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EFFECTIVENESS OF SELF INSTURCTIONAL MODULE ON KNOWLEDGE REGARDING POLYCYSTIC OVARIAN SYNDROME AMONG ADOLESCENT GIRLS

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ABSTRACT

A quantitative research approach and one group pre-test and post-test research design was used to assess the effectiveness of self-instructional module on knowledge regarding polycystic ovarian syndrome among adolescent girls.60 adolescent girls were chosen by non-probability convenient sampling technique. The level of knowledge score was assessed by structured self - administered questionnaire. The study findings revealed that, in the posttest majority of them had adequate knowledge 56 (93%) and only 4 (7%) of them had moderately adequate knowledge and none of them had inadequate knowledge. In the pre-test, most of them had inadequate knowledge 53 (88%) and few of them had adequate knowledge 7 (12%). The pretest mean value was 10.43 and standard deviation (SD) of 3.18 and in the post-test mean value was 25.08 with standard deviation (SD) of 2.45. It showed that there was a high statistically significant difference in the level of knowledge among adolescent girls with 't' value of 27.65 at $p<0.01$ level which in turn indicates that SIM was effective in improving the knowledge of adolescent girls. Therefore, the study concludes that the administration of self-instructional module was an effective method to improving the knowledge regarding PCOS among adolescent girls. So we need to organize awareness program on PCOS among adolescent girls.

INTRODUCTION

Human life completes its journey through various stages and one of the most vital stages is adolescence. Adolescence has been identified as a distinct period in human development marked by biological changes beginning at the onset of puberty. The term adolescence derived from the Latin word 'adolesco' meaning "to grow" or "to grow to maturity" which has a broad meaning of mental, emotional and social maturity.

Adolescents is defined by the United Nations as those between the ages of 10 to 19 and they are around 1.2 billion in the world today. Nearly 90% live in the developing countries. Adolescent aged between 10-19 years account for more than one fifth of the world's population. In India this group forms 21.4% of the total population [1].

Worldwide, there are approximately 880 million adolescent girls and young women aged 15–24 years. Despite making up 12% of the world's population, this population is often left without a voice or control of their own bodies [2].

There are 1.8 billion young people in the world and the majority live in developing countries. They are the largest generation of youth in history. Approximately half of them 900 million are adolescent girls and young women [3].

Polycystic ovarian syndrome is a heterogeneous

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endocrine disorder distinguished by the manifestation of ovarian cysts, anovulation and endocrine variations that, severely impact the life of a women. The disturbance in the reproductive hormones like LH, FSH, Estrogen, and Testosterone interrupts the normal menstrual cycle and would lead to oligomenorrhoea, amenorrhea like irregularities [4].

The World Health Organization (WHO) data suggests that approximately 116 million women (3.4%) are affected by PCOS globally. Polycystic ovary syndrome (PCOS) affects an estimated 8 –13% of reproductive aged women. Up to 70% of affected women remain undiagnosed worldwide. PCOS is the commonest cause of anovulation and a leading cause of infertility [5].

According to the National Health Portal of India, the prevalence rate of PCOS in Maharashtra was noted to be 22.5%. The prevalence of PCOS estimates that, according to Rotterdam's criteria is 11.34% in India. The overall prevalence of PCOS was 10.01% among Chinese women [6].

According to The Times of India, September 2022 (Awareness month), PCOS affects women of reproductive age (15-49 years). Worldwide, it affects 4%–20% (8-40 crore) of women. In India, it affects 3.7% to 22.5% (1.3 - 7.9 crore) of women.

Considering magnitude of the problem and its impact, the investigators have decided to assess the knowledge regarding poly cystic ovarian syndrome among adolescent girls and in order to create awareness on poly cystic ovarian syndrome, their causes, risk factors, clinical manifestations and management and life style modifications among the school adolescents to prevent the complications like obesity, hyperandrogenism, insulin resistance and infertility in future.

Objectives

1. To assess the pretest and posttest knowledge regarding polycystic ovarian syndrome among adolescent girls.
2. To evaluate the effectiveness of self-instructional module on knowledge regarding polycystic ovarian syndrome among adolescent girls.
3. To find out the association between the posttest knowledge regarding polycystic ovarian syndrome among adolescent girls with their selected demographic variables.

