Research Article

Assessment of the attitude regarding polycystic ovarian syndrome among B.Sc. nursing students in selected nursing colleges of Shimla: A quasi experimental Study.

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Abstract

Polycystic Ovarian Syndrome (PCOS) is one of the most common endocrine disorders that affecting women in reproductive age. Incidence rate is about 5% to 10% in this age group. Nurses are in a position to improve attitude of individuals affected with the syndrome, soenhancing the attitude of nursing students regarding PCOS will help to modify attitude of general population. Aim of the study was to improve the attitude of B.Sc. Nursing students regarding PCOS.Quasi experimental research approach,non-randomized control group pre-test- post–test design was used.80 B.Sc. Nursing students were selected by using purposivesampling technique.Likert scale was used to collect the data from the samples.Result of the study revealed that in experimental group, mean pre-test attitude score was 54.70,more than half 75 % of the nursing students had unfavorable attitude, 25%had moderately favorable attitude and none of them had favorable attitude, Mean post-test attitude score of B.Sc. Nursing students was 93.72, none of the nursing student had unfavorable attitude, 15% had moderately favorable attitude and 85% had favorable attitude. In comparison group, Mean pre-test attitude score of B.Sc. Nursing students was 55.22, more than half of the nursing students 87.5% had unfavorable attitude, 12.5%had moderately favorable attitude and none of the nursing student had favorable attitude, Mean post-test attitude score of B.Sc. Nursing students was 55.20, more than half of the nursing students 87.5% had unfavorable attitude, 12.5%had moderately favorable attitude and none of the nursing student had favorable attitude.

Keywords: Effectiveness, Structured teaching programme, Polycystic Ovarian Syndrome (PCOS), Attitude

1. Introduction:

The polycystic ovary syndrome is a combination of hyper androgenism (hirsutism and acne) and an ovulation (oligomenorrhea, infertility, and dysfunctional uterine bleeding) with polycystic

ovaries. Type 2 diabetes, genetic predisposition, environmental factors, unhealthy diet and lack of physical activity can contribute to PCOS.It affects women in reproductive age; the incidence rate is 6% - 10%[1]

In this condition there is increased production of androgens in theca cells of the ovary Decreased sensitivity to insulin also results in higher androgens production Increased insulin binds to insulin-like growth factor – I receptor on the ovary and stimulates androgen production, and further increase activity of 5-alpha reductase ,causes alopecia and acne.[2]

According to World Health Organization (WHO), Global incidence of PCOS varies from 2.2% to 26%. In India, the incidence rate is about6-10%.[3]

Nurses are in the position to impact woman towards developing positive outlook regarding PCOS through counseling and education and by providing support for women with negative self-image as a result of their physical manifestation of PCOS. They may also make referrals to local support groups to help women build their coping skills.[3]

