

EFFECT OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE REGARDING SELF-CARE MANAGEMENT OF PCOS AMONG THE STUDENTS OF DEGREE COLLEGES

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ABSTRACT

Introduction: Polycystic Ovary Syndrome (PCOS) is one of the most common endocrine and reproductive disorders affecting women of reproductive age, with an estimated global prevalence ranging from 2.2% to 26%. It is characterized by hyperandrogenism, menstrual irregularities, chronic anovulation, and polycystic ovaries, and is associated with long-term metabolic, cardiovascular, and psychological complications. The rising prevalence of PCOS has become a significant public health concern, particularly among adolescents and young women, largely due to changing lifestyles and limited awareness. In India, despite the increasing burden of PCOS, many women remain undiagnosed or seek medical care only after experiencing infertility or other complications. Insufficient knowledge regarding the causes, symptoms, risk factors, and preventive measures contributes to delayed diagnosis and management. Therefore, improving awareness about PCOS is essential for promoting early detection, timely intervention, and the prevention of long-term health consequences. Objectives The study was aimed at assessing the knowledge regarding self-care management of PCOS among the students preintervention and after the planned teaching and to associate the knowledge score of students with their selected demographic variables. Methodology: Quasi experimental pre-test and post-test design, 30 BSc Nursing students from selected Nursing colleges were enrolled by non-probability convenience sampling. Pre-test was administered on day one and planned teaching was given to the participants and after seven days post test was conducted. Result: The findings revealed that the mean knowledge score of students increased significantly from 8.36 ± 2.29 in the pre-test to 14.83 ± 2.12 in the post-test following the structured teaching programme. The difference was statistically significant ($Z = -6.468$, $p < 0.05$), indicating the effectiveness of the intervention. In the post-test, 66.67% of students demonstrated very good knowledge and 20% achieved excellent knowledge, whereas none had poor or average knowledge. A significant association was observed between pre-test knowledge scores and participants' age and year of study, while no significant association was found with healthcare profession, personal history of PCOS, or family history of PCOS. Conclusion: The structured teaching programme was effective in significantly improving students' knowledge regarding self-care management of Polycystic Ovary Syndrome (PCOS). Enhancing awareness through educational interventions can promote early recognition, adoption of healthy lifestyle practices, and timely management of PCOS among young women.

Keywords: Polycystic Ovary Syndrome (PCOS), Structured Teaching Programme, Self-Care Management, Knowledge, Nursing Students and Health Education

INTRODUCTION

Polycystic Ovary Syndrome (PCOS) is associated with chronic anovulation, menstrual irregularities, infertility, metabolic disturbances, and psychological problems, significantly affecting women's reproductive, metabolic, and emotional health. The growing incidence of sedentary lifestyles, unhealthy dietary habits, obesity, and stress has contributed to the increasing occurrence of PCOS, particularly among adolescents and young women.

Beyond reproductive dysfunction, women with PCOS are at an increased risk of developing several long-term health complications, including type 2 diabetes mellitus, insulin resistance, cardiovascular disease, hypertension, dyslipidaemia, and endometrial cancer. PCOS has a profound psychological impact, with many women experiencing anxiety, depression, frustration, reduced self-esteem, and impaired quality of life. The multifaceted nature of the syndrome necessitates a comprehensive approach that includes lifestyle modification, early diagnosis, self-care, and continuous health education.

Awareness regarding its risk factors, symptoms, complications, and self-care practices remains inadequate among young women. Many women seek medical attention only after experiencing infertility or other serious complications, leading to delayed diagnosis and treatment. Improving knowledge through structured educational interventions is therefore crucial for promoting healthy lifestyle behaviours, facilitating early diagnosis, enhancing self-management, and preventing long-term complications associated with PCOS.

NEED OF THE STUDY

Despite its growing burden, many women remain unaware of the signs, symptoms, risk factors, and long-term consequences of PCOS, resulting in delayed diagnosis and treatment. Over the past several decades, significant advances have been made in understanding the pathophysiology, diagnosis, and management of PCOS. However, the dissemination of this knowledge to the general population remains inadequate. Studies have shown that many women diagnosed with PCOS receive insufficient information regarding the disorder and its long-term management, while the general public continues to have limited awareness about preventive measures and self-care practices.

Therefore, there is a pressing need to improve awareness and knowledge regarding PCOS through structured educational interventions. Enhancing knowledge about lifestyle modification, early recognition of symptoms, and self-care management can facilitate timely diagnosis, promote healthy behaviours, reduce disease-related complications, and ultimately improve the overall health and quality of life of women affected by PCOS.

