

A Quasi Experimental Study to Assess the Effectiveness of Planned Teaching Programme On Knowledge Regarding Polycystic Ovarian Syndrome Among Adolescent Girls in Selected Girls Inter College, in Moradabad

J. Nesamani Sonja*

College of Nursing, Aligarh Muslim University, Aligarh, India

Abstract: This paper presents a quasi-experimental study to assess the effectiveness of planned teaching programme on knowledge regarding polycystic ovarian syndrome among adolescent girls in selected girls inter college, in Moradabad.

Keywords: Adolescent girls, Effectiveness, Experimental study, Knowledge, Ovarian, Pretest, Posttest, Polycystic, PCOS, Quasi, syndrome.

1. Introduction and Need for the Study

Adolescent is a transitional stage of physical and mental human development generally occurring between puberty and legal adulthood.

Due to lack of knowledge regarding PCOS, the adolescent girls go through the physiological and emotional stresses. In Indian society, most of the girls do not get adequate knowledge regarding their own body's physiological change such as obesity, Dysmenorrhoea and irregular menstrual cycles. If we are providing accurate knowledge regarding PCOS to the adolescence girls, it will be helpful for them to identify PCOS.

2. Review of Literature

1. Serum Androgen Levels and Muscle Mass in Women with Polycystic Ovary Syndrome. Tsutomu Douchi, Shinako Yamamoto, Toshimichi Oki, Kuninori Maruta, Riki Kuwahata, And Yukihiko Nagata (Obstet Gynecol 1999; 94:337-40. © 1999 by The American College of Obstetricians and Gynecologists.)
2. Ultrasound and Menstrual History in Predicting Endometrial hyperplasia in Polycystic Ovary Syndrome. Anthony P. Cheung, MBBS, MPH (Obstet Gynecol 2001;98:325-31. © 2001 by the American College of Obstetricians and Gynecologists.)
3. Obstetric Outcomes After in Vitro Fertilization in Obese and Morbidly Obese Women. Anuja Dokras, Lindsey Baredziak, Jill Blaine, Craig Syrop, Bradley J. Van Voorhis,

- and Amy Sparks. (Obstet Gynecol 2006;108:61-9)
4. Relationship of Androgens to Muscle Size and Bone Mineral Density in Women with Polycystic Ovary Syndrome. Tsutomu Douchi, Toshimichi Oki, Hideki Yamasaki, Riki Kuwahata, Mitsuhiro Nakae, MD, and Yukihiko Nagata, MD. (Obstet Gynecol 2001;98:445-9. © 2001 by the American College of Obstetricians and Gynecologists.)
5. Endometrial Expression of Cyr61 A Marker of Estrogenic Activity in Normal and Abnormal Endometrium. Shannon D. MacLaughlan, Wilder A. Palomino, Bilan Mo, Terrence D. Lewis, Ruth A. Lininger, and Bruce A. Lessey. (Obstet Gynecol 2007;110:146-54).

3. Objectives of the Study

1. To assess the pretest and post test knowledge regarding polycystic ovarian syndrome among adolescent girls.
2. To find out the effectiveness of the structure teaching programme regarding polycystic ovarian syndrome among adolescent girls.
3. To determine the association between pretest knowledge regarding polycystic ovarian syndrome among adolescent girls with the selected demographic variables.

4. Operational Definition

Adolescence Period:

The transition period from childhood to adulthood is with physical, social, psychological, economic and biological transitions with demand of emotional changes.

Poly cystic: Multiple immature follicles.

PCOS:

Definition: It includes the common symptoms of oligomenorrhoea, amenorrhoea, infertility, hirsutism, acne, seborrhoea, obesity and depression.

Assumption:

1. The adolescent girls have inadequate knowledge of PCOS.
2. Structure teaching programme is effective.
3. The adolescents will participate positively to the intervention carries out during study.

Hypothesis:

1. There will be a significant difference between pretest and post test knowledge regarding PCOS. (Poly cystic ovarian syndrome) at the level of 0.001
2. There will be a significant relationship with pretest knowledge with demographic significant value of P<0.001.

