

## A SURVEY INSIGHTS ON PCOS ETIOLOGY AND ITS AYURVEDIC PERSPECTIVE

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**ABSTRACT**

Polycystic Ovarian Syndrome (PCOS) is a common hormonal disorder increasingly affecting women from puberty to menopause, marked by hormonal imbalance, persistent anovulation, multiple small ovarian cysts, and elevated androgen levels. From an Ayurvedic perspective, it can be compared to *Artava Kshaya* due to the similarity in key symptoms, particularly menstrual irregularities such as *Yathochitakala Adarshanam*, *Alpata*, and *Yoni Vedana*. Pushpaghani Jataharini, Granthibhuta artava dushti. A prospective observational study was carried out on 60 women with PCOS, aged 16–35 years, who met the revised Rotterdam 2003 criteria. Data were collected using a self-designed proforma covering patient demographics, symptoms, menstrual patterns, diagnostic findings, and current medications for PCOS management. Observational studies are effective even with smaller sample sizes and can be conducted quickly and cost-effectively. They hold significance in healthcare as they offer real-world evidence, including the effectiveness of specific therapies in particular populations.

**KEYWORDS:** PCOS, Artava Kshaya, Ahara, Vihar.**INTRODUCTION**

Polycystic Ovarian Syndrome (PCOS) was first described by Stein and Leventhal in the United States in 1935. It is called a “syndrome” because it encompasses several symptoms occurring together. The condition is marked by menstrual irregularities, hirsutism (excess hair growth), obesity, and enlarged ovaries containing multiple cysts.

The primary clinical feature of Artava Kshaya aligns with PCOS, namely menstrual irregularities, which include *Yathochitakala Adarshanam* (delayed or absent menstruation), *Alpata* (scanty menstrual flow), and *Yoni Vedana* (pain during menstruation).<sup>[1]</sup>

As per *Ashtang Sangraha*, aggravated Vata and Kapha Doshas obstruct the pathway of *Artava*, leading to improper discharge of menstrual blood. According to WHO statistics, approximately one in forty women is affected by this condition, and its prevalence is increasing at an alarming rate.<sup>[2]</sup>

A study conducted in India reported that the prevalence of PCOS was 50–60%<sup>[3]</sup> among urban adult women of reproductive age, 9.13%<sup>[4]</sup> among adolescents (16–20 years), and 26.7% among premenopausal women with Type II diabetes.<sup>[5]</sup> The exact prevalence of PCOS in the

general population is difficult to determine due to the absence of a universally accepted diagnostic gold standard. Based on symptomatology, the condition is observed<sup>[6]</sup>

- 90% of women with anovulatory infertility
- 30–40% of women with amenorrhea, and 75–90% of women with oligomenorrhoea.
- Up to 80% of PCOS-afflicted women also had hirsutism.<sup>[7]</sup>
- 75% of the Pelvic USG data.
- Insulin resistance in 50–70% of females.<sup>[8]</sup>
- 20% of women who are asymptomatic.

Women are the backbone of families and Communities. They provide care, support and Nurturing to their Families and are essential for the development of children.

The Indian medical science Ayurveda focuses towards the restoration of health & well being, in this connection Ayurveda gives prime importance of healthy women since healthy women not only contributes towards her family but also involved in the growth and development of society and nation. Ayurveda emphasizes many issues related to the health of women and some gynecological problems acquiring great attention of Ayurveda physician now a day's and PCOS is one of them. Poly Cystic

Ovarian Syndrome (PCOS) is emerging health problem of current scenario mainly seen.

Healthy lifestyle and adequate reproductive health knowledge, maintenance of physical and mental well-being of women across the world. With increasing prevalence of metabolic disorders such as polycystic ovary syndrome (PCOS) it is important that sufficient awareness of these issues is generated, especially in conservative communities. The main objective of this study is to assess reproductive health knowledge and awareness of PCOS among female and also to explore their adequate lifestyle choices and reproductive health knowledge.

By looking at the risk factors, it is clearly evident that fast food can have a very negative impact on fertility. Regular consumption of fast food leads to obesity and makes the body devoid of certain essential nutrients, which makes it harder to conceive. Modern research conducted on the topic supports the fact that women, who ate fast food regularly increased their risk of infertility from 8 percent to 16 percent. Therefore, eating fast food even before conception can significantly affect fertility. Not only eating fast food increases the time taken to conceive, but it also puts the mother in a poorer health, which increases the risks of complications during pregnancy.

