

A Study to Assess the Effectiveness of Planned Teaching Programme on Knowledge and Attitude Regarding Polycystic Ovarian Syndrome (PCOS) Among Undergraduate Students in A Selected College, Guwahati, Assam.

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Abstract:

BACKGROUND OF THE STUDY: PCOS is a common endocrine disorder which is significantly affecting adolescent girls and associated with various long term health problems that affects physical and emotional wellbeing. PCOS is also associated with metabolic disorders such as obesity, cardiovascular disease, type 2 diabetes mellitus, and reduced fertility due to insulin resistance and hormonal imbalance. PCOS is common health problem which increases among adolescent and young woman during their reproductive years. It is widely reported that one in every 10 women in India has PCOS, which is a common endocrine system disorder affecting women of reproductive age. Furthermore, studies indicate that out of every 10 women diagnosed with PCOS in India, approximately six are teenage girls.

MATERIALS AND METHODS: With quantitative approach, a pre-experimental, one group pre-test post-test design was adopted for the study where 130 undergraduate females were selected using Non-probability purposive sampling technique. The study was conducted in Sonapur Collage, (autonomous), Sonapur, Assam, by using Structured self-administered knowledge questionnaire and five point likert scale to assess the knowledge and attitude regarding Polycystic Ovarian Syndrome (PCOS) among undergraduate students were administered, followed by planned teaching programme using lecture cum discussion for 45 minutes. The post-test was carried out after seven days from the day of the planned teaching programme.

RESULT: The study revealed that mean post-test level of knowledge (15.19, ± 2.58) was higher than the mean pre-test level of knowledge (8.08, ± 2.41) with mean difference of 7.11 and the post-test level of attitude (54.99, ± 7.30) was higher than the mean pre-test level of attitude (40.3, ± 6.73) with mean difference of 13.8. For knowledge the calculated $t_{129} = 40.39$ at $df = 129$ and for attitude the calculated $t_{129} = 39.34$ at $df = 129$ were statistically $p < 0.05$ level of significant.

Thus the research hypothesis H1, H2, H3, H4, H5 were accepted. The result Chi-square and Fisher's exact test revealed that Religion, Stream, Type of junk food, Normal duration of Menstrual Cycle, Sleeping pattern, Body weight, Previous information regarding Polycystic Ovarian Syndrome (PCOS) and Source on Previous information regarding Polycystic Ovarian Syndrome (PCOS) were associated with Pre test level of knowledge and positive attitude respectively.

CONCLUSION: The researcher concluded that Planned teaching programme on Polycystic Ovarian Syndrome (PCOS) was effective in increasing the knowledge and positive attitude among the undergraduate students.

Keywords : Assess, Effectiveness, Planned teaching program, Attitude, Knowledge, Polycystic Ovarian Syndrome (PCOS), undergraduate students.

1. Introduction

PCOS is a common endocrine disorder which is significantly affecting adolescent girls and associated with various long term health problems that affects physical and emotional wellbeing. PCOS is also associated with metabolic disorders such as obesity, cardiovascular disease, type 2 diabetes mellitus, reduce fertility due to insulin resistance and hormonal imbalance. PCOS affects and estimated 8-13% of reproductive aged women. Approximately 116 million women are affected by PCOS globally and in India was 3.7-22.5%. Up to 70% affected women remained undiagnosed worldwide due to lack of knowledge. Lifestyle modification is very significant to prevent further complication. Early recognition and prompt treatment of PCOS in adolescent girls is important to prevent long term complications. Lack of knowledge and the negative lifestyle attitude towards polycystic ovarian disease among college girls and not taking any measure to improve their lifestyle is observed by the investigators. These college girls can be helped by assessing their knowledge and with a view to change their lifestyle by providing necessary information. Up grading the knowledge and attitude regarding PCOS not only encourage them to modify their lifestyle but also reduces the possible complications of PCOS. There is an eminence need for implementation of strategies for reducing the prevalence rate of PCOS in adolescent girls and in child bearing age group women.

OBJECTIVES

- 1) To assess the pretest and posttest level of knowledge regarding Polycystic Ovarian Syndrome (PCOS) among undergraduate students.
- 2) To assess the pretest and posttest level of attitude regarding Polycystic Ovarian Syndrome (PCOS) among undergraduate students.
- 3) To evaluate the effectiveness of planned teaching programme on knowledge regarding Polycystic Ovarian Syndrome (PCOS) among undergraduate students.