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

There is lack of data regarding prevalence of PCOD in India. Most prevalence studies in India are in hospital settings and most of them are observational studies done by clinicians. Recently few studies done among adolescents in schools report prevalence of PCOS as 9.13% to 36%.[6,7]
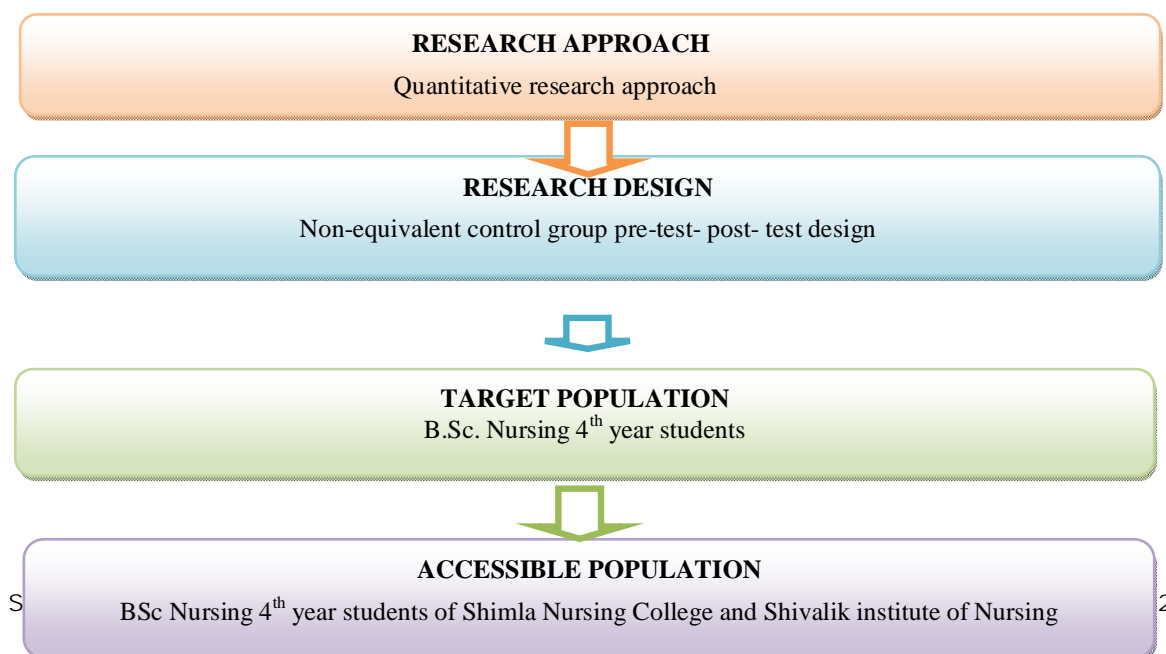
Several studies suggest that one in every ten women in India has Polycystic Ovary Syndrome (PCOS), and out of every 10 females diagnosed with PCOS, six are teenage girls.[8] Obesity is seen in 50% to 65% of PCOS patients. Obesity may have role in increasing the insulin resistance and hyperinsulinemia.[9]

2. Methods and Materials:

2.1 Research Design: This study aims to assess the attitude 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.

RESEARCH APPROACH
Quantitative research approach

RESEARCH DESIGN
Non-equivalent control group pre-test- post- test design

TARGET POPULATION
B.Sc. Nursing 4th year students

ACCESSIBLE POPULATION
BSc Nursing 4th year students of Shimla Nursing College and Shivalik institute of Nursing

SAMPLING TECHNIQUE
Non-probability Purposive sampling technique

SAMPLING SIZE
Comparison group
   Pilot Study: 4 B.Sc. Nursing 4th year students of
     Indian institute of nursing Shimla
Final Study: 40 B.Sc. Nursing 4th year students of
   Shivalik institute of nursing Shimla

SAMPLING SIZE
Experimental group
   Pilot Study: 4 B.Sc. Nursing4th year students of
     Modern nursing college Shimla
Final Study: 40 B.Sc. Nursing 4th year students
   Shimla nursing college Shimla

TOOL AND DATA COLLECTION
Likert scale

Experimental group
Pretest (O_{K1} O_{A1})

Comparison group
Pretest (O_{K1} O_{A1})

Intervention
Structural teaching programme (X_{STP})

No intervention was given to comparison group

Post test (O_{K2} O_{A2})

Post test (O_{K2} O_{A2})

