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## **A study to evaluate the effectiveness of structured teaching programme on polycystic ovarian syndrome in terms of knowledge and attitude among nursing students of Shimla nursing college, Annandale, Shimla (H.P)**

**Deeksha Kumari, Deepu Gupta, Devyani Sharma, Diksha Dhiman, Divya Jyoti Sharma, Dixit Gautam, Isha Chauhan, Kalpana Bhardwa and Deepthi Sharma**

### **Abstract**

Polycystic ovary syndrome 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. The objective is to assess and compare the knowledge and attitude of 25 nursing students in experimental group regarding the polycystic ovarian syndrome before and after the administration of structured teaching programme, other one is to assess and compare the knowledge and attitude of 25 nursing students in control group regarding polycystic ovarian syndrome in Shimla Nursing College, Shimla. True experimental research approach pre and post-test design and samples are selected by randomized sampling technique. The result of study shows that the pre-test mean knowledge score of control group is 7.84 and post-test is 8.28 and pre-test mean knowledge score of experimental group is 7.44 and post-test is 12.6, whereas the mean pre-test attitude score of control group is 29.84 and post-test is 35 and pre-test mean score of attitude in experimental group is 30.48 and post-test is 32.72. 't' test value of control group is 1.17 and of experimental group is 5.002 which is considered to be significant of knowledge. Whereas 't' test value of control group is 0.62 and of experimental group is 2.98 which is considered to be significant of attitude. So improvement happens in knowledge and attitude regarding polycystic ovarian syndrome after administering the structured teaching programme.

**Keywords:** Polycystic ovarian syndrome and structured teaching programme

### **Introduction**

Polycystic ovary syndrome 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. The syndrome is characterized by chronic hyperandrogenism; polycystic ovaries results in excessive amounts of androgenic (masculinizing) hormones, acne and hirsutism, insulin resistance which is often associated with obesity of BMI >30 kg/m<sup>2</sup>, diabetes, high and anovulation resulting in irregular menstruation, amenorrhea. Polycystic ovaries are ovaries containing a large number of harmless cysts that are no bigger than 8mm each. Normal ovaries have only about half this number of cysts. The cysts is egg-containing follicles that have not developed properly because of a hormone imbalance often in PCOS, none of these follicles develops enough to release an egg, meaning ovulation does not take place. Also, in some women, levels of the hormone testosterone are higher than normal, which, results in many of the typical symptoms. There are two main reasons for the increase of PCOS diagnoses in Indian women, i.e to adopt the unhealthy eating habits and a sedentary lifestyle. Whereas older generations of Indian women eat traditional, lower calorie foods with less sugar. Many young Indian girls today eat a steady diet of junk food.

Within the past two decades, India began relying on Westernized diets and lifestyle. It is predicted that they may see up to a six-fold increase in obesity prevalence in the next ten years especially for India who already has the highest rates of diabetes in the world (WHO 2009). Polycystic ovarian syndrome (PCOS) has a wide spectrum of consequences in adolescent girls and thus needed to be treated completely and as soon as possible. The PCOS is reported to be a growing problem with adolescent girls. Adolescents may experience the full range of symptoms including irregular or complete absent of menstruation. PCOS affects 7-10% of women of childbearing age (15 to 45 years). In women of Indian subcontinent, prevalence rates as high as 50% have also been detected and is a leading cause of infertility, primarily secondary to anovulation. PCOS was responsible for 18% of PCOS in adolescents. There is immense need for implementation of strategies for reducing the prevalence rate of polycystic ovarian syndrome in adolescent girls and in women who are in child bearing age. Therefore, this study was undertaken to evaluate the effectiveness of structured teaching programme on polycystic ovarian syndrome in terms of knowledge and attitude among nursing students of Shimla nursing college, Annandale, Shimla (H.P).