METHODS

A quasi-experimental one-group pre-test–post-test research design was adopted to evaluate the effectiveness of a structured teaching programme on knowledge regarding self-care management of Polycystic Ovary Syndrome (PCOS) among students. The study was conducted among Bachelor of Science (B.Sc.) Nursing students. The target population comprised undergraduate nursing students studying in selected degree colleges. A total of 30 students were selected using a non-probability convenience sampling technique. Data was collected using a self-structured questionnaire. The questionnaire consisted of two sections. Section I included demographic characteristics such as age, year of study, healthcare profession, personal history of PCOS, and family history of PCOS. Section II consisted of 20 multiple-choice questions assessing knowledge regarding PCOS, including its definition, causes, signs and symptoms, self-care management (weight management, diet, exercise, sleep, and personal hygiene), and pharmacological management. Knowledge levels were categorized as poor (0–4), average (5–8), good (9–12), very good (13–16), and excellent (17–20).

The content validity of the questionnaire and the structured teaching programme was established through review by subject experts in nursing and related specialties. A pre-test was conducted using the structured questionnaire to assess baseline knowledge regarding self-care management of PCOS. Immediately after the pre-test, participants received the structured teaching programme. A post-test was administered seven days later using the same questionnaire to evaluate the effectiveness of the educational intervention.

The collected data were entered into Microsoft Excel and analysed using appropriate descriptive and inferential statistics. The effectiveness of the structured teaching programme was determined by comparing pre-test and post-test knowledge scores using the Wilcoxon signed-rank test (or the paired *t*-test if data met the assumptions of normality). Associations between knowledge scores and selected demographic variables were analysed using the Chi-square test, independent *t*-test, or one-way analysis of variance (ANOVA).

RESULTS

Section I

Distribution of subjects with regards to their demographic variables.

Table No-1: Distribution of subject with regards to their demographic variables

SR.NO	SOCIO-DEMOGRAPHIC VARIABLES	CATEGORY	FREQUENCY	PERCENTAGE
1	Age in years	a) 18-20	30	100
		b) 21-23	0	0
		c) 24-26	0	0
		d) Above 26	0	0
2	Year of course	a) First year	30	100
		b) Second	0	0
		c) Third year	0	0
		d) Fourth	0	0
3	Health care profession	a) Yes	30	100
		b) No	0	0
4	Suffering with PCOS	a) Yes	1	3.33 %
		b) No	29	96.67 %
5	Family suffering with PCOS	a) Yes	1	3.33 %
		b) No	29	96.67 %

Table – 1 shows that among the total 30 samples, maximum 30 (100 %) of the students were from age group 18-20 years. Maximum 30 (100 %) of the students studying from the year of course in first year. Maximum 30 (100 %) of the students from the health care profession. 1 (3.33 %) of the students were suffering with PCOS and 29 (96.67 %) of the students are not suffering with PCOS. 1 (3.33%) of the students family suffering with PCOS and 29 (96.67%) of the student's family are not suffering with PCOS.

Section II

Assessment of knowledge regarding self-care management of PCOS among students

This section deals with the assessment of knowledge regarding self-care management of PCOS among students. The level of knowledge is divided under following headings: poor, average, good, very good and excellent.

Table No- 2: General assessments with pre test

n=30

Sr. No.	LEVEL OF KNOWLEDGE	SCORE RANGE	PERCENTAGE RANGE	PRETEST	
				FREQUENCY	PERCENTAGE
1.	Poor	0-4	0-19 %	1	3.33 %
2.	Average	5-8	20-39 %	14	46.67 %
3.	Good	9-12	40-59 %	14	46.67 %
4.	Very good	13-16	60-79 %	1	3.33 %
5.	Excellent	17-20	80-100 %	0	0 %
					100%
	Minimum score	4			
	Maximum score	13			
	Mean $\pm$ SD	8.36 $\pm$ 2.296			

Table-2 shows that pretest, 3.33% of students were found to have poor knowledge (score 0-4), 46.67% of them had average knowledge (score 5-8) and good knowledge (score 9-12), and 3.33% of them had very good knowledge (score 13-16) and none of them had excellent knowledge (score 17-20) regarding self-care management of PCOS.

Table No-3: General assessment with post test

n=30

S.N.	LEVEL OF KNOWLEDGE	SCORE RANGE	PERCENTAGE RANGE	POST TEST	
				FREQUENCY	PERCENTAGE
1.	Poor	0-4	0-19%	0	0%
2.	Average	5-8	20-39%	0	0%
3.	Good	9-12	40-59%	4	13.33%
4.	Very good	13-16	60-79%	20	66.67%
5.	Excellent	17-20	80-100%	6	20%
					100%
	Minimum score	11			
	Maximum score	20			
	Mean $\pm$ SD	14.83 $\pm$ 2.12			

Table-3 shows that post test ,0% of students were found to have poor knowledge (score 0-4) and average knowledge (score 5-8), 13.33% of them had good knowledge (score 9-12), 66.67% of them had very good knowledge (score 13-16) and 20% of them had excellent knowledge (score 17-20) regarding self care management of PCOS.