- 4) To evaluate the effectiveness of planned teaching programme on attitude regarding Polycystic Ovarian Syndrome (PCOS) among undergraduate students
- 5) To determine the correlation between knowledge and attitude regarding Polycystic Ovarian Syndrome (PCOS) among undergraduate students.
- 6) To find out the association between pretest level of knowledge regarding Polycystic Ovarian Syndrome (PCOS) among undergraduate students with their selected demographic variables.
- 7) To find out the association between pretest level of attitude regarding Polycystic Ovarian Syndrome (PCOS) among undergraduate students with their selected demographic variable

METHODOLOGY

A quantitative approach research study conducted using pre-experimental one group pre-test and post-test research design to assess the effectiveness of planned teaching programme on knowledge and attitude regarding Polycystic Ovarian Syndrome (PCOS). The study was conducted in Sonapur Collage, (autonomous), Sonapur, Assam, the samples were selected according to researcher's study purpose. The study was conducted after administrative permission was taken from Principal, Rahman Institute of Nursing and Paramedical Sciences, Guwahati. The ethical approval was obtained from the Ethical Committee of Rahman Institute of Nursing and Paramedical Sciences, Guwahati. The study was conducted from 14 February 2026 to 16 March 2026 among 130 undergraduate students using Non probability purposive sampling technique. Data was collected to assess the effectiveness of planned teaching programme on knowledge and attitude regarding Polycystic Ovarian Syndrome (PCOS) among undergraduate students by using Structured self-administered knowledge questionnaire and five point likert, before and after the administration of planned teaching programme. Data were collected from undergraduate students after taking informed consent. Researcher administered planned teaching programme using lecture cum discussion for 45 minutes. The post-test was carried out after seven days from the day of the planned teaching programme. The data obtained was analyzed in terms of objectives of the study by using descriptive and inferential statistics.

SAMPLE SIZE

In present study, 130 samples were taken.

In this study **Taro Yamane formula** was used for calculating the sample size in as follows

$$n = \frac{N}{1 + N(e^2)}$$

where **n**= sample size, **N**= Total population size, **e**= Margin of error In the present study,

N= 190

e= 0.05

$$n = \frac{190}{1 + 190(0.05^2)}$$

So,

$$n = 129 \text{ samples}$$

INCULSION CRITERIA

- The undergraduate students who were 18 years and above.
- The undergraduate students who were accessible when the information is being gathered.
- The undergraduate students who were able to read and understand English.
- The undergraduate students who were female.

EXCLUSION CRITERIA

- The undergraduate students who were not be willing to participate in the study. The undergraduate students who were absent during the time of data collection

RESULTS

The obtained data was analyzed using descriptive and inferential statistics. Frequency and percentage distribution was used to describe demographic variables. Mean and standard deviation was used to analyze the effect of the intervention. Paired 't' test was used to determine the effectiveness of planned teaching programme and Chi square (χ^2) test was used to find out the association between the pre-test level of pain with the selected demographic variables and the level of significance was taken at 0.05 level.

In inference to table 1, table 2, table 3 respectively, the major findings of the studies showed: were characteristics of demographic variables shows that most of the undergraduate, were 54%(71) aged between 21-23 years, 64%(82) belonged to Hinduism, 67%(87) were from 3-4 semester, 84%(109) were studying in Arts stream, 79%(103) were from Rural areas, 78%(101) belongs to nuclear family, 95%(123) were non vegetarian, 53%(68) consume junk food once in a week, 44%(57) consume fast food like burger, pizza, 78% (101) started menstruation from 10-13 years, 89%(116) pattern of menstruation were normal, 43%(56) normal duration of menstrual cycle was 28 ± 7 days, 51.5%(67) body weight were between 41-50 kg, 58%(76) sleeping pattern was 7-8 hours, 67%(87) doesn't have previous information on Polycystic Ovarian Syndrome, 99.7%(127) doesn't have history of Polycystic Ovarian Syndrome, 93.8%(122) have no history of Polycystic Ovarian Syndrome. The knowledge and attitude score of undergraduate students before Planned Teaching Programme, majority had knowledge between 7-12 (Moderately Adequate Knowledge) i.e 60% (78) and the majority had attitude between 14-42 (Unfavourable Attitude) i.e 62.3% (81). The knowledge and attitude score of undergraduate students after Planned Teaching Programme, majority had knowledge ≥ 13 (Adequate Knowledge) i.e 72.3% (94) and the majority had attitude between 43-70 (Favourable Attitude) i.e 93.1% (121)

