Effectiveness of Self Instructional Module (SIM) on Knowledge Regarding Polycystic Ovarian Syndrome (PCOS) among Late Adolescent Girls (17 to 19 years) in Selected Colleges at Gurugram, Haryana

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Abstract: *Polycystic ovaries are slightly larger than normal ovaries and have twice the number of follicles (small cysts). Polycystic ovaries are very common affecting a women. PCOS produces symptoms in approximately 5% to 10% of women of reproductive age (12±45 years old). The prevalence of PCOS depends on the choice of diagnostic criteria. About 18% of women had PCOS, and that 70% of them were previously undiagnosed in India.* Design: *Quantitative approach and Pre-experimental one group pre-test post-test design was adopted for this study.* Setting: *The study was conducted in SGT University and Starex University, Gurugram.* Sample size: *The sample size was 80 adolescent girls.* Sampling technique: *The convenient sampling technique was used.* Method of data collection: *Data were collectedto assess the level of knowledge among the adolescent girls by using structured questionnaire before and after self-instructional module. The collected data were tabulated and analysed by descriptive and inferential statistics.* Results: *Self Instructional Module was effective for adolescent girls according to the level of knowledge before and after the manipulation. The obtained t- value (12.551) was statistically significant at 0.05 levels and significant association with demographic variables i.e. exercise and menstruation (regular/irregular).* Conclusion: *This study shown that Self Instructional Module had a significant effect in improving knowledge of adolescent girls.*

Keywords: Effectiveness, Polycystic Ovarian Syndrome, Late Adolescent girls, Self-instructional Module

1. Introduction

Human life complete 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. With the arrival of puberty, hormonal changes particularly, the production of male and female hormones lead to an increase in sex drive[1]. Gynaecological problems of adolescents occupy a special space in the spectrum of gynaecological disorders of all ages. Menstrual abnormalities are the common problems of adolescents. Polycystic ovary syndrome (PCOS) is the commonest cause of an-ovulatory infertility. As there are no well-accepted criteria for diagnosis, the incidence of PCOS is not really known. However, it is postulated to be about 20-30% in the general population[2]. Polycystic ovary syndrome (PCOS) is a condition that affects a woman's hormone levels. Women with PCOS produce higher-than-normal amounts of male hormones. This hormone imbalance causes them to skip menstrual periods and makes it harder for them to get pregnant. PCOS also causes hair growth on the face and body, and baldness. And it can contribute to long-term health problems like diabetes and heart disease.[3].

2. Need of the Study

Polycystic ovary syndrome (PCOS) is a common endocrine disorder affecting about 8 to 20% women of reproductive age group worldwide. It is also estimated to be the major cause of an-ovulatory infertility accounting for about 73% of cases. Variance in prevalence among population is thought to be dependent on ethnic origin, race and other environmental factors on the phenotype.[4]

Polycystic ovarian syndrome (PCOS) has drawn a lot of attention in the recent years being the leading cause of infertility among women. During Researcher's clinical experience, she saw more patients with infertility. The incidence of PCOS is more among adolescents suffering from physical and psychological morbidity. Assessing adolescents regarding polycystic ovarian syndrome (PCOS) is desirable to understand this upcoming health issue and formulate effective programme to enhance the quality of life of the people. Improving knowledge among adolescents regarding prevention and early detection of polycystic ovarian syndrome (PCOS) can go a long way in taming the disease. From the above studies the investigator found adolescent girls have lack of knowledge regarding PCOS and its prevention at the primary level as they are neglecting taking care of the disease. Hence, the researcher is interested to educate the adolescent girls regarding polycystic ovarian syndrome (PCOS) and its prevention through self-instructional module.

3. Statement of the Problem

A study to assess the effectiveness of Self Instructional Module (SIM) on knowledge regarding polycystic ovarian syndrome (PCOS) among late adolescent girls in selected colleges at Gurugram, Haryana.

Objectives

1) To assess the knowledge regarding polycystic ovarian syndrome among adolescent girls in terms of pre-test.
2) To evaluate the effectiveness of self-instructional module on knowledge regarding polycystic ovarian syndrome among adolescent girls in terms of post-test.
3) To find out the association between the pre-test knowledge regarding polycystic ovarian syndrome with their selected demographic variables.

Assumptions

- Adolescent girls were not aware about polycystic ovarian syndrome.
- Education about polycystic ovarian syndrome will improve the knowledge of adolescent girls to take preventive measures and to manage in proper ways.

