JETIR.ORG ISSN: 2349-5162 | ESTD Year : 2014 | Monthly Issue
JOURNAL OF EMERGING TECHNOLOGIES AND INNOVATIVE RESEARCH (JETIR)
An International Scholarly Open Access, Peer-reviewed, Refereed Journal

Assessment of the knowledge regarding polycystic ovarian syndrome among B.Sc. nursing students in selected nursing colleges of Shimla: An interventional study.

Authors Details:

Dr. Krishna Chauhan[1] Ms. Ritu Rilta [2].Ms. Shubhra Sharma[3]

[1] Professor cum Principal, Department of Obstetrics and gynecological Nursing, Shimla Nursing College, Shurala, Shimla-6, Himachal Pradesh University, India.

[2] Nursing Tutor, Department of Mental Health Nursing, Shimla Nursing College, Shurala, Shimla-6, Himachal Pradesh University, India.

[3] Nursing Tutor, Department of Obstetrics and gynecological Nursing, Shree Balaji College of Nursing, Kangra, Himachal Pradesh University, India.

Corresponding author details:

Ms. Shubhra Sharma, Nursing Tutor, Department of Obstetrics and gynecological Nursing, Shree Balaji College of Nursing, Kangra, Himachal Pradesh University, India.

E mail: shubhrasharma6281@gmail.com Phone no. – 9882628184.

Acknowledgements:

This study appears in its current form due to the assistance and guidance of several people. We would like to express our sincere thanks to all of them. Our special thanks also goes to the Nursing and other experts who validated the content of tools and by considering and extending their hearted cooperation and valuable suggestions .Our sincere thanks to the students of Shivalik institute of nursing and Shimla nursing college who had participated in the study.

Conflict of Interest:

The authors do not have any conflicts of interest to declare a relation to this study.

1. Introduction:

Polycystic Ovarian Syndrome (PCOS) is one of the most common endocrine disorders that affect women in reproductive age. PCOS is related with hormonal abnormalities. It is considered a syndrome as the signs and symptoms vary in each woman. Higher levels of androgen (male hormones) are produced in the body when the woman is suffering from this syndrome. Higher levels of androgens prevent the ovaries from making enough progesterone that is necessary for a normal menstrual cycle. Estrogen levels are usually produced in normal amount. The lower levels of progesterone and higher levels of androgens result into undeveloped egg follicles, which results in, anovulation and small cysts are formed in the ovaries due to immature follicles.[1]

It is the main gynecological endocrinopathy of reproductive age, affecting 6% - 10% of women in menarche. It is said to be a multifactorial condition with a genetic component, although the exact cause of PCOS is unknown. About 20–40% of women with their first-degree female relatives with PCOS tend to develop this syndrome, as compared to general population where the prevalence rate is 4–6%. Type 2 diabetes, numerous genes are also considered as the etiological factors of PCOS. Some other factors like genetic predisposition, environmental factors, unhealthy diet and lack of physical activity can also contribute to PCOS.[2]

World Health Organization (WHO) estimates that PCOS has affected 116 million women (3.4%) worldwide in 2012. Globally, prevalence estimates of PCOS are highly variable, ranging from 2.2% to as high as 26%. In India, experts claim 10% of the women to be affected by PCOS and yet no proper published statistical data on the prevalence of PCOS in India is available.[3]

A study conducted on Endocrinology in the hills of Himachal Pradesh, India, shows reproductive endocrine disorders are the most neglected ones. It is estimated that approximately 10% of the couples suffer from primary infertility. Much progress has to be made in diagnosing the cause and effectively treating infertility. Polycystic ovarian syndrome (PCOS) remains a major concern for young women. Many of the young women suffer from PCOS and struggle for appropriate treatment for infertility and menstrual irregularity. The social stigma attached to infertility is enormous and is inappropriately treated, especially in rural areas.[4]

So, the researcher wished to conduct the research to assess the knowledge regarding polycystic ovarian syndrome among B.Sc. nursing students in selected nursing colleges of Shimla.

2. Methods and Materials:

2.1 Research Design: This study aims to assess the knowledge regarding polycystic ovarian syndrome among B.Sc. nursing students in selected nursing colleges of Shimla, So, a quantitative research approach was used in the study and under that a non-randomized control group pre-test- post –test design was used.