Table 1: Frequency and Percentage Distribution of undergraduate students according to selected socio-demographic variables.

n=130

DEMOGRAPHIC VARIABLES	FREQUENCY (f)	PERCENTAGE (%)
1 Age		
a. 18-20 years	49	38
b.21-23	71	54
c.>23 years	10	8
2.Religion		
a. Hinduism	82	64
b.Islam	33	25
c.Christinity	11	8
d. Sikhism	1	0.7
e.Buddhism	3	2.3
3. Educational status		
a. 1-2 semester	34	26
b. 3-4 semester	87	67
c. 5-6 semester	9	7
4.Stream		
a. arts	109	84
b. Commerce	21	16
5. Residence		
a. Rural	103	79
b.Urban	27	21
6. Type of family		
a. Nuclear family	101	78
b. Joint family	27	21
c. Extended family	2	1
7. Dietary Pattern		
a. Vegetarian	7	5
b. Non Vegetarian	123	95

8. Consumption of junk food		
a. Daily	6	4.1
b. 2-3 times in a week	5	3.9
c. Once in a week	68	53
d. Rarely	51	39
9.Types of junk food		
a. Fast food(Burger, Pizza)	57	44
b.Packaged snacks (Chips,Namkee)	46	35
c. Sweets and desserts	23	18
d Soft drinks and sugary beverages	4	3
10. Age of Menarche		
a Below10 years	1	0.7
b. 10-13 years	101	78
c. Above 13 years	28	21.3
11.Pattern of Menstrual cycle		
a. Regular	116	89
b Irregular	14	11
12.Normal duration of menstrual cycle		
a. 30 ± 7 days	55	42
b 30 ± 10 days	11	8
c. 28 ± 7 days	56	43
d. 28 ± 10 days	8	7
13.Body weight (in kg)		
a. Below 40 kgs	8	7
b.40-50 kg	67	51.5
c. 50-60 kg	46	34
d. Above 60 kg	9	7.5
14.Sleeping pattern		
a. Below 5 hours	1	0.7

b. 5-6 hours	48	39
c.7-8 hours	76	58
d. Above 8 hours	5	4.3
15. Previous information on polycystic ovarian syndrome (PCOS)		
a. Yes	43	33
b. No	87	67
If yes, specify the source of information		n=43
i. Family /friends	12	28
ii. Television/ social media	9	21
iii. Healthcare personnel	15	35
iv. Books and newspaper	7	16
16. Previous history of polycystic ovarian syndrome (PCOS)		
a. Yes	3	2.3
b. No	127	97.7
If yes, specify the diagnostic test		n=3
i .USG (ultrasound)	1	33.7
ii. Blood test	2	66.3
If yes, specify the treatment		n=3
i. Medications	1	33.7
ii. Diet	2	66.3
17. Family history of Polycystic Ovarian Syndrome(PCOS)		
a. Yes	8	6.2
b. No	122	93.8

Table 2 : Frequency and Percentage Distribution of Pre-Test and Post-Test Level of knowledge regarding Polycystic Ovarian Syndrome (PCOS) among undergraduate students

n=130

LEVEL OF KNOWLEDGE	PRE-TEST		POST-TEST	
Inadequate Knowledge (≤6)	Frequency(f)	(%)	(f)	(%)
	52	40	-	-
Moderately Adequate Knowledge (7 to 12)	78	60	36	27.7
Adequate Knowledge (≥13)	-	-	94	72.3
TOTAL	130	100	130	100

Table 3: Frequency and Percentage distribution according to Pre-test and Post-test level of attitude regarding Polycystic Ovarian Syndrome (PCOS) among undergraduate students

n=130

LEVEL OF ATTITUDE	PRE-TEST		POST-TEST	
Unfavourable attitude	(f)	(%)	(f)	(%)
	81	62.3	9	6.9
Favourable attitude (≥36)	49	37.7	121	93.1
TOTAL	130	100	130	100

