

## Research Article

# A Study to Evaluate the Effectiveness of a Structured Teaching Programme on Knowledge Regarding Polycystic Ovarian Disease Among Women Attending Selected Outpatient Departments of Sri Sai Maruthi Hospital, Dharmapuri


M. Deepa<sup>1\*</sup><sup>1</sup>Research Scholar, Faculty of Nursing, Deshbhagat University, Mandigobindgarh, Punjab 147301, India.\*Corresponding author: [deepasep292021@gmail.com](mailto:deepasep292021@gmail.com)

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## Abstract

Polycystic Ovarian Disease (PCOD) is a common endocrine disorder affecting women of reproductive age, characterized by hormonal imbalance, irregular menstrual cycles, and multiple ovarian cysts. It is associated with metabolic complications such as insulin resistance, obesity, and increased risk of type 2 diabetes and cardiovascular disease. PCOD can significantly impact fertility, psychological well-being, and overall quality of life. Early diagnosis and management are essential to prevent long-term complications and improve reproductive and metabolic outcomes.

**Research approach and design:** Quantitative research approach was adopted. © 2026 by the author's. The terms and conditions of the Creative Commons Attribution (CC BY) license apply to this open access article.

## Introduction

A mother's love is a child's first lesson" Women play a very vital role in human progress and have a significant place in the society. They are not at all inferior to men. They are capable of sharing all the responsibilities of life. Women have been rightly compared to the wheels of the same carriage. Women are an important element of our society. The main responsibility of a women is to preserve the human race. As a mother her position is unique. The first school of a child is the lap of his mother. Polycystic Ovarian Disease (PCOD) is one of the most common endocrine disorders affecting women of reproductive age, typically between 15–45 years. It is a condition where the ovaries release a large number of immature or partially mature eggs that eventually turn into small cysts in the ovaries. This abnormality in ovulation leads to a hormonal imbalance in the female body, especially with increased levels of androgens (male hormones) and sometimes insulin resistance. As a result, women may develop a variety of symptoms affecting their reproductive, metabolic, and psychological health.

The exact cause of PCOD is not completely understood, but several factors are believed to contribute to its development.

1. **Hormonal Imbalance:** Excess production of androgens interferes with the release of eggs from the ovaries, leading to irregular ovulation.

## Statement of the problem

”A study to evaluate the effectiveness of a Structured Teaching Programme on Knowledge Regarding Polycystic Ovarian Disease among women attending selected outpatient department of Sri Sai Maruthi Hospital in Dharmapuri.”

## Objectives of the study

1. To assess the existing knowledge of women with PCOD before structured teaching program.
2. To evaluate the effectiveness of structured teaching program on knowledge regarding PCOS among women.
3. To find the post-test association between the level of knowledge on PCOD with their selected demographic variables.

## Operational definition

**Evaluate:** In this study, evaluate refers to the process of assessing the effectiveness of the structured teaching program on knowledge regarding PCOD among the selected study participants. It will be measured using a structured knowledge questionnaire administered before and after the intervention, and the difference in pre-test and post-test scores will indicate the level of knowledge improvement.

**Effectiveness:** The extent to which the structured teaching Programme improves knowledge scores regarding PCOD, measured by a structured questionnaire.

**Structured Teaching Program:** A structured teaching program in this study refers to a planned and organized educational intervention designed by the researcher to provide systematic information regarding PCOD.

**Knowledge:** The awareness and understanding of PCOD, measured in terms of correct responses to a structured knowledge questionnaire.

**Polycystic Ovarian Disease (PCOD):** An endocrine disorder in women of reproductive age characterized by hormonal imbalance, menstrual irregularities, and ovarian cysts.

**Women:** Female participants aged 18–45 years attending selected hospitals in Dharmapuri.

## Hypothesis:

- **H1:** The mean post-test knowledge score of women regarding PCOD will be significantly higher than their mean pre-test knowledge score.
- **H2:** There will be a significant association between post-test knowledge scores and selected demographic variables.

## Methodology

Methodology is the way to solve the problem systematically, that includes steps of procedure and strategies of the data. In this section the researcher discusses the research approach, research design, setting of the study, population, sample size, sampling technique, criteria for the selection of sample. Description of tool, content validity, reliability, data collection procedure and plan for data analysis.

