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Analysis of the Impact of Polycystic Ovarian Syndrome on the Reproductive Health of Married Women in Tamil Nadu

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ABSTRACT

Polycystic Ovarian Syndrome (PCOS) is a frequently occurring endocrine condition among women of reproductive age and a primary contributor to subfertility associated with anovulation. Moreover, insufficient awareness of PCOS, its management, and essential lifestyle modifications adversely affects clinical outcomes. This qualitative study explores women's understanding and perceptions of the syndrome, its treatment options, and the lifestyle changes required for effective management. A total of 120 individuals with PCOS were selected through purposive sampling from Vriddhachalam, and telephonic interviews were also conducted. The themes derived from the analysis encompassed women's understanding of PCOS; its causes, complications, and risk factors; treatment-related perceptions; and the perceived significance of health-promoting behaviors such as physical activity, sleep habits, and societal support. The respondents further emphasized the importance of nutrition, regular physical activity, and a wellness-oriented lifestyle. While medications assisted participants in achieving consistent menstrual cycles, they also produced side effects, which are discussed in the subsequent section. A small number of respondents reported being unaware of PCOS at the time of their diagnosis during adolescence. Overall, this study enhances the understanding of PCOS from a qualitative perspective that incorporates cultural context alongside relevant clinical and lifestyle considerations.

Introduction

Polycystic Ovarian Syndrome (PCOS), in which the ovaries release numerous undeveloped eggs that may form cysts, is significantly influenced by two primary factors: (a) a considerable lack of awareness regarding the syndrome and (b) lifestyle-related alterations. Although knowledge of healthy practices such as diet is considered essential for the effective management of the condition, it also significantly influences the regulation of sex steroid metabolism. Previous research has indicated that a high-fat, low-fibre diet can elevate circulating androgen levels. Moreover, excessive lipid consumption may reduce Sex Hormone Binding Globulin (SHBG) levels and increase the free androgen index. A rise in body fat, particularly abdominal fat, is likewise associated with heightened metabolic risk. Consequently, specialists and physicians should advocate initial treatments such as a nutritious diet and consistent physical activity for individuals with PCOS.

PCOS is a prevalent health concern in both developed and developing nations, affecting 4% to 12% of women of reproductive age in India; however, few studies—primarily qualitative in nature—have been conducted on the topic. Furthermore, while observations by endocrinologists and gynaecologists indicate a notable rise in PCOS cases among women,

particularly those who are unmarried, high-risk individuals often possess limited awareness of the syndrome and its associated effects. The present study seeks to examine how women's understanding and awareness of PCOS, its related therapies, and everyday lifestyle adjustments may influence the experiences of those diagnosed with the condition. Additionally, because few studies—especially those involving women—have employed qualitative research methods in this area, the present research holds heightened significance for generating valuable insights aligned with the study's objectives. Consequently, the findings are highly pertinent to women with PCOS and may assist them in managing the syndrome more effectively.

Objectives of the study

1. To examine the socio-economic and demographic characteristics of the respondents in the study area.
2. To assess the association between Polycystic Ovarian Syndrome (PCOS) and demographic variables in Vriddhachalam.
3. To identify the symptoms associated with the development of Polycystic Ovarian Syndrome.
4. To determine the relationship between a family history of Polycystic Ovarian Syndrome and its occurrence.

Research Design

This study employed a qualitative, exploratory research design to investigate the stated objectives through semi-structured telephone interviews. The interview questions examined participants' understanding and awareness of Polycystic Ovarian Syndrome (PCOS), its related treatments, and the influence of these factors on essential lifestyle adjustments required for effective management of the syndrome. The interview schedule was developed on the basis of a comprehensive review of relevant literature. The resulting questions were reviewed and validated by two specialist gynaecologists and a researcher in reproductive health. Necessary modifications were made in accordance with their feedback, thereby establishing the face validity of the interview schedule. Upon finalizing the schedule, it was pilot-tested with a small number of participants for confirmation prior to full-scale data collection.

Sample Size

A total of 120 young women (N = 120) diagnosed with Polycystic Ovarian Syndrome (PCOS) were included in the study. Participants were selected through purposive sampling from Vriddhachalam and were between 19 and 25 years of age at the time of data collection. Among the respondents, 80 reported having been diagnosed with PCOS between the ages of 15 and 18, while 40 indicated that they were diagnosed at 19 years of age or older.

