

A Study to Assess the Effectiveness of Structured Teaching Program on knowledge Regarding PCOS Among Basic BSc Nursing Students in Selected Nursing College in Nagpur

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Abstract

Polycystic ovarian syndrome (PCOS) is a hormonal disorder common among women of reproductive age. Women with PCOS may have infrequent or prolonged menstrual period or excess male hormone (androgen) level. Objectives of the study was to assess the post-test knowledge scores regarding polycystic ovarian syndrome (PCOS) among the nursing students. The study was conducted at Asharam college of nursing, Kamptee road, Nagpur. Data was collected using structured questionnaire. Research Approach was used as qualitative research approach and Research Design was pre-experimental one group pre-test design. The conceptual framework used for the present study is "general system theory". Total sample size was 30 and selected by convenient sampling technique.

Inclusion criteria: (1) The girls those who are 17 to 28 years. (2) The girls those who are willing to participate. (3) The girls those who are available at the time of data collection. (4) The girls those who can understand English. Based on the objectives and the hypothesis the data were analyzed and by using various statistical tests i.e. frequencies, percentage, mean, chi square and standard deviations 't' test. Data analysis was done by using descriptive and inferential statistics. The 't' value obtained was 12.09 which accepted the research hypothesis suggesting that the structured teaching was effective in increasing the knowledge of nursing students on polycystic ovarian syndrome. The finding of the study showed that, the mean pretest score was 19.8 with the standard deviation 3.62, whereas in posttest the mean score was 25.3, with the standard deviation 2.86, the mean difference pretest and posttest score was 0.76. The calculated "t" value was 12.09 found to be significant at the level of $p < 0.05$. It showed that calculated "t" value much higher than the tabulated "t" value and there was significant improvement in the knowledge regarding study related polycystic ovarian syndrome among the nursing students. Hence the H1 is accepted.

Keywords: Assess; Effectiveness; Structured teaching; Programme; Polysystic; Ovary, Syndrome; Nursing students.

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INTRODUCTION

Reproductive health is a physical, mental, and social well being and not merely the absence of disease or infirmity, in all matters relating to the reproductive systems and its processes. Reproductive health therefore implies that people are able to have a satisfying and safe sex life and that they have the capability to reproduce and the freedom to decide if, when and how often to do so. Implicit in his last



condition are the right of men and woman to be informed and to be informed and to have access to save, effective, affordable and acceptable methods of family planning of their choice of regulation of fertility which are not against law, and the right of access to appropriate health care services that enables women to go safely through pregnancy and childbirth and provide couples with proper guidance on reproductive health.

Polycystic Ovarian Syndrome (PCOS) is one of the most common reproductive endocrinological disorders with a broad spectrum of clinical manifestations affecting about 6-8% of women of reproductive years. World Health Organization (WHO) estimates that it affected 116 million women worldwide in 2012 (3.4% of women). Globally, prevalence estimates of PCOS are highly variable, ranging from 2.2% to as high as 26%.³

In India, the prevalence is gradually increasing. In Indian Express 2013, it was published that PCOS becoming 'epidemic' in Bangalore city, because of the lifestyle that people have adopted. Almost all foods are packed with chemicals that lead to hormonal imbalance the cause of PCOS remains nuclear.

Infertility occurs in 75% due to an ovulation other risks have been reported in different percentages as cutaneous hyperandrogenism in the form of obesity is found in 40-60%, cases acne in 15-25%, hirsutism in 65-75%, alopecia in 5-50% cases. Most prevalence studies in India are in hospital set-ups and recently a few studies among adolescents in schools reports prevalence of PCOS as 9.13% to 36%. It is approximately pointed by Gainie and Kalra that the health budget of India is unlikely to meet the costs posted to tackling the associated multiple consequences of PCOS. It is time that this warning is needed and at national level the disease is recognized as important non-communicable diseases.

BACKGROUND OF THE STUDY

Polycystic ovarian syndrome (PCOS) is a hormonal disorder common among women of reproductive age. Women with PCOS may have infrequent or prolong menstrual period or excess male hormone (androgen) level. The ovaries may develop numerous small collections of fluid (follicles) and fail to regularly release eggs.³ The exact Cause of PCOS is unknown. Polycystic ovarian disease is a common endocrine condition which is rapidly gaining epidemic proportions.