4. Conceptual Framework

The present study aims at evaluating the effectiveness of Self Instructional Module on knowledge regarding Polycystic Ovarian Syndrome among late adolescent girls. The framework of the present study based on **Shuffle Beam's CIPP Programme Evaluation model, 1960**. CIPP is an acronym that stands for Context, Input, Process and Product.

5. Operational Definitions

- **Effectiveness**: In this study, it refers to the extent to which the self-instructional module will achieve desired effect to gaining knowledge regarding polycystic ovarian syndrome in terms of difference between pre-test and post-test knowledge measured by semi structured questionnaire.
- **Self-instructional module:** In this study it refers to self-learning information prepared for adolescent girls to improve the knowledge on poly cystic ovary syndrome which includes anatomy and physiology of ovaries, definition, aetiology, clinical manifestation, management, complications of PCOS.
- **Knowledge**: In this study, it refers to the facts, information acquired through education by adolescent girls regarding polycystic ovarian syndrome.
- **Polycystic ovarian syndrome**: Polycystic ovary syndrome (PCOS) is heterogeneous disorder characterized by excessive androgen production by the ovaries, which interferes with the reproductive, endocrine, metabolic functions manifested by amenorrhea, hirsutism and obesity associated with enlarged polycystic ovaries.
- **Late Adolescents:** In this study, late adolescent refers to adolescent girls aged between 17-19 years studying in selected colleges of Gurugram, Haryana.

6. Methodology

- **Research approach**
  Quantitative approach
- **Research design**
  Pre experimental one group pre-test post-test design will be adopted for this study
- **Variables**
  Independent variables: Self-instructional module
  Dependent variables: Knowledge of late adolescent girls regarding Polycystic Ovarian Syndrome.
- **Setting of the study:**
  SGT University and Starex University, Gurugram, Haryana.
- **Population:**
  Adolescent girls who are studying inSGT University and Starex University, Gurugram.
- **Sample**
  Adolescent girls who fulfil the inclusion criteria will be consider as a sample.
- **Sample size**
  Sample size consists of 80 adolescent girls studying at selected colleges of Gurugram.
- **Sampling Technique:**
  Convenient sampling technique had been used for selection of the subject

7. Results

A total of 80 Adolescent girls studying in Gurugram, Haryana

Table 1: Demographic Profile, N = 80

Variables	Options	Frequency	Percentage (%)
Age	17 year	14	17.5
	18 year	30	37.5
	19 year	36	45.0
Religion	Hindu	76	95.0
	Christian	1	1.2
	Muslim	3	3.8
	Sikh	0	0
	Others	0	0
Type of Family	Nuclear	57	71.2
	Joint	20	25.0
	Extended	3	3.8
Income	Rs. 10,000 & below	3	3.8
	Rs. 10,001 – 15.000	3	3.8
	Rs. 15,001 - 20,000	1	1.3
	Rs. 20,001 – 25,000	27	33.8
	Rs. 25,001 & above	46	57.3
Residence	Rural	54	67.5
	Urban	21	26.3
	Semi urban	5	6.2
Previous Knowledge	Yes	0	0
	No	80	100
Type of Diet	Vegetarian	59	73.8
	Non- vegetarian	5	6.2
	Egg- vegetarian	16	20.0
Exercise	No	56	70.0
	Yes	24	30.0
Age at Menarche (Years)	10-12	4	5.0
	13-15	55	68.8
	16-18	21	26.2

	2-4	45	56.2
Duration	5-7	35	43.8
Frequency of Menstruation	One	80	100.0
	More	0	0.0
Regular/ Irregular	Regular	73	91.2
	Irregular	7	8.8
Any Problem Faces	No	63	78.8
	Yes	17	21.2
Menstrual Bleeding	Normal bleeding(need to change regular absorbency pad in 3-4 hours)	74	92.5
	Absence of bleeding	1	1.3
	Mild bleeding(spotting)	5	6.2
	Severe bleeding(need to change high absorbency pad in 1-2 hours)	0	0.0
BMI	Under Weight	18	22.5
	Normal Weight	60	75.0
	Over Weight	2	2.5

Table No. 1 shows the background information of late adolescent girls in Starex University, Haryana who were participated in the study.

1) **Age:** The background variable related to age indicates that the student were of aged 19 years were (45%), 37.5% of them who were 18 years and 17.5% of them were 17 years.

2) **Religion:** The background variable related to religion indicates that 95% of the late adolescent girls were Hindu, 3.8% of girls were Muslim and 1.3% of girls were Christian.

3) **Type of Family:** The background variable related to type of family indicates that 71.3% were belongs to Nuclear family, 25% were from Joint family and 3.8% were from Extended family.