RESEARCH METHODOLGY

A quantitative research approach and one group pre- test and post-test experimental design was used for the study. The 60 samples were chosen by non-probability convenient sampling technique. Structured Self-administered questionnaire consists of 30 questions. Each question had only one correct answer. Each correct answer carried 1 mark. The total score of the tool was 30 & the scores were interpreted as below,

- 75 % - 100 % - Adequate knowledge (above23)
- 50 % - 75% - Moderate adequate knowledge (15-23)
- <50% - Inadequate knowledge (<14)

A formal permission obtained from the school authorities in Government Higher Secondary school, Thiruvallur District. The 60 adolescent girls who fulfilled the inclusive criteria were selected by non – probability convenient sampling technique. Detailed explanation regarding the purpose of the study was explained. The researcher obtained consent from the adolescent girls and the confidentiality of the responses were assured. All students were gathered in a classroom and Pretest questionnaires were distributed [7]. Nearly 30 mts were given for them to answer. Self-instructional modules on knowledge regarding PCOS were issued to them. After a week, the post test was conducted in the same manner.

RESULTS

The table – 1depicts the frequency and percentage distribution of demographic variables like age, religion, mother's educational qualification and mother's occupation, type of family, socioeconomic status, area of residency and source of previous information regarding PCOS, BMI and menstrual bleeding among adolescent girls.

With regard to age, most of them were in the age group of 16 – 17 yrs 58 (97%) and 2 (3%) of them were belongs to 18 – 19 yrs. With respect to religion, majority 52 (87%) were belongs to Hindu and 2 (3%) of them were Christian. And 6 (10%) of them were belongs to Muslim. In regard to mother's educational qualification, 17 (28%) were illiterate, 33 (56%) were have primary and 10 (16%) were have secondary education. With regard to mother's occupation, 50 (83%) were house wife, 8 (14%) were private employees and 2 (3%) were government employees [8]. With regard to type of family, 46 (76%) were from nuclear family, 14 (23%) were belongs to joint family.

With regard socioeconomic status, 18 (30%) of them belongs to lower class family, 42 (70%) were belongs to middle class family and none of them were belongs to upper class family. With regard to area of residency 53 (88%) were in Rural, 7 (11%) were in Urban [9]. With regard to source of previous information regarding PCOS, 15 (25%) of them were received through family members, 15 (25%) were through friends and 14 (23%) were through mass media, 16 (27%) were from newspaper and magazines.

With regard BMI, 17 (28%) were belongs to >18.5 underweight, 34 (57%) were in Normal weight (18.5 - 24.5), 9 (15%) were belongs to pre obesity (25.0 -

29.9) and none of them were belongs to Obesity class 1, Class 2 & Class 3. With regard menstrual bleeding 50 (83%) of them were in normal bleeding, 6 (10%) of them in mild bleeding, very few 3 (5%) were in heavy bleeding and only 1 (2%) of them in the stage of amenorrhea.

The table – 2 shows frequency and percentage distribution of level of knowledge among adolescent girls in pre-test and post-test. The findings revealed that in posttest many of them had adequate knowledge 56 (93%) and only 4 (7%) of them had moderately adequate knowledge and none of them had inadequate knowledge. In the pre-test, most of them had inadequate knowledge 53 (88%) and few of them had adequate knowledge 7 (12%) [10].

The table – 3 highlights the level of knowledge regarding polycystic ovarian syndrome among adolescent girls. In the pretest mean value was 10.433 with standard deviation (SD) of 3.18 and in the post-test mean value was 25.08 with standard deviation (SD) of 2.45.

The table – 4 highlights the effectiveness of structured teaching program on knowledge regarding polycystic ovarian syndrome among adolescent girls.

The findings unfold that, the post-test mean value was 25.08 with standard deviation (SD) of 2.45 and in the pre-test mean value was 10.43 with standard deviation (SD) of 3.18. It showed that there was a high statistically significant difference in the level of knowledge among adolescent girls with 't' value of 27.65 at $p<0.01$ level which in turn indicates that SIM was effective in improving the knowledge of adolescent girls.

