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Effectiveness of self-instructional Module on prevention of polycystic ovarian syndrome among adolescent girls in selected Nursing College, Chennai.

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ABSTRACT

The major problem faced by adolescent girls is menstrual disorders. Polycystic Ovarian Syndrome is a common endocrine disorder in women of any reproductive age (18- 40 years). PCOS elicits a set of symptoms such as irregular menses, heavy menstruation, pelvic pain, excess hair, facial growth, patches of thick, dark, velvety skin and difficulty in pregnancy. The research is about to improve the knowledge regarding the prevention of polycystic ovarian syndrome among adolescent girls at a selected nursing college. The problem statement of the study is to evaluate the effectiveness of a self-instructional module on the prevention of polycystic ovarian syndrome among adolescent girls at a selected nursing college in Chennai. The objective of the study is to assess the pre-test knowledge regarding the prevention of polycystic ovarian syndrome among adolescent girls in a selected nursing college. To assess the post-test knowledge regarding the prevention of polycystic ovarian syndrome among adolescent girls in selected nursing colleges. To compare the pre-test and post-test knowledge regarding the prevention of polycystic ovarian syndrome among adolescent girls in a selected nursing college. To find out the association between post-test knowledge score with their selected demographic variables. The methodology of the present study was conducted at Sathyabama College of Nursing. The sample of this study consists of 30 students in Sathyabama College of Nursing. The purposive sampling technique was used for the sample selection. The tool used for the data collection was a self-administered multiple-choice questionnaire, which consisted of part one, demographic data, and part two, a PCOS semi-structured questionnaire, knowledge about polycystic ovarian syndrome. Descriptive statistics (frequency, percentage) and inferential statistics (chi-square) were used to analyse the data and set hypotheses. It was concluded that the knowledge regarding the prevention of polycystic ovarian syndrome will be conducted among adolescent girls. This will help to identify and prevent PCOS and improve their quality of life. The results showed that 76% of adolescent girls have gained moderate knowledge, and 24% of them have gained adequate knowledge. The present study is to evaluate the knowledge regarding the prevention of polycystic ovarian syndrome among adolescent girls at a selected nursing college in Chennai. Thus, the investigator was done to evaluate the knowledge of PCOS among adolescent girls of each sample.

Keywords: *Evaluate, Polycystic ovarian syndrome, adolescent girls, college*.

1. INTRODUCTION

Human life encompasses a diverse journey in which one of the most vital stages is adolescence. According to NCERT, The word adolescence is derived from Latin word means 'to grow up'. Adolescence is the period of transition from childhood to adulthood and a time of various biological, intellectual, psychological and economic changes. Adolescence has been identified as a pivotal period in human development marked by biological changes such as puberty. There are three main stages of adolescence such as early adolescence (11-14 years) middle adolescence (15- 17 years) and late adolescence (18-21 years). The major portion of the country which is occupied by adolescence and development of the country depends upon the healthy adolescents. The major problem which is faced by adolescent girls is menstrual disorder.

Polycystic Ovarian Syndrome is a common endocrine disorder, in women of any reproductive age(18-40years). The term Polycystic Ovarian Syndrome was first discovered by Irving Stein and Michel Leventhal. So, it is called as 'Stein Leventhal Syndrome/ Hyperandrogenic anovulation. PCOS occurs when the ovaries produce higher than normal levels of androgens, disrupting the normal menstrual cycle and sometimes preventing ovulation. It is characterized by insulin resistance, hyperandrogenism, gonadotropin abnormalities and polycystic ovaries. It is a multisystem / heterogenous disorder of unknown cause, but factors such as genetic, environmental conditions and behavioral factors may contribute the condition. PCOS elicits a set of symptoms such as irregular menses, heavy menstruation, pelvic pain, excess hair facial growth and patches thick dark velvety skin and difficulty in pregnancy. It is found in around 70% of women who have ovulation difficulties leading to infertility.

PCOS poses unique challenges during adolescence period. Young individuals with PCOS may encounter various physical and hormonal imbalances. Early diagnosis through regular checkup is crucial, which allowing timely intervention and management. Since the exact cause is unknown, it can be actively managed by reducing the risk factors, adopting a healthy lifestyle to reduce the likelihood of developing symptoms or complications. By incorporating the active measures to prevent PCOS helps to optimize the overall health and wellbeing. The manifestations of PCOS can impact their self -esteem and body structure further contributes to physical, mental and emotional challenges. Managing PCOS during adolescence requires a holistic approach by maintaining healthy lifestyle, stress management, nutritional and emotional support.