The first urban community based study

diagnosing PCOS and phenotypes among adolescent and young girls in India. This study demonstrates that PCOS is an emerging disorder during adolescence and screening could provide opportunity to target the group for promoting healthy lifestyles and early interventions to prevent future morbidities. The prevalence of PCOS among them was 22.5% by Rotterdam and 10.7% by Androgen Excess Society criteria. Nonobese comprised 71.8% of PCOS diagnosed by Rotterdam criteria. Mild PCOS (oligomenorrhea and polycystic ovaries on USG) was the most common phenotype (52.6%). History of oligomenorrhea had a positive predictive value of 93.3% and negative predictive value of 86.7% to detect a possible case of PCOS. Hyperinsulinemia (serum insulin >15 μ LU/mL) was present among 19.2% of diagnosed PCOS cases. Obese girls with PCOS were more hirsute, hypertensive, and had significantly higher mean insulin and 2 h post 75 g glucose levels compared with nonobese PCOS.

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OBJECTIVES

- To assess the pre-test knowledge scores regarding polycystic ovarian syndrome (PCOS) among the nursing students.
- To assess the post-test knowledge scores regarding polycystic ovarian syndrome (PCOS) among the nursing students.

- To find out the association between pre-test and post-test knowledge scores and their selected demographic variables in the nursing students with polycystic ovarian syndrome (PCOS).

OPERATIONAL DEFINITION

- **Assess:** In this study the term assess is used for finding out estimate the level of knowledge among the nursing students regarding polycystic ovarian syndrome (PCOS).
- **Effectiveness:** In this study effectiveness means producing a desired change in the knowledge among the nursing students regarding polycystic ovarian diseases (PCOS) which are measure in term of significant gain in post-test knowledge score.
- **Structured Teaching Program:** In present study it refers as prepared teaching program with systematically developed instruction for a group of nursing students regarding knowledge of polycystic ovarian syndrome (PCOS) using variety of AV aids.
- **Knowledge:** In this study knowledge refers to awareness or understanding of the nursing students regarding polycystic ovarian syndrome (PCOS) and it will be measured through structured questionnaire developed by the researcher.
- **Polycystic Ovarian Syndrome (PCOS):** According to Stein andleventhal (1935) PCOS mean "PCOS is a syndrome manifested by amenorrhea, obesity associated with enlarges polycystic ovaries".

DELIMITATIONS

- The study is delimited to nursing students.
- This study is delimited Between 17-28 years of age and Who will understand English.

ASSUMPTIONS

Nursing students need proper information regarding importance of PCOS in developing a healthy life style.² The structured teaching program will be helpful to improve the knowledge of the nursing students regarding PCOS.

HYPOTHESIS

- H0:** There is no significant difference between pretest and posttest knowledge scores

among the nursing students regarding polycystic ovarian syndrome (PCOS).

- H1:** There is significant difference between pre-test and post-test knowledge score among the nursing students regarding polycystic ovarian syndrome (PCOS).
- H2:** There is a significant association of the pre-test knowledge score among the nursing students regarding polycystic ovarian syndrome (PCOS) with significant demographic variables.

Conceptual Framework

The conceptual framework used for the present study is "general system theory". General system theory was introduced by Ludwig von bertalanffy in 1968.

REVIEW OF LITERATURE

In the present study the literature reviewed has been organized into the following categories:

- Literature related to polycystic ovarian syndrome.
- Literature related to prevalence.
- Literature related to Quality of life.
- Literature related to risk factors.
- Literature related to treatment.

METHODOLOGY

Research Approach: Quantitative research approach.

Research design: A pre-experimental one group pre-test design was used in the study design.

Setting of the study: The study was conducted in the Asharam College of nursing, Kampteroad, Nagpur of district Nagpur.

VARIABLE

Independent Variable: The independent variable is manipulated by researcher to create an effect on the dependent variable. The independent variable was the structured teaching program on polycystic ovarian syndrome, which was provided to the nursing students by the researcher.

Dependent Variable: A dependent variable is the outcome or response that the researcher wants to predict or explain. The level of knowledge regarding polycystic ovarian syndrome was the dependent variable.

POPULATION

Target Population: All the nursing students (17-28 years).

Accessible population: Accessible population is the aggregate of cases that confirmed to designated criteria and also accessible as subject for the study.

Sample size: 30 nursing students (17-28 years) of selected nursing college.

Sampling Technique: Convenient sampling technique.

SAMPLING CRITERIA

Inclusion Criteria

- The girls those who are 17 to 28 years.
- The girls those who are willing to participate.
- The girls those who are available at the time of data collection.
- The girls those who can understand English.

EXCLUSION CRITERIA

- The girls those who are 19 years of age.
- The girls those who are not available during the data collection.

TOOL AND TECHNIQUE OF DATA COLLECTION

The Tools used in this Study consists of Two Sections

The structure questionnaire was constructing into two sections.