#### AIMS AND OBJECTIVES

To study the etiological factors of PCOS, and evaluate the role of ahara and vihar. according to the Samhitas and modern lifestyle.

#### MATERIALS AND METHODS

The survey was conducted on 60 patients of PCOS from OPD and IPD of RAC college of Ayurveda and Hospital,

Varanasi after receiving Institution Committee approval (Ref. No. IEC-RAC-80 MD (Ayu). The causative factors were assessed by using specially prepared case sheet. The data was collected and results were analyzed.

#### CRITERIA FOR DIAGNOSIS

Diagnostic criteria.

2 point out of 3 points of ASRM/ESHM criteria of PCOS

- Oligomenorrhea Amenorrhoea
- Oligo/Anovulation manifest as Oligo/ Amenorrhea
- Hyperandrogenism-clinical/biochemical

For the purpose of perfect diagnosis and assessment a special research Proforma was designed.

#### Inclusion Criteria

Married female patient Unmarried female patient

Reproductive age group of 20-38 years

>10 Hb gm%

BMI between 18-28 kg/meter square

#### Exclusion Criteria

Patients below the age 20, and above 38 years not taken.

Patients with other causes of androgen excess Diabetic patients

Patients having cardiovascular disease.

Patients suffering from carcinomas.

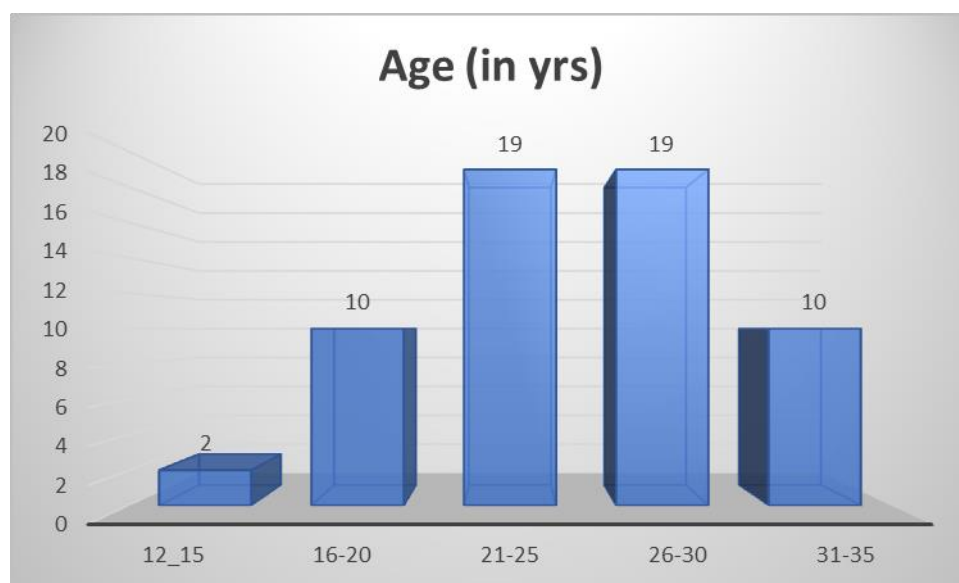
Patients in which nasaya or uttar basti is contraindicated.

Low level of HB.

#### OBSERVATION AND RESULT

Here's a high-level summary of some categories from the data.