OBJECTIVES:

1. To assess the pre-test knowledge regarding prevention of polycystic ovarian syndrome among adolescent girls in selected nursing college.
2. To assess the post-test knowledge regarding knowledge on prevention of polycystic ovarian syndrome among adolescent girls in selected nursing college.
3. To compare the pre-test and post-test knowledge regarding prevention of polycystic ovarian syndrome among adolescent girls in selected nursing college.

To find out the association between post-test knowledge score with their selected demographic variables

2. MATERIALS & METHODS

Study design and setting: An evaluative research approach was adopted for the study. The research design used in this study is Pre-Experimental- Descriptive research design. The Accessible Population of the present study was adolescent girls studying in 1st year B.sc Nursing college. The study was collected in studying in selected nursing college.

Sample size and sampling method: The study sample size was 30 students who were present on the day of the data collection. The purposive sampling method was used in this study. Knowledge was assessed by PCOS semi-structured questionnaire and is conducted by pre-test and post-test.

Data collection: The data was collected in selected nursing college. The permission will be obtained from the dean of the college and oral consent will be obtained from the study subjects after explaining the purpose of the study. 30 samples that met the inclusion criteria will be selected by using a purposive sampling technique. The PCOS semi-structured questionnaire is used to evaluate the knowledge regarding the prevention of polycystic ovarian syndrome among adolescent girls. The adolescent girls were educated with a PowerPoint presentation on knowledge regarding the prevention of polycystic ovarian syndrome. The post-test was conducted using the PCOS semi-structured questionnaire.

3. RESULTS

Section I: data on demographic variables of adolescent girls

Table 1: Frequency and percentage distribution of demographic variables of adolescent girls.N=30

S.No	Socio Demographic Variables	Frequency	Percentage
1	Age		
	a)16-17 years	1	3.3%
	b)17-18 years	10	33.3%
	c)18-19 years	17	56.6%
	d) 19-20 years	2	6.6%

2	Body weight a) 35-45 kg b) 45-55kg c)55-65kg d)65-75 kg	 11 8 8 3	 36.6% 26.6% 26.6% 10%
3	Religion a) Hindu b) Christian c)Muslim d)Others	 15 12 3 0	 50% 40% 10% 0%
4	Marital status a) Married b) Unmarried	 0 30	 0% 100%
5	Standard of study a) Primary b) Secondary c) Under graduate d)Post graduate	 0 0 30 0	 0% 0% 100 % 0%
6	Menstrual pain a) No pain b) Low pain c) Moderate pain d) Severe pain	 1 5 15 5	 3.3% 16.6% 50% 30%
7	Duration of menstruation a) 3 days b)4 days c) 5 days d) 6 days	 5 4 16 5	 16.6% 13.3% 53.3% 16.6%
8	Frequency of menstruation a) 20-25 days once	 6	 20%

	b) 25-30 days once	20	66.6%
	c) 30-35 days once	4	13.3%
9	Type of institution		
	a) Government	0	0%
	b) Private	30	100%
10	Type of institution currently studying		
	a) 1st year	30	100%
	b) 2nd year	0	0%
	c)3rd year	0	0%
	d) 4th year	0	0%

The data given in **Table-1** showed that,

Table 1.1: Regarding the age, majority 56.6% girls were in the age group of 18-19 years, remaining 33.3% girls were in the age group of 17-18years, 6.6% girls are19 -20 years and 3.3% girls are 16-17 years.

Table 1.2: Regarding the body weight majority 36.6% of the girls are 35-45kg, remaining 26.6% girls are 45-55kg and 55-65kg and 10% of 65-75 kg.

Table 1.3: Regarding the marital status majority 100% of girls are unmarried and 0% married.

Table 1.4: Regarding religion majority 50% of the girls were in Hindu, remaining 40% of girls were in Christian and 10% of girls were in Muslim and other 0%.

Table 1.5: Regarding standard of study, majority 100% of the girls are in undergraduate, remaining 0% of primary school, secondary school and post graduate.

Table 1.6: Regarding the menstrual pain majority 50% of the girls have moderate pain, remaining 30% of the girls have severe pain, 16.6% girls have low pain and 3.3% of the girls have no pain.

Table 1.7: Regarding the duration of menstruation majority 53.3% of the girls have 5days of menstruation, remaining 16.6% of the girls have 3 and 6 days of menstruation and 13.3% of the girls have 4 days of menstruation.

Table 1.8: Regarding the frequency of menstruation majority 66.6% of the girls have menses of 25-30 days once, remaining 20% of the girls have 20-25 days once and 13.3% of the girls have 30-35 days once of menstruation.

Table 1.9: Regarding the type of institution majority 100% of the girls are under private institution, remaining 0% of the girls are government institution.

Table 1.10: Regarding type of institution currently studying majority 100% of the girls are 1st year, remaining 0% of 2nd,3rd and 4th year.

