, a maximum of 42 (63.6%) patients were students/scholars followed by 12 (18.2%) patients were working women, followed by 10 (15.2%) housewives and 2 (3.0%) were unemployed. (Table No. 3) This suggests that it is common in those girls who have stressful life, the stress disturbs the hypothalamic pituitary ovarian axis leads to imbalance of the hormones. This finding favours the description of *Makhzanul ilaj* and Shaw's Textbook of Gynaecology (Jeelani, n.d, Padubidri, 2013). From the survey it was found that 6% and 1% of the urban and rural PCOS population were under stress. Stress was found to set off the symptoms to PCOS (Bharathi, 2017).

CONCLUSION

The conclusion of the data shows that the PCOS is mostly common in young girls, mostly they are unmarried, having stressful life. It is increasing day by day among young girls due to the change in lifestyle, change in eating habits since the last two to three decades. Moreover the stress among young girls is increasing day by day due to higher studies, competition, making carrier of their own, must be standing on their foot in the terms of earning money. The stress causes disturbances in hypothalamic pituitary ovarian axis leads to disturbance in hormones and hence irregularity in their monthly menstrual cycles. The disturbance in hormones leads to other features like acne and hirsutism give rise to the ugly syndrome that is polycystic ovarian syndrome. The girls are busy in making the carrier, due to this there is delaying in marriage particular in Kashmir. They do well in one aspect of life i.e. carrier, earning money, helping their father, brother and husband but on the other aspect they are losing their health that must be the main priority.

In PCOS there is some role of genetics as well. It may also be due to the cold climate of the Kashmir. In short there is not a single factor that is responsible for the syndrome but the multiple factors are responsible for polycystic ovarian syndrome. However, long term study on larger sample size is

required for further exploration of the study.

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The paper should be published under the subject of medicine.

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