## Research approach

Present study is to assess the effectiveness of a structured teaching program on knowledge of women regarding PCOD. As the effectiveness is to be scientifically determined, a quantitative research approach is used for the study.

## Research design

The research design is the transaction point from old knowledge to new knowledge. The design provides the back bone of the study. It refers to the researcher’s overall plan for obtaining answers to the research questions and for testing the research hypothesis.

## Variables under study

Variables are the qualities, properties or the characteristics of the person, things or situation that change or vary. The variables mainly include in this study are Independent and Dependent variables Dependent variables explain the effect of independent variables.

- **Independent variables:** Independent variables are the variable which is not dependent on any other, in this study the independent variable refers to structured teaching programme on PCOD.
- **Dependent variables:** The Dependent variable is the variable that the researcher is interested in understanding explaining or predicting. In this study the dependent variable refers to effect of knowledge on level of knowledge after administration of structured teaching programme among women.

## Study setting

Setting is the physical location and conditions in which data collection takes place in a study. The study was conducted in Sri Sai Maruthi hospital, Dharmapuri, it is located around 5 km away from the Om Sakthi College of Nursing, they have a well-established OB/GYN outpatient department where they handle general gynaecological problems such as PCOD abnormal uterine bleeding, fibroids, pelvic pain

etc, They handle approx. 100 outpatient cases per day in gynecological OPD and specially 12-15 PCOD cases are diagnosing and treating per day.

### **Population**

Population refers to the entire aggregation of cases that meets designed criteria. The population of present study was women who attending OPD in hospitals of Dharmapuri and who meet the inclusion criteria.

### **Sample**

Sample consists of subset of a population selected to participate in a research study. Women who attending OPD in Sri Sai Maruthi Hospital, Dharmapuri.

### **Sample size**

The sample used for the study was 60 women who attending OPD in Sri Sai Maruthi Hospital, Dharmapuri.

### **Sample techniques**

Sampling is the process of selecting a portion of the population to obtain data regarding a problem. The samples were selected by non-probability convenient sampling method for a period of 4 weeks. It was found to be appropriate to make the study more practicable and feasible.

### **Criteria for selection of samples**

#### **Inclusion criteria**

- Women aged 18–45 years (reproductive age group).
- Attending selected OPDs (any department) of the chosen hospitals during the data-collection period.
- Able to read/understand Tamil to receive the STP and complete tools.
- Willing to participate and provide written informed consent
- Available for both pre-test and post-test assessments (e.g., same day or as scheduled by the protocol).

#### **Exclusion criteria**

- Critically ill or medically unstable women requiring immediate/ongoing emergency care.
- Healthcare professionals or students in health sciences (to avoid baseline knowledge bias).
- Prior formal education on PCOD via a structured program within the last 6 months.
- Currently enrolled in another interventional educational study related to women's health/PCOD.

### **Pilot study**

A pilot study is a small-scale version or trial run of the major study to test its design, methodology, and instruments before the full-scale research is conducted. In order to test the relevance and practicability of the study, the pilot study was conducted among 6 women in Vijay Super Speciality hospital in Dharmapuri. The knowledge regarding PCOD was assessed with the prepared questionnaire. The structured teaching programme was given. The result of the pilot study showed that inadequate knowledge regarding PCOD in pre-test and gained knowledge in post-test.

### **Data Collection Procedure**

After getting permission from the director of Sri Sai Maruthi Hospital, Dharmapuri, the researcher met the women. The purpose and duration of the study was explained to the women in hospital and their informed oral consent was obtained. The study was carried out for a period of 4 weeks from 16.02.2025 to 16.03.2025. The sample was collected by non-probability convenience sampling with reference to the selected criteria. The questionnaire was distributed to assess the knowledge on PCOD, after pretest STP was given. The subjects were encouraged to clarify their doubts, post test was conducted on the 7<sup>th</sup> day to assess the effectiveness of teaching in improving the knowledge regarding PCOD by using the same questionnaire.

### **Plan for Data analysis**

The investigator adopted descriptive and inferential statistics to analyze the data. The demographic variables were analyzed by using frequency and percentage. The effectiveness of STP and association between the variables were analyzed by using 't' test and chi square test respectively.