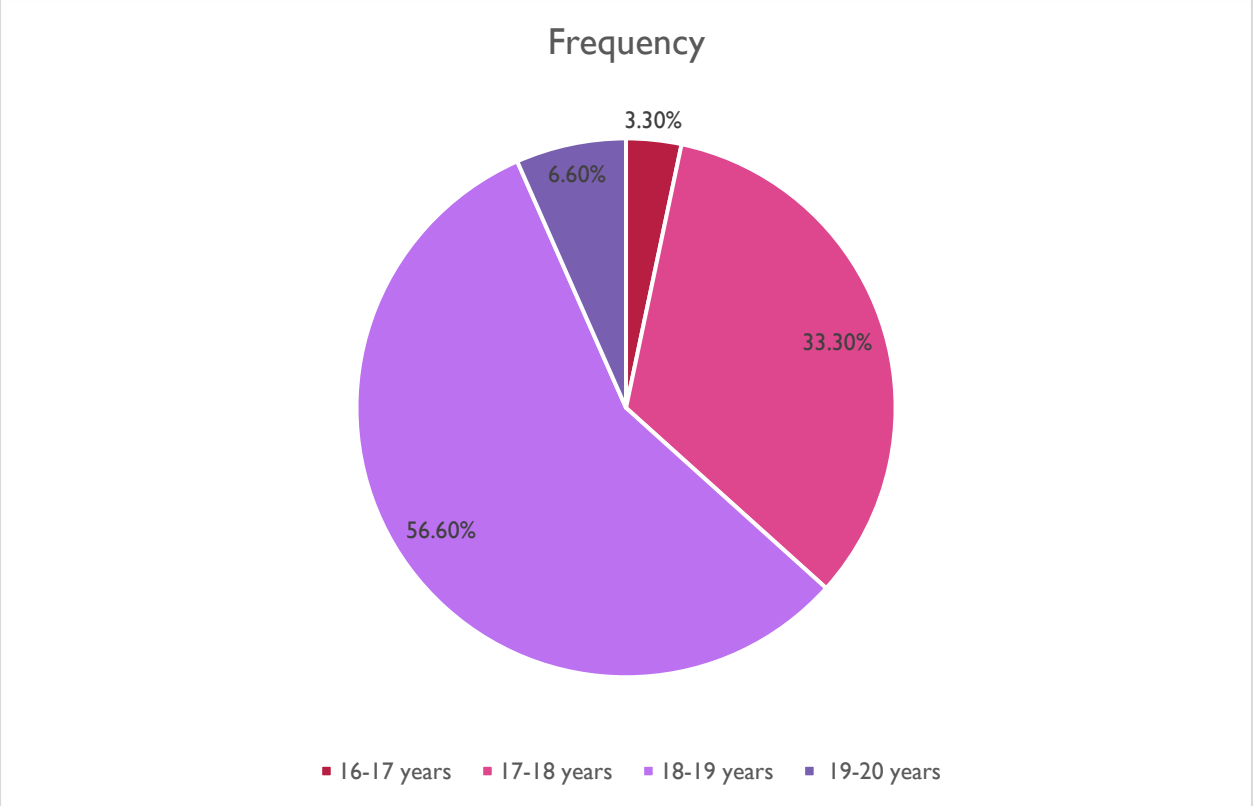


Figure 3: Age of the students

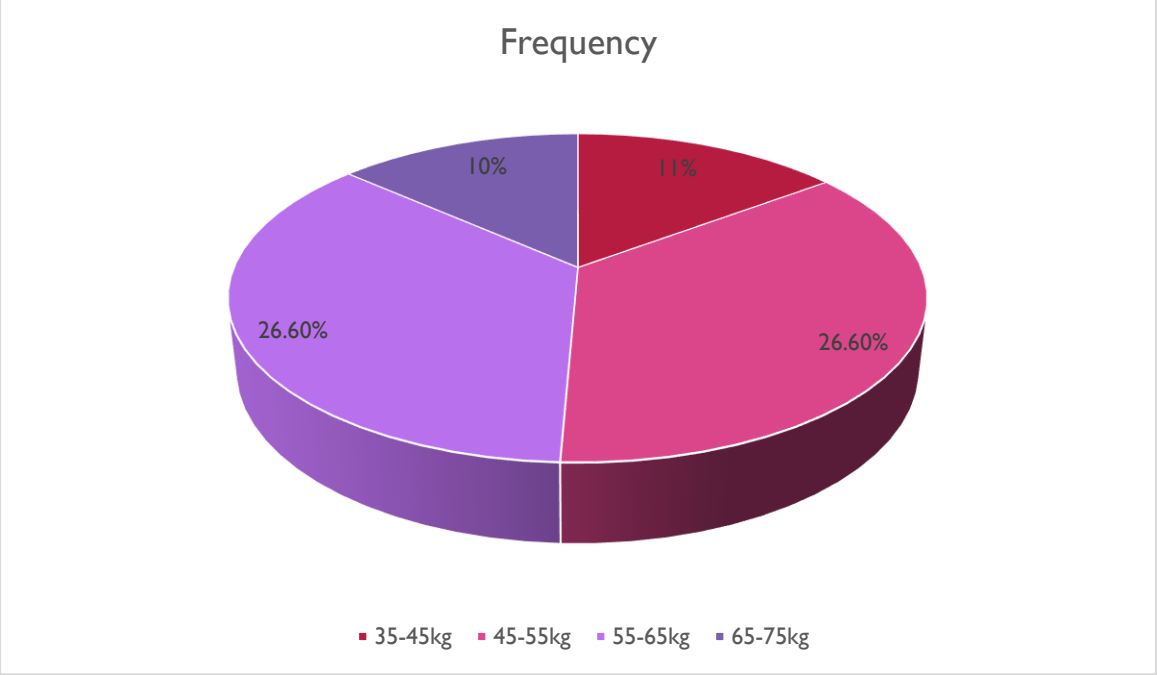


Figure 4: Body weight of the students

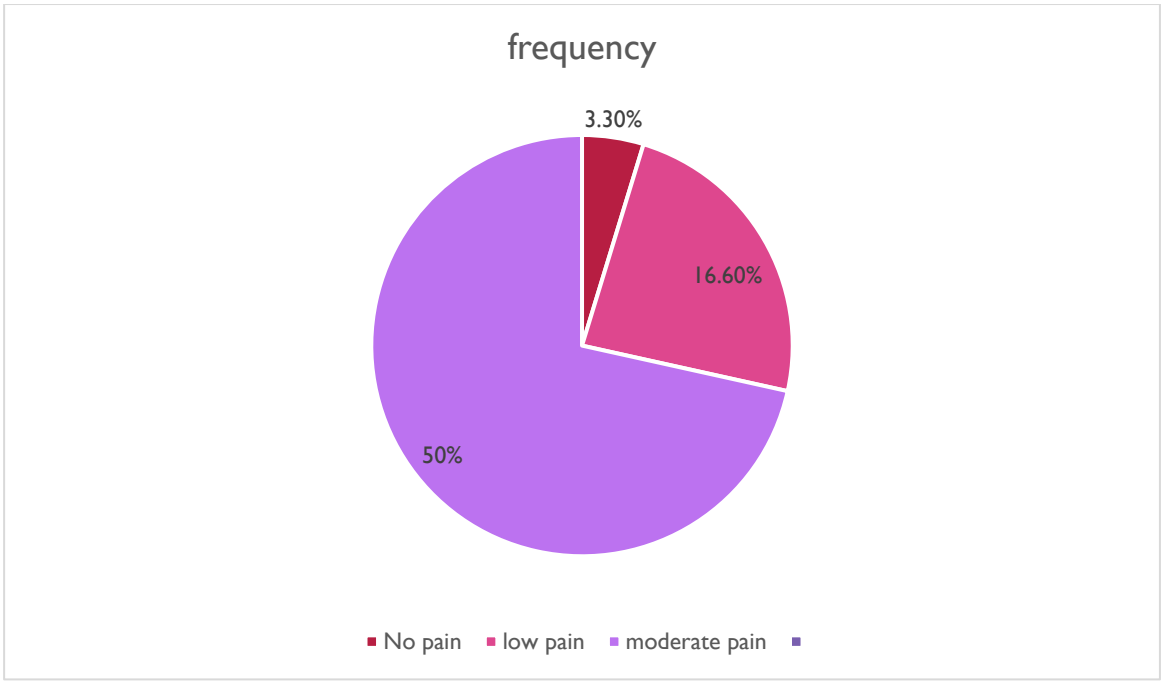


Figure 5: Show Menstrual pain of the students

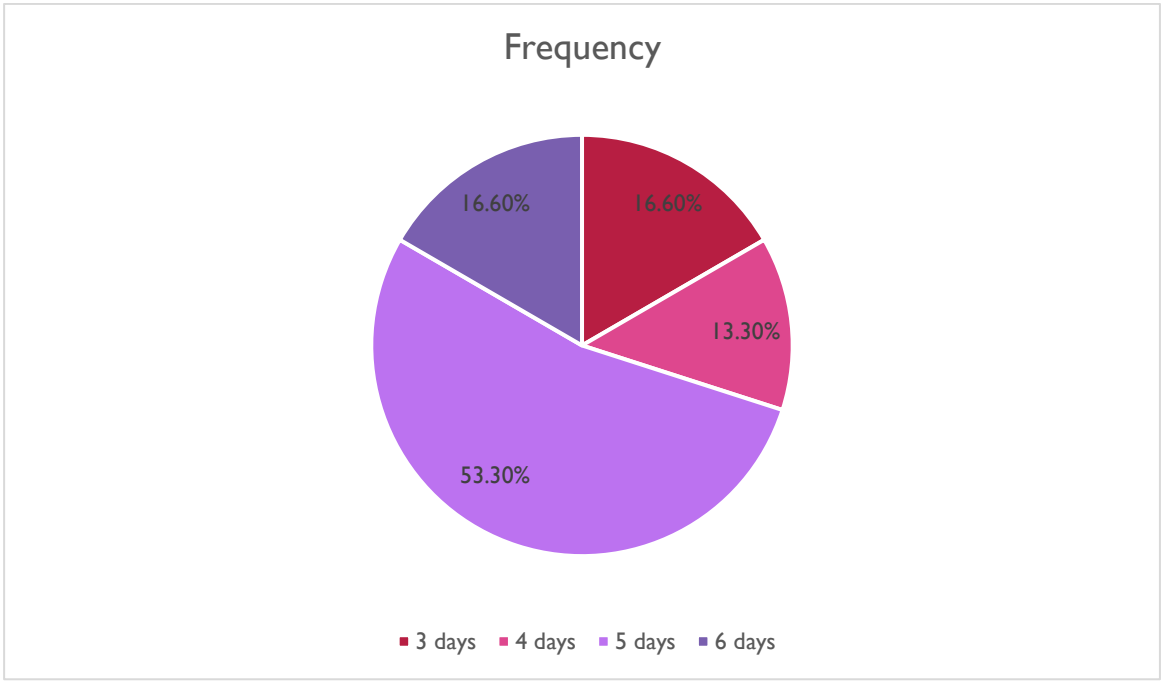


Figure 6: Shows duration of menstruation