Delimitation of the study:

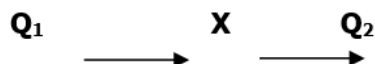
1. Sample size limited to 60.

5. Methodology

A. Research Design

The research design used for this study is quasi experimental study.

The following schematic representation of research design:



B. Research Approach

Evaluative approach helps to explain the effect of Independent variables on the dependent variables.

C. Population

Target population: adolescent girls in Modern public school, Moradabad.

Sample: XI Standard adolescent girls.

Sampling technique: purposive sampling method.

Setting: Wilsonia Girls Intercollege at Moradabad.

D. Variables

Independent variable planned teaching programme on PCOS among adolescent girls. Dependent variable is knowledge regarding PCOS. The influencing variables refers to Age, Age at puberty, Menstrual History, Occupation, Income of the parent, family type and dietary pattern.

Inclusion Criteria:

1. Girls studying in XI Std. in Modern Public School at Moradabad.
2. Girls between the age of 16-18 years.

Exclusion Criteria:

1. Girls less than 16 yrs and more than 18 yrs.
2. Girls who are absent.

E. Description of the tool

Section 1:

It includes socio-demographic variables. It consists of Age, age at puberty, family history of infertility, level of education and occupation of parents, type of family, total family income (months).

Section 2:

Semi structured questionnaire to seek knowledge of adolescent girls regarding PCOS. The difference between pre and post test knowledge score will be calculated by using significant value of P<0.001 and paired ‘t’ test.

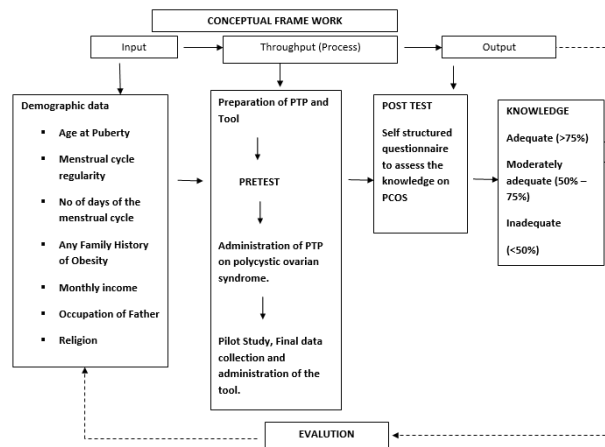


Fig. 1. Conceptual framework

6. Major Findings

Table 1

Distribution of adolescent girls based on their demographic variables. n=50

S. No.	Variable	No. of Frequency	%
1.	Age at Puberty		
	12 to 13	15	30
	13 to 14	17	35
	14 to 15	12	25
	Above 15	05	10
2.	Menstrual cycle Regularity		
	Regular	25	50
	Irregular	20	40
	Absence	05	10
3.	No of days of the Menstrual cycle		
	Twenty-eight	36	70
	Thirty	10	20
	None	06	12
4.	Family History of Obesity		
	A-Yes	07	15
	B-No	43	85
5.	Monthly Income		
	< Rs 5,000/-	15	30
	Rs 5,001/- to Rs 8,000/-	10	20
	Rs 8,001/- to Rs 10,000/-	15	30
	> Rs 10,001/-	10	20
6.	Occupation of Father		
	Agriculture	15	30
	Business	15	30
	Employed	13	25
	Daily Wages	07	15
7.	Religion		
	A-Hindu	23	46
	B-Muslim	10	20
	C-Sikh	07	14
	D-Christian	10	20
8.	Source of Income		
	Internet	19	38
	Television	14	28
	News Paper	04	08
	Others	13	26

Majority of adolescent girls of 35% belong to the age group

13-14 years. Majority of them 52% were of regular menstrual cycle. Most of them 70% were having 28 days of menstrual cycle. Majority of them (85%) do not have family history of obesity.

Majority of monthly in the family 30% were <5000 per month and Rs 8,001/- to Rs 10,000/-. Majority of the occupation of the parents 30% were both agriculture and business people. Majority of religion were Hindu. Most of them 38% received information on POLY CYSTIC OVARIAN SYNDROME through media like internet and 28% were receiving through Television.