2.2 Setting: The study was conducted in selected nursing colleges of Shimla H.P. among B.Sc. Nursing students.

2.3 Population: Population in this study consisted of B.Sc. Nursing 4th year students and who meet the designated inclusion criteria and who are available at the time of data collection.

2.4 Sample and Sampling technique: Sample size for the present study was 80 B.Sc. Nursing 4th year students **(**40 students in Experimental group and 40 students in Comparison group), in selected nursing colleges of Shimla and the samples were selected by using purposive sampling technique.

2.5 Data collection tools and technique: Based on the objectives and conceptual framework of the study, the tools developed were divided into 2 sections, in which Section 1 consisted of Demographic variables and Section 2 was structured knowledge questionnaire regarding PCOS

It was a self- structured questionnaire containing 30 questions. It was validated by experts from the field of nursing and medicine. Experts were requested to judge the items for their clarity, relevance, meaningfulness and content.

2.5 Ethical Considerations: Consent form was prepared and consent was taken from the study subject regarding their willingness to participate in the research study. The purpose for carrying out research study was explained to the subjects and assurance for confidentiality was given.

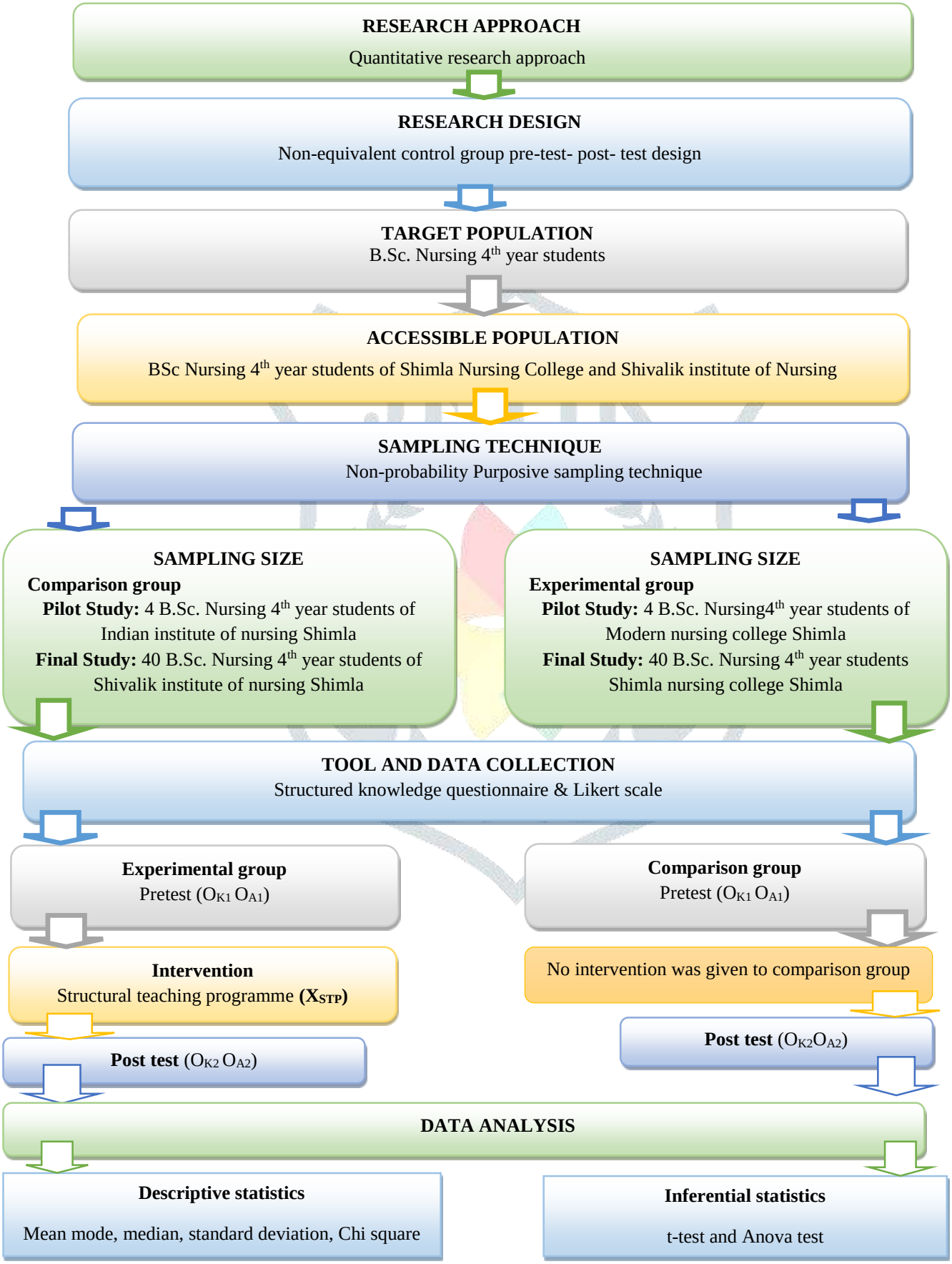

Figure-1: Schematic representation of the study.

3. Results:

3.1 Description of demographic variables among B.Sc. Nursing students in experimental and comparison group

