

A STUDY TO ASSESS THE EFFECTIVENESS OF INFORMATION BOOKLET IN TERMS OF KNOWLEDGE REGARDING POLYCYSTIC OVARIAN SYNDROME AMONG THE STUDENTS OF SELECTED SCHOOL IN AHMEDABAD CITY OF GUJARAT STATE

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ABSTRACT

A study was conducted to assess the effectiveness of an Information Booklet on Polycystic Ovarian Syndrome (PCOS) among students of a selected school in Ahmedabad. The objectives included assessing knowledge before and after the booklet's administration and finding the association of pre-test knowledge scores with selected demographic variables. A qualitative research approach using the General System Model was employed. The study, conducted at selected school in Ahmedabad, utilized a non-probability convenient method for selecting students. A structured knowledge questionnaire was developed, and its content validity and reliability were established. Data was collected in October 2023. All participants (100%) were female, aged 13 to 17 years. The mean pre-test knowledge score was 14.38, while the mean post-test score was 26.28, showing a mean difference of 11.9. The standard deviation for pre-test knowledge score was 4.21, and for post-test, it was 1.4.

Keywords: Information Booklet, Polycystic Ovarian Syndrome, Knowledge

INTRODUCTION

Menarche is a significant marker of puberty in adolescent girls, typically occurring between 10-16 years. Menstruation is a physiological phenomenon unique to females, beginning in adolescence, characterized by monthly uterine bleeding for 4-5 days, usually every 28 days. Approximately 13 menses occur annually in a woman's reproductive life, with 50-60 ml of blood lost per cycle. In low socioeconomic areas, menstruation is often surrounded by negativity, myths, and socio cultural restrictions. Proper menstrual hygiene practices are crucial, including awareness of sanitary products. Polycystic Ovarian Syndrome (PCOS) is a hormonal imbalance affecting the ovaries, leading to infrequent or prolonged menstrual periods and elevated male hormone levels, which can cause skipped periods and infertility. It involves disorders in the hypothalamic-pituitary-ovarian axis, resulting in chronic an ovulation, affecting approximately 6% of women of childbearing age. Features include obesity, insulin resistance, impaired glucose tolerance, sleep apnea, infertility, hirsutism, and acne. PCOS is characterized by high LH and low FSH; elevated LH is observed in 60% of PCOS cases. This imbalance prevents monthly egg release, leading to small cysts in the ovaries and infertility.

OBJECTIVES OF THE STUDY

1. To assess the knowledge of students regarding Polycystic Ovarian Syndrome before and after the administration of an information booklet.
2. To evaluate the effectiveness of the information booklet regarding Polycystic Ovarian Syndrome among nursing college students.
3. To find out the association between knowledge scores regarding Polycystic Ovarian Syndrome with selected demographic variables.

OPERATIONAL DEFINITION

1. Study: In this context, it refers to a structured approach to learning or research concerning Polycystic Ovary Syndrome, involving a set of techniques, strategies, and behavior patterns.
2. Assess: In this study, it means the organized systematic variable of collecting information about knowledge regarding Polycystic Ovary Syndrome.
3. Effectiveness: This refers to the extent to which planned teaching, delivered by a health educator to students, improves their ability to recognize Polycystic Ovary Syndrome.
4. Information Booklet: A small, thin book with a paper cover designed to provide information regarding Polycystic Ovary Syndrome.
5. Polycystic Ovarian Syndrome: In this study, it refers to a complex, heterogeneous disorder characterized by a wide spectrum of clinical manifestations, including menstrual irregularities, an

ovulatory infertility, hyperandrogenic features, and obesity.

6. Knowledge: The correct responses of the selected sample to structured questionnaires regarding Polycystic Ovary Syndrome.

DELIMITATION OF THE STUDY

The study has the following delimitations:

1. Limited to students of selected Schools in Ahmedabad.
2. Limited to school going adolescent girls who can understand and write English.
3. Limited to students who are willing to participate in the research.
4. Limited to 50 samples.

METHODOLOGY

According to Suresh k Sharma, research methodology involves the systematic procedure from problem identification to final conclusion, including procedures and techniques for conducting the study. This chapter covers the research approach, research design, study setting, population, sample selection criteria, sample size, sampling techniques, instrument development, data collection, and data analysis, including a pilot study.

RESEARCH APPROACH

A quantitative evaluative research approach was used to assess the effectiveness of Information Education Communication on the level of knowledge regarding polycystic ovarian syndrome among adolescent girls.

RESEARCH DESIGN

The research design selected for the study was a one-group Pre-Test Post-Test design. A structured knowledge questionnaire was developed for evaluation.