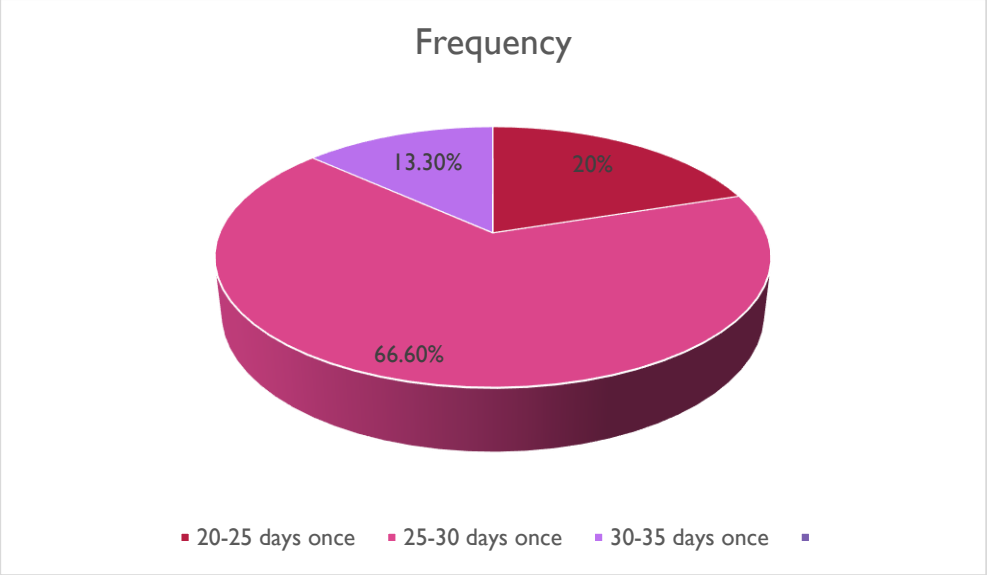


Figure 7: Show frequency of menstruation

SECTION-II DATA ON PRETEST KNOWLEDGE REGARDING PREVENTION OF POLYCYSTIC OVARAN SYNDROME AMONG ADOLESCENT GIRLS

Table:2 Frequency and percentage assess the pretest knowledge regarding prevention of polycystic ovarian syndrome among adolescent girls using PCOS semi structured questionnaire.

S.NO	LEVEL OF KNOWLEDGE	FREQUENCY (F)	PERCENTAGE (%)
1.	Inadequate knowledge	12	40%
2.	Moderate knowledge	18	60%
3.	Adequate knowledge	0	0%

Table-2: The above the table shows that pre-test knowledge regarding prevention of polycystic ovarian syndrome among adolescent girls received 12(40%) Inadequate, 18(60%) moderate, 0(0%) adequate knowledge.