**1. AGE WISE DISTRIBUTION:** Maximum patient i.e (63.34%) were belonging to 20-30 year age.



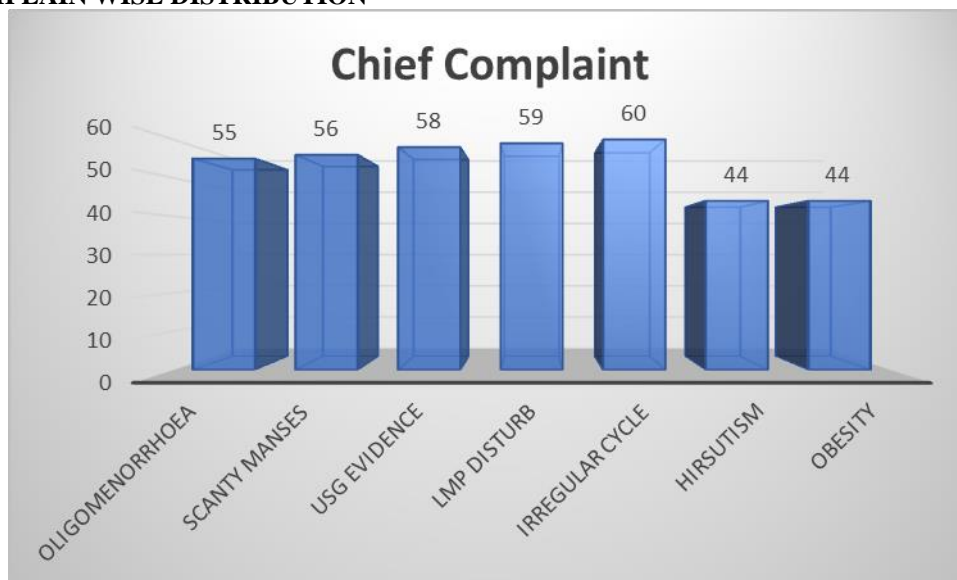
**2. Socioeconomic status:** maximum patients (80%) are from Middle economic group, 15% patients from Rich and only 5% patients from Poor Socio-economic group.

**3. Occupation:** maximum patients (48.33%) are students. 26.67% patients are housewives, 16.67% are teacher, 3.33% are engineer. 1.67%.

**4. Marital Status wise distribution:** maximum patients (65%) are unmarried, 33.33% parents are married and only 1.67% are divorcee.

**5. Education wise distribution:** Majority of the patient is Student (80%)

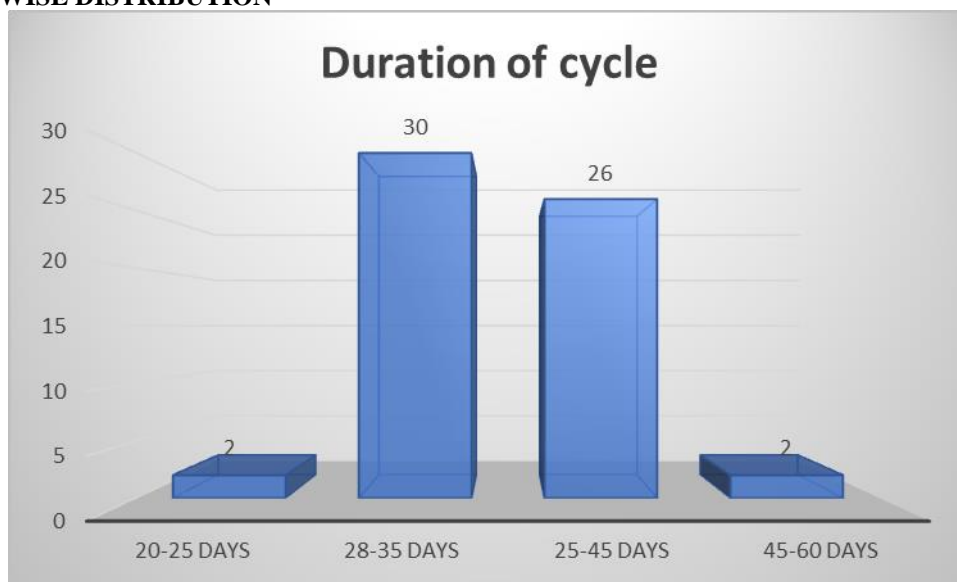
#### CHIEF COMPLAIN WISE DISTRIBUTION



all patients (100%) having complaint of Irregular cycle. In 98.3% patients LMP disturb, in 96.7% patients USG Evidence present, in 93.3% patients having complaint of

Scanty Manses. In 91.7% patients Oligomenorrhoea. In 73.3% patients having complaint of Hirsutism and obesity respectively.

#### DURATION WISE DISTRIBUTION



in maximum patients (61.7%) duration of spotting was 2-3 days, in 13.3% patients it was 1-2 days, in 11.7% patients it was 4-5 days, in 10% patients 3-4 days and in 3.3% patients it was 5-6 days.