- Majority adolescent girls 56% had inadequate knowledge, 24% had moderate knowledge and 20% had adequate knowledge POLY CYSTIC OVARIAN SYNDROME in Pretest.
- The majorities of adolescent girl in Posttest were 42% and had adequate knowledge, 34% had Moderate knowledge and 24% had inadequate knowledge.

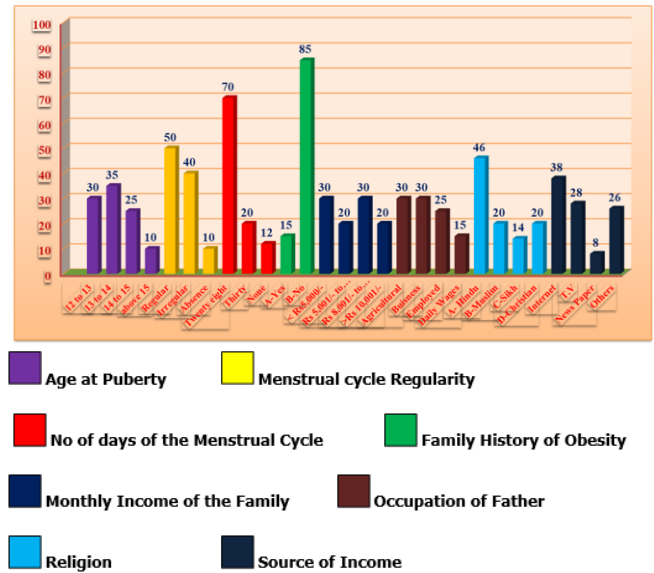


Fig. 2.

Table 2

Test	Girls (N)	Mean ± SD	Student's paired t-test
Pretest	50	12.56 ± 4.26	t=11.26 P=0.05*
Posttest	50	20.70 ± 2.57	DF=49, SIGNIFICANT

Table 3

Association between post test knowledge with selected demographic variables regarding polycystic ovarian syndrome, n=50

Demographic Value	X ²	Table value 'P'	Df	Level of significance	Inference
Age at Puberty	2.880	3.841	1	0.05	NS
Menstrual cycle Regularity	4.000	5.991	2	0.05	NS
No of days of the Menstrual cycle	43.120	7.815	3	0.05	S
Family History of Obesity	42.320	3.841	1	0.05	S
Monthly Income	29.520	7.815	3	0.05	S
Occupation of Father	11.760	7.815	3	0.05	S
Religion	24.760	5.991	2	0.05	S
Source of Income	46.080	3.841	1	0.05	S

Table 4

Association between and within groups of selected demographic variables regarding polycystic ovarian syndrome

Demographic variables	Association	Sum of Squares	df	Mean Square	F	Significant
Age at Puberty	Between Groups	5.078	10	0.508	2.955	0.007
	Within Groups	6.702	39	0.172		
	Total	11.780	49			
Menstrual cycle regularity	Between Groups	9.724	10	0.972	2.075	0.051
	Within Groups	18.276	39	0.469		
	Total	28.000	49			
No of days of Menstrual Cycle	Between Groups	5.462	10	0.546	0.458	0.907
	Within Groups	46.538	39	1.193		
	Total	52.000	49			
Family history of Obesity	Between Groups	2.013	10	0.201	1.386	0.223
	Within Groups	5.667	39	0.145		
	Total	7.680	49			
Monthly Income	Between Groups	5.396	10	0.540	1.106	0.382
	Within Groups	19.024	39	0.488		
	Total	24.420	49			
Occupation of Parent	Between Groups	9.704	10	0.970	1.297	0.266
	Within Groups	29.176	39	0.748		
	Total	38.880	49			
Religion	Between Groups	9.089	10	0.909	2.312	0.030
	Within Groups	15.331	39	0.393		
	Total	24.420	49			
Source of Information	Between Groups	.463	10	4.629E-02	0.216	0.993
	Within Groups	8.357	39	0.214		
	Total	8.820	49			

