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ASSESSMENT OF RISK OF POLYCYSTIC OVARIAN SYNDROME AMONG NURSING STUDENTS

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ABSTRACT

Polycystic Ovarian Syndrome is a common hormonal disorder that affects women of reproductive age. It is characterized by a combination of symptoms, including irregular periods, excess androgen production, and presence of cysts on the ovaries. The study aimed to assess the risk of Polycystic Ovarian Syndrome among nursing students. The objectives of this were to assess the risk of PCOS among nursing students and to find out the association between risk of PCOS with selected socio demographic variables. A quantitative research approach was used for the study. A sample of one hundred and twenty students was selected by using non probability purposive sampling technique. The study was conducted at MGM Muthoot College of Nursing, Kozhencherry. The risk is assessed by using a modified self assessment test which consists of questions to assess the risk of PCOS and socio demographic variables. The present study revealed distribution of risk that 0.83% of the samples were having no risk, 43.33% of the samples were having poor risk, 37.5% of the samples were having moderate risk and 23.3% of the samples were having high risk for PCOS. Chi square analysis showed that there was significant association between risk of PCOS among students with selected socio demographic variables like age, ($\chi2$=43.710), pattern of menstrual cycle ($\chi2$= 9.34), family history of diabetes mellitus ($\chi2$= 9.321) and socio economic status ($\chi2$= 12.60). This study recommends that early identification of risk of PCOS helps in controlling and minimizing the complications.

Keywords: Assess; risk; PCOS.

INTRODUCTION

BACKGROUND OF THE PROBLEM

Polycystic Ovarian Syndrome (PCOS) is an endocrine disorder usually characterized by multiple ovarian cysts, oligomenorrhea, amenorrhea, menorrhagia, hirsutism, acne, obesity and infertility. Alopecia and hypertension may also be present. It is a set of symptoms due to elevated androgens in women.[1]

PCOS is common among women between the age of 18–44 years. It affects approximately 2 to 20% of this age group. It is one of the leading endocrine disorders which affects one in 15 women in worldwide. The Global prevalence of PCOS is estimated between 4% & 20%. Today 1 in every 10 women is diagnosed with PCOS across the world. World Health Organization (WHO) data suggest that approximately 116 million women (3.4%) are affected by PCOS globally.[3]

For the diagnosis of PCOS, the Rotterdam criteria are widely used worldwide and its use is recommended by Endocrine society in 2013, the American Academy of Family Physician (AAFP) Guidelines in 2016 and the International Evidence based guidelines for the assessment and management of PCOS 2018. This criterion stated that women must have at least two out of the three criteria for diagnosing PCOS including the presence of oligo/anovulation, clinical or biochemical hyperandrogenism or ovarian cysts. Other

possible hormonal disorder should also be excluded. It meets the diagnostic requirements set by the Centers for disease control and prevention (CDC). In addition to using the Rotterdam criteria for the diagnosis of PCOS, a thorough evaluation of the patient's medical history, physical examination, basic laboratory test and comorbidity risk assessment is recommended.[2]

The prevalence rate of PCOS is high among Indian women. According to the National Health portal of India, the prevalence rate of PCOS in Maharashtra was noted to be 22.5%. Another previous report from South India which included adolescents showed an incidence of 9.13%. The pooled prevalence of PCOS was close to 10% using Rotterdam's criteria and Advanced Encryption Standard (AES) criteria while it was 5.8% using National Institutes of Health (NIH) criteria. Incidence in adolescent girls is 6 to 18%.

A study conducted among girls aged 15 to 18 years in Andhra Pradesh, prevalence was noted as 9.13% while in Kerala the prevalence found was 26.4%.[4]

Girls with normal birth rate as well as family history of diabetes mellitus, premature birth, cardiovascular disease, hypertension, hormonal imbalance, genetic problem, endocrine disease, weakened immune system, environmental factors in effect for developing PCOS.[5]

STATEMENT OF THE PROBLEM

A descriptive study to assess the risk of Polycystic Ovarian Syndrome among nursing students of selected college in Kozhencherry, Pathanamthitta with a view to develop information booklet.

OBJECTIVES

1. Assess the risk of PCOS among students.

2. Find out the association between risk of PCOS with selected socio demographic variables.

OPERATIONAL DEFINITIONS

Assess: In this study, assess refers to the evaluation of risk of PCOS among nursing students.