DATA ANALYSIS

Descriptive statistics
Mean mode, median, standard deviation, Chi square
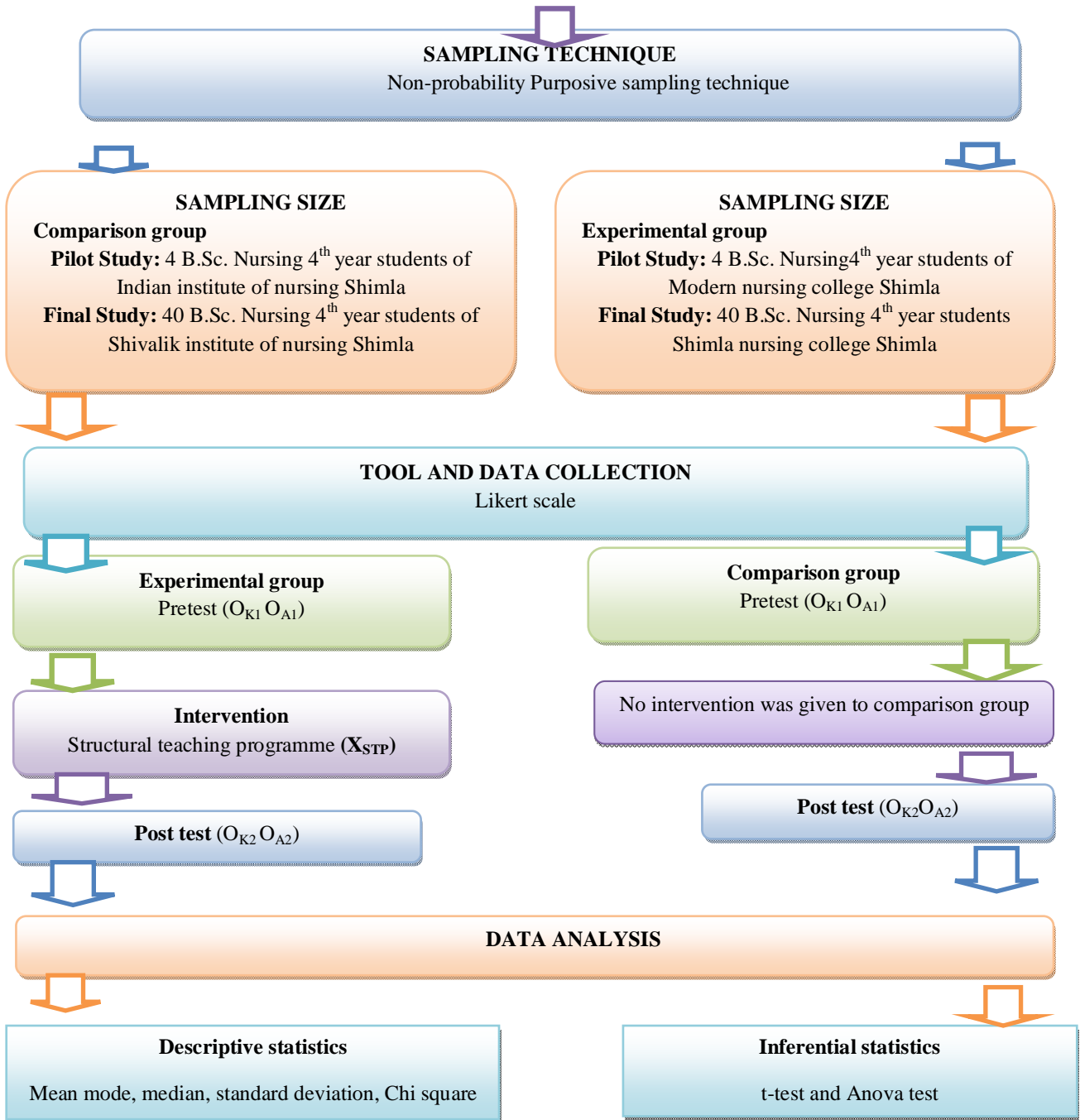
Inferential statistics
t-test and Anova test

Figure-1. Schematic representation of the study.

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 techniques: Based on the objectives and conceptual framework of the study, the tools developed were divided into the following sections:

Section 1: -Demographic variables

Section2: -Likert scale regarding PCOS

It consisted of12 positive and 12 negative statements. 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.

2.6 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 studywas explained to the subjects and assurance for confidentiality was given.

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}

No.	Variable					
	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)			
	7.4 Minimal 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 attitude 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 attitude 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 attitudescores in experimental and comparison Group.