Table-1: frequency and percentage distribution among B.Sc. nursing students based on demographic variables

N=80

S.No.	Demographic Variables	Experimental group (n= 40) f (%)	Comparison group (n=40) f (%)	Chi-square	df	p value
1.	**Age**					
	1.1 21-22 years	31 (77.5)	27 (67.5)			
	1.2 23-24years	7 (17.5)	7 (17.5)	73.21	3	0.42^{NS}
	1.3 25-26years	1 (2.5)	4 (10)			
	1.4 27years and above	1 (2.5)	2 (5)			
2.	**Area of residence**					
	2.1 Rural	15 (37.5)	10 (25)			
	2.2 Urban	21 (52.5)	18 (45)	44.84	2	0.15 ^{NS}
	2.3 Semi-urban	4 (10)	12 (30)			
3.	**Dietary pattern**					
	3.1 Vegetarian	23 (57.5)	30 (75)			
	3.2NonVegetarian	13 (32.5)	5 (12.5)	28.77	2	0.79 ^{NS}
	3.3 Eggitarian	4 (10)	5 (12.5)			
4.	**Consumption of junk food**					
	4.1Yes	25 (62.5)	32 (80)			
	4.2No	15 (37.5)	8 (20)	23.72	1	0.16^{NS}
5.	**Age at menarche**					
	5.1 < 12years	-	-			
	5.2 12 - 13 years	19 (47.5)	16 (40)			
	5.3 14 - 15 years	19 (47.5)	24 (60)	36.79	3	0.43 ^{NS}
	5.4 > 15 years	2 (5)	-			
6.	**Duration of menstrual cycle**					
	6.1 < 26 days	3 (7.5)	2 (5)			
	6.2 26-28 days	16 (40)	20 (50)	50.96	3	0.59 ^{NS}
	6.3 28-32 days	15 (37.5)	16 (40)			
	6.4 > 32 days	6 (15)	2 (5)			
7.	**Physical activity**					
	7.1 Vigorous physical activity	1 (2.5)	2 (5)	44.82	3	0.81 ^{NS}
	7.2 Moderate activity	12 (30)	18 (67.5)			
	7.3 Mild activity	22 (55)	16 (20)			
	7.4Minimal or no activity	5 (12.5)	4 (7.5)			
8.	**BMI**					
	< 18.50	3 (7.5)	-			
	18.50-22.99	26 (65)	38 (95)	62.89	3	0.19 ^{NS}
	22.99-24.99	8 (20)	2 (5)			
	Above 25	3 (7.5)	0 (0)			
9.	**Previous associated disease**					
	Yes	8 (20)	3 (7.50)			
	No	32 (80)	37 (92.5)	13.22	1	0.78^{NS}