Section –III

Effectiveness of planned teaching regarding self care management of PCOS among students.

This section deals with evaluation of effectiveness of planned teaching on Knowledge regarding self care management of PCOS among students in selected nursing colleges of Pune. The hypotheses are tested statistically with area wise distribution of pretest and post test mean, standard deviation and mean score percentage. The levels of knowledge during the pretest and post test are compared to prove the effectiveness of planned teaching.

Table No-4: Comparison of knowledge in pretest and post test

S. N.	LEVEL OF KNOWLEDGE	SCORE RANGE	PERCENTAGE RANGE	PRETEST		POSTTEST	
				FREQUENCY	%	FREQUENCY	%
1.	Poor	0-4	0-19%	1	3.33%	0	0%
2.	Average	5-8	20-39%	14	46.67	0	0%
3.	Good	9-12	40-59%	14	46.67	4	13.33
4.	Very good	13-16	60-79%	1	3.33%	20	66.67
5.	Excellent	17-20	80-100%	0	0%	6	20%
					100%		100%
	Minimum			4		11	
	Maximum			13		20	
	Mean ± SD			8.36±2.296		14.83±2.12	

Table 4 shows that majority of 46.67% of students in pretest had average knowledge (score 5-8) and good knowledge (score 9-12). And 3.33% of students had poor knowledge (score 0-4) and very good knowledge (score 13-16) and none of them had excellent knowledge. Whereas in post test majority of 66.67% of the students had very good knowledge (score 13-16) and 20% of them had excellent knowledge (score 17-20) and 13.33% of them had good knowledge (score 9-12) and none of them had poor and average knowledge.

Table No-5: Significance of difference between knowledge score in pre and post-test of students regarding self care management of PCOS.

n = 30

Overall	Mean knowledge	SD	Z value	P value
Pretest	8.36	2.296	-6.4682	0.00
Posttest	14.83	2.12		S, p < 0.05

Table 5 shows effectiveness of structured teaching program regarding self care management of PCOS on knowledge scores. Mean knowledge scores about self care management of PCOS obtained from first year B.Sc Nursing students in pretest was 1.83 and post test was 2.33. This difference was statistically highly significant as P value <0.05, hence we reject null hypothesis and accept research hypothesis. It can be concluded that, the structured teaching program on self care management of PCOS is proved to be effective in delivering the knowledge and awareness.

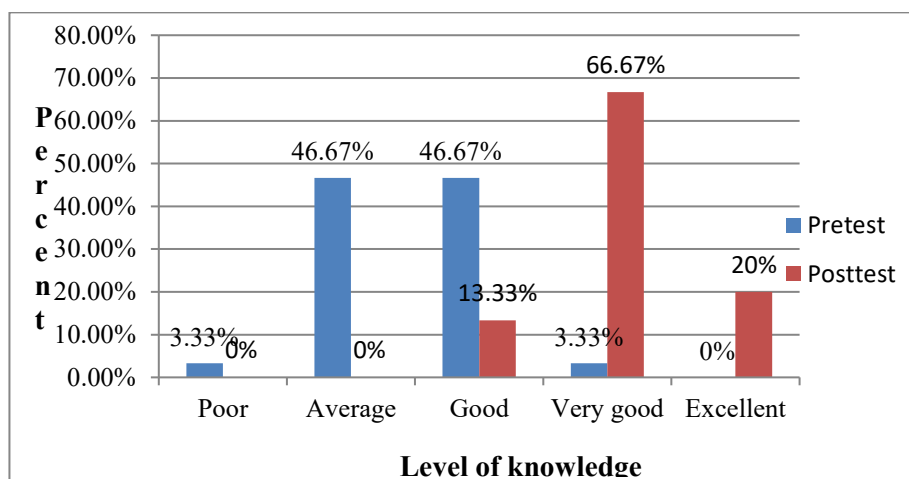


Fig 1: Distribution of students with regards to level of knowledge

Section IV

Association of knowledge score with selected demographic variables

This section deals with the association of knowledge scores with demographic variables of the study participants. One way ANOVA and unpaired 't' test are used for within group comparisons categorically. For variables having more than two categories, one way ANOVA is used and for variables having two categories unpaired 't' test is used.