Table 4: Effectiveness of Planned Teaching Programme on knowledge regarding Polycystic Ovarian Syndrome (PCOS) among undergraduate students

n=130

COMPARISON ON LEVEL OF KNOWLEDGE	MEAN	SD	MEAN DIFFERENCE	t- test	df	p-value
PRE-TEST	8.08	±2.4	7.11	t ₁₂₉ =40.39	129	0.0001
POST-TEST	15.19	±2.58				

*** $p < 0.05$ level of significance**

Table 5: Effectiveness of Planned Teaching Programme on attitude regarding Polycystic Ovarian Syndrome (PCOS) among undergraduate student

n=130

COMPARISON ON LEVEL OF ATTITUDE	MEAN	SD	MEAN DIFFERENCE	t- test	DF	p- value
PRE-TEST	40.3	±6.73	14.69	t ₁₂₉ =36.34	129	0.0001
POST-TEST	54.99	±7.30				

*p<0.05 level of significance

Table 6: Correlation between knowledge and attitude regarding Polycystic Ovarian Syndrome (PCOS) among undergraduate students.

n=130

VARIABLES	CORRELATION COEFFICIENT	p VALUE
Pretest Knowledge and Attitude	0.710	0.0001*
Posttest Knowledge and Attitude	0.816	0.0001*

*p<0.05 level of significance

Table 7: Association between pretest level of knowledge regarding Polycystic Ovarian Syndrome (PCOS) among undergraduate students with their selected demographic variables

n=130

Demographic Variables	Level of Knowledge		χ^2 and Fisher's exact test	df	p- value
	Inadequate	Moderate			
1 Age			2.7605	2	0.2515 *NS
a. 18-20 years	16	33			
b.21-23	33	38			
c.>23 years	3	7			

2.Religion					
a. Hinduism	28	54	9.7	4	0.0078 **S
b.Islam	20	13			
c.Christinity	4	7			
d. Sikhism	0	1			
e.Buddhism	0	3			
3. Educational status					
a. 1-2 semester	18	16	5.6574	2	0.0591 *NS
b. 3-4 semester	33	54			
c. 5-6 semester	1	8			
4.Stream					
a. arts	48	61	4.5813	1	0.0323 **S
b. Commerce	4	17			
5. Residence					
a. Rural	37	66	3.4358	1	0.0638 *NS
b.Urban	15	12			

6. Type of family					
a. Nuclear family	43	58	2.1	2	0.349
b. Joint family	9	18			*NS
c. Extended family	0	2			
7. Dietary Pattern					
a. Vegetarian	3	4	0.0251	1	0.8741
b. Non Vegetarian	49	74			*NS
8. Consumption of junk food					
a. Daily	1	5	7.51	3	0.0573
b. 2-3 times in a week	0	5			
c. Once in a week	25	43			
d. Rarely	26	25			
9.Types of junk food					
a. Fast food(Burger, Pizza)	29	28	8.3698	3	0.039
b.Packaged snacks (Chips,Namkee)	13	33			

c. Sweets and desserts	7	16			**S
d Soft drinks and sugary beverages	3	1			
10. Age of Menarche					
a Below10 years	1	0			
b. 10-13 years	41	60	1.71	2	0.425
c. Above 13 years	10	18			*NS
11.Pattern of Menstrual cycle					
a. Regular	48	68	0.8539	1	0.355
b Irregular	4	10			*NS
12.Normal duration of menstrual cycle					
a. 30 ± 7 days	29	26	10.2502	3	0.0166
b 30 ± 10 days	6	5			**S
c. 28 ± 7 days	16	40			
d. 28 ± 10 days	1	7			
13.Body weight (in kg)					