10.	**Previous knowledge regarding PCOS**					
	Yes	36 (90)	33 (82.5)			
	No	4 (10)	7 (17.5)	25.39	1	0.11[NS]
11.	**Source of information**					
		11 (27.5)	21 (52.5)			
	Health Professionals	12 (30)	4 (10)			
	Parents/Teacher	3 (7.5)	3 (7.5)	82.39	5	0.00 [NS]
	Peer Group	12 (30)	10 (25)			
	Mass Media	-	2 (5)			
	No information	2 (5)	-			
	Others					
12.	**Family history of PCOD**					
	Yes	1 (2.5)	1 (2.5)			
	No	39 (97.5)	39 (97.5)	19.83	1	0.34 [NS]
13.	**Family history of any associated disease like diabetes, hypertension**					
		18 (45)	11(7.5)	15.38	1	0.64 [NS]
	Yes	22 (55)	29(92.5)			
	No					

Table-1 shows the frequency and percentage distribution among demographic variables in terms of age, area of residence, dietary pattern, consumption of junk food, age at menarche, duration of menstrual cycle, physical activity, BMI, Previous associated disease, previous knowledge regarding PCOS, source of information, family history of PCOS, family history of any associated disease like Diabetes, Hypertension in experimental and comparison group.

Table-2: Frequency and percentage distribution of pre-test and post-test Knowledge scores in Experimental and comparison Group.

N= 80

	Level of knowledge	Actual range of score	Experimental group (n = 40) f (%)	Comparison group (n = 40) f (%)
	Below Average	0-20	21(52.5)	20(50)
Pre-Test	**Average**	20-30	18(45)	20(50)
	Good	31-40	1(2.5)	-
Post-test	**Below Average**	0-10	-	20(50)
	Average	11-20	8(20)	20(50)
	Good	21-30	32(80)	-

Minimum= 0 **Maximum=30**

Table-2 depicts pre-test and post test frequency and percentage distribution knowledge scores in experimental and comparison group. In experimental group, pre-test scores showed, majority of the students (52.5%) were having below average knowledge, less than half (45%) were having average knowledge, minority(2.5%) were having good knowledge whereas in comparison group half number

of students (50%) were having below average knowledge score and the same number were having average knowledge, none of them had good knowledge regarding PCOS The chi-square was computed to determine the homogeneity of experimental group and comparison group in terms of pre-test knowledge score. The findings showed that both groups were homogeneous with respect to knowledge score (chi-square value is (1.13) and p- value is (0.56).Therefore, it can be inferred that the students in experimental and comparison group were homogeneous and comparable in regards to pre-test knowledge score.

In experimental group post-test scores showed, majority (80%) of the nursing students were having good knowledge, minority (20%) of the nursing students were having Average knowledge , none (0%) below average knowledge regarding PCOS in post test. On the other hand in comparison group half (50%) of the nursing students had Below Average, same (50%) number of students were having Average knowledge and none (0%)of the nursing students had good knowledge regarding PCOS.