4) **Family Income per Month:** The background variable related to Family Income indicates that 3.8% were from Rs. 10,000 & below, 3.8% were from Rs. 10,001-15,000, 1.3% were from Rs 15,001-20,000, 33.8% were from Rs. 20,001-25,000 and 57.5% were from Rs.25,001 & above.

5) **Area of Residence:** The background variable related to Area of Residence indicates that 67.5% were belongs to rural, 26.3% were from Urban and 6.3% were from Semi Urban.

6) **Previous Knowledge on PCOS:** The background variable related to Previous Knowledge indicates that 0% of adolescent girls were having knowledge about PCOS and 100% of adolescent were not having any knowledge of PCOS.

7) **Type of Diet:** The background variable related to Type of Diet indicates that 73.8% of adolescent girls were Vegetarian, 6.3% were Non-Vegetarian and 20% were Egg-Vegetarian.

8) **Exercise:** The background variable related to Exercise indicates that70% were not doing Exercise and 30% were doing Exercise.

9) **B.M.I.:** The background variable related to B.M.I. indicates that 22.5% were from underweight, 75% were from normal weight and 2.5% were overweight.

10) **Age at Menarche:** The background variable related to Age at Menarche indicates that 5% were from 10-12 years, 68.8% were from 13-15 years and rest 26.3% were from 16-18 years.

11) **Duration of Menstruation:** The background variable related to Duration of menstruation indicates that 56.3% were having menstruation for 2-4 days and 43.8% were having menstruation for 5-7 days.

12) **Mode of Menstruation (regular/irregular):** The background variable related to Menstruation indicates that 91.3% of adolescent girls were having regular menstruation and 8.8% were having irregular menstruation.

13) **Problem during Menstruation:** The background variable related to Problem during Menstruation indicates that 78.8% were not having any problem and 21.3% were having problem during menstruation.

14) **Menstrual Bleeding:** The background variable related to Menstrual Bleeding indicates that 92.5% of adolescent girls were having normal bleeding, 1.3% were absence of bleeding and 6.3% were having mild and 0% were having severe bleeding.

**Table 2:** Determination of overall mean knowledge score before and after SIM, N=80

	No. of the Late Adolescent Girls	Pre – Test Mean±SD	Post – Test Mean±SD	Paired t-Test
Overall knowledge score	80	6.4±5.314	16.01±4.665	t = 12.551 P = <0.001 Significant

** Significance level 0.05

Table no. 2 shows the comparison of overall knowledge of adolescent girls before and after giving SIM. On an average adolescent girls improved their knowledge from 6.4 to 16.01 after giving SIM. The difference between pre and post-test knowledge score is t = 12.551 p= <0.001 significant and it was significant. Statistical significance was calculated by using Paired't' test.
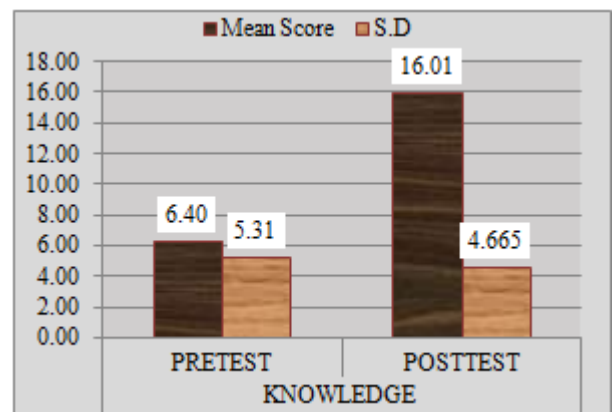
Multiple bar diagram indicates the pre-test and post – test knowledge scores
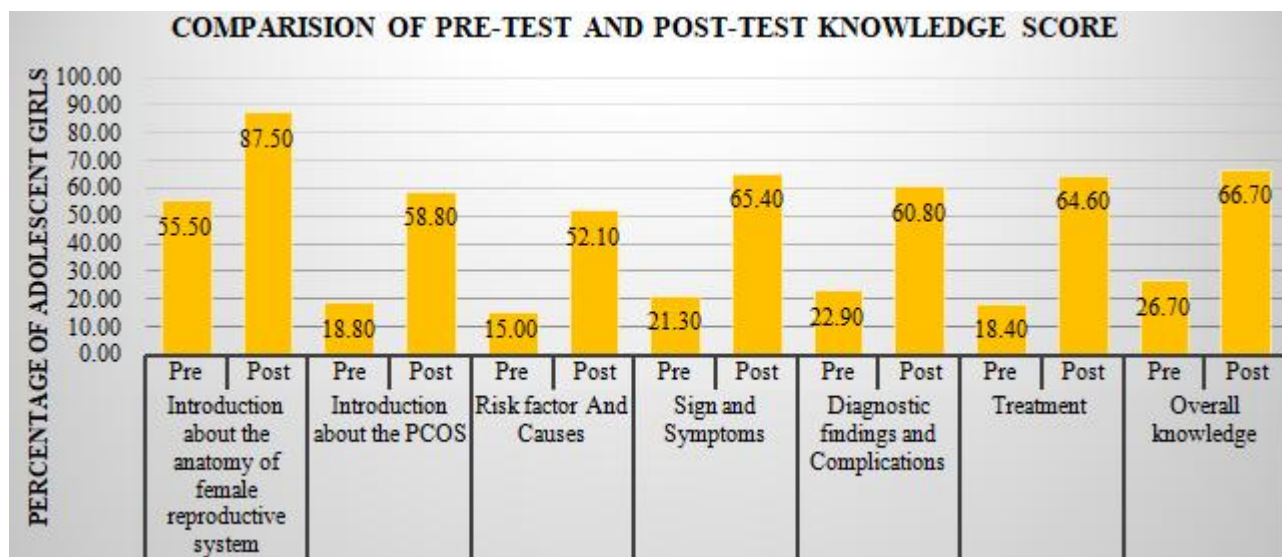
Multiple bar diagram indicates category wisepre-test and post – test knowledge scores