The design can be diagrammed as: $K1 \times K2 = (K2 - K1)$

K1: Pre-test of knowledge of samples on polycystic ovarian syndrome (using a structured knowledge questionnaire).

X: Administration of Information Booklet on polycystic ovarian syndrome.

K2: Post-test of knowledge of samples on polycystic ovarian syndrome (using the same structured knowledge questionnaire).

K1	X	K2
Pre-Test to assess the knowledge of samples on polycystic ovarian syndrome. Tool: structured knowledge Questionnaire	Treatment to the samples by administration of Information Booklet on polycystic ovarian syndrome.	Post-test to assess the knowledge of samples on polycystic ovarian syndrome. Tool: structured knowledge Questionnaire.

This design allowed the investigator to manipulate the independent variable (Information Booklet) and observe its effect on the dependent variable (knowledge among samples). The dependent variable was measured before and after the independent variable was applied, with the difference indicating the effect of the independent variable.

RESEARCH SETTING

The study was conducted in a selected private schools in Ahmedabad city, Gujarat state. The rationale for selecting this school included familiarity with the setting, availability of subjects, feasibility of conducting the study, easy access to subjects, and administrative approval and cooperation.

TARGET POPULATION

The target population for this study was all adolescent girls aged between 13-17 years. The accessible population included adolescent girls in selected schools.

SAMPLE SIZE AND SAMPLING TECHNIQUE

Sample Size: The sample for this study consisted of 50 adolescent girls aged between 13-17years.

Sampling Technique: A non-probability convenient sampling technique was used to select the samples. This method involves selecting units from a population using a subjective (non-random) approach.

INCLUSION CRITERIA:

1. Samples aged between 13-17 years.
2. Samples willing to participate in the study.

3. Samples present during the data collection period.
4. Samples able to read and write English.

EXCLUSION CRITERIA:

1. Samples unwilling to participate.
2. Samples not available at the time of data collection.
3. Samples who do not know English.

DEVELOPMENT OF STRUCTURED KNOWLEDGE QUESTIONNAIRES

The investigator developed the tool after an extensive review of literature and experts' opinions. A structured multiple-choice questionnaire was created to assess the level of knowledge regarding polycystic ovarian syndrome. The Information Booklet was also developed based on extensive research and non-research literature, incorporating expert opinions. The content was organized appropriately, considering sequence and the level of the samples. Content validity of the Information Booklet was performed by experts, leading to the final draft.

The questionnaire was divided into two sections:

Section-1: Consisted of 10 items on demographic data (Age, Menstrual disorder, Associated disease, Bad habits, Family History, Source of Information related to PCOS).

Section-2: Contained 30 multiple-choice questions, each carrying 1 mark for a correct answer and 0 for a wrong answer. The maximum score was 30.

A blueprint for the structured knowledge questionnaire was prepared, covering topics such as definition, introduction, incidence, etiology, pathophysiology, clinical manifestations, diagnostic evaluation, complications, lifestyle modification, and management of PCOS.

RELIABILITY

Reliability, which measures the adequacy, consistency, and accuracy of a tool, was determined for the structured knowledge questionnaire using a test-retest method. An initial try-out was conducted with near by school students between the age of 13 to 17 years. The reliability coefficient obtained was 0.9, indicating acceptable reliability of the tools.

VALIDITY OF TOOLS

The content validity of the tools was evaluated by three nursing experts and two medical experts (gynecologists). Modifications were made based on their suggestions regarding clarity of sentences and content relevance.

MAJOR FINDINGS OF STUDY

The mean pre-test knowledge score was 14.38, and the mean post-test knowledge score was 26.28. The mean difference between the pre-test and post-test knowledge scores was 11.9. The standard deviation of the pre-test knowledge score was 4.21, and the post-test knowledge score was 1.4.

Sr. No.	Level of Knowledge	Mean	Standard Deviation	Mean Difference	't' Value
1	Pre-test	14.38	4.21	11.9	22.74
2	Post-test	26.28	1.40		

* - Significant at $P < 0.05$ level

CONCLUSION

The present study conclusively demonstrates that the use of an Information Booklet is a highly effective educational intervention for enhancing knowledge about Polycystic Ovarian Syndrome (PCOS) among adolescent girls. The significant improvement in post-test knowledge scores compared to pre-test scores indicates a substantial gain in awareness and understanding of PCOS after exposure to the booklet. These findings highlight the importance of structured, accessible educational materials in bridging knowledge gaps among school-aged girls, particularly concerning critical reproductive health issues like PCOS. Early education and awareness can empower adolescents to seek timely medical guidance, adopt healthier lifestyles, and reduce the long-term consequences of undiagnosed or poorly managed PCOS. The study also underscores the role of school-based health education as a strategic platform for early intervention in addressing growing public health concerns among youth.