

Pre-Experimental Study to Assess the Effectiveness of Structured Teaching Program on Knowledge Regarding Polycystic Ovarian Syndrome (PCOS) Among Adolescent Girls in Selected Hospitals of Indore

Mr. Chetan Kumar Sharma¹, Ms. Roshni Khaped², Ms. Sabina Yeasmin³,
Ms. Punam Chouhan⁴

¹M.Sc. Tutor, Dept. of Child Health Nursing, Renaissance University, School of Nursing, Indore M.P.

²Student of B.Sc. Nursing, Batch 2020 – 2024, Final Year, Renaissance University, School of Nursing, Indore M.P.

^{3,4}Student of G.N.M., Batch 2021 – 2024, Final Year, Renaissance University, School of Nursing, Indore M.P.

Abstract:

polycystic ovarian syndrome (PCOS) is a prevalent disorder among females, characterized by hormonal imbalances and diverse clinical manifestations, with a global prevalence estimated between 4% and 20%. Early diagnosis and personalized management are vital for improving the quality of life for women with PCOS. This study evaluates the effectiveness of a Structured Teaching Programme (STP) on enhancing knowledge about PCOS among adolescent girls in selected hospitals of Indore. Employing a quantitative pre-experimental one-group pre- and post-test design, 45 adolescent girls were selected through purposive sampling. Data analysis using descriptive and inferential statistics revealed a significant increase in knowledge post-intervention. The mean post-test knowledge score (19.97 ± 2.27) significantly surpassed the pre-test score (11.5 ± 1.998), with a computed 't' value of 23.43 ($p < 0.001$). The findings indicate that the STP effectively improved knowledge about PCOS, though no significant association was found between pre-test scores and demographic variables.

Keywords: Effectiveness, STP, adolescent girls, PCOS.

Introduction:

Adolescence, a crucial phase from ages 10 to 19, is marked by rapid growth and lays the foundation for good health. Polycystic Ovarian Syndrome (PCOS), a common endocrine disorder affecting reproductive-age women, presents with elevated androgens, menstrual irregularities, and ovarian cysts. Initially described as Stein–Leventhal syndrome, PCOS remains a diagnosis of exclusion with evolving criteria. Globally, PCOS affects 3.4% of women, with higher prevalence reported in India. Health education, a key strategy for early detection, is essential. This study aims to enhance PCOS awareness among adolescents,

enabling early diagnosis and intervention through structured teaching programs.

Background of the Study

polycystic ovarian syndrome (PCOS) is a prevalent endocrine disorder affecting women of reproductive age, characterized by symptoms such as menstrual irregularities, hyperandrogenism, and polycystic ovaries. It poses significant health risks, including infertility, metabolic syndrome, and cardiovascular diseases. Despite its high prevalence, awareness and understanding of PCOS, particularly among adolescent girls, remain inadequate. Early education and intervention are crucial to prevent long-term health complications and improve the quality of life for those affected by PCOS.

Need of the Study

Adolescence is a critical period for health education, as habits and knowledge formed during this stage can have long-lasting impacts. Given the rising prevalence of PCOS and its potential health implications, there is a pressing need for effective educational interventions targeting adolescent girls. Structured teaching programmes (STPs) can play a pivotal role in enhancing knowledge, promoting early diagnosis, and encouraging healthy lifestyle choices. This study aims to address the knowledge gap among adolescent girls regarding PCOS and evaluate the effectiveness of an STP in a hospital setting.

Objectives of the Study

- To assess the pre-intervention level of knowledge regarding PCOS among adolescent girls.
- To implement a structured teaching programme on PCOS for adolescent girls.
- To evaluate the post-intervention level of knowledge regarding PCOS among adolescent girls.
- To compare the pre- and post-intervention knowledge scores to determine the effectiveness of the structured teaching program.

Hypothesis

H0: There is no significant difference in the knowledge scores regarding PCOS among adolescent girls before and after the implementation of the structured teaching programme.

H1: There is a significant difference in the knowledge scores regarding PCOS among adolescent girls before and after the implementation of the structured teaching programme.

Literature Survey:

Globally, prevalence estimates of PCOS are highly variable, ranging from 2.2% to as high as 26%.