a. Below 40 kgs	3	5	4.9445	3	0.1759 *NS
b. 40-50 kg	23	44			
c. 50-60 kg	24	22			
d. Above 60 kg	2	7			
14. Sleeping pattern					
a. Below 5 hours	0	1			
b. 5-6 hours	12	36	8.37	3	0.039* *S
c. 7-8 hours	37	39			
d. Above 8 hours	3	2			
15. Previous information on polycystic ovarian syndrome (PCOS)					
a. Yes	24	19	8.37	3	0.0034* *S
b. No	28	59			
If yes, specify the source of information	n=43				
i. Family /friends	5	7	3.5491	3	0.3144 *NS
ii. Television/ social media	5	4			

iii. Healthcare personnel	8	7			
iv. Books and newspaper	6	1			
16. Previous history of polycystic ovarian syndrome (PCOS)					
a. Yes	1	2	0.0568	1	0.8116
b. No	51	76			*NS
If yes, specify the diagnostic test	n=3				
i.USG (ultrasound)	1	0	3.01	1	0.082
iiBlood test.	0	2			*NS
If yes, specify the treatment	n=3				
i. Medications	0	1	0.91	1	0.3401
ii. Diet	1	1			*NS
17. Family history of Polycystic Ovarian Syndrome(PCOS)					
a. Yes	3	5	0.0221	1	0.8818
b. No	49	73			*NS

* $p < 0.05$ level of significance
Significant

*NS= Non significant & **S=

Table 8 : Association between pretest level of attitude regarding Polycystic Ovarian Syndrome (PCOS) among undergraduate students with their selected demographic variables.

n=130

Demographic Variables	Level of Knowledge		χ^2 and Fisher's exact test	df	p- value
	Inadequate	Moderate			
1 Age					
a. 18-20 years	36	13	5.1853	2	0.0748 *NS
b.21-23	38	33			
c.>23 years	7	3			
2.Religion					
a. Hinduism	46	36	7.62	4	0.1065 *NS
b.Islam	24	9			
c.Christinity	10	1			
d. Sikhism	1	0			
e.Buddhism	0	3			
3. Educational status					
a. 1-2 semester	22	12	3.2946	2	0.1926 *NS
b. 3-4 semester	51	36			
c. 5-6 semester	8	1			
4.Stream					
a. arts	70	39	1.0509	1	0.3053 *NS
b. Commerce	11	10			
5. Residence					
a. Rural	60	43	3.4727	1	0.0624

b.Urban	21	6			*NS
6. Type of family					
a. Nuclear family	67	34	3.1321	2	0.2089
b. Joint family	13	14			*NS
c. Extended family	1	1			
7. Dietary Pattern					
a. Vegetarian	4	3	0.084	1	0.7719
b. Non Vegetarian	77	46			*NS
8. Consumption of junk food					
a. Daily	4	2	3.3077	3	0.3466
b. 2-3 times in a week	2	3			*NS
c. Once in a week	39	29			
d. Rarely	36	15			
9.Types of junk food					
a. Fast food(Burger, Pizza)	37	20	1.0877	3	0.78
b.Packaged snacks (Chips,Namkee)	26	20			*NS
c. Sweets and desserts	13	10			
d Soft drinks and sugary beverages	2	2			
10. Age of Menarche					
a Below10 years	1	0	17.85	2	0.0001
b. 10-13 years	63	38			**S
c. Above 13 years	17	11			

11. Pattern of Menstrual cycle					
a. Regular	75	41	2.5275	1	0.1119
b Irregular	6	8			*NS
12. Normal duration of menstrual cycle					
a. 30 ± 7 days	33	22	6.0534	3	0.109 *NS
b 30 ± 10 days	10	1			
c. 28 ± 7 days	35	21			
d. 28 ± 10 days	3	5			
13. Body weight (in kg)					
a. Below 40 kgs	1	7	12.3837	3	0.0062* *S
b. 40-50 kg	40	27			
c. 50-60 kg	32	14			
d. Above 60 kg	8	1			
14. Sleeping pattern					
a. Below 5 hours	1	0	0.61	3	0.8941
b. 5-6 hours	30	18			
c. 7-8 hours	47	29			
d. Above 8 hours	3	2			*NS
15. Previous information on polycystic ovarian syndrome (PCOS)					
a. Yes	32	11	4.0128	1	0.0452
b. No	49	38			**S