PERCENTAGE

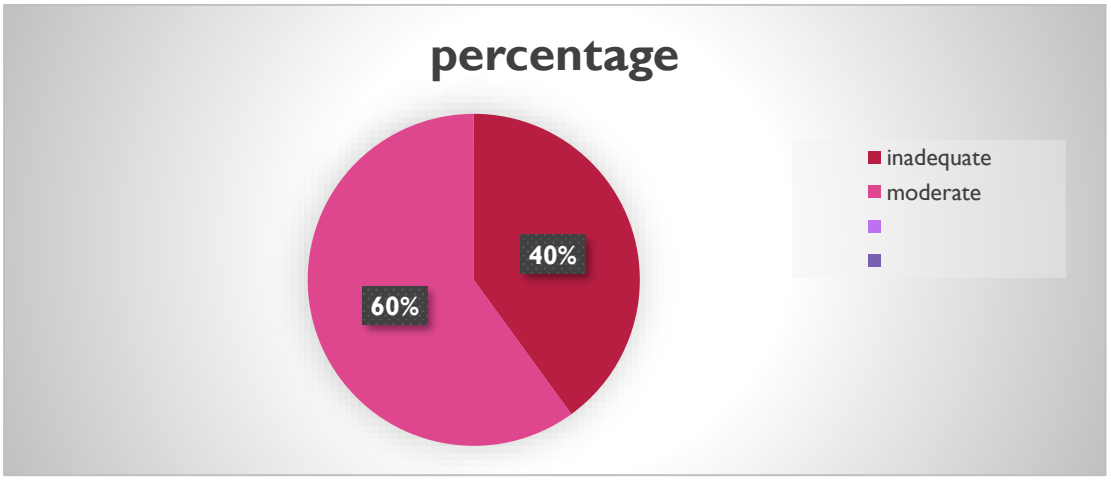


Figure 8: Show Pre-test knowledge

SECTION -III DATA ON POST TEST KNOWLEDGE REGARDING PREVENTION OF POLYCYSTIC OVARIAN SYNDROME AMONG ADOLESCENT GIRLS

Table-3: Frequency and percentage assess the post-test knowledge regarding prevention of polycystic ovarian syndrome among adolescent girls using PCOS semi structured questionnaire

S.NO	LEVEL OF KNOWLEDGE	FREQUENCY (F)	PERCENTAGE (%)
1.	Inadequate knowledge	0	0%
2.	Moderate knowledge	23	76.6%
3.	Adequate knowledge	7	23.3%

Table-3: The above the table 3 shows that post-test assess the effectiveness of self-instructional module on knowledge regarding prevention of polycystic ovarian syndrome among adolescent girls received 0(0%) Inadequate, 23(76.6%) Moderate, 7(23.3%) Adequate knowledge