- **Section A:** It consists of demographic data which includes age of nursing students, religion, course in which they were studying. Education status of parent, belonging area.
- **Section B:** It consist structure knowledge questionnaires on polycystic ovarian syndrome for nursing students.

The self-administered questionnaires consisted of 30 multiple choice questions, with 4 options for each question. 1 answer among the 4 options the respondents were required to select the best possible option by marking against the acceptable answer.

Content Validity

The validity of the research tool was established

by administering the questionnaires to five experts, from different specialties that are from two midwifery and gynecology specialty, one community health nursing specialty, one medical surgical nursing specialty, one mental health nursing specialty and one child health nursing specialty. The experts were selected on the basis of their clinical expertise

Reliability

Reliability of the structured questionnaires was established by using test retest method.

Pilot Study

After obtaining permission from the concerned authorities of pilot study setting (Sumantai Wasnik Institute of nursing.) pilot study was conducted for a period of one week in month of February i.e. on 15/02/2020 to 22/02/2020. The data was collected from the nursing students after explaining the purpose of the study and obtaining the informed consent.

Data Collection

The data collection procedure was done on 26/02/2020. Samples (nursing students) were selected conveniently from selected nursing college.

RESULTS

The analysis and interpretation of the observations are given in the following sections:

Section I: Deals with frequency and Percentage wise distribution of nursing students with regards to demographic variables.

Table 1: Deals with Frequency and Percentage wise Distribution of Nursing Students with regarding to Demographic Variables.

Section II: Deals with assessment of levels of knowledge regarding PCOS among nursing students in selected nursing college.

Section III: Deals with comparison of the knowledge regarding PCOS among nursing students in selected nursing colleges at time of pre-test and post-test.

Section IV: Deals with associations between the levels of knowledge score regarding PCOS of nursing students with their selected demographic variables.

Table 1: Deals with frequency and Percentage wise Distribution of Nursing Students with Regarding to Demographic Variables.

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| Demographic Variables | Categories | Frequency | Percentage |
|-----------------------|------------------|-----------|------------|
| Age | a) 17-19 year | 22 | 73.33% |
| | b) 20-22 year | 0 | 16.66% |
| | c) 23-25 year | 03 | 10.00% |
| | d) 17-19 year | 00 | 00.00% |
| Religion | a) Hindu | 25 | 83.33% |
| | b) Christian | 01 | 03.33% |
| | c) Muslim | 00 | 00.00% |
| | d) other | 04 | 13.33% |
| Course | a) I | 00 | 00.00% |
| | b) II | 05 | 16.66% |
| | c) III | 20 | 66.66% |
| | d) IV | 05 | 16.66% |
| Education of parents | a) illiterate | 0 | 00.00% |
| | b) HSC | 12 | 40.00% |
| | c) Undergraduate | 14 | 46.66% |
| | d) Postgraduate | 04 | 13.33% |
| Belonging Area | a) Urban area | 22 | 73.33% |
| | b) Rural area | 08 | 26.66% |

DISCUSSION

The findings of the study were discussed with references to the objectives stated in chapter I and with finding of the other section. The present study was undertaken as Distribution of subject according to the demographic variables showed that, out of 30 subjects, majority of subjects 22(73.33%) were of 17-19 year age, 5(16.66%) of 20-22 years, 3(10.00%). The subjects according to their religion 25(83.33%) were Hindu, 1(3%) was Christian and 4(16.66%) were from other religion. The subjects according to their course of studying 05(16.66%) were from II and IV year and 20(66.66%) were from III year. The subject according to their parents education, non-of were illiterate, 12(40.00%) had HSC, 14(46.66%) undergraduate and 4(13.33%). The subject according to their belonging area, 22(73.33%) were from urban area, 8(26.66%) were from rural area.

The finding of the study showed that, the mean pretest score was 19.8 with the standard deviation 3.62, whereas in posttest the mean score was 25.3, with the standard deviation 2.86, the mean difference pretest and posttest score was 0.76 The calculated "t" value was 12.09. It showed that calculated "t" value much higher than the tabulated "t" value and there was significant improvement in the knowledge regarding study related polycystic ovarian syndrome among the nursing students. Thus, H1: there is significant difference between

the pre-test and post-test score among the nursing students regarding polycystic ovarian syndrome measured at $p < 0.05$ level is non significance so it is rejected. There was no significant association between the knowledge score among adolescent girls regarding polycystic ovarian syndrome with their significant variables such as age, religion, course of studying, education of parents and belonging area in this study. The following two studies are added for more conformity to researcher proven hypothesis. The study was conducted to determine the effectiveness of a planned teaching program on prevention of PCOD among 30 girls in the community of Nagpur district. The research approach used was evaluative approach with one group pretest and posttest, pre experimental design. Descriptive and inferential statistics were used to analyses the data. The planned teaching program was found to be effective in increasing the knowledge of students on prevention of PCOD with 49 ± 7.86 , $p < 0.05$.