Sampling Method

Purposive sampling was employed to recruit participants for the study. Potential respondents were contacted to determine their willingness to participate in the planned semi-structured telephone interviews. Telephone interviews were chosen as the mode of data collection, and suitable interview times were confirmed with each participant in advance. Prior to each interview, rapport was established to ensure participant comfort, and the purpose of the

study was clearly explained. Informed consent was obtained for both participation and audio recording, with assurances of confidentiality and anonymity. Participants were encouraged to request clarification for any questions they found unclear. Each interview lasted approximately 45 to 50 minutes. After data collection, the second author transcribed all interview recordings, and the remaining authors checked the transcripts for accuracy. The initial data analysis was carried out by the first three authors, and the findings were then independently reviewed by the other authors to ensure analytical rigor.

Results and Discussion

Polycystic Ovary Syndrome (PCOS) is a common endocrine disorder affecting women of reproductive age. Despite its prevalence, PCOS remains poorly understood, and its impact on women's health can be substantial. This study aims to investigate the knowledge, symptoms, and treatment practices related to PCOS among married women, and to examine the associations between occupation, place of residence, and various aspects of PCOS management. Understanding the impact of PCOS on the reproductive health of married women is essential for interpreting their general characteristics. This section therefore presents key demographic and socio-economic features of the respondents, including religion, community, place of residence, family type, income, educational attainment, occupation, age, age at marriage, and duration of marriage.

PCOS is a prevalent endocrine disorder that affects women during their reproductive years and can lead to several reproductive health complications. The present study focuses specifically on married women to understand the impact of PCOS on their reproductive health. It also examines how the respondents' demographic and socio-economic profiles relate to their experiences with PCOS.

Table -1

Percentage Distribution of Respondents by Socio-Economic and Demographic Characteristics

SED Variables	Sub-Variables	No. of Respondents (120)	Percentage (%)
Religion	Hindu	60	50.00
	Muslim	20	16.66
	Christian	40	33.33
Community	BC	40	33.33
	MBC	30	25.00
	SC/ST	40	33.33
	FC	10	8.33
Family Type	Nuclear	90	75.00
	Joint Family	30	25.00
Residence	Urban	50	41.67
	Rural	70	58.33
Education	Up to Higher Secondary level	33	27.5
	Under Graduation	70	58.33

	Post-Graduation	17	41.67
Occupation	Working	80	66.67
	Not Working	40	33.33
Income	5000 – 10,000	58	48.33
	10,001- 15,000	24	20.00
	15001+	38	31.66
PCOS diagnosed at age	15-18 years	80	66.67
	19 and above	40	33.33
Age at Marriage	18 - 20yrs	35	29.16
	21 - 25yrs	60	50.00
	25+ yrs	25	20.83
Duration of Marriage	1-5 yrs	44	36.66
	6+ yrs	76	63.33
	Total	**120**	**100.00**

From the table -1 presents the percentage distribution of respondents according to their socio-economic and demographic characteristics. The data show that 50.00% of the respondents were Hindu, followed by 33.33% Christian and 16.66% Muslim. Regarding community background, 33.33% belonged to the BC category, 25.00% to MBC, 33.33% to SC/ST, and 8.33% to FC. With respect to family type, 75.00% of the women lived in nuclear families, while 25.00% lived in joint families. Among the respondents, 41.67% resided in urban areas and 58.33% in rural areas. Educational attainment shows that 27.50% were educated up to the higher secondary level, 58.33% were undergraduates, and 14.17% were postgraduates (corrected based on total N = 120). Occupationally, 66.67% of the respondents were working, whereas 33.33% were not working. With regard to monthly income, 48.33% earned between ₹5,000 and ₹10,000, 20.00% earned between ₹10,001 and ₹15,000, and 31.66% had a monthly income above ₹15,000. Concerning the age at which PCOS was diagnosed, 66.67% reported being diagnosed between 15 and 18 years of age, while 33.33% were diagnosed at 19 years or older. In relation to age at marriage, 29.16% were married between 18 and 20 years, 50.00% between 21 and 25 years, and 20.83% at 25 years or above. The duration of marriage indicates that 36.66% had been married for 1–5 years, while 63.33% had been married for more than 6 years.

