

## A Study to Assess the Effectiveness of Structured Teaching Programme on Polycystic Ovarian Syndrome (PCOS) among Adolescent in Selected Pre-University at Amritsar (Punjab)

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### Abstract

*Adolescence is a period having the sense of individuality and the sense of familiarity. It is the shift from childhood to adulthood and so it is not a smooth one. In addition to this intellectual and affectional upheaval, rapid body growth causes them anxiousness and cultural pressures of today's world add further strain to their quality. 10 to 20% of the world population comprises adolescents and their problems have not been fully understood and addressed until recent times. The target population for the study was selected from SSSS College of commerce at Amritsar. This population was selected by simple random sampling technique. The total samples under the study were 60 students (females). The data was collected by organized knowledge questionnaire which was designed to evaluate the knowledge of students regarding polycystic ovarian syndrome. The results were represented by using prescriptive and reasoning statistics. The overall findings of the study clearly shows that there is a statistically enhancement in post-test knowledge. It reveals that, if the adolescent are provided with some sort of educational interventions such as structured teaching programme on polycystic ovarian syndrome will definitely brief up their knowledge, which in turn contributes to improve the total quality of one's reproductive health.*

**Keywords:-** Polycystic ovarian syndrome, structured teaching programme, knowledge, adolescents.

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### INTRODUCTION

Nowadays we are living in a period of modernization. The effect of modernization and technological advancement shows in everyday life. Our lifestyle also has varied a lot. Nutrients intake is becoming more assembled on sugar, fast food and soft drinks and less on healthy, traditional fare. This unhealthy food traditions and lack of exercise leads to many diseases in adolescents like Polycystic Ovarian Syndrome (PCOS). Polycystic ovary syndrome (PCOS) is a common health problem which is appallingly increasing in teenage girls and young women during their early reproductive years. It is one of the most

common endocrine disorders of women in reproductive age group, with figure of 4–12% globally. In India the relative frequency of PCOS is 0.5–4%<sup>[1]</sup>.

PCOS is the most common endocrinopathy affecting the women. Stein and Leventhal first described PCOS in 1935. It is a complex heterogeneous disorder of the female endocrine system with uncertain etiology. It affects about 5-10% of the female population who are in the age group of 12–45 years and produces symptoms in approximately 5% to 10% of women of reproductive age and is thought to be one of the leading causes of infertility<sup>[2–3]</sup>.

It is known that Poly cystic ovarian syndrome (PCOS) and infertility go hand in hand. PCOS, a major reason of infertility in women, is related to the lack of ovulation (an ovulatory infertility). Most women don't find out that they have PCOS until become pregnant or want to have a baby<sup>[4]</sup>. Potentially trying for a year or more without success, a woman will go to doctor who confirms the problem. However, many of the symptoms and distinctive characters of PCOS are present in a young girl even before she begins menstruation and the impact of this condition far extends what we have thought to date<sup>[5]</sup>.

This data alone has caused some researchers to question whether PCOS is a genetic or hereditary issue. PCOS is a systemic, convoluted disorder that needs to be actively managed by them for the rest of their life<sup>[6]</sup>. They need to go to a deeper level and develop certain health practices that will help their body to naturally minimize the symptoms and long-term risks of polycystic ovary syndrome<sup>[7-8]</sup>.

### **Need for the Study**

Health of Adolescents plays vital role in a country's health condition. There are 35% of adolescents suffering from PCOD in India. This is due to the changes in their life style. There are two main reasons for the increase of PCOS diagnoses in Indian women. Firstly, the acceptance of unhealthy eating habits and an inactive lifestyle. Whereas older generations of Indian women eat traditional, lower calorie foods with less sugar. Today numerous young Indian girls eat a steady-going diet of junk food. Within the past two decades, India began relying on Westernized diets and lifestyle. It is expected that they may see up to a six-fold increase in obesity prevalence in the next ten years especially in India who already has the highest rates of diabetes in the world (WHO 2009)<sup>[9]</sup>. There should be proper awareness that

helps them in prevention and early identification of PCOD, by which diseases like diabetes, hypertension and cardiovascular diseases can be reduced.