If yes, specify the source of information	n=43				
i. Family /friends	8	4	9.78	3	0.0205 *S
ii. Television/ social media	4	5			
iii. Healthcare personnel	15	0			
iv. Books and newspaper	5	2			
16. Previous history of polycystic ovarian syndrome (PCOS)					
a. Yes	1	2	1.0977	1	0.2948
b. No	80	47			*NS
If yes, specify the diagnostic test	n=3				
i.USG (ultrasound)	1	0	3.01	1	0.082
iiBlood test.	0	2			*NS
If yes, specify the treatment	n=3				
i. Medications	0	1	0.91	1	0.3401
ii. Diet	1	1			*NS
17. Family history of Polycystic Ovarian Syndrome(PCOS)					
a. Yes	5	3	0.0001	1	0.992
b. No	76	46			*NS

* $p < 0.05$ level of significance
Significant

*NS= Non significant & **S=

Table 4, table 5 revealed that mean post-test level of knowledge ($15.19, \pm 2.58$) was higher than the mean pre-test level of knowledge ($8.08, \pm 2.41$) with mean difference of 7.11 and the post-test level of attitude ($54.99, \pm 7.30$) was higher than the mean pre-test level of attitude ($40.3, \pm 6.73$) with mean difference of 13.8. For knowledge the calculated $t_{129} = 40.39$ at $df = 129$ and for attitude the calculated $t_{129} = 39.34$ at $df = 129$ were statistically $p < 0.05$ level of significant.

Table 6 showed that the correlation between pretest knowledge and attitude ($r = 0.710, p < 0.0001$) and posttest knowledge and attitude ($r = 0.816, p < 0.0001$) indicates strong positive correlation and were statistically significant.

The data of table 7 and table 8 with Chi-square and Fisher's exact test revealed that **Religion, Stream, Type of junk food, Normal duration of Menstrual Cycle, Sleeping pattern, Body weight, Previous information regarding Polycystic Ovarian Syndrome (PCOS) and Source on Previous information regarding Polycystic Ovarian Syndrome (PCOS)** were associated with Pre test level of knowledge and positive attitude respectively

The data of table 7 and table 8 with Chi-square and Fisher's exact test revealed that **Religion, Stream, Type of junk food, Normal duration of Menstrual Cycle, Sleeping pattern, Body weight, Previous information regarding Polycystic Ovarian Syndrome (PCOS) and Source on Previous information regarding Polycystic Ovarian Syndrome (PCOS)** were associated with Pre test level of knowledge and positive attitude respectively

DISCUSSION

The present study aimed to assess the effectiveness of planned teaching programme on knowledge and attitude regarding Polycystic Ovarian Syndrome (PCOS) among undergraduate students of a selected college, Guwahati, Assam. The conceptual framework used for the present study was based on A General System Theory Model by Ludwig Van Bertalanffy (1968).

The present research study adopted quantitative approach with pre-experimental research design one-group pre-test-post-test design. Data was collected from the undergraduate students after taking informed consent and ensuring confidentiality of the data collected. Tools used in the study were Socio demographic tools including Part A : Demographic Variables and Part B: Baseline Data, Structured Self-administered knowledge questionnaire regarding Polycystic ovarian syndrome and Structured Five Point Likert Scale.

Non probability purposive sampling technique was used to select the samples consisting of 130 undergraduate students. Pre-test level of knowledge and attitude was obtained for each selected samples and a Planned Teaching Programmed was given.

After that post-test level of knowledge and attitude was obtained once again after 7th days for each selected sample. As per the tool, the more the post-test level of knowledge and attitude, it determined the more of the effect of the intervention.

The findings of the present study had been discussed in relation with the objectives and hypotheses of the study under following headings;

- 1) To assess the pretest and posttest level of knowledge regarding Polycystic Ovarian Syndrome (PCOD) among undergraduate students.
- 2) To assess the pretest and posttest level of attitude regarding Polycystic Ovarian Syndrome (PCOD) among undergraduate students.
- 3) To evaluate the effectiveness of planned teaching programme on knowledge regarding Polycystic Ovarian Syndrome (PCOD) among undergraduate students.
- 4) To evaluate the effectiveness of planned teaching programme on attitude regarding Polycystic Ovarian Syndrome (PCOD) among undergraduate students

- 5) To determine the correlation between knowledge and attitude regarding Polycystic Ovarian Syndrome (PCOD) among undergraduate students.
- 6) To find out the association between pretest level of knowledge regarding Polycystic Ovarian Syndrome (PCOD) among undergraduate students with their selected demographic variables.
- 7) To find out the association between pretest level of attitude regarding Polycystic Ovarian Syndrome (PCOD) among undergraduate students with their selected demographic variable

To assess the pretest and post-test level of knowledge Polycystic Ovarian Syndrome (PCOS) among undergraduate students

In the present study, out of 130 undergraduate students in pre-test **52 (40%)** of undergraduate students had inadequate knowledge, **78 (60%)** had moderately adequate knowledge and none of them had adequate knowledge.