N= 80

	Type of attitude	Actual range of score	Experimental group n = 40 f (%)	Comparison group n = 40 f (%)	Chi-square value	df	p value
Pre-Test	**Unfavorable attitude**	24-60	30(75)	35(87.5)	2.051	1	0.12[NS]
	Moderately favorable attitude	61-90	10(25)	5(12.5)			
	Favorable attitude	91-120	-	**-**			

Minimum= 24Maximum=120

Table-2 Depicts the comparison of attitude among nursing students before giving structured teaching Programme in both experimental and control group. In experimental group maximum number of students (75%) were having unfavorable attitude, $1/3^{rd}$ (25%) were having moderately favorable attitude, none (0%) of nursing students were having favorable attitude regarding PCOS. In comparison group maximum number of students (87.5%) were having unfavorable attitude regarding PCOS,minority (12.5%) were having moderately favorable attitude, none (0%) of them were having favorable attitude regarding PCOS. The chi-square was computed to determine the homogeneity of the experimental and comparison group in terms of attitude regarding PCOS before Structured teaching Programme .The findings showed that both groups were homogeneous with regard to attitude regarding PCOS having chi-square value (2.051) and p value (0.12).Therefore, it can be inferred that the students in experimental and comparison group were homogeneous and comparable in regards to pre-test level of attitude.
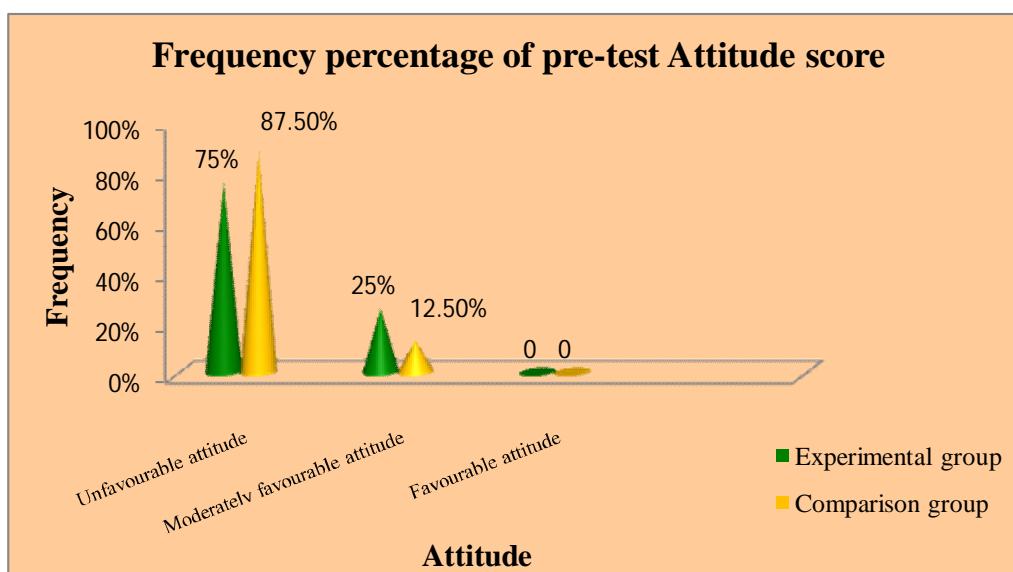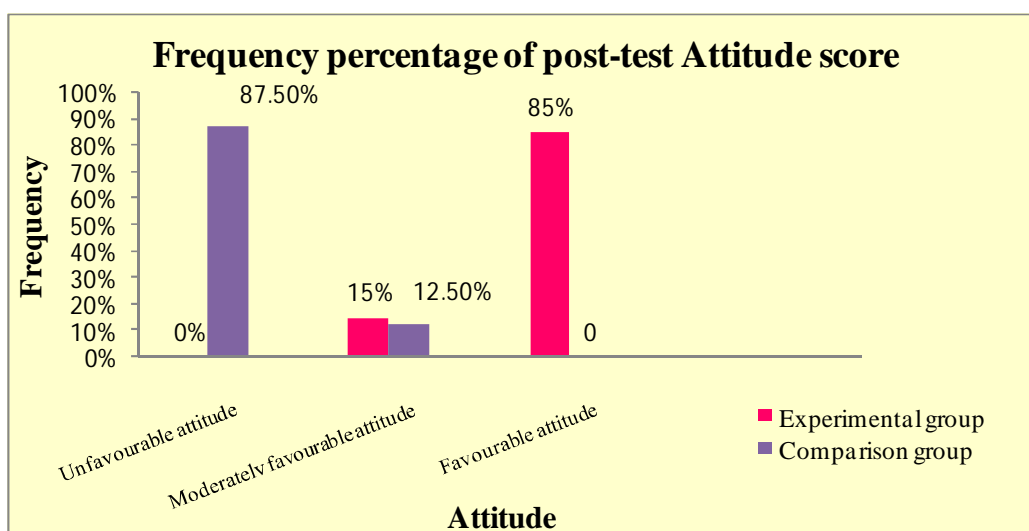

Figure -2: Depicts conical diagram regarding distribution of B.Sc. nursing students as per pre-test attitude scores in Experimental Group.