Table 1: Frequency and percentage distribution of demographic variables of adolescents **N=60**

S. No	Demographic variables	No.	%
1.	Age in years		
	a) 16-17 years	58	97%
	b) 18-19 years	2	3%
2.	Religion		
	a) Hindu	52	87%
	b) Christian	2	3%
	c) Muslim	6	10%
3.	Mother's educational qualification		
	a) Illiterate	17	28%
	b) Primary	33	56%
	c) Secondary	10	16%
	d) Undergraduate	0	0%
	e) Postgraduate	0	0%
4.	Mother's occupation		
	a) House wife	50	83%
	b) Private employee	8	14%
	c) Government employee	2	3%
5.	Type of family		
	a) Nuclear	46	77%
	b) Joint	14	23%
6.	Socio economic status		
	a) Lower class family	18	30%
	b) Middle class family	42	70%
	c) Upper class family	0	0%
7.	Area of residency		
	a) Rural	53	88%
	b) Urban	7	12%
8.	Source of previous information regarding PCOS		
	a) Through family members	15	25%
	b) Through friends	15	25%
	c) Mass media	14	23%
	d) Newspaper and magazines	16	27%

9.	BMI a) Underweight (>18.5) b) Normal Weight (18.5-24.5) c) Pre-obesity (25.0-29.9)	 17 34 9	 28% 57% 15%
10.	Menstrual bleeding a) Amenorrhea b) Mild bleeding c) Normal bleeding d) Heavy bleeding	 1 6 50 3	 2% 10% 83% 5%

Table 2: Frequency and percentage distribution of level of knowledge on polycystic ovarian syndrome among adolescent girls in pre-test and post-test.

Level of knowledge	Pretest		Posttest	
	Frequency	Percentage	Frequency	Percentage
Inadequate	53	88%	0	0%
Moderate adequate	07	12%	04	7%
Adequate	0	0%	56	93%

Table 3: Mean and standard deviation of knowledge regarding poly cystic ovarian syndrome among adolescent girls.

Knowledge	Pretest		Posttest	
	Mean	S. D	Mean	S. D
Level of knowledge	10.43	3.18	25.08	2.45

Table 4: Effectiveness of self-instructional module on knowledge regarding polycystic ovarian syndrome among adolescent girls.

Knowledge	Pretest		Posttest		Paired 't' test
	Mean	S. D	Mean	S. D	
Level of knowledge	10.43	3.18	25.08	2.45	**t = 27.65** **p =< 0.01** **S**

P<0.01, S = Significant

Figure 1:

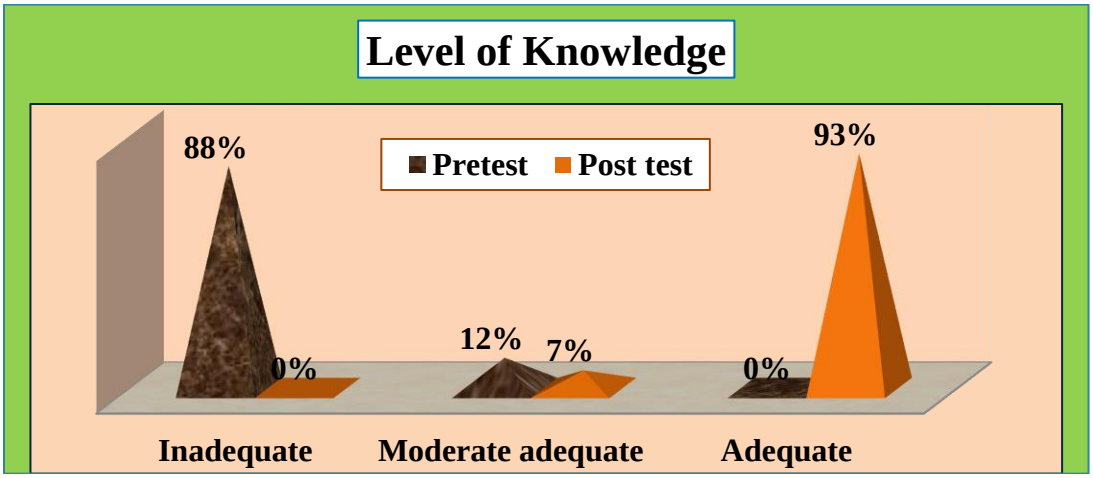
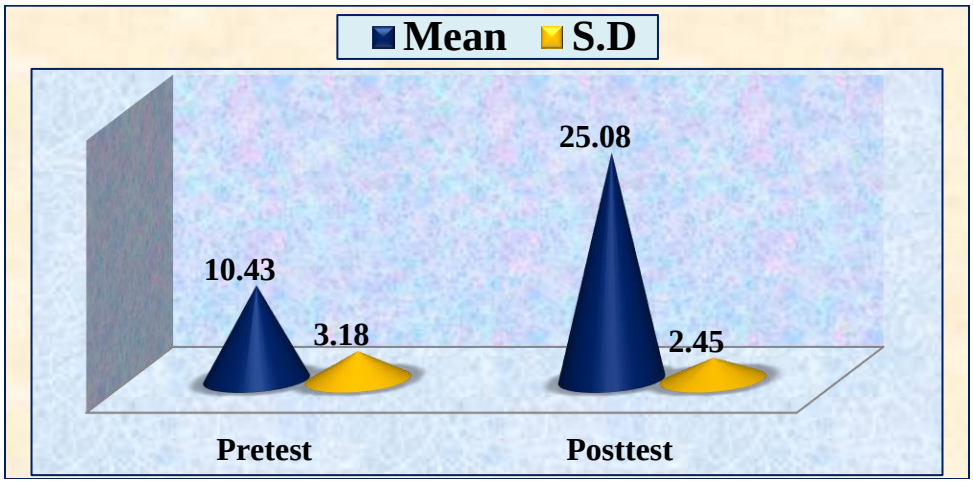