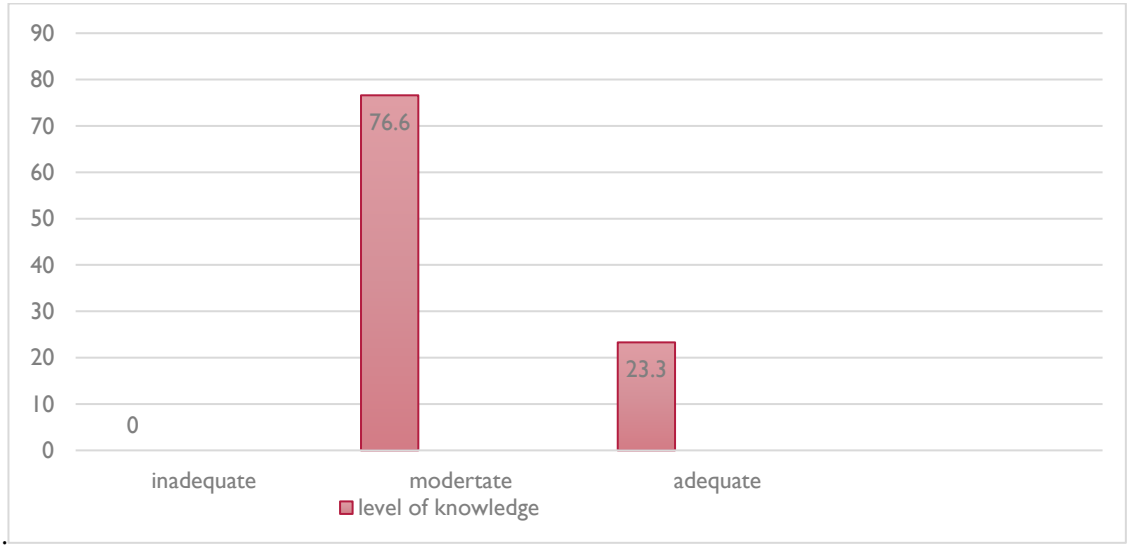


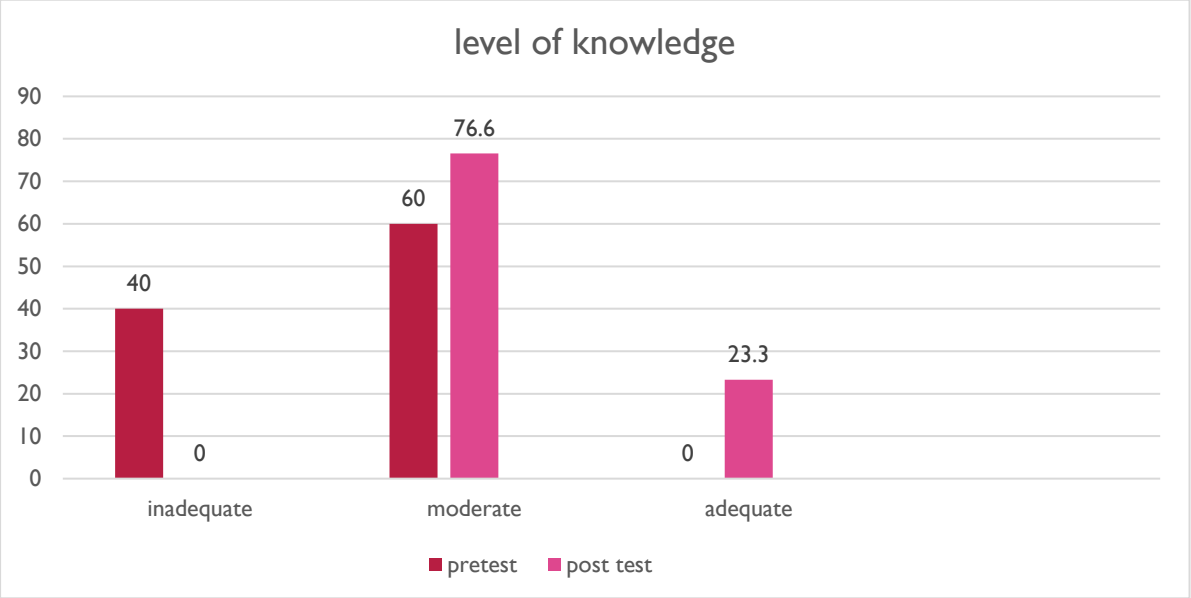
Figure 9: Show post-test knowledge

SECTION-IV DATA ON COMPARISON BETWEEN PRETEST AND POSTTEST SCORES ON KNOWLEDGE REGARDING PREVENTION OF POLYCYSTIC OVARIAN SYNDROME AMONG ADOLESCENT GIRLS

Table : 4 Highly significant at p 0.05 level, Df=30, table value=2.045 N=30

S. No	Knowledge	Maximum score	Mean	Mean difference	Standard Deviation	Paired 't' test Value
1.	Pre-test	20	9.4	4.5	2.121	11.425
2.	Post-test	20	14			

The above table shows the comparison of pre-test and post-test level of knowledge regarding prevention of polycystic ovarian syndrome among adolescent girls. The post-test mean score was high when compared to the pre-test mean score. The obtained t value (11.42) was higher than the table value at 0.05level significance which shows that was significant difference in knowledge regarding prevention of polycystic ovarian syndrome among adolescent girls before and after self-instructional module. Hence formulated hypothesis (H1) was accepted.



LEVEL OF KNOWLEDGE

SECTION-V Association between the post-test knowledge score among adolescent girls and their selected demographic variables

Demographic variables	**Category**	**No of sample**	**Level of knowledge**						**X2 values**	**P Value**
			Inadequate		**Moder Ate**		**Adequate**			
			F	**%**	**F**	**%**	**F**	**%**		
Age (in years)	a)16-17 b)17-18 c)18-19 d) 19-20 years	1 10 17 2	0 0 0 0	0 0 0 0	1 5 9 1	3.3 16.6 30 3.3	0 5 8 1	0 16.6 26.6 3.3	0.9288 **df**=3	7.815 **NS***