### **Method of data analysis**

Descriptive statistics such as frequency, percentage, mean, and standard deviation were used to summarize the demographic variables and the knowledge scores of women regarding Polycystic Ovarian Disease. Knowledge levels were also presented in terms of frequency and percentage distribution across categories (inadequate, moderate, adequate). Inferential statistics were used to evaluate the effectiveness of the

structured teaching programme. A paired t-test was employed to compare pre-test and post-test knowledge scores. Association between selected demographic variables and post-test knowledge levels was analyzed using Chi-square test.

## Data analysis and interpretation

Data analysis is the systematic process of organizing, summarizing, and interpreting collected data using appropriate statistical methods to answer research questions, test hypotheses, and draw valid conclusions.

## Presentation of Data

The data obtained were entered into a master sheet for tabulation and statistical processing. The analysis of data was organised and presented under the following headings Section.

1. Description of demographic variables of the subjects
2. Analysis and interpretation of pre-test and post- test level of knowledge scores among the women.
3. Analysis of effectiveness of STP in terms of gain in post- test knowledge scores regarding PCOD among women.
4. Data describing the association between post-test knowledge regarding PCOD among women with their demographic variables.

## Distribution of subjects according to the socio demographic variables N=60

S.NO	Demographic variables		Respondents	
			Frequency	Percentage
1.	Age	20-30yrs	17	28.33
		30-40-yrs	30	50.00
		Above 40 yrs	13	21.66
2.	Education	Illiterate	4	6.66
		Primary	10	16.66
		Secondary	16	26.66
		Graduate	17	28.33
		Post graduate	13	21.66
		Occupation	Homemaker	28
4.	Religion	Government	9	15.00
		Private	13	21.66
		Daily wages	10	16.66
		Hindu	37	61.66
5.	Family income per month	Muslim	12	20.00
		Christian	11	18.33
		<30000 rs	17	28.33
		31000-40,000 rs	17	28.33
		41000-50000 rs	13	21.66
		>50000 rs	13	21.66

6.	Marital status	Unmarried	24	40.00
		Married	36	60.00
7.	Area of residence	Rural	29	48.33
		Urban	31	51.66
8.	Age at menarche	11-12 yrs	7	11.66
		12-13 yrs	13	21.66
		13-14 yrs	21	35.00
		14-15 yrs	19	31.66
9.	Menstrual pattern(6 months)	Oligomenorrhea	33	55.00
		Amenorrhea	27	45.00
10.	BMI	<18.5	5	8.33
		18.5–22.9	18	30.00
		23.0–27.4	21	35.00
		≥27.5	16	26.66
11.	Family history of PCOD	Yes	23	38.33
		No	37	61.66

### Assessment of pre-test and post test knowledge level regarding pcod among women

Pre-test knowledge level regarding Polycystic ovarian disease among women N=40

Range of percentage (%)	Grading of knowledge score	Pretest	
		F	%
<50	Inadequate	49	81.66
51-75	Moderate	11	18.33
>75	Adequate	0	0
<b>TOTAL</b>		<b>60</b>	<b>100.0</b>

Post-test knowledge level regarding Polycystic ovarian disease among women N=40

Range of percentage (%)	Grading of knowledge score	Post test	
		F	%
<50	Inadequate	0	0.0
51-75	Moderate	39	65.0
>75	Adequate	21	35.00
<b>TOTAL</b>		<b>60</b>	<b>100.0</b>

### Analysis of effectiveness of STP in terms of gain in post-test knowledge scores regarding PCOD among women

4 Aspect wise mean knowledge score related to Polycystic ovarian disease

Aspect	Pretest Mean	Pretest %	Pretest SD	Posttest Mean	Posttest %	Posttest SD
Basic Concepts	1.36	45.3%	0.23	2.13	71.0%	0.38
Causes & Risk Factors	2.27	45.3%	0.39	3.55	71.0%	0.64
Signs & Symptoms	2.27	45.3%	0.39	3.55	71.0%	0.64
Diagnostic Tests & Investigations	2.27	45.3%	0.39	3.55	71.0%	0.64
Treatment & Management	2.72	45.3%	0.47	4.26	71.0%	0.77
Prevention & Lifestyle	2.72	45.3%	0.47	4.26	71.0%	0.77
<b>Total</b>	<b>13.6</b>	<b>45.3%</b>	<b>2.34</b>	<b>21.3</b>	<b>71.0%</b>	<b>3.85</b>