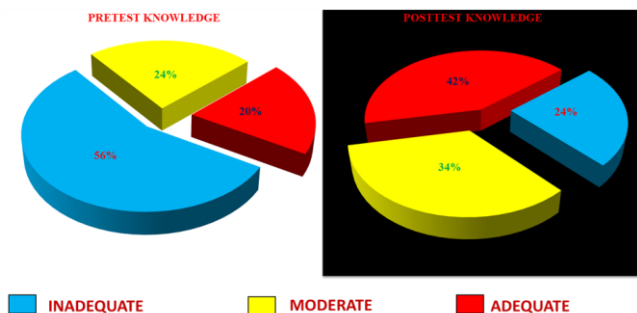


Fig. 3. Difference between pretest and posttest know ledge regarding PCOS

Overall knowledge score:

- The fourth objective of this study was to find out the association between posttest knowledge with selected demographic variables
- There was significant association between posttest knowledge with selected demographic variables such as No of days of Menstrual Cycle, Family history of Obesity, Monthly Income, Occupation of Parent, Religion and Source of Information at $P < 0.05$ level.
- There was no significant between posttest knowledge with demographic variables such as Age at Puberty and Menstrual cycle regularity at $P < 0.05$ level.

ANOVA shows that there was highly significant association between and within the Group of selected demographic variables regarding Poly Cystic Ovarian Syndrome in Age at Puberty and significant association between and within the group such as Religion and menstrual cycle regularity.

7. Nursing Implication

A. Nursing Education

Nursing curriculum should insist about the importance of health education, on polycystic ovarian syndrome among adolescents.

B. Nursing Practice

- This study recommends the nurse should emphasis practicing the health education programme to be carried out.
- These findings emphasis that nurse should focus on the early identification and the treatment for polycystic ovarian syndrome.

C. Nursing Administration

Nursing administrator should provide necessary facilities to equip the staff to obtain education and service related to polycystic ovarian syndrome.

D. Nursing Research

This study motivates other investigators to conduct further studies regarding polycystic ovarian syndrome.

8. Conclusion

I have discussed the statement of the problem, objective, hypothesis, major findings of the research and nursing implications.