Knowledge of Polycystic Ovarian Syndrome (PCOS)

Polycystic Ovarian Syndrome (PCOS) is a hormonal disorder affecting women of reproductive age and is characterized by an imbalance of hormones that disrupts normal ovulation. This imbalance may lead to symptoms such as irregular menstrual cycles, elevated androgen levels, and the development of multiple cysts on the ovaries. Although PCOS is a chronic condition with no definitive cure, its symptoms can be effectively managed through lifestyle modifications—including diet and physical activity—pharmacological interventions, and fertility treatments when required. PCOS is also associated with broader health concerns, such as insulin resistance, infertility, and an increased risk of developing type 2 diabetes.

Table -2

Percentage Distribution of Respondents by Knowledge and Perceptions of PCOS,

Variables	Level of knowledge	No. of Respondents	Percentage
Knowledge of PCOS	Poor understanding	32	26.67
	Fair Understanding	44	36.67
	Good Understanding	14	11.67
	Very Good	20	16.67
	Excellent Understanding	10	8.33
	Total	**120**	**100.00**
Perceived Causes of PCOS	Genetic	20	16.67
	Environmental	40	33.33
	Hormonal	36	30.00
	Life Factors	18	15.00
	Others (Specify)	6	5.00
	Total	**120**	**100.00**
Treatment options and Awareness	Limited Knowledge	44	36.67
	Basic Knowledge	36	30.00
	Good Knowledge	20	16.67
	Very Good Knowledge	12	10.00
	Excellent Knowledge	8	6.67
	Total	**120**	**100.00**
Medication adherence	Yes	74	61.67
	No	46	38.33
	Total	**120**	**100.00**
Family Support	No support	7	5.83
	Little support	10	8.33
	Moderate Support	26	21.67
	Good Support	32	26.67
	Excellent Support	45	37.50
	Total	**120**	**100.00**
Perceived impact of PCOS	Minimal Impact	41	34.17
	Mild Impact	22	18.33
	Moderate Impact	35	29.17
	Significant Impact	4	3.33
	Sever Impact	18	15.00
	Total	**120**	**100.00**
Importance of Treatment	Not Important at all	8	6.67
	Somewhat Important	10	8.33
	Neutral	21	17.50
	Important	30	25.00
	Very important	51	42.50
	Total	**120**	**100.00**

Family support for management	Stress Management	52	43.33
	Support Groups	12	10.00
	Counselling	30	25.00
	Others	8	6.67
	Total	**120**	**100.00**
Life style changes	Dietary Exercise	40	33.33
	Exercise	32	26.67
	Weight Management	35	29.17
	Stress Reduction	8	6.67
	Others (Specify)	5	4.17
	Total	**120**	**100.00**
Cognitive Impact	No Impact	32	26.67
	Mile Impact	34	28.33
	Moderate Impact	28	23.33
	Significant Impact	16	13.33
	Severe Impact	10	8.33
	Total	**120**	**100.00**

Table -2 Percentage Distribution of Respondents by Knowledge and Perceptions of PCOS, Knowledge of PCOS, A significant portion of respondents (63.34%) demonstrated only poor to fair understanding of PCOS, indicating a general lack of comprehensive knowledge about the condition. Only about 36.67% had good to excellent knowledge, highlighting the need for improved education and awareness programs. Perceived Causes of PCOS, Environmental factors (33.33%) and hormonal imbalances (30%) were the most commonly perceived causes, showing awareness of some scientific explanations. Genetic causes were acknowledged by 16.67%, while lifestyle factors were seen as less influential (15%), indicating possible gaps in understanding the multifactorial aetiology of PCOS.A small percentage (5%) attributed PCOS to other unspecified causes, suggesting some uncertainty or misinformation. Treatment Options and Awareness, more than two-thirds (66.67%) of respondents had only limited to basic knowledge about PCOS treatment options, which could affect their treatment-seeking behaviour and adherence. Only 16.67% and 16.67% had good to excellent knowledge respectively, implying that health education on treatment modalities requires reinforcement. Medication Adherence, the majority (61.67%) adhered to their prescribed medication, which is positive for disease management. However, a substantial minority (38.33%) were non-adherent, potentially risking poor health outcomes and indicating a need for support mechanisms to improve adherence. Family support, A large majority (64.17%) of respondents reported receiving good to excellent family support, which is crucial for emotional well-being and effective disease management. Only a small minority lacked family support (5.83%) or had little support (8.33%), highlighting mostly positive social support environments.