According to a study by the PCOS Society, 1 in every 10 women in India has polycystic ovary syndrome (PCOS), a common endocrine system disorder among women of reproductive age. Out of every 10 women diagnosed with PCOS, six are teenage girls.

A study conducted in Mohali, Punjab, on knowledge regarding PCOS among teenage girls included around 200 adolescent girls from school. The results showed that the majority of girls (61.5%) had fair knowledge, and a minority of girls (0.5%) had an excellent level of knowledge. Only 17.5% had a good level of knowledge. The findings indicated a lack of knowledge among teenage girls regarding PCOS

Methodology:

The objective of the study was to assess the level of knowledge regarding PCOS among adolescent girls

before and after a structured teaching programme. The study was conducted at selected hospitals in Indore. The research approach used was quantitative, with a pre-experimental one-group pre-test post-test design. Purposive sampling technique was used to select 45 adolescent girls. The tool for data collection comprised 9 questions related to sociodemographic data and 27 structured questionnaires to assess the knowledge of adolescent girls about PCOS. The reliability of the tool was assessed using the internal consistency method, with a reliability score of 0.830, indicating the tool was reliable.

Result and Discussion:

In this study, the results revealed that 84% of adolescent girls had moderate knowledge in the pre-test, and 16% had inadequate knowledge. In the post-test, 69% of adolescent girls had adequate knowledge, and 31% had moderate knowledge.

TABLE 1: Pre and Post-test level of knowledge score (N=45)

LEVEL OF KNOWLEDGE	Pre-Test	Post-Test
	NO. OF FREQUENCY	%
Adequate Knowledge (19-27)	0	0
Moderate Knowledge (10-18)	38	84
Inadequate Knowledge (1-9)	7	16
TOTAL	45	100

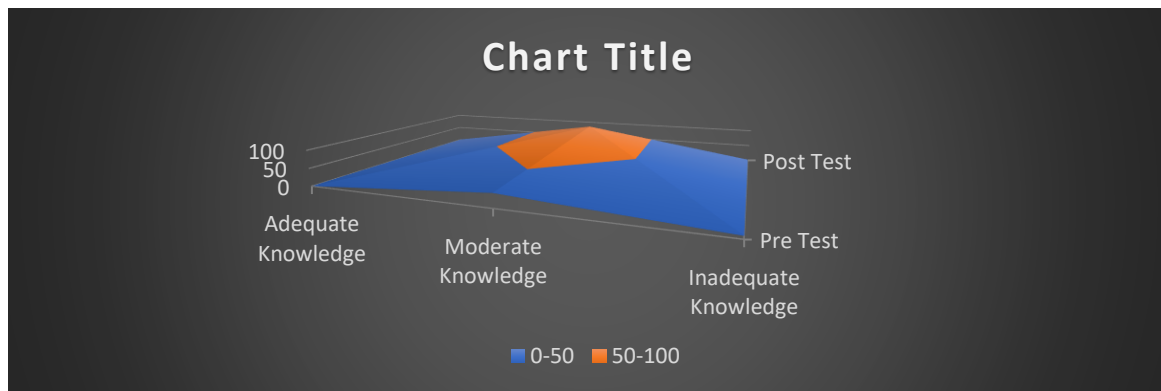


FIGURE 1: Percentage distribution of pre and post-test level of knowledge score of adolescent girls.

The results showed that the pre-test mean score and SD was 11.5 ± 1.998 , and the post-test mean score and SD was 19.97 ± 2.27 . The calculated paired t-test value ‘ $t = 23.43$ ’ was more than the table t-value at the 0.001 level of significance. Thus, it was established that the structured teaching program was effective in increasing knowledge.