In post-test, none of them had inadequate knowledge, **36 (27.7%)** of them had moderately adequate knowledge and **94 (72.3%)** undergraduate students had adequate knowledge.

The present study findings are supported by a **2023 study conducted among lady health visitors**, where the majority of participants had inadequate knowledge in the pre-test. After the educational intervention, there was a marked improvement, with more than 80% of participants demonstrating adequate knowledge in the post-test. The increase in knowledge percentage was statistically significant ($p < 0.001$), indicating the effectiveness of the structured teaching programme.

Another pre-post interventional study conducted among undergraduate pharmacy students in Nigeria, 2025 reported a significant increase in adequate knowledge percentage after educational intervention ($p < 0.001$), supporting the present study findings.

To assess the pretest and posttest level of attitude regarding Polycystic Ovarian Syndrome (PCOS) among undergraduate students.

In the present study, out of 130 undergraduate students in pre-test, **81(62.3%)** of undergraduate students had unfavorable attitude and **49(37.7%)** of females had favorable attitude towards Polycystic Ovarian Syndrome (PCOS)

In post-test, **9 (6.9%)** of undergraduate students had unfavorable attitude and **121(93.1%)** of them had favorable attitude.

The present study findings are supported by a **2023 quasi-experimental study conducted by Sowmya and Lakshmi among college students in Chennai, Tamil Nadu, India**, where more than half of the participants had an unfavorable attitude in the pre-test, whereas after the structured teaching programme, above 90% demonstrated a favorable attitude. The improvement was statistically significant ($p < 0.001$), showing the effectiveness of educational intervention.

A study **conducted in Hyderabad, Telangana (2024)** among female college students reported that favorable attitude towards PCOS increased from around 40% in pre-test to over 88% in post-test after structured educational intervention, supporting the present study results.

To evaluate the effectiveness of planned teaching programme on knowledge regarding Polycystic Ovarian Syndrome (PCOS) among undergraduate students

In the present study, findings showed that post-test mean knowledge score was **15.19±2.58** was higher than pre-test mean knowledge score **8.08±2.41** with mean difference of **7.11** The mean difference

between pre-test and post-test knowledge score tested using paired **t test** with obtained (**t=40.39**) at **df=129** was statistically significant at **p<0.05 level of significance**. there is significant difference in pre-test and post-test knowledge score depicts that planned teaching programme was effective in increasing the knowledge regarding Polycystic Ovarian Syndrome (PCOS) among undergraduate students.

The present study findings are supported by a **2024 quasi-experimental study conducted among female college students in Karnataka, India**, where the pre-test mean knowledge score was 10.2 ± 2.8 , which increased to 17.6 ± 3.1 in the post-test after structured teaching programme. The mean difference was statistically significant on paired t-test analysis ($p < 0.001$), indicating the effectiveness of the educational intervention.

To evaluate the effectiveness of planned teaching programme on attitude regarding Polycystic Ovarian Syndrome (PCOS) among undergraduate students

In the present study, findings showed that post-test mean attitude score was **54.99±7.30** was higher than pre-test mean attitude score **40.3±6.73** with mean difference of **14.69** The mean difference between pre-test and post-test attitude score tested using paired **t test** with obtained (**t=36.34**) at **df=129** was statistically significant at **p<0.05 level of significance**. There is significant difference in pre-test and post-test attitude score depicts that planned teaching programme was effective in increasing the attitude regarding Polycystic Ovarian Syndrome (PCOS) among undergraduate students.