## Correlation between Aahar and PCOS

Parameters of PCOS	Irregular menstruation		Duration of bleeding		USG Evidence		Size of follicle	
Parameters of Aahar	R	p value	R	p value	R	p value	R	p value
Type of Diet	-0.757	<b>0.047</b>	-0.894	<b>0.032</b>	-0.728	<b>0.039</b>	-0.768	0.052
Guna of Diet	-0.919	<b>0.024</b>	-0.843	<b>0.037</b>	-0.897	<b>0.026</b>	-0.824	<b>0.033</b>
Rasa in Diet	-0.849	<b>0.036</b>	-0.774	<b>0.045</b>	-0.842	<b>0.032</b>	-0.858	<b>0.02</b>
Aahar Kala	-0.741	<b>0.034</b>	-0.778	<b>0.038</b>	-0.745	<b>0.033</b>	-0.823	<b>0.032</b>
Dietary Habit	-0.741	<b>0.034</b>	-0.778	<b>0.038</b>	-0.745	<b>0.033</b>	-0.823	<b>0.032</b>
Time duration of food intake	-0.8	<b>0.05</b>	-0.857	<b>0.033</b>	-0.781	0.056	-0.755	<b>0.048</b>
Quality of Food	-0.818	<b>0.037</b>	-0.827	<b>0.03</b>	-0.883	<b>0.038</b>	-0.831	<b>0.033</b>
Habit during food intake	-0.82	<b>0.027</b>	-0.822	<b>0.022</b>	-0.869	<b>0.032</b>	-0.824	<b>0.025</b>
Habit after meals	-0.886	<b>0.027</b>	-0.906	<b>0.018</b>	-0.922	<b>0.027</b>	-0.853	<b>0.026</b>
Habit of water intake	-0.711	<b>0.048</b>	-0.734	0.053	-0.724	<b>0.048</b>	-0.804	<b>0.045</b>
Supplementary Diet	-0.743	0.059	-0.0821	<b>0.048</b>	-0.737	0.061	-0.705	0.053
Frequency of Supplementary Intake	-0.937	<b>0.03</b>	-0.933	<b>0.026</b>	-0.96	<b>0.025</b>	-0.861	<b>0.039</b>

Parameters of PCOS	Hirsutism		Pain during menses		Acne		Amount of menstrual flow	
Parameters of Aahar	R	p value	R	p value	R	p value	R	p value
Type of Diet	-0.803	<b>0.023</b>	-0.805	<b>0.035</b>	-0.926	<b>0.025</b>	-0.847	<b>0.033</b>
Guna of Diet	-0.789	<b>0.029</b>	-0.698	<b>0.033</b>	-0.793	<b>0.036</b>	-0.748	<b>0.049</b>
Rasa in Diet	-0.781	<b>0.032</b>	-0.698	<b>0.035</b>	-0.732	0.051	-0.691	0.052
Aahar Kala	-0.871	<b>0.03</b>	-0.923	<b>0.022</b>	-0.816	<b>0.039</b>	-0.767	<b>0.039</b>
Dietary Habit	-0.871	<b>0.03</b>	-0.923	<b>0.022</b>	-0.816	<b>0.039</b>	-0.767	<b>0.039</b>
Time duration of food intake	-0.851	<b>0.02</b>	-0.733	<b>0.036</b>	-0.763	<b>0.031</b>	-0.911	<b>0.018</b>
Quality of Food	-0.89	<b>0.025</b>	-0.779	<b>0.036</b>	-0.752	<b>0.024</b>	-0.884	<b>0.027</b>
Habit during food intake	-0.918	<b>0.027</b>	-0.815	<b>0.035</b>	-0.771	<b>0.023</b>	-0.809	<b>0.033</b>
Habit after meals	-0.89	<b>0.03</b>	-0.836	<b>0.034</b>	-0.863	<b>0.019</b>	-0.76	<b>0.046</b>
Water Intake Quantity	-0.797	<b>0.049</b>	-0.858	<b>0.045</b>	-0.7	0.063	-0.724	<b>0.046</b>
Supplementary Diet	-0.838	<b>0.044</b>	-0.735	<b>0.049</b>	-0.802	<b>0.046</b>	-0.909	<b>0.033</b>
Frequency of Supplementary Intake	-0.838	<b>0.03</b>	-0.762	<b>0.035</b>	-0.892	<b>0.02</b>	-0.844	<b>0.049</b>