Body weight (kg)	a)35-45kg b)45-55kg c)55-65kg d)65-75kg	11 8 8 3	0 0 0 0	0 0 0 0	5 4 5 2	16.6 13.3 16.6 6.6	6 4 3 1	20 13.3 10 3.3	0.791 **df**=3	7.815 **NS***
Religion	a) Hindu b) Christian c)Muslim d)others	15 12 3 0	0 0 0 0	0 0 0 0	9 5 2 0	30 16.6 6.6 0	6 7 1 0	20 23.3 3.3 0	1.137 **df**=3	7.815 NS*
Menstrual pain	a) No pain b) Low pain c) Moderate pain d) Severe pain	1 5 15 9	0 0 0 0	0 0 0 0	0 3 8 5	0 10 26.6 16.6	1 2 7 4	3.3 6.6 23.3 13.3	1.2517 **df**=3	7.815 NS*
Duration of menstruation	a)3 days b) 4 days c) 5 days d) 6 days	5 4 16 5	0 0 0 0	0 0 0 0	3 3 9 1	10 10 30 3.3	2 1 7 4	6.6 3.3 23.3 13.3	3.127 **df**=3	7.815 NS*
Frequency of of menstruation	a) 20-25 days once b) 25-30 days once c) 30-35 days once	6 20 4	0 0 0	0 0 0	4 9 3	13.3 30 10	2 11 1	6.6 36.6 3.3	1.737 **df**=2	5.991 NS*

Table-5: It represents that in group the calculated value of the selected demographic variables such as age, body weight, religion, menstrual pain, duration of menstruation, frequency of menstruation lesser than table value which indicates there was significant association between post-test knowledge score among adolescent girls regarding knowledge on prevention of polycystic ovarian syndrome.

4. CONCLUSION

It is concluded in the present study that polycystic ovarian syndrome was a major problem among adolescent girls. They

have no adequate knowledge about the prevention of polycystic ovarian syndrome; they need awareness about PCOS. After the PowerPoint presentation, a post-test was conducted.

There was a statistical difference between pre-test and post-test knowledge. Thus, PowerPoint, in order to support adequate knowledge about the prevention of polycystic ovarian syndrome for adolescent girls, could provide an opportunity for a healthy transition from childhood to adulthood. Moreover, the focus should be given to knowledge regarding the prevention of polycystic ovarian syndrome among adolescent girls.

CONFLICT OF INTEREST:

NIL

SOURCE OF FUNDING:

Self funding

ETHICAL CLEARENCE:

Sathyabama Institute of Science & Technology

REFERENCES

[1] Sandeep Kaur (2023) textbook of obstetrics and gynecology nursing published by CBS publishers and distributors Pvt Ltd.

[2] Nima Bhaskar (2022), Textbook of midwifery and gynecological nursing,1st edition published by EMMESS.

[3] Anupama Tamrakar (2014), textbook of gynecology nurses, 1st edition published by Jaypee Brothers medical publishers Pvt Ltd.

[4] Lewis (2021) Textbook of medical and surgical nursing, (volume 2) 4th edition, published by Elsevier.

Padubidri VG., et. al. Textbook of Gynaecology.16th edition, chapter-32 polycystic ovarian syndrome published by Elsevier.

[5] Rashmi Malik. A.G. Radhika (2021), Berek and Novak's gynecology, SAE edition published by Walters Kluwer.

[6] Dr. U.N. Panda (2016), Handbook of gynecology and obstetrics for nurses, published by AITBS.

[7] Sunesh Kumar (2022), Shaw's textbook of gynecology, 18th edition published by Elseiver.

[8] E Hiralal Kanar (2024), Dc Dutta's textbook of Gynecology, 9th edition published by Jaypee brothers medical published Pvt Ltd.

[9] Lakshmi Seshadri (2022), Essential of Gynecology, 3rd edition published by Walters Kluwer.

[10] Pawan Kumar Sharma (2021), A textbook of midwifery and gynecological nursing published by Jain publication, Jaipur.

[11] Sakshi Arora Hans (2023), One touch obstetrics and gynecology, 1st edition, published by CBS publishers and distributors Pvt.Ltd.

[12] N.Hephzibar Kirubamani (2021), undergraduate manual of clinical cases in obstetrics and gynecology, 2nd edition published by Elsevier.

[13] Azziz R, et at (2006) "Androgen excess in women: Experience with over 1,000 consecutive patients" Journal of clinical Endocrinology and Metabolism.

[14] Legro R, et. Al. (2013). "Diagnosis and treatment of polycystic ovary syndrome: An endocrine society clinical practice guidelines" Journal of clinical Endocrinology and Metabolism.

[15] Goodarzi, M.O., et at.(2011) "polycystic ovary syndrome: Etiology, pathogenesis and diagnosis". Nature reviews endocrinology, 7(4), 219-231. 10.1038/ Nrendro.2010. 217.

[16] Moran LJ, et al. (2011) "Lifestyle changes in women with polycystic ovary syndrome". Cochrane Database of systematic reviews.

[17] Diamanti – Kandarakis, E., et al. (2010). "pathophysiology and types of dyslipidemia in PCOS". Trends in endocrinology and Metabolism