Perceived Impact of PCOS, most respondents perceived the impact of PCOS as minimal (34.17%) to moderate (29.17%), suggesting some may underestimate the severity or long-term consequences of the syndrome. About 18.33% experienced mild impact, while a combined 18.33% felt significant to severe impact, indicating that for some, PCOS seriously affects their

quality of life. Importance of treatment, strong majority (67.5%) of respondents acknowledged that treatment for PCOS is important to very important. However, 15% were either neutral or felt treatment was not important, which could influence health-seeking behaviour negatively. Coping Mechanisms, Stress management (43.33%) was the most commonly used coping mechanism, followed by counselling (25%) and support groups (10%). Emotional support and other mechanisms were less common, indicating varied approaches to managing PCOS-related stress. Lifestyle Changes, Dietary exercise (33.33%) and weight management (29.17%) were the primary lifestyle changes adopted, reflecting awareness of the role of lifestyle in managing PCOS. Some respondents engaged in exercise alone (26.67%) or stress reduction (6.67%), but a minority made no or other unspecified changes, which may affect symptom control. Cognitive Impact, approximately 55% of respondents reported some degree of cognitive impact from PCOS, ranging from mild to moderate. About 21.66% experienced significant to severe cognitive impacts, highlighting that PCOS may affect mental functioning or psychological health for many. Around 26.67% reported no cognitive impact, suggesting variability in individual experiences.

The data reflects a need for enhanced education and awareness about PCOS, particularly regarding its causes, treatment options, and the importance of medication adherence. While family support is generally strong, some gaps exist in understanding the impact and importance of treatment. Lifestyle modifications and coping mechanisms are adopted by many but could be encouraged further for better management. The cognitive and psychological effects of PCOS also warrant attention in patient care.

Analysis of Data

The traditional content analysis approach was employed in this research as a qualitative method to identify and interpret meanings through relevant words, themes, or ideas within the collected data. The data coding process was conducted manually, involving transcription, classification, and interpretation of the interview material. Recorded interviews were transcribed and subjected to multiple stages of processing to ensure a deep understanding of the data and to confirm the authenticity of the respondent's shared information. Sentences and paragraphs from the interviews were condensed and summarized based on their content and context. These condensed meaning units were then categorized and assigned codes following the guidelines outlined by Elo and Kyngäs (2008). Subsequently, the codes were grouped into categories and subcategories by examining their similarities and differences. Greater emphasis was placed on codes that appeared more frequently and closely aligned with the study's objectives