## Correlation between Vihar and PCOS

Parameters of PCOS	Irregular menstruation		Duration of bleeding		USG Evidence		Size of follicle	
Parameters of Vihar	R	p value	R	p value	R	p value	R	p value
Nature of Work	-0.757	<b>0.028</b>	-0.780	<b>0.037</b>	-0.779	<b>0.034</b>	-0.826	<b>0.031</b>
Working Hours	-0.789	<b>0.030</b>	-0.814	<b>0.046</b>	-0.806	<b>0.032</b>	-0.925	<b>0.026</b>
Vyayama	-0.867	<b>0.046</b>	-0.911	<b>0.033</b>	-0.862	<b>0.047</b>	-0.802	<b>0.045</b>
Type of Exercise	-0.842	<b>0.023</b>	-0.840	<b>0.024</b>	-0.846	<b>0.024</b>	-0.864	<b>0.017</b>
Snana (Bathing)	-0.842	0.051	-0.916	<b>0.029</b>	-0.836	<b>0.047</b>	-0.774	0.051
Mental Status	-0.903	<b>0.035</b>	-0.822	<b>0.046</b>	-0.883	<b>0.038</b>	-0.880	<b>0.031</b>
Nidra (Sleep)	-0.741	0.053	-0.781	<b>0.047</b>	-0.781	0.058	-0.783	0.053
Diwaswapna	-0.898	<b>0.039</b>	-0.938	<b>0.022</b>	-0.916	<b>0.038</b>	-0.838	<b>0.042</b>
Vega Vidharana	-0.819	0.052	-0.892	<b>0.034</b>	-0.828	0.053	-0.749	<b>0.049</b>

Parameters of PCOS	Hirsutism		Pain during menses		Acne		Amount of menstrual flow	
Parameters of Vihar	R	p value	R	p value	R	p value	R	p value
Nature of Work	-0.904	<b>0.029</b>	-0.997	<b>0.002</b>	-0.792	<b>0.046</b>	-0.780	<b>0.041</b>
Working Hours	-0.835	<b>0.031</b>	-0.837	<b>0.041</b>	-0.837	<b>0.050</b>	-0.747	<b>0.049</b>
Vyayama	-0.862	<b>0.034</b>	-0.758	<b>0.041</b>	-0.832	<b>0.034</b>	-0.938	<b>0.033</b>
Type of Exercise	-0.932	<b>0.025</b>	-0.860	<b>0.038</b>	-0.856	<b>0.027</b>	-0.846	<b>0.037</b>
Snana (Bathing)	-0.831	<b>0.037</b>	-0.742	0.051	-0.909	<b>0.035</b>	-0.836	<b>0.048</b>
Mental Status	-0.805	<b>0.036</b>	-0.742	<b>0.042</b>	-0.860	<b>0.047</b>	-0.721	0.053
Nidra (Sleep)	-0.778	<b>0.050</b>	-0.837	<b>0.045</b>	-0.739	0.052	-0.841	<b>0.045</b>
Diwaswapna	-0.850	<b>0.032</b>	-0.763	<b>0.036</b>	-0.859	<b>0.028</b>	-0.884	<b>0.044</b>
Vega Vidharana	-0.836	<b>0.038</b>	-0.721	<b>0.045</b>	-0.872	<b>0.038</b>	-0.850	<b>0.045</b>