**Methodology**

The present study is aimed for evaluating the effectiveness of structured teaching program on polycystic ovarian syndrome in terms of knowledge and attitude among nursing students of Shimla nursing college .To accomplish the objective of the study True experimental research approach was considered to be most appropriate. This study was conducted in Shimla Nursing College Annandale, Shimla. Criteria for selecting the setting were purposive sampling technique. Total 50 nursing students were selected by purposive sampling technique and then divided 25 samples in both groups (Experimental and control) through lottery Method. The college was selected purposively and assigned to experimental and control group by randomization method. The tools were constructed to obtain the data were

structured knowledge questionnaire to assess the knowledge of nursing students regarding structured teaching programme and check list to assess the attitude of nursing students regarding polycystic ovarian syndrome. Structured teaching programme to enhance the knowledge of nursing students regarding Polycystic Ovarian Syndrome. Paper and pencil method are used to collect the data. The content validity of the tools was established by the suggestion of five experts from the field of child health care nursing, medical surgical nursing, psychiatric nursing, community health nursing, obstetrical and gynecological nursing respective principal ma'am for establishing content validity. All tools were returned by the experts, with minor additions. A Non-standardized tool was used to measure the knowledge. The reliability of the tool was found to be significant = 9.51. Ethical approval to conduct the study was obtained from management Of Shimla nursing college, Annandale, Shimla. Data was collected by structured knowledge questionnaire and it took 30-40 minutes to complete the test. 50 nursing students were selected by purposive sampling technique then they were divided into two groups with random assignment (lottery method). On day one, the structured knowledge questionnaire was administered to the control group but no interventions were given. After a gap period of one day the post-test was taken from the control group to reassess the knowledge and attitude of nursing students regarding polycystic ovarian syndrome. On the same day, the structured knowledge questionnaire was administered followed by the Structured teaching programme regarding the polycystic ovarian syndrome in experimental group 45 to 55 minutes were taken by the nursing students to complete the tool. After a gap period of two days the post-test was taken in order to evaluate the effectiveness of structured teaching programme in enhancing the knowledge and attitude of nursing students regarding polycystic ovarian syndrome. No problem was faced during data collection.

**Result**

**Table 1:** Frequency and percentage distribution of nursing students in Experimental and control group based on level of knowledge

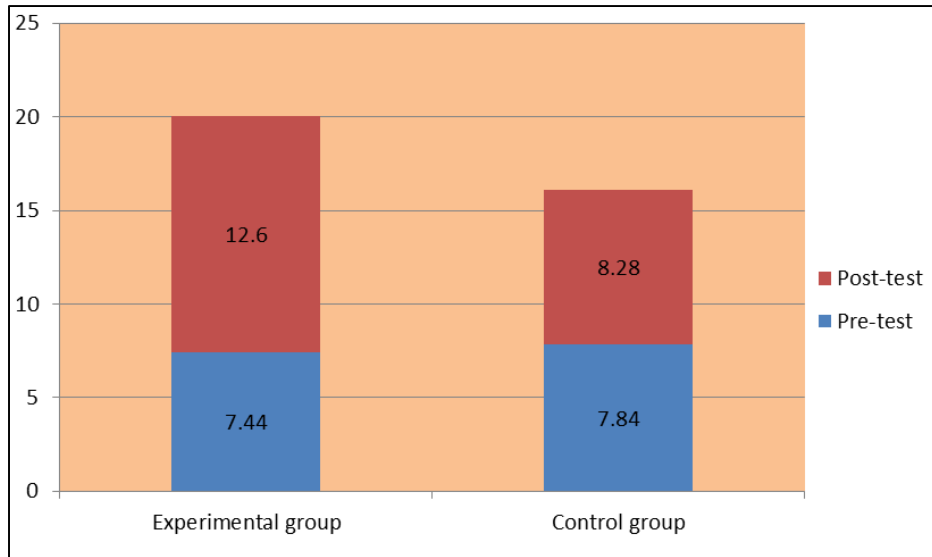
Level of Knowledge	Range of Score and Percentage	Control group (n=25)				Experimental group(n=25)			
		Pre test post test				Pre test		Post test	
		F	%	F	%	F %		F %	
Excellent	16-20	0	0	0	0	0	0	2	8
Very good	11-15	3	12	8	32	0	0	19	76
Good	7-10	18	72	11	44	18	72	4	16
Fair	1-6	4	16	7	28	7	28	0	0
Total		25	100	25	100	25	100	25	100

**Table 2:** Mean, standard deviation and range of score of pre test and post test knowledge score of nursing students in experimental and control group