The diverse and complex female endocrine disorder polycystic ovary syndrome (PCOS), which affects 1 in 15 women worldwide, is a major economic health burden that is likely to expand together with obesity. The high prevalence of overweight and obesity (BMI 30 kg/m<sup>2</sup>) is significantly contributing to the overall burden of PCOS worldwide. In adolescent girls, the PCOS is reported to be a growing problem. Adolescents may experience the full range of symptoms including irregular or complete missing of menstruation. Polycystic ovarian syndrome (PCOS) accounts for 90% of women with oligomenorrhea, 30% of women with amenorrhea and Over 70% of women with anovulation. Research has evidenced that PCOS predisposes the women including adolescent girls to additional health problems<sup>[10-11]</sup>.

### **Objectives**

- To assess the pre-test level of knowledge among the adolescent regarding polycystic ovarian syndrome.
- To assess the post- test level of knowledge among the adolescent regarding polycystic ovarian syndrome.
- To compare the pre-test level of knowledge and post-test level of knowledge among the adolescent regarding high risk for polycystic ovarian syndrome.
- To find out association between knowledge score with selected demographic variables.

### **RESEARCH METHODOLOGY**

The research design selected for this study was quasi experimental one group pre and post-test design. Independent variable is the structured teaching programme on

polycystic ovarian syndrome and Dependent variable of the present study is Knowledge of the pre-university adolescent on polycystic ovarian syndrome. The study was Conducted SSSS College of commerce Amritsar, Punjab. Sample comprised of pre-university adolescents (females) who were studying at SSSS College of commerce, Amritsar, Punjab. The Sample size comprises of 60 adolescents. Present study probability, simple random sampling technique (Lottery Method) was used. The tool consists of a structured knowledge questionnaire. It is divided into 2 parts,

**Part I:** This part of the tool consists of questions related to demographic data and it consists of 6 items.

**Part II:** This part of the tool consists of items related to the knowledge on

polycystic ovarian syndrome. It consists of 30 items and those are sentence completion type multiple choice questions that help in assessing their knowledge.

Each correct answer was given a score of 'one' and wrong answer a score of 'zero' respectively. The reliability of the tool was computed by split half Karl Pearson's correlation formula (Raw score method) and Brawn's prophecy formula for internal consistency of the tool. The reliability coefficient of knowledge found to be 0.94 the tool and the subjects were found to be suitable and the study was found to be feasible.

## RESULTS

Assessing the level of knowledge of samples regarding PCOS. Grading the knowledge level of samples regarding PCOS in pre-test

**Table 1 (a): Assessing the level of knowledge of samples regarding PCOS in Pre-Test N=60**

S.No.	Grade of knowledge	Frequency	Percentage
1	Adequate Knowledge (21–30)	1	1%
2	Moderately adequate knowledge (11–20)	22	37%
3	Inadequate knowledge (0–10)	37	62%

**Table 1(a)** shows that most of the samples 62% had inadequate knowledge regarding PCOS and 37% of samples had moderately

adequate knowledge regarding PCOS and there was 2% adequate knowledge among samples regarding PCOS.

**Table 1 (b): Assessing the level of knowledge of samples regarding PCOS in Post-Test N=60**

S.No.	Grade of knowledge	Frequency	Percentage
1	Adequate Knowledge (21–30)	21	35%
2	Moderately adequate knowledge (11–20)	32	53%
3	Inadequate knowledge (1–10)	7	12%

**Table 1(b)** shows that most of the of samples 7% had inadequate knowledge regarding PCOS and 53% of samples had moderately adequate knowledge regarding PCOS and there was 7% adequate

knowledge among samples PCOS

**To Assess the Effectiveness of Structured Teaching Programme**

**Table 2.** Comparison of mean and standard deviation scores of samples knowledge in pre and post– test.

Variable	Mean	Standard Deviation	‘t’ Test Value	Table Value
Pre test	9.51	3.96	12.53	2.00
Post test	18.66	4.2		

df = 59

**Table 2:** shows that mean score of pre-test and post test of samples regarding PCOS is 9.51(SD + 3.96) and 18.66 (SD + 4.2) respectively. Post-test mean score was higher than the pre-test mean scores the ‘t’

test value is 12.53 which is significant at 0.05 level as ( $p > 0.05$ ). Association of post-test knowledge scores regarding polycystic ovarian syndrome among samples with their demographic variables.