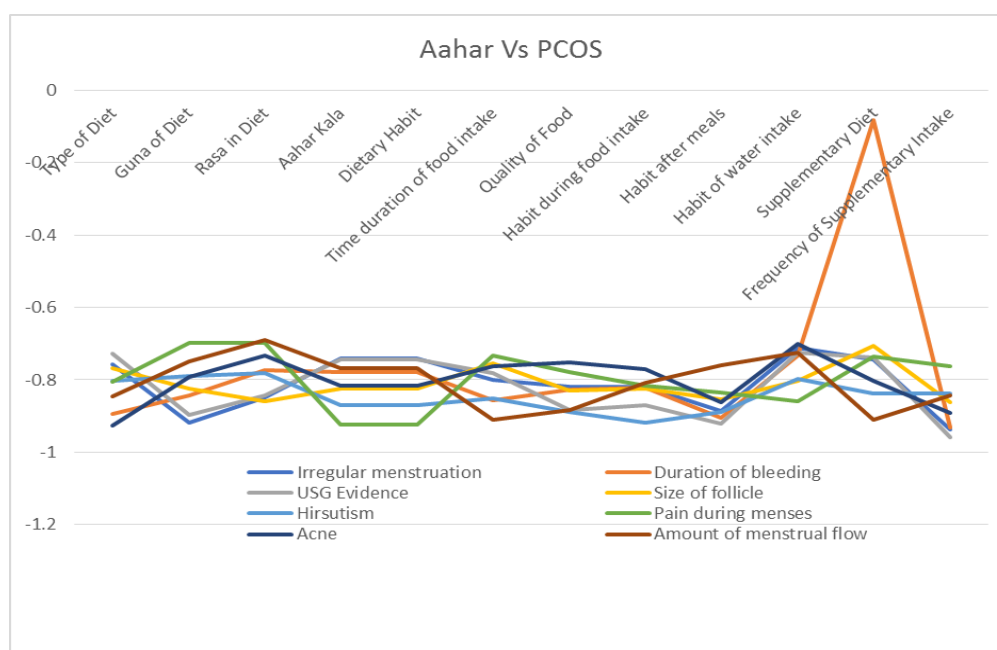
**Interpretation of Correlation**

Aahar Parameter	Association with PCOS Features
Type of Diet	Significant
Guna of Diet	Significant
Rasa of Diet	Significant
Aahar Kala	Significant
Dietary Habit	Significant
Time Duration of Food Intake	Significant
Quality of Food	Significant
Habit during Meals	Significant
Habit after Meals	Significant
Water Intake Quantity	Significant
Supplementary Diet	Not Significant
Frequency of Supplementary Intake	Significant

Negative correlation means as Aahar grade decreases, PCOS score increases.

•  $p \leq 0.05$  indicates significant association.

Supplementary diet significantly associated with Duration of bleeding, Hirsutism, Pain during menses, Acne and Amount of menstrual flow.

**Interpretation of Correlation**

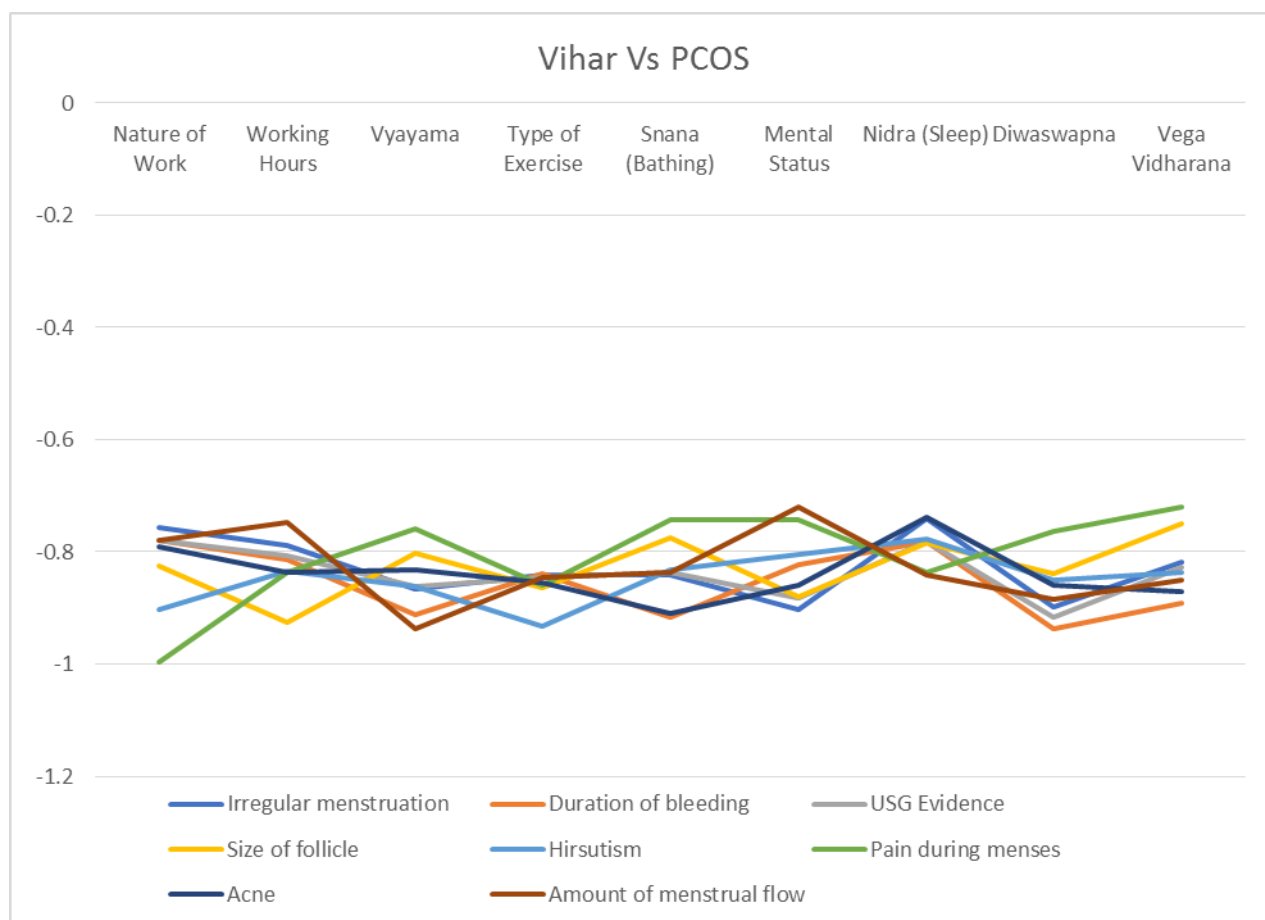
Vihar Parameter	Association with PCOS Features
Nature of Work	Significant
Working Hours	Significant
Vyayama (Exercise)	Significant
Type of Exercise	Significant
Snana (Bathing)	Not Significant
Mental Status	Not Significant
Nidra (Sleep)	Not Significant
Diwaswapna (Day Sleep)	Significant
Vega Vidharana	Not Significant