Chart – 1 Effect of PCOS on Reproductive Health of women - Structural Fit

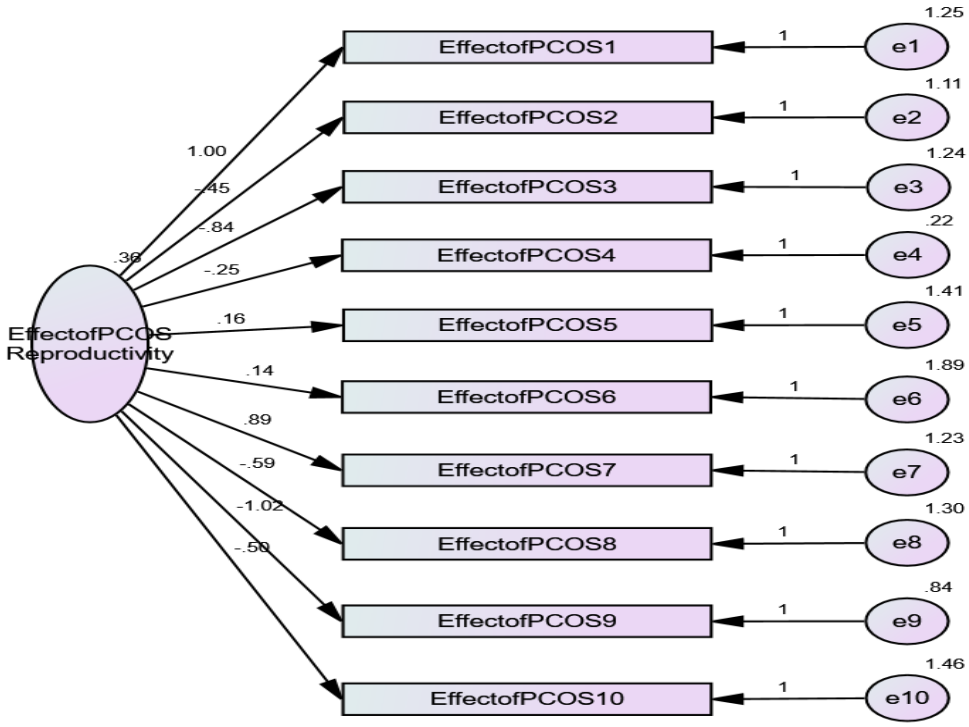

Table -3 GFI and Base Line Comparisons

Model Fit	Result	Cut Off Value
GFI	0.949	> 0.90
AGFI	0.909	> 0.80
IFI	0.987	> 0.90
TLI	0.978	> 0.90
CFI	0.985	> 0.90

Table 3 presents the model fit indices, indicating a good fit between the data and the proposed model. The Goodness of Fit Index (GFI) is 0.949, surpassing the recommended threshold of 0.90, which reflects a strong model-data fit. Similarly, other fit indices, including the Adjusted Goodness of Fit Index (AGFI), Incremental Fit Index (IFI), Tucker-Lewis Index (TLI), and Comparative Fit Index (CFI), all demonstrate values consistent with a good fit. These results collectively suggest that the model provides an accurate representation of the underlying data structure, thereby offering a reliable foundation for interpreting the effects of PCOS on reproductive health.

Table 4 Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P
Knowledge of PCOS	<---	Impact of PCOS Reproductive	1.000			
Perceived Causes of PCOS	<---	Impact of PCOS Reproductive	0.445	0.249	1.790	0.074
Treatment options and Awareness	<---	Impact of PCOS Reproductive	0.838	0.310	2.706	0.007
Medication adherence	<---	Impact of PCOS Reproductivity	0.252	0.114	2.210	0.027
Family Support	<---	Impact of PCOS Reproductivity	0.163	0.241	0.677	0.499
Perceived impact of PCOS	<---	Impact of PCOS Reproductivity	0.143	0.270	0.530	0.596
Importance of Treatment	<---	Impact of PCOS Reproductivity	0.889	0.317	2.806	0.005
Coping Mechanism	<---	Impact of PCOS Reproductivity	0.591	0.269	2.197	0.028
Life style changes	<---	Impact of PCOS Reproductivity	1.017	0.328	3.097	0.002
Cognitive Impact	<---	Impact of PCOS Reproductivity	0.501	0.276	1.817	0.069

Table 5 clearly indicates that the regression weights have significant effect of PCOS on various aspects of reproductive health. The results show that the effect of PCOS on various aspects of reproductive health. The results show that the Effect of PCOS on Reproductive has a significant positive impact on Treatment options and Awareness (estimate = 0.838, p = 0.007), Medication adherence (estimate = 0.252, p = 0.027), Importance of Treatment (estimate = 0.889, p = 0.005), Coping Mechanism (estimate = 0.591, p = 0.028), and Life Style changes (estimate = 1.017, p = 0.002). However, the effects on Perceived Causes of PCOS, Family Support, and Perceived impact of PCOS are not statistically significant. The result suggests that PCOS has a substantial influence on women's knowledge, treatment-seeking behavior, and coping mechanisms, highlighting the need for targeted interventions to address these aspects.