**Table 3.** Association of Post Test Knowledge with Age of Samples

S.No.	Age	Adequate Knowledge		Moderately adequate Knowledge		Inadequate knowledge		Total no. of samples	Chi <sup>2</sup>	Table Value	Inference
		F	%age	F	%age	F	%age				
1	16	2	3.33	1	2	2	3.33	5	15.16	12.59	Significant
2	17	13	22	16	27	1	1.66	30			
3	18	1	27	13	22	2	3.33	16			
4	19	5	15	2	3.3	2	3.33	9			

Table 3 shows the association of post–test knowledge with age. The X<sup>2</sup> value is 15.16 which is more than the tabulated value.

This shows that there is significant association between post-test knowledge score with age at 0.05 level as ( $p < 0.05$ ).

**Table 4:** Association of Post Test Knowledge with Residence of Samples

S.No.	Residence	Adequate Knowledge		Moderately adequate Knowledge		Inadequate knowledge		Total no. of samples	Chi <sup>2</sup>	Table value	Inference
		F	%age	F	%age	F	%age				
1	Urban	7	11.66	8	13.33	5	8.3	20	5.55	5.99	No-significant
2	Rural	14	23.33	24	40	2	3.33	40			

Table 4 shows the association of post-test knowledge with residence. The X<sup>2</sup> value is 5.55 which is less than the tabulated value.

This shows that there is no significant association between post-test knowledge with residence at 0.05 level as ( $p < 0.05$ ).

**Table 5.** Association of Post Test Knowledge with Monthly Income of Samples

S.No.	Family income	Adequate Knowledge		Moderately adequate Knowledge		Inadequate knowledge		Total no. of samples	Chi <sup>2</sup>	Table value	Inference
		F	%age	F	%age	F	%age				
1	Less than 5000	4	6.66	2	3.33	2	3.33	8	15.68	12.59	Significant
2	5000–10000	3	5	1	1.6	2	3.33	6			
3	11000–15000	13	21.66	16	26.66	1	1.66	30			

4	More than 15000	1	1.6	13	21.66	2	3.33	16
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Table 5 shows the association of post-test knowledge with monthly income. The  $X^2$  value is 15.68 which are more than the tabulated value. This shows that there is

significant association between post-test knowledge with monthly income at 0.05 level as ( $p < 0.05$ ).

**Table 6: Association of Post Test Knowledge with Religion of Samples**

S.No.	Religion	Adequate Knowledge		Moderately adequate Knowledge		Inadequate knowledge		Total no. of samples	Chi <sup>2</sup>	Table value	Inference
		F	%age	F	%age	F	%age				
1	Muslim	2	3.33	1	1.66	1	1.66	4	13.44	12.59	significant
2	Hindu	2	3.33	15	25	2	3.33	19			
3	Sikh	13	21.66	13	21.66	1	1.66	27			
4	Christian	4	6.66	3	5	3	5	10			

Table 6 shows the association of post-test knowledge with religion. The  $X^2$  value is 13.44 which are more than the tabulated

value. This shows that there is significant association between post-test knowledge with religion at 0.05 level as ( $p < 0.05$ )

**Table 7: Association of Post Test Knowledge with Onset of Menarche of Samples**

S.No.	Onset of menarche	Adequate Knowledge		Moderately adequate Knowledge		Inadequate knowledge		Total no. of samples	Chi <sup>2</sup>	Table value	Inference
		F	%age	F	%age	F	%age				
1	14	9	15	17	28.33	2	3.33	28	2.10	12.59	Not significant
2	15	10	16.66	12	20	3	5	25			
3	16	1	1.66	1	1.66	1	1.66	3			
4	17	2	3.33	1	1.66	4	6.66	4			

**Table 7** shows the association of post-test knowledge with onset of menarche. The  $X^2$  value is 2.14 which is less than the tabulated value. This shows that there is no

significant association between post-test knowledge with onset of menarche at 0.05 level as ( $p < 0.05$ ).