The association between background variables and the pre-test knowledge scores of adolescent girls. Finding shows adolescent girls in pre-test have a significant association with exercise, fisher test= 4.746 (P=0.029 significance) and in mode of menstruation regular / irregular, fisher test =4.001(p= 0.045). This type of association are statistically significant and it was calculated using fisher test.

8. Discussion

The findings of the study revealed a significantly increase in the pre-test knowledge score was 26.70% and the post-test knowledge score was 66.70%. The difference between pre-test and post-test knowledge score was 40%. Adolescent girls' pre-test knowledge on PCOS shows that 76.2% of them were having inadequate knowledge and 23.8% of them were having moderately adequate knowledge. After giving self-instructional module, the post-test level of knowledge on PCOS shows that 65% of the adolescent girls were having moderate adequate knowledge, 20% of them were having inadequate knowledge and 15% of them were having good knowledge. Association with socio-demographic variables were significant in exercise and mode of menstruation (regular/irregular). These finding were supported by study conducted on 97 adolescent girls to see effectiveness on PCOS. A significant difference between pre-test and post-test knowledge was found (t 2.0 79=p<0.05).The study findings showed that the structured teaching programme was effective in improving knowledge of adolescent girls regarding polycystic ovarian syndrome. There was no significant association between the level of knowledge and demographic variables except the group in which they study (Science, Arts, Commerce).

Nursing Implications
The findings of the study will help the investigator in the following ways:
- Gaining the more knowledge regarding PCOS.
- Encourage the students to improve their knowledge regarding PCOS.

Nursing Education
Self-instructional module can be used by the student to impart knowledge on polycystic ovarian syndrome to the adolescent girls in both urban and rural area while giving health education. Nurse educator can prepare the students in order to give importance of teaching programme on polycystic ovarian syndrome by using different educational and teaching methods.

Nursing Research
The findings of the present study are helpful for the nursing professionals and nursing teachers to conduct further studies to find out the effectiveness of various methods of providing education on improving the knowledge regarding polycystic ovarian syndrome.

Nursing Administration
Nurse administrator should take interest in motivating the nursing personnel to improve their professional knowledge and skill by attending the workshops, conferences, seminars on polycystic ovarian syndrome. Nurse administrator should arrange regular in service education program to the health care workers for gaining knowledge.

Nursing Practice
Nurse owes a great responsibility in educating the people regarding polycystic ovarian syndrome. Nurses by getting knowledge and impact into their clinical practise. Many nurses can conduct evidence base nursing practice by referring to these result.

9. Recommendations

A comparative study may be conducted to evaluate the effectiveness of self-instructional module. A similar study can be conducted on large sample to assess the knowledge and attitude regarding polycystic ovarian syndrome. A video teaching programme can be conducted in large scale to the late adolescent girls of selected colleges in Gurugram

10. Conclusion

This study conclude that, adolescent girls were having inadequate knowledge before administering self-instructional module but after administering self-instructional module the knowledge was moderately adequate. Demographic variables were having association with pre-test in exercise and menstruation (regular/ irregular). This study can finally say that adolescent girl's knowledge level increases through self-instructional module.

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