Table - 5 Suggestions of the Study of PCOS

Category	Variable/ Test	Typical finding suggestive of PCOS	Purpose
Clinical Signs	Menstrual cycle pattern	Oligomenorrhea (>35-day cycles) or amenorrhea	Shows ovulatory dysfunction
	Hirsutism score (Ferriman–Gallwey)	≥8 (excess facial/body hair)	Clinical hyperandrogenism
	Acne, androgenic alopecia	Moderate–severe	Additional signs of hyperandrogenism
Hormonal Tests	Total / Free Testosterone	Elevated	Confirms biochemical hyperandrogenism
	LH/FSH ratio	>2:1 (not always required)	Suggests ovarian dysregulation
	DHEAS, Androstenedione	Elevated	Excludes adrenal source
	17-OH Progesterone	Normal (rules out CAH)	Differential diagnosis
	Prolactin, TSH	Normal (screening)	Rules out thyroid/prolactin disorders
Imaging	Pelvic ultrasound (transvaginal preferred)	≥20 follicles (2–9 mm) in one ovary and/or ovarian volume >10 ml	"Polycystic ovarian morphology"
Metabolic Parameters	Fasting glucose & insulin	Impaired fasting glucose/insulin resistance	Evaluate metabolic risk
	Lipid profile	↑Triglycerides, ↓HDL	Cardiometabolic assessment
Other Assessments	BMI & waist circumference	Overweight/central obesity common	Risk stratification
	Blood pressure	May be elevated	Cardiovascular screening

Conclusion

Many respondents expressed similar views on the importance of nutrition, physical activity, and maintaining a healthy lifestyle for managing PCOS and overall well-being. The study found that individuals diagnosed with PCOS at a younger age generally had limited

awareness of the condition. However, as they grew older and matured, they increasingly took necessary steps to improve their health, motivated by social and family expectations such as marriage and childbearing. Additionally, the research revealed that societal awareness of PCOS remains inadequate, highlighting the cultural pressures faced by families of unmarried women with PCOS.Medications were reported to help regulate menstrual cycles but were also associated with certain health side effects. Notably, all participants acknowledged engaging in unhealthy lifestyle behaviours prior to their diagnosis, including poor dietary habits and lack of regular physical activity. Following diagnosis, most have made efforts to adopt healthier lifestyles.

Limitations

This study was limited primarily by time constraints and a low participation rate, resulting in a relatively small sample size. Data collection was restricted to 120 participants due to practical considerations rather than achieving saturation, which means additional interviews might have uncovered further themes. Additionally, the qualitative nature of the research limits the generalizability of the findings. Due to insufficient data, particularly from women with PCOS, it was not possible to conduct a comparative analysis of perceptions, knowledge, and attitudes across different groups of women.

The study highlights the need for future research to:

a) employ a multidisciplinary, mixed-methods approach to address unresolved questions raised by this study, and

b) specifically explore the cultural factors influencing women's perceptions and attitudes towards PCOS and its management.

References

1. Amiri, F.N., Tehrani, F.R., Simbar, M., Montazeri, A., Thamtan, R.A.M., 2014. The experience of women affected by polycystic ovary syndrome: a qualitative study from Iran. Int. J. Endocrinol. Metabol. 12 (2).
2. Azziz, R., Woods, K.S., Reyna, R., Key, T.J., Knochenhauer, E.S., Yildiz, B.O., 2004. The prevalence and features of the polycystic ovary syndrome in an unselected population. J. Clin. Endocrinol. Metabol. 89 (6), 2745–2749.
3. Barnard, L., Ferriday, D., Guenther, N., Strauss, B., Balen, A.H., Dye,Chadha, C., Kataria, J., Chugh, P., Choudhary, A., 2019. Quality of life in young adult females with PCOS. Indian J. Physiother. Occupat. Ther. - Int. J. 13 (1), 40.
4. Sessa, A.K., Harris, R.M., Hofmann, H.A., 2013. Sex steroid hormones modulate responses to social challenge and opportunity in males of the monogamous convict cichlid, Amatitliananigrofasciata. Gen. Comp. Endocrinol. 189, 59–65.
5. Pasquali, R., Casimirri, F., 1993. The impact of obesity on hyperandrogenism and polycystic ovary syndrome in premenopausal women. Clin.Endocrinol.39(1),1-16.
6. Hart, R., Hickey, M., Franks, S., 2004. Definitions, prevalence and symptoms of polycystic ovaries and polycystic ovary syndrome. Best Pract. Res. Clin. Obstet. Gynaecol. 18(5), 671–683.
7. Thomson, R.L., Buckley, J.D., Brinkworth, G.D., 2011. Exercise for the treatment and management of overweight women with polycystic ovary syndrome. Obes. Rev. 12(5), e202–e210.