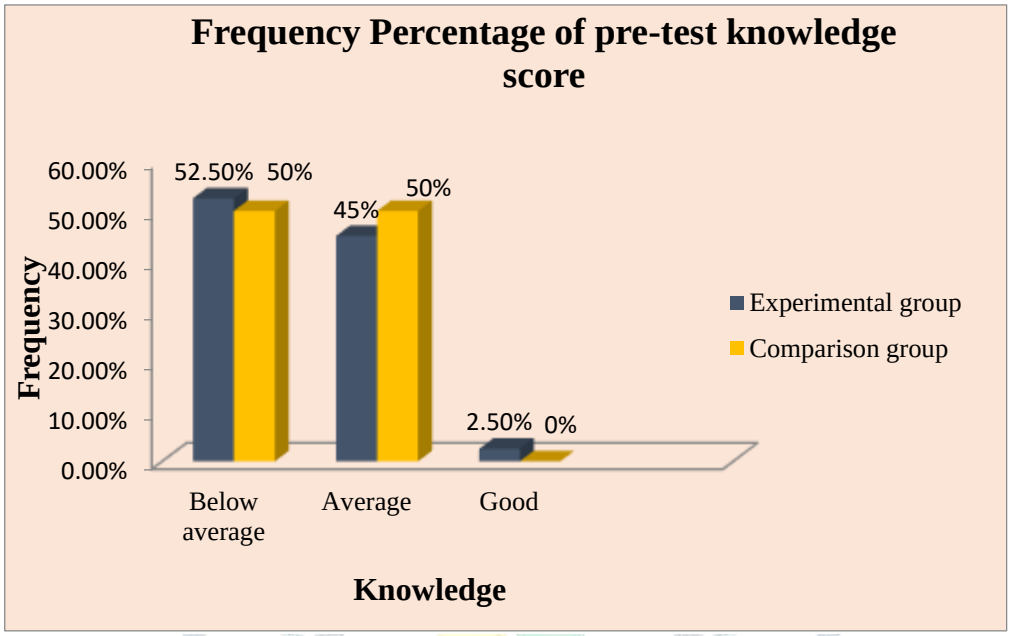

Figure -2: Depicts cuboidal diagram distribution of pre-test Knowledge scores in experimental and comparison group

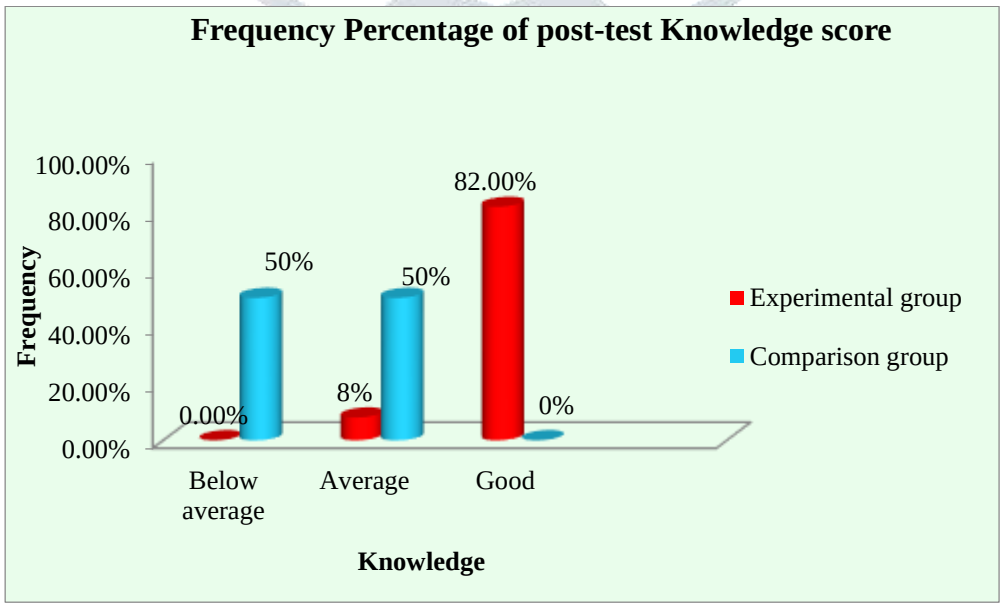

Figure -3: Depicts cylindrical diagram regarding distribution of post-test knowledge scores regarding PCOS in experimental and comparison group

Table 3: Depicts comparison of pre-test and post-test knowledge scores between experimental and comparison group

N=80

	Groups	Mean	Standard deviation	Independent 't' test	df	p value
Pre-test knowledge	**Experimental Group (n =40)**	15.45	3.56	8.90	78	0.69 NS
	Comparison group (n =40)	15.28	2.83			
Post-test knowledge	**Experimental Group (n =40)**	24.40	2.37	15.63	78	0.00**
	Comparison group (n =40)	15.28	2.83			

**** Highly Significant,** **NS- Non –Significant**

Table No 3: Depicts comparison of pre-test and post-test knowledge scores between experimental and comparison group. Mean pre-test knowledge score in experimental group was (15.45), in comparison group (15.28). The independent't' test was applied and computed't' value obtained (8.90) and (p= 0.69^{NS}) was found to be non- significant at 0.05 level of significance. Mean post-test knowledge score in experimental group was (24.40) , in comparison group mean was (15.28), computed't' value obtained (15.63) and (p= 0.00 **) was found to be significant at 0.05 level of significance.