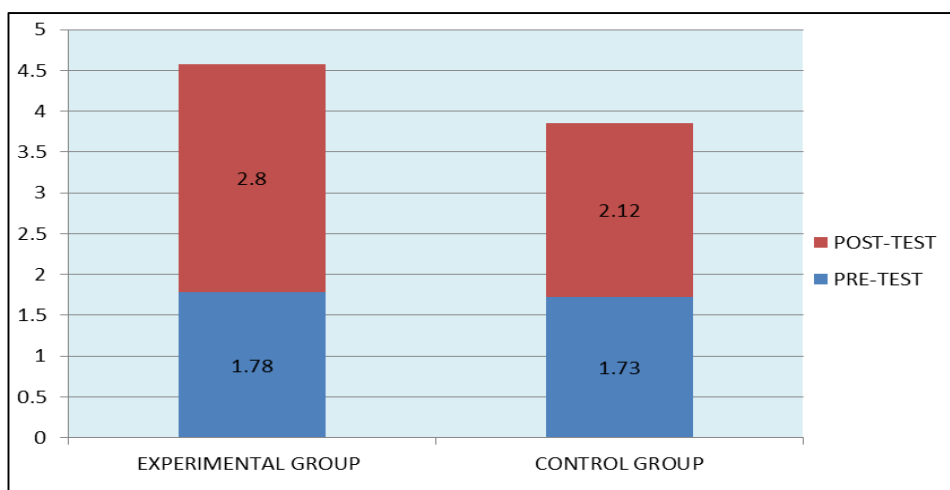
Group	Mean		Standard deviation	
	Pre Test	post Test	Pre Test	post Test
Experimental group n=25	7.44	12.6	1.78	2.80
Control group n=25	7.84	8.28	1.73	2.12

The data further indicated the mean post-test knowledge score 12.6 was higher than the mean pre-test knowledge score 7.44 in experimental group whereas the mean post-test knowledge score 8.28 was higher than the mean pre-test knowledge score 7.84 in the control group. The data also

shows that the standard deviation of post-test knowledge score was 2.80 and pre-test knowledge score was 1.78 for experimental group whereas in control group post-test knowledge score was 2.12 and pre-test knowledge score was 1.73.



**Fig 1:** Mean range scores of pre test and post test knowledge score of nursing students in experimental and control group



**Fig 2:** Standard deviation and range of score of pre test and post test knowledge score of nursing students in experimental and control group

**Table 3:** Mean, mean difference, standard deviation of difference, standard error of mean difference and ‘t’ value of pre-test and post-test knowledge scores of nursing students in experimental and control group.

Group	Knowledge test	Mean	Mean D	SDD	t value
Experimental group n=25	Pre-test	7.44	5.16	1.02	5.002
	Post-test	12.6			
Control group N =25	Pre-test	7.84	0.44	0.39	1.17
	Post-test	8.28			

**Table 4:** Frequency and percentage distribution of nursing students in experimental and control group based on attitude

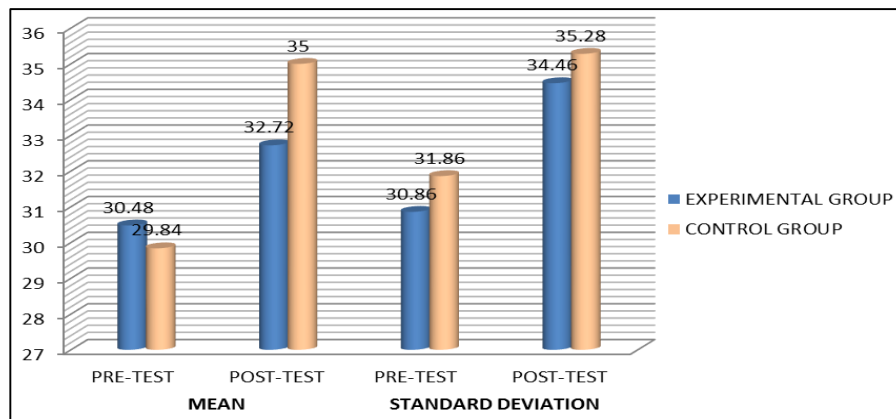
Level of knowledge	Range of score And percentage	Experimental group (N=25)				Control group (N=25)			
		Pre-test		post-test		Pre-test		Post-test	
		F	%	F	%	F	%	F	%
Excellent	39-45	1	4%	3	12%	0	0%	3	12%
Very good	32-39	8	32%	15	60%	7	28%	18	72%
Good	26-32	10	40%	6	24%	16	64%	3	12%
Fair	20-26	6	24%	1	4%	2	8%	1	4%
Total		25	100%	25	100%	25	100	25	100