References

- [1] Basavanthappa BT, 1998 "Nursing Research" (1st ed), Jaypee Publication, New Delhi 153-218.
- [2] Polit & Hungler (2004) "Nursing Research Principle and Methods" (7th ed). Lippincott Company, India 317-337.
- [3] Emily Slone McKinney (2005) "Maternal Child Nursing". (2nd ed) Elsevier Saunders, Missouri 786.
- [4] Lowdermilk (1997) "Maternity and women Health Care" (6th ed). Mosby publication Sydney 1268-1269.
- [5] Dutta DC (2005). "Textbook of Gynaecology" 4th ed. New Central Book agency, (P) Ltd., India, 421, 431, 523, 549, 558
- [6] Lynna Y. Littleton (2007) "Maternity Nursing Care" (1st ed). All right reserved publisher, Haryana 179.
- [7] Susan Scott Ricci, Terri Kyle (2009) "Maternity and Paediatric Nursing" Lippincott Williams & Wilkins, Sydney 212-214.
- [8] Gita Ganguly Mukherjee "Current Obstetrics and Gynaecology" (1st ed) Jaypee Brother Publication 232-239.
- [9] Katie Colwel et al (2009). "Women's perceptions of polycystic ovarian syndrome". Women's Health 32 (5). 453-459 J Obstet Gynaecol Con.
- [10] Sigrid Elsonbruch et al (2003). Quality of the psychosocial well-being and sexual satisfaction in women with polycystic ovarian syndrome. "The Journal of clinical endocrinology and Metabolism 88 (12), 5801-5807.
- [11] Maria E. Trent et al (2002), Quality of life in adolescent girls with polycystic ovary syndrome, Archives of paediatrics and adolescent medicine 15 (6) (1-8).
- [12] Judy Griffin McCook et al (2004). "Health related quality of life issues in women with polycystic syndrome JOGUN 1 (34) (12-20).
- [13] Kitzinger, Willmott (2002) Women's experience of polycystic ovary syndrome Soc Sci Med 54 (349-361).
- [14] Vink JU et al (2006). Heritability of Poly Cystic Ovarian Syndrome in a Dutch Twin-family study "Journal of clinical endocrinology and Metabolism 91 (2) 2100-2104.
- [15] Robert L. Rosenfield (2007) Identifying children at risk for polycystic ovarian syndrome, Journal of Clinical Endocrinology and Metabolism 92 (3) 787-796.
- [16] Bulent O. Yildiz et al (2008). Impact of obesity on the risk for polycystic ovary syndrome, Journal of clinical endocrinology and metabolism 93 (1) 162-168.
- [17] Bradley Trivax et al (2007) Diagnosis of polycystic ovary syndrome, clinical obstetrical and Gynaecology 50 (1) 168-177.
- [18] Alexander CJ, Tangchitnob EP. Keoir BE, (2009). "Polycystic ovary syndrome: a major unrecognized cardiovascular risk factor in women. Rev. Obstet Gynecol.2(4): 232-239.
- [19] Trivax B, Azziz R. (2007) "Diagnosis of polycystic ovarian syndrome". Clin Obstet Gynecol. 50 (1): 168-77.
- [20] Bekx MT, Connor EC, Allen DB. (2010). "Characteristics of adolescents presenting to a multidisciplinary clinic for polycystic ovarian syndrome". J Pediatr Adolesc Gynecol.23 (1):7-10.
- [21] Azziz R, Marin C, Hoq L, Badamgarav E, Song P. (2005). "Health – related economic burden of the polycystic ovary syndrome during reproductive lifespan". J Clin Endocrinol Metab. 90(8)4650-4658.
- [22] Azziz R, Woods KS, Reyna R, Key TJ, Knochenhauer ES, Yildiz BO. (2004). The prevalence and features of the polycystic ovary syndrome in an unselected population. J Clin Endocrinol Metab 89(6): 2745-2749.
- [23] Marrinan G, Stein M. Polycystic Ovarian disease (Stein-Leventhal syndrome). Emedicine.medscape.com/article/404754-overview.
- [24] Brassard M, AniMelk Y, Baillargeon JP. Basic infertility including polycystic ovary syndrome. Med Clin North Am. 2008; 92 (5):1163-1192. www.mdconsult.com/das/article/body. Assessed October 6 2011.
- [25] Magnotti M, Futterweit W. Obesity and polycystic ovary syndrome. Med Clin North Am. 2007 91 (6): 115101168. MD Consult website: www.mdconsult.com/ das/article/body
- [26] Khan MI. Polycystic ovarian syndrome. eMedicine web site. Emedicine. medscape.com/ article/2568606-overview.
- [27] O'Brien RF, Emans SJ. Polycystic ovary syndrome in adolescents. J Pediatr Adolesc Gynecol. 2008; 21 (3); 119-128.

- [28] Polycystic ovary syndrome research highlights. The hormone Foundation, www.hormone.org/Polycystic/research.cfm.
- [29] Meyer C, McGrath BP, Teede HJ. Overweight women with polycystic ovary syndrome have evidence of subclinical cardiovascular diseases. *J Clin Endocrinol Metab.* 2005;90(10):5711-5716.
- [30] Donavalli S, Ehrman DA. (2007) Pharmacologic therapy for polycystic ovary syndrome. *Clin Obstet Gynecol* (2007), 50 (1); 244-254.
- [31] Attaran M. Polycystic ovary syndrome. Cleveland Clinic Website. www.clevelandclinicmeded.com/medicalpubs/disease/management/~.
- [32] Ferry RJ, Polycystic ovarian syndrome. eMedicine web site. emedicine.medscape.com/article/924698-overview.
- [33] Poly Cystic Ovarian Syndrome symptoms. Polycystic ovarian syndrome association website. www.Poly Cystic Ovarian Syndrome upport.org/symptoms.php. Accessed February 2, 2012.
- [34] Panill M. Polycystic ovarian syndrome an overview Medscape web site. www.medscape.com/viewarticle/438597.
- [35] Nader S. Treatment for polycystic ovarian syndrome: a critical appraisal of treatment options. Medscape web site. www.medscape.com/viewarticle/576132.
- [36] Boschert S. Some Poly Cystic Ovarian Syndrome treatment decrease cardiovascular risk. www.mdconsult.com/das/news/body/~