• Negative correlation means as Vihar grade decreases, PCOS score increases.

•  $p \leq 0.05$  indicates significant association.

➤ Mental Status is significantly associated with Irregular menstruation, Duration of bleeding, USG Evidence, Size of follicle, Hirsutism, Pain during menses and Acne.

- Nidra (Sleep) is significantly associated with Duration of bleeding, Size of follicle, Hirsutism, Pain during menses and Amount of menstrual flow.
- Vega Vidharana is significantly associated with Duration of bleeding, Size of follicle, Hirsutism, Pain during menses, Acne and Amount of menstrual flow.



## DISCUSSION

The study included 60 women diagnosed with PCOS, with the majority (approximately). Maximum patient i.e (63.34%) were belonging to 20-30 year age group. according to acharya. The hormone activity peaks during this Pitta-dominated age (Yuvavastha). Artava Kshaya is caused by Pitta-Kapha vitiation and Apana Vata obstruction. Sedentary lifestyle choices are a major contributing factor to PCOS development, which is most likely to occur at this age. Stress and physical inactivity exacerbate PCOS in women who are in the stage of their lives where they are focused on their careers or their family, social, and economic lives.

Followed by 16–20 years (16.67%) -The shift from the Kapha to the Pitta phase; incorrect Aahara-Vihara results in hormonal imbalance and the start of early Ama formation. Due to stress, bad sleep, and unhealthy diet, there is an increasing rate of this in college-age women. Hyperandrogenism and persistent anovulation are the main issues in young women with PCOS.

The highest frequency is found among urban areas (70%) and rural area (58.7%). More stressful living

circumstances, Nuclear family, more demanding living situations, family members rarely spending time together, etc., are probably significant reasons.

In this study, 60% of patients were vegetarians, 26.7% preferred a mixed diet, and 13.3% consumed non-vegetarian or processed foods. This distribution reflects the predominance of mixed diet consumption in the region where the study was conducted. Food taken at the wrong time, in excess, or in inadequate amounts is termed Vishamashana and was identified as a major contributing factor. Among the patients, 53.3% practiced Akalabhojan, 30% followed Kalabhojan, and 16.7% had irregular eating patterns. Additionally, 53.3% exhibited Aadhyashana habits, 30% had Samashana habits, and 16.7% followed Vishamashana, indicating improper meal timing.

It is also considered an important factor causing Agni Dushti. The primary cause of Tridosha aggravation is the main Hetu for Artava Dushti, which leads to PCOS. Koshtha represents bowel habits and varies according to Prakruti. In the present study, most patients (51.7%) had normal bowel habits, while 48.3% had poor bowel



habits, and the majority were of Madhyama Koshtha. This suggests that PCOS can occur regardless of Koshtha type; however, due to the small sample size, a definitive conclusion cannot be drawn.

Most patients (80%) belonged to the middle socioeconomic class, 15% to the higher class, and only 5% to the lower class. In Ayurveda, factors such as luxury (upabhoga) and lack of discipline (ayoga) within certain socioeconomic groups contribute to Dosha vitiation, especially of Kapha and Vata, leading to Ama formation and disease. This indicates a higher prevalence of PCOS among the urban, educated middle-class population, likely due to lifestyle factors such as dietary habits, physical inactivity, psychological stress, and sedentary behavior, which primarily affect GnRH pulsatile secretion.