Figure 2:



DISCUSSION

Human life completes its journey through various stages and one of the most vital stages is adolescence. Adolescence has been identified as a distinct period in human development marked by biological changes beginning at the onset of puberty. Adolescents is defined by the United Nations as those between the ages of 10 to 19 and they are around 1.2 billion in the world today. Nearly 90% live in the developing countries. Adolescent aged between 10-19 years account for more than one fifth of the world's population. In India this group forms 21.4% of the total population. [11]

Polycystic ovarian syndrome is a heterogeneous endocrine disorder distinguished by the manifestation of ovarian cysts, anovulation and endocrine variations that, severely impact the life of a women. The disturbance in the reproductive hormones like LH, FSH, Estrogen, and Testosterone interrupts the normal menstrual cycle and would lead to oligomenorrhoea, amenorrhea like irregularities.

The frequency and percentage distribution oflevel of knowledge on polycystic ovarian syndrome among adolescent girls were assessed. The study findings revealed that, in the posttest majority of them had adequate knowledge 56 (93%) and only 4 (7%) of them had moderately adequate knowledge and none of them had inadequate knowledge [12]. In the pre-test, most of them had inadequate knowledge 53 (88%)and few of them had adequate knowledge 7 (12%). The pre test mean value was 10.43 and standard deviation (SD) of 3.18 and in the post-test mean value was 25.08 with standard deviation (SD) of 2.45. It showed that there was a high statistical significant difference in the level of knowledge among adolescent girls with 't' value of 27.65 at $p<0.01$ level which in turn indicates that SIM was effective in improving the knowledge of adolescent girls.Therefore, the study concludes that the administration of self-instructional module was an effective method to improving the knowledge regarding PCOS among adolescent girls [13].

CONCLUSION

The findings of the study showed that the knowledge score of adolescent girls in GHS Kanakammachathram was very less before the SIM. The SIM facilitated them to gain knowledge about PCOS which was evident from the post-test knowledge score. Therefore, the study concludes that the administration of self-instructional module was an effective method to improving the knowledge regarding PCOS among adolescent girls.

IMPLICATIONS

As a Nursing personnel need to screen all the adolescents school children and create awareness about PCOS among school teachers & students. And show them the ways to overcome.

Recommendations For Nursing Education

- Nursing leaders may organize training programme to use the SIM in prevention of PCOS for the School Teachers, Anganwadi workers, etc.
- School Health Nurse may utilize SIM to create awareness among school children during regular school visits.
- As Nurse administrator may organize screening camps to screen PCOS among the adolescent girls in school children.
- True experimental study can also be conducted to evaluate the knowledge, attitude and practices of PCOS among adolescent girls.

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