A study was conducted to determine the effectiveness of a planned teaching program on early detection of PCOD and polycystic ovarian syndrome among women. The study adopted evaluation approach with pre-test control group design. The data were collected structured interview schedule and observational checklist. Findings showed that there was significant difference between pre-test I ($K1=40\%$) and posttest II ($k2$

=45%) knowledge score and ability scores. This indicated planned teaching program contributed to enhance knowledge and ability scores regarding prevention of PCOD.

CONCLUSION

After the detailed analysis the study leads to the following conclusions. The Nursing students did not have 100% knowledge regarding study related polycystic ovarian syndrome. There was a significant increase in the knowledge of subject after introduction structured teaching to find out the structured teaching student 't' test was applied 't' value calculated post-test score was significantly higher at 0.05 level than that of post-test score. Thus it was concluded that structured teaching on study related polycystic ovarian syndrome was found effective as a teaching strategy.

Implication of the study

The finding of the study provided the useful information to the health care providers, health educators and teachers to improve knowledge.

Nursing education

Nursing curriculum should include areas for nursing students to learn and identify the symptoms of study related polycystic ovarian syndrome among the nursing students and should be taught polycystic ovarian syndrome to prevent PCOD. The nursing education should be encouraged to take up novel improvisations to make interesting health education activities for health education.

The curriculum should provide an opportunity for innovation and experience to conduct health education, thereby spreading awareness messages to wider areas of the society. Nursing personnel should be given in service education to update and improve knowledge regarding polycystic ovarian syndrome among the nursing students. The nurse also should be encouraged to provide information regarding polycystic ovarian syndrome to the nursing students. So study will help the teachers to educate the students to increasing the knowledge about study related polycystic ovarian syndrome. The structured teaching could help educator to use it as a tool for teaching.

Nursing Service: Nurses are the key providers of preventing, promote, curative and rehabilitative services to individual and communities. The expand role of nurse emphasizes on activities that promote health. Nurse as an educator and client advocate, are in a better position to mold the health

related behavior among the nursing students. Nursing students can be involved actively to modified the health related behavior in the family and have more influence in their family members. Therefore structured teaching program are feasible cost effective method of health education that can extensively use in health care.

NURSING RESEARCH

- The findings of the study can be utilized for the references and the result can be used by other researchers for the comparison and guidance. Other researcher may utilize the suggestions and recommendations for conducting further studies. The tool and technique of the study can be used for further references.
- Research should be done to find out the effectiveness of structured teaching on level of knowledge regarding study related to polycystic ovarian syndrome to prevent and early detection of PCOD.
- Education further research studies on the effectiveness of the study related polycystic ovarian syndrome as it is evident from the review of literature more research need to be conducted on the effectiveness study related polycystic ovarian syndrome among nursing students.
- Disseminate the finding through the conference seminar publication in professionals, national and international journals and World Wide Web.

NURSING ADMINISTRATION

The present study provides suggestion to nurse administration to focus their attention in organizing in service education programs catering the needs of specific population in nursing students. They should plan and organize cost effective program for staff nurses and teaching faculties and encourage them to serve individual with special needs. Personal experience The present study has enriching experience to the researcher. It has help to: Develop skill in critical thinking and analysis and realize the importance of effective communication and respondents. The present study has made the researcher to understand how to carry out the research and face various difficulties in the research proposal steps. The entire study was a varied and rich learning experience, improved the knowledge and increase confidence to be a vigilant researcher in her work. At every step the researcher received

support and guidance from the guide which has boosted confidence to go ahead and carry out the planned activities resulted in presenting this study.

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RECOMMENDATION

On the basis of the study the following recommendation has been made:

- A similar Studies can be conducted with a large number of samples.
- Similar study can be conducted among women.
- A study can also be done to assess the practice and attitude of the nursing student regarding polycystic ovarian syndrome.
- Similar study to assess the knowledge, attitude and practice of the family towards polycystic ovarian syndrome could be studied.
- Studies may be conducted to evaluate and effectiveness of method of teaching versus information booklet on study related polycystic ovarian syndrome.
- Furthermore the strategies should be adopted parents and teachers for the study related polycystic ovarian syndrome on a wider range of group considering same or more demographic variables.

- Teachers and parents may be included as sample to provide subjective responses.
- The study can be conducted among different group in hospital and community settings.
- Study can be done with randomization for better result.
- The study can be conducted using various research designs.

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