Table-3: Depicts frequency and percentage distribution of post-test Attitude scores regarding PCOS in experimental and comparison group

N-80

	Type of Attitude	Range of Attitude Scores	Experimental group (n = 40) f(%)	Comparison group (n = 40) f(%)
Post-test	Unfavorable attitude	24-60	-	35(87.5)
	Moderately favorable attitude	61-90	6(15)	5(12.5)
	Favorable attitude	91-120	34(85)	-

Minimum= 24 Maximum=120

Table-3 Depicts the frequency and percentage distribution of post-test attitude scores in experimental and comparison group. In experimental group majority of students (85%) were having favorable attitude, minority were having moderately favorable attitude (15%) and none of them were having unfavorable attitude. In comparison group majority (87.5%) of students had unfavorable attitude, few were having moderately favorable attitude (12.5%), and none (0%) of them were having favorable attitude.

Figure -3: Depicts column diagram regarding distribution of post-test attitude scores in experimental and comparison group.

Table 4: Depicts comparison of pre-test and post-test attitude scores between experimental and comparison group

N=80

	Groups	Mean	Standard deviation	Independent 't' test	df	p value
Pre-test attitude	Experimental Group (n =40)	54.70	8.39	0.31	78	0.76 NS
	Comparison group (n =40)	55.22	6.70			
Post-test attitude	Experimental Group (n =40)	93.72	3.92	31.33	78	0.00**
	Comparison group (n =40)	55.20	6.72			

** Significant,   NS- Non –Significant

Table No 4: Depicts comparison of pre-test and post-test attitude scores between experimental and comparison group. Mean pre-test attitude score in experimental group was (54.70), in comparison group (55.22). The independent 't' test was applied and computed 't' value obtained (0.31) and (p= 0.76[NS]) was found to be non- significant at 0.05 level of significance. Mean post-test attitude score in experimental group was (93.72) in comparison group was (55.20), computed 't' value obtained (31.33) and (p= 0.00[**]) was found to be significant at 0.05 level of significance.

4. Discussion:

In the present study In experimental group, Mean pre-test attitude score of B.Sc. Nursing students was 54.70 and it revealed that 30 (75 %) had unfavorable attitude, 10 (25%) had moderately favorable attitude and none of them had favorable attitude. In comparison group, Mean pre-test attitude score of B.Sc. Nursing students was 55.22 and it revealed that 35 (87.5 %) had unfavorable attitude, 5 (12.5%) had moderately favorable attitude and none of them had favorable attitude It showed that B.Sc. Nursing students had unfavorable, moderately favorable attitude regarding PCOS. This indicates that it was necessary for the researcher to modifyattitude among B.Sc. Nursing students by giving information regarding PCOS. The findings of the study were similar to the study conducted byPatel Khushbu (2018) which states that80% of Adolescent girls had unfavorable attitude and 20 % had favorable attitude in pre-test. In post-test 55% had favorable attitude and 45 % had unfavorable attitude regarding Polycystic Ovarian Syndrome.[4]

5. Conclusion:

The following conclusions were drawn from the study findings:
- There was a significant difference in the mean pre-test and post-test attitude scores regarding Polycystic Ovarian Syndrome

(PCOS) among B.Sc. Nursing students in experimental group. This indicates that it was necessary for the researcher to modifyattitude 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 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 regarding PCOS among adolescent girl in selected schools of H.P
- A similar study can be conducted on larger sample to generalize the findings.
- A descriptive study may be conducted to find out the incidence of PCOS related to lifestyle changes

Conflict of Interest:

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

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