TABLE 2: Comparison of pre and post-test knowledge score before and after administration of STP (N=45)

Knowledge Questionnaire by category	Pre-test	Post-Test	% of knowledge gain	Paired test
	Mean	% of knowledge	SD	Mean
Introduction about the anatomy of female reproductive system	2.26	56.5	0.97	3.3
Incidence	0.69	34.5	0.67	1.3
Causes	0.79	39.5	0.66	1.66
Sign and Symptoms	2.46	49.2	0.94	4.17
Diagnostic evaluation	1.21	40.3	0.81	2.23
Treatment	1.4	35	0.65	2.54

Conclusion

The structured teaching program (STP) significantly improved the knowledge of adolescent girls regarding polycystic ovarian syndrome (PCOS) in selected hospitals of Indore. The study demonstrated a notable increase in post-test knowledge scores compared to pre-test scores, indicating the effectiveness of the intervention. With a mean post-test score of 19.97 ± 2.27 surpassing the pre-test score of 11.5 ± 1.998 , the paired t-test value of 23.43 ($p < 0.001$) confirmed the statistical significance. These findings underscore the importance of targeted educational initiatives in enhancing awareness and understanding of PCOS among adolescent girls, thereby promoting early diagnosis and intervention.

REFERENCES

Books

1. Dutta, D. C. (2015). *Textbook of Obstetrics* (8th ed.). Jaypee Brothers Medical Publishers.
2. Dutta, D. C. (2013). *Textbook of Gynecology* (6th ed.). Jaypee Brothers Medical Publishers.
3. Padubidri, V. G., & Daftary, S. N. (2018). *Shaw's Textbook of Gynecology* (17th ed.). Elsevier India.
4. Malhotra, N., Kumar, P., & Malhotra, J. (2018). *Jeffcoate's Principles of Gynaecology* (9th ed.). Jaypee Brothers Medical Publishers.
5. Gopalan, S., & Mehta, S. (2014). *High-Risk Pregnancy* (3rd ed.). Orient Blackswan.
6. Ratnam, S. S., Rao, K. B., & Arulkumaran, S. (2017). *Obstetrics and Gynecology for Postgraduates* (2nd ed.). Orient Longman.
7. Desai, P. (2014). *Endometriosis: Advanced Management and Surgical Techniques*. Jaypee Brothers Medical Publishers.
8. Kriplani, A., Agarwal, N., & Gupta, A. (2016). *Essentials of Gynecology*. Jaypee Brothers Medical Publishers.
9. Bhatla, N. (2020). *Principles and Practice of Obstetrics & Gynecology for Postgraduates* (4th ed.). Jaypee Brothers Medical Publishers.

10. Krishna, U. R., & Mehta, S. (2016). *Pregnancy at Risk: Current Concepts* (5th ed.). Jaypee Brothers Medical Publishers.

Journals

1. Sharma, R., & Bhatia, S. S. (2017). Prevalence and risk factors of polycystic ovary syndrome in young women in India. *Indian Journal of Endocrinology and Metabolism*, 21(2), 140-143.
2. Kulkarni, S., & Rathi, S. (2019). Role of Metformin in the Treatment of Polycystic Ovary Syndrome: A Study in Indian Women. *Journal of Obstetrics and Gynecology of India*, 69(3), 242-246.
3. Shah, D., & Patel, S. (2018). Prevalence of menstrual disorders in adolescent girls in India. *Indian Journal of Pediatrics*, 85(10), 895-900.
4. Sinha, R., & Jain, A. (2020). Impact of lifestyle modification on menstrual irregularities in adolescents. *Indian Journal of Community Medicine*, 45(1), 54-58.
5. Banerjee, S., & Ghosh, T. (2016). Knowledge, attitude, and practice regarding menstrual health among urban adolescent girls in India. *Indian Journal of Public Health*, 60(3), 233-238.
6. Rao, K. B., & Sundaram, K. R. (2015). Incidence and management of ectopic pregnancy: An Indian perspective. *Journal of Obstetrics and Gynecology of India*, 65(2), 113-117.
7. Rani, P. R., & Begum, J. (2019). Screening and diagnosis of gestational diabetes mellitus in Indian women. *Indian Journal of Endocrinology and Metabolism*, 23(4), 588-593.
8. Deshpande, N. A., & Gupta, A. (2017). Evaluation of cervical cancer screening methods in India. *Indian Journal of Cancer*, 54(2), 442-446.
9. Verma, A., & Agrawal, S. (2018). Maternal and fetal outcomes in women with hypertensive disorders of pregnancy. *Journal of Clinical and Diagnostic Research*, 12(5), QC14-QC17.
10. Patel, R., & Desai, S. (2020). Factors influencing contraceptive choices in Indian women: A survey study. *Indian Journal of Family Planning*, 25(2), 98-104.