Stress is an unseen yet significant factor in modern life and has a strong link to PCOS in women. In the present study, 50% of patients were Tensed, Depressive, or Anxious, 48.3% experienced mild stress or were sentimental, and only 1.7% were Calm and Content.

This study noted a higher occurrence of family-related, work-related, and academic stress. Such psychosocial stress suppresses the hypothalamic-pituitary-ovarian axis, leading to ovulatory dysfunction, reduced sex steroid production, and decreased fertility in women of reproductive age. Regarding sleep patterns, 61.7% of patients experienced disturbed sleep (Khadita Nidra), 23.3% suffered from insomnia (Anidra), and only 15% had sound sleep (Samyak Nidra).

Modern lifestyle trends such as staying awake late at night (Ratri Jagarana), waking up late in the morning, and sleeping during the day (Diwaswapana) are contributing factors to various metabolic disorders. The expression “Ratrou jagaranaruksham” indicates that late-night awakening increases Vataprakopa due to the influence of Ruksha Guna, which is identified as a significant cause of PCOS.

This can also lead to Artava Rukshata, resulting in irregular menstruation. Ayurveda recommends waking up during Brahmi Muhurta, approximately 48 minutes before sunrise. After this period, Kapha Kala begins, during which Tama and Kapha can obstruct the Srotas. This time coincides with peak levels of cortisol, FSH, and LH. When cortisol, derived from cholesterol, is produced abnormally, it reduces LH and estradiol secretion, indirectly disrupting the menstrual cycle. Waking up during Brahmi Muhurta can help prevent many endocrine disorders, including PCOS.

The main factor responsible for Kapha aggravation is day sleep (Diwaswapana). Sleeping during the day increases the body's Snigdhatva, leading to vitiation of Medas. This, in turn, contaminates Rasavaha, Mamsavaha, and Medovaha Srotas. Consequently, PCOS

often presents with Sthoulya (obesity), making it a Medo-pradhana Vyadhi.

In this study, most patients (46.7%) had Vata-Kapha Prakruti, 35% had Vata-Pitta, and 18.3% had Pitta-Kapha Prakruti. All three Doshas play a role in the pathogenesis of PCOS, with Kapha and Vata being predominant. The higher occurrence of Vata-Kapha Prakruti among patients indicates their greater susceptibility to this condition.

Here, lack of physical activity was defined as spending most of the day sitting or lying down while engaging in other tasks such as reading, working on laptops, watching TV, or using a mobile phone. This sedentary behavior is one of the major causes of many non-communicable diseases, including PCOS. According to recent findings, 66% of patients reported it as a significant contributing factor. Such inactivity causes Rasavaha and Medovaha Srotas Dooshana, aggravates Kapha Dosha, and is also a Hetu (cause) for Agni Dushti, leading to Tridosha vitiation. These factors collectively worsen the severity of PCOS.

## CONCLUSION

The significance of an observational study lies in understanding all aspects of a disease, such as its frequency, impact, prognosis, and other characteristics. In this study, most patients were unmarried, reflecting the adolescent phase of life, a period marked by significant physiological, anatomical, and psychological changes in females. Due to family, cultural, and social constraints, many adolescent girls are unable to openly discuss or seek proper guidance for menstrual issues. PCOS is one such condition that poses a serious concern in this context.

Ayurveda regards diet as the foremost medicine and one of the three fundamental pillars of life, emphasizing its vital role in maintaining tissue balance and sustaining Agni. Diet plays a crucial role not only in promoting health but also in managing various diseases. In this context, Maharshi Kashyapa described Ahara as *Mahabhaishajya*—the supreme or most powerful medicine—because of its significance in preserving Dhātu Samya (tissue harmony) and supporting Agni (digestive fire).

Ayurveda emphasizes the deep connection between the mind and body, stressing that mindful attention is vital for every activity, including eating. In digestion, the link between mental state and Agni (digestive fire) is especially significant. A calm and positive mindset promotes healthy digestion, whereas mental disturbance can impair it.

The idea of distinct mind/body types was initially identified by Ayurveda as a system of medicine. It argues that everyone is born with their own natural balance, which affects every aspect of their life, including their physical form, emotional makeup, and susceptibility to

disease. Following a lifestyle that puts stress on one's bodily system might result in imbalances without one even realizing it.

Today, very few people are aware of correct dietary practices and their effect on health. Poor eating habits have become common, contributing to numerous diseases. Adopting a healthier lifestyle guided by Ayurvedic principles can significantly help in managing such conditions more effectively.

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