**Table 5:** Mean Median, Standard Deviation And Range Of Score Of Pre Test And Post Test Attitude Score Of Nursing Students In Experimental And Control Group

Group	Mean		Standard deviation	
	Pre-test	post-test	Pre-test	post-test
Experimental group n=25	30.48	32.72	30.86	34.46
Control group n=25	29.84	35	31.86	35.28

The data indicated the mean post-test attitude score 32.72 was higher than the mean pre-test attitude score 30.48 in experimental group whereas the mean post- test attitude score 35 was higher than the mean pre-test attitude score 29.84 in the control group. The data also shows that the

standard deviation of post-test attitude score was 34.46 and pre-test attitude score was 30.86 for experimental group whereas in control group post-test attitude score was 31.86 and pre-test attitude score was 35.28.



**Table 6:** Mean, mean difference, standard deviation of difference, standard error of mean difference and ‘t’ value of pre-test and post-test attitude scores of nursing students in experimental and control group.

Group	Knowledge test	Mean	Mean D	SDD	t value
Experimental group n=25	Pre-test	30.48	2.24	3.6	2.98
	Post-test	32.72			
Control group n =25	Pre-test	29.84	5.16	3.42	0.61
	Post-test	35			

Data presented in table 5 and 6 shows that the mean post – test knowledge and attitude score of nursing students in experimental group was 12.6 and 32.72 and the mean pre – test knowledge and attitude score was 7.44 and 30.48 with the mean difference of 5.16 and 2.24 the computed t value of 5.002 and 2.98 was found to be statistically significant at 0.05 level showed that the mean difference between the mean pre-test and post-test knowledge and attitude score of nursing student in the experimental group was a true difference and not by chance. The result further show that in the control group, the mean post-test knowledge and attitude score of nursing student was 8.28 and 35 and the mean pre-test knowledge and attitude score of nursing students in the control group was not a true a difference but by chance.

**Discussion**

The present study results revealed that there were improvement of all variables of knowledge and there was highly statistical significant difference between pre and post educational sessions. So, the research hypothesis is accepted. So it indicates that educational sessions were effective. Similar study regarding to the effectiveness of structured teaching program regarding polycystic ovarian syndrome among adolescents revealed that before program, more than two third of respondents had poor knowledge scores and less than one third of them had moderate knowledge scores, while none of them had adequate knowledge. The majority of students have inadequate knowledge and around one tenth of them have moderate knowledge. The study concluded that after program about 66.7% of respondents had adequate knowledge, 33.3% had moderate knowledge and none of them had poor knowledge.

**Conclusion**

The following conclusions are drawn from the findings of the study;

- Selected group of nursing students had deficit knowledge on polycystic ovarian syndrome.
- The nursing students have significant enhancing the knowledge and attitude regarding polycystic ovarian syndrome.
- STP was an effective method in enhancing the knowledge and changing the attitude of nursing students regarding polycystic ovarian syndrome.

Thus, the STP was effective in enhancing the knowledge and changing the attitude of nursing students regarding polycystic ovarian syndrome.

**Recommendations**

Based on findings, the following recommendations were offered for future research:

- The study needs to replicate on a large sample to validate and generalize its findings.
- A similar study can be conducted in community health centres to assess the knowledge regarding PCOS.A similar study can be conducted to assess the knowledge regarding PCOS among staff nurses, college girls, reproductive age bearing women, and all other females who are having hormonal imbalances.
- Learning modules with pictorial should be given to public regarding PCOS similar study can be applied in nursing practice to increase their knowledge, practice and attitude regarding PCOS.

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