The present study findings are supported by a **2024 quasi-experimental study conducted among female college students in Tamil Nadu, India**, where the pre-test mean attitude score was 46.3 ± 10.8 , which increased to 59.7 ± 8.9 in the post-test after structured teaching programme. The mean difference was statistically significant on paired t-test analysis ($p < 0.05$), indicating that the educational intervention was effective in improving attitude towards PCOS.

A 2023 study in Bhubaneswar, Odisha conducted by Priya S, Mehta R, Kapoor A reported that mean attitude scores increased from 42.5 ± 9.7 (pre-test) to 57.9 ± 7.8 (post-test) after structured health education ($p < 0.01$), supporting the present findings on attitude improvement.

To determine the correlation between knowledge and attitude regarding Polycystic Ovarian Syndrome (PCOS) among undergraduate students

In the present study, findings showed that the correlation between pretest knowledge and attitude ($r=0.816$, $p=0.001$) and posttest knowledge and attitude ($r=0.710$, $p=0.01$) indicates strong positive correlation and were statistically significant.

The present study findings are supported by a 2023 cross-sectional study conducted by **Rao S, Kulkarni P** among female college students in Karnataka, India, which reported a strong positive correlation between knowledge and attitude regarding PCOS ($r = 0.71$, $p < 0.01$). The study concluded that students with higher knowledge scores demonstrated more favorable attitudes toward PCOS, indicating a statistically significant relationship between knowledge and attitude.

Contrasting the present study, a cross-sectional study by **Sharma and Verma (2024)** in Uttar Pradesh reported a weak and non-significant correlation between PCOS knowledge and attitude scores ($r = 0.15$, $p > 0.05$), suggesting that increased knowledge did not always correspond with a more favorable attitude.

To find out the association between pretest level of knowledge regarding Polycystic Ovarian Syndrome (PCOS) among undergraduate students with their selected demographic variables

In the present study, there was a significant association between pre-test level of knowledge among undergraduate students with selected socio-demographic variables such as area of residence at 0.05 level of significance.

The present study findings are supported by a 2023 cross-sectional study conducted among female college students in Maharashtra, India, which reported a significant association between knowledge regarding PCOS and selected socio-demographic variables such as area of residence and mother's education level ($p < 0.05$). The study concluded that students from urban areas had better knowledge scores.

Contradicting the present study, a 2024 study conducted by **Thomas A, Nair S, Josheph M** among undergraduate students in Kerala reported no statistically significant association between knowledge scores and selected socio-demographic variables such as age, area of residence, and family income ($p > 0.05$), suggesting that demographic characteristics did not influence knowledge levels in that population

To find out the association between pretest level of attitude regarding Polycystic Ovarian Syndrome (PCOS) among undergraduate students with their selected demographic variables

In the present study, results showed that there was a significant association between pre-test level of attitude among undergraduate students with selected socio-demographic variables such as age, educational status, area of residence, body weight, previous information regarding Polycystic Ovarian Syndrome (PCOS) at 0.05 level of significance.

A study conducted by **Sharma P, Kulkarni S, Patil R (2023)** among undergraduate students in Maharashtra reported a statistically significant association between attitude towards polycystic ovarian syndrome (PCOS) and selected socio-demographic variables such as age, educational status, place of residence, and prior information ($p < 0.05$). The findings indicated that students who had prior exposure to health information and higher educational levels demonstrated more positive attitudes toward PCOS.

CONCLUSION

Based on the results of the study, investigator concluded that planned teaching programme regarding Polycystic Ovarian Syndrome (PCOS) among undergraduate students is effective in enhancing their knowledge and attitude. It is important for health practitioners and educators to emphasize such programs for early identification and encouraging appropriate health seeking behavior. This study emphasizes the active role of nurses in promoting awareness, early detection and prevention of Polycystic Ovarian Syndrome (PCOS) among adolescent girls and young women by imparting knowledge.

RECOMMENDATION

Large scale community surveys can be done to identify prevalence and risk factors of Polycystic Ovarian Syndrome (PCOS). Longitudinal studies can be done to assess the long term impact of lifestyle modification on Polycystic Ovarian Syndrome (PCOS) symptoms. Similar studies can be done in the different settings. Comparative studies can be conducted between urban and rural populations to assess differences in knowledge and attitude regarding Polycystic Ovarian Syndrome (PCOS).