Table No- 6: Association of knowledge score of subjects regarding self care management of PCOS in relation to their age.

n = 30

Age in years	Frequency	Mean ± S. D	F-value	p-value
18-20	30	8.36±2.296	3.36	0.045
21-23	0	0		S
24-26	0	0		P < 0.05
Above 26	0	0		

Table 6 shows the association of pretest knowledge scores with the age of study participants. The tabulated 'F' value for the association with the age of the participant was 3.36. Also the calculated 'p' = 0.045 was less than the acceptable level of significance i.e. 'p' = 0.05. Hence it is interpreted

that age of the study participants was associated with the pre-test knowledge scores.

Table No-7: Association of knowledge score of subjects regarding self care management of PCOS in relation to their year of course

n = 30

Year of Course	Frequency	Mean $\pm$ S.D	F-value	p-value
First year	30	8.36 $\pm$ 2.296	3.36	0.045
Second year	0	0		S
Third year	0	0		P < 0.05
Fourth year	0	0		

Table 7 shows the association of pretest knowledge scores with the year of course of study participants. The tabulated 'F' value for the association with the age of the participant was 3.36. Also the calculated 'p' = 0.045 was less than the acceptable level of significance i.e. 'p' = 0.05. Hence it is interpreted that year of course of the study participants was associated with the pre-test knowledge scores.

Table No-8: Association of knowledge score of subjects regarding self care management of PCOS in relation to belongingness to health care profession.

n = 30

Belonging to Health care profession	Frequency	F-value	p-value
a) Yes	30	3.36	0.37
b) No	0		NS, P > 0.05

Table 8 shows the association of pretest knowledge scores with the belongingness to health care profession of study participants. The tabulated 'F' value for the association with the age of the participant was 3.36. Also the calculated 'p' = 0.37 was greater than the acceptable level of significance i.e. 'p' = 0.05. Hence it is interpreted that health care profession of the study participants was not associated with the pre-test knowledge scores.

Table No-9: Association of knowledge score of subjects regarding self care management of PCOS in relation to suffering with PCOS.

n = 30

Participants suffering with PCOS	Frequency	F-value	p-value
a) Yes	29	2.78	0.43
b) No	1		NS, P > 0.05

Table 9 shows the association of pretest knowledge scores with suffering with PCOS of study participants. The tabulated 'F' value for the association with the age of the participant was 2.78. Also the calculated 'p' = 0.43 was greater than the acceptable level of significance i.e. 'p' = 0.05. Hence it is interpreted that suffering with PCOS of the study participants was not associated with the pre-test knowledge scores.

Table No-10: Association of knowledge score of subjects regarding self care management of PCOS in relation to family history of PCOS.

n = 30

Family history of PCOS	Frequency	F-value	p-value
a) Yes	29	3.14	0.39
b) No	1		NS, P > 0.05

Table 10 shows the association of pretest knowledge scores with family history of PCOS of study participants. The tabulated 'F' value for the association with the age of the participant was 3.14. Also the calculated 'p' = 0.39 was greater than the acceptable level of significance i.e. 'p' = 0.05. Hence it is interpreted that family history of PCOS of the study participants was not associated with the pre-test knowledge scores.

DISCUSSION

The present study findings demonstrated that the structured teaching programme significantly improved participants' knowledge, indicating that educational interventions are effective in enhancing awareness and promoting self-care practices related to PCOS. The assessment revealed that most participants had average to good knowledge regarding self-care management of PCOS, while only a small proportion demonstrated very good knowledge and none had excellent knowledge. These findings suggest that although nursing students possess some awareness of PCOS, important knowledge gaps remain, particularly regarding risk factors, lifestyle modification, and preventive measures. Similar findings have been reported in previous studies, which observed inadequate awareness of PCOS among adolescents and young women.

The present study also examined the association between knowledge scores and selected demographic variables. A significant association was found between pre-test knowledge and participants' age and year of study. This finding may indicate that educational exposure and academic progression influence students' understanding of reproductive health issues. However, no significant association was observed between knowledge scores and healthcare profession, personal

history of PCOS, or family history of PCOS. These findings suggest that prior exposure to the condition alone may not be sufficient to ensure adequate knowledge, highlighting the importance of structured educational programmes for all students regardless of their background.

CONCLUSION AND RECOMMENDATIONS:

The structured teaching programme was effective in significantly improving students' knowledge regarding self-care management of Polycystic Ovary Syndrome (PCOS). Enhancing awareness through educational interventions can promote early recognition, adoption of healthy lifestyle practices, and timely management of PCOS among young women. A study can be conducted to assess the attitude of students in the self care management of PCOS. A similar study may be replicated on large sample there by finding can be generalized and may be repeated with a control group for more generalization of findings. Different methods of teaching strategies can be used as part of teaching methods for the study. A study may be conducted to evaluate the effectiveness of health teaching of self care management of PCOS.

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