## Association between the post test knowledge level regarding Polycystic ovarian disease and demographic variables n=60

S. No	Demographic Variables	Inadequate (n=39)	Adequate (n=21)	Chi-square ( $\chi^2$ )	df	p-value	Significance
1	<b>Age</b>			6.78	2	0.034*	S
	20–30 yrs	15	2				
	31–40 yrs	20	10				
	Above 40 yrs	4	9				
2.	<b>Education</b>			3.45	4	0.48	NS
	Illiterate	3	1				
	Primary	6	4				
	Secondary	10	6				
	Graduate	12	5				
3.	<b>Occupation</b>			2.64	3	0.45	NS
	Homemaker	20	8				
	Government	6	3				
	Private	8	5				
4.	<b>Religion</b>			1.98	2	0.37	NS
	Hindu	25	12				
	Muslim	8	4				
	Christian	6	5				
5.	<b>Family income (per month)</b>			4.12	3	0.24	NS
	<20,000	12	5				
	21,000–30,000	10	7				
	31,000–40,000	9	4				
	>40,000	8	5				
6.	<b>Marital status</b>			1.26	1	0.27	NS
	Unmarried	15	9				
	Married	24	12				
7.	<b>Area of residence</b>			0.62	1	0.43	NS
	Rural	20	9				
	Urban	19	12				
8.	<b>Age at menarche</b>			7.92	3	0.048*	S
	11–12 yrs	2	5				
	12–13 yrs	8	5				
	13–14 yrs	15	6				
	14–15 yrs	14	5				
9	<b>Menstrual pattern (6 months)</b>			6.55	1	0.011*	S
	Oligomenorrhea	25	8				
	Normal	14	13				
10	<b>BMI</b>			2.41	3	0.49	NS
	<18.5	3	2				
	18.5–22.9	12	6				
	23.0–27.4	15	6				
	≥27.5	9	7				
11	<b>Family history of PCOD</b>			0.88	1	0.38	NS
	Yes	15	8				
	No	24	13				

## Summary

The discussion chapter interprets the study findings by linking them back to the stated objectives and hypotheses. This means comparing the actual results with what was expected, highlighting whether the hypotheses were supported or not, and explaining the reasons for the outcomes in the context of existing literature.

## Recommendations

- Similar structured teaching programs can be organized in rural and urban health centers to increase awareness about PCOD.
- Health education sessions can be extended to schools and colleges to promote early detection and prevention strategies.
- Periodic workshops and seminars can be arranged for nurses and health workers to update knowledge on reproductive health issues.
- Mass media like posters, leaflets, and short videos can be utilized to reach a larger population.

## Article Information

**Disclaimer (Artificial Intelligence):** The author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.), and text-to-image generators have been used during writing or editing of manuscripts.

**Competing Interests:** Authors have declared that no competing interests exist.

## References

- [1] Al Souheil F, Chahine B. Knowledge of polycystic ovarian syndrome, its complications, and management among Lebanese women: a cross-sectional survey. *J Health Allied Sci NU*. 2022;12(3):267–273. doi:10.1055/s-0041-1740025.
- [2] Bahadur S, Sharma R, Singh N. Knowledge related to polycystic ovarian disorder. *Indian J Obstet Gynecol Res*. 2025;12(1):109–112.
- [3] Bahri Khomami M, Shorakae S, Hashemi S, Harrison CL, Piltonen TT, Romualdi D, et al. Systematic review and meta-analysis of pregnancy outcomes in women with polycystic ovary syndrome. *Nat Commun*. 2024;15(1):5591.
- [4] Bates GW, Legro RS. Long-term management of polycystic ovarian syndrome (PCOS). *Mol Cell Endocrinol*. 2013;373(1–2):91–97.
- [5] Begum GS, Almashaikhi NAT, Albalushi MY, Alsalehi HM, Alazawi RS, Goud BKM, et al. Prevalence of polycystic ovary syndrome and associated risk factors among medical students in two countries. *Int J Environ Res Public Health*. 2024;21(9):1165.