Table 4: Depicts comparisons within pre-test knowledge score and post-test knowledge score within experimental and comparison group

N=80

	Groups	Mean	Standard deviation	Paired t-test	p value
Experimental Group	**Pre- test (n =40)**	15.45	3.57	17.33	**0.00****
	Post- test (n =40)	24.40	2.37		
Comparison Group	**Pre- test (n =40)**	15.35	3.02	1.54	0.13^{NS}
	Post -test (n =40)	15.28	2.8		

****Highly Significant** **NS - Non –Significant**

Table No. 4: Depicts the comparisons within pre-test knowledge score and post-test knowledge score in experimental and comparison group. In Experimental group mean pre-test knowledge score was (15.45) and mean post-test knowledge score was (24.40). The paired' test was applied and computed't' value obtained (17.33) and (p= 0.00**) was found to be significant at 0.05 level of significance. post-test knowledge score of experimental group (24.40) and in comparison group (15.28). In comparison group mean pre-test knowledge score was (15.35) and mean post-test knowledge score was (15.28). The paired 't' test was applied and computed't' value obtained (1.54) and (p= 0.13^{NS}) was found to be non- significant at 0.05 level of significance.

4.Discussion:

In the present study In experimental group, Mean pre-test knowledge score of B.Sc. Nursing students was 15.45 and it revealed that 21 (52.5 %) had below average knowledge, 25 (50%) had average knowledge and 18 (45%) had average knowledge, 1(2.5%) had good knowledge. In comparison group, Mean pre-test knowledge score of B.Sc. Nursing students was 15.35 and it revealed that 20 (50%) had below average knowledge, 20 (50%) had average knowledge and 0 (0%) had good knowledge It showed that B.Sc. Nursing students had below average; average knowledge regarding PCOS. This indicates that it was necessary for the researcher to increase knowledge among B.Sc. Nursing students by giving information regarding PCOS. The findings of the study were similar to the study conducted by Karkar Manisha Abraham Anna Feba, Joseph Divyamol et.al, (2019) which states that 3% of undergraduate students had good knowledge regarding Polycystic Ovarian Syndrome, 73% of undergraduate students were having average knowledge and 24% of undergraduate students were having poor knowledge regarding Polycystic Ovarian Syndrome.[5]

5. Conclusion:

The following conclusions were drawn from the study findings:

- There was a significant difference in the mean pre-test and post-test knowledge scores regarding Polycystic Ovarian Syndrome (PCOS) among B.Sc. Nursing students in experimental group. This indicates that it was necessary for the researcher to increase knowledge among B.Sc. Nursing students by giving information regarding PCOS.

6. Limitations:

- Study was limited to 80 samples. It cannot be generalized to all.
- The group was limited to only B.Sc. nursing 4th year students.

7. Recommendations:

Based on the findings of the study following recommendations are offered for the future research:

- A descriptive study can be conducted to assess the Knowledge and Attitude regarding PCOS among nursing students in selected nursing colleges of H.P.
- A pre-experimental study can be carried out to assess the effectiveness of video assisted teaching programme on Knowledge and Attitude regarding PCOS among adolescent girl in selected schools of H.P
- A similar study can be conducted on larger sample to validate and generalize the findings.
- The study can be replicated on adolescent girls studing in various schools and colleges
- A descriptive study may be conducted to find out the incidence of PCOS related to lifestyle changes

References:

[1] PCOS Research [Internet]. Center for Reproductive Health. [cited 2020 Apr 30]. Available from: https://crh.ucsf.edu/pcos-research

[2]Blogspot Snapshot [Internet]. [Cited 2020 Dec 4]. Available from: https://drsreedhars.blogspot.com/2020/02/poly-cystic-ovarian-syndrome-pcos.html

[3] Rocha AL, Oliveira FR, Azevedo RC, Silva VA, Peres TM, Candido AL, et al. Recent advances in the understanding and management of polycystic ovary syndrome. F1000Research [Internet]. 2019 Apr 26 [cited 2020 May 17];8. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6489978/

[4] Raina S. Endocrinology in the hills of Himachal Pradesh, India. Indian J Endocrinol Metab. 2012 Mar 1;16(2):316.

[5]8-5-25-609.pdf [Internet]. [cited 2020 Sep 3]. Available from: http://www.thepharmajournal.com/archives/2019/vol8issue6/partd/8-5-25-609.pdf