**Table 8: Association of Post Test Knowledge with Family History of Samples**

S.No.	Family history	Adequate Knowledge		Moderately adequate Knowledge		Inadequate knowledge		Total no. of samples	Chi <sup>2</sup>	Table value	Inference
		F	%age	F	%age	F	%age				
1	Yes	6	10	13	21.66	6	10	25	16.54	5.99	Significant
2	No	15	25	19	31.66	1	1.66	35			

**Table 8** shows the association of post-test knowledge with family history. The  $X^2$  is 16.54 which is more than the tabulated value. This shows that there is significant association between post-test knowledge with family history at 0.05 level as ( $p < 0.05$ ).

### Findings Related to the Demographic

### Characteristics

- Majority 30(50%) of pre-university adolescents were in the age group of 17 years,
- Majority 40(66.67%) of pre-university adolescents were residing in rural area,
- Majority 27(45%) of pre-university adolescents were belongs to Sikh.
- Majority 28(46.67)% of pre-university



adolescents were had onset of menarche at age of 13

- Majority 35(58.34%) of pre-university adolescents were no family history of PCOS,
- With regard to family income per month, 30(50%) were 11000–15000.

The selected socio-demographic variables are age, residence, monthly income, religion, onset of menarche and family history. The result indicates the higher percentage of subject belongs to 17 years of age (50%). About (26.67%) belongs to 18 years, (15%) belongs to 19 years and (8.33%) to 16 years. According to residence classification it can be seen that vast majority of respondents were rural (66.67%) while (33.33%) were urban. In relation to the monthly income, it reveals that most of the adolescents had between 11,000–15,000(50%), (26.67%) had more than 15,000 while (13.33%) had less than 5000 and (10%) had 6000-10,000. The religions were Muslim (6.67%), Hindu (31.66%), Sikh (45%) and Christian (16.67%). The distribution of the samples according to onset of menarche depicts that the adolescents who have the age of 13 years have more knowledge (45%) than the others who have 14, 15 and 16 years which includes 41.67%, 5% and 6% respectively. The distribution of respondents in relation to family history reveals that majority of adolescents (58.33%) had no knowledge while (41.66%) had knowledge variables

## **IMPLICATIONS**

### **Nursing Education**

- Nurses at the post graduate level need to develop skills in preparing health teaching materials related to polycystic ovarian syndrome at the level of adolescents understanding. Improved and newer techniques have to be used for motivating the student's participation<sup>[9-11]</sup>.

### **Nursing Administration**

- The obstetrics and gynaecology nurse can plan, organize and conduct the health awareness on polycystic ovarian syndrome and its prevention.
- Nurse should see that the structured teaching programme is effectively implemented, using adequate resources and beneficial to the population.

### **Nursing Research**

- Various studies conducted by researchers showed that PCOS is a chronic hyperandrogenic state that has many significant short-term and long-term implications for patients. So studies should be carried out and mainly focusing on the knowledge regarding polycystic ovarian syndrome and its prevention.
- Thus, the present investigation offer infinite scope and potential implications for nursing practice, administration and research aspects of polycystic ovarian syndrome and its prevention.

### **Suggestions**

- Should organize programmes to educate the pre-university adolescents regarding knowledge on polycystic ovarian syndrome and its prevention.
- Awareness programmes can be arranged for the pre-university adolescents to improve their reproductive health.

## **RECOMMENDATIONS**

Based on the findings of the study the following recommendations are made.

- A similar study may be conducted on a larger sample for wider generalization.
- A similar study may be replicated with control group.
- A similar study can be conducted among adolescents of rural areas.
- A similar study may be conducted in other urban areas.

- Health education module, manuals and self-instruction module may be developed.
- The comparative study can be conducted on urban and rural area.
- Longitudinal studies to determine the constant effectiveness of structured teaching programme over a period of time may be conducted.

## CONCLUSION

The findings reveals that maximum adolescents had inadequate knowledge in pre-test and majority of adolescents had moderate adequate knowledge in post-test and concluded that there was a significant improvement in the level of knowledge regarding polycystic ovarian syndrome in post-test after administration of structured teaching program. Thus, structured teaching programme was found to be effective in improving the knowledge regarding polycystic ovarian syndrome. Among the demographic variables analyzed in the age, family income, religion, family history had found to have significant association with knowledge scores. And there was no significant association found between residence, onset of menarche with knowledge scores among pre-university adolescent.

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