Polycystic Ovarian Syndrome: It is an endocrine disease in women characterized by irregular menstrual periods, acne, obesity and excess hair growth.

Risk: Factors that increases a person's chance of developing PCOS such as family history of diabetes mellitus, hypertension, hormonal imbalance, genetic problems, endocrine diseases, weakened immune system, environmental factors.

Students: In this study, students are those who study BSc nursing and in the age group of 18-25 years.

Information booklet: It is a booklet that gives information regarding the risk factors and prevention of PCOS.

ASSUMPTIONS

Students may have higher chance of getting PCOS.

RESEARCH APPROACH

The research approach used in the study was Quantitative research Approach.

RESEARCH DESIGN

The research design used in the study was Descriptive Design.

POPULATION

In this study, the population consists of B.Sc Nursing students in the age group of 18 to 25 years.

SAMPLE AND SAMPLING TECHNIQUE

Sample: Students of the age group 18 to 25 years.

Sample size: 120 students

Sampling technique: Non-Probability purposive sampling technique.

DESCRIPTION OF THE TOOL

The tool consists of two sections.

Section A:

Section A consists of socio demographic variables including age, religion, dietary pattern, menstrual cycle, family history of PCOS, family history of diabetes mellitus, family history of cardiovascular diseases, body mass index, age of menarche, socioeconomic status, residence, history of any other endocrine disorders.

Section B: Semi-structured questionnaire

Section B consists of 17 questions for the assessment of risk of PCOS.

For section B, score 1 for all the correct answers and score 0 was given for the wrong answers.

Scoring consists of

0: No risk

1-3: Poor risk

4-6: Moderate risk

Above 7: High risk

The maximum possible score was 17.

CONTENT VALIDITY

Content validity is the degree to which a multi-item instrument has an appropriate set of relevant items reflecting the full content of the construct domain being measured.[38]

To establish content validity the tool along with objectives, hypotheses, operational definition and criteria were submitted to five experts from nursing education (Child health department, Medical Surgical department, Community health department).

Suggestions and recommendations given by the experts were accepted and research tool was finalized according to the expert's opinion.

DATA COLLECTION PROCESS

A collection is a precise, systematic gathering of information relevant to the research through objective questions for the purpose of validating the hypothesis of the study. [39] The study was conducted at MGM Muthoot College of Nursing, Kozhencherry on 21/07/2023 and the data was collected using semi-structured questionnaire among 120 students who were in the age group of 18 to 25 years.

After obtaining a formal permission from the principal of the college, the students from the third semester, third year and fourth year were selected for the data collection. The students were selected on the basis of inclusion and exclusion criteria by non-probability purposive sampling technique. Written informed consent from the participants was obtained after explaining the purpose and the need

of the study. The confidentiality of the information was maintained. Data was collected using semi-structured questionnaire. A time period of 15 minutes was provided for completing the questionnaire. The subjects were co-operative during the study.

PLAN FOR DATA ANALYSIS

Data analysis is planned based on the objectives of the study. After collection of data, data were organized, tabulated by using descriptive and inferential statistics manually in MS Excel 2007 version. Frequency and percentage were used to define baseline data and knowledge scores. As the knowledge was in the ordinal data, non-parametric test was adopted for the association of the knowledge scores with demographic variables, Chi square test was computed.

FINDINGS OF THE STUDY

Section 1: Distribution of samples according to Socio demographic data

In the present study the distribution of samples according to the age in years revealed that 21 (17.50%) samples were within the age group of 17-19 years, 96 (80%) samples were within the age group of 20-22 years and 3 (2.5%) samples were within the age group of 23-25 years.

Distribution of samples according to the religion revealed that 34 (28.33%) samples were Hindu, 79 (65.83%) samples were Christian and 7 (5.84%) samples were Muslims.

Distribution of samples according to the dietary pattern revealed that none of the students were vegetarians, 120 (100%) samples were non-vegetarians.

Distribution of samples according to the menstrual cycle revealed that 99 (82.5%) samples were having regular cycle, 21 (17.5%) samples were having irregular cycle.

Distribution of samples according to the family history of PCOS revealed that 8 (6.6%) samples were having family history of PCOS and 112 (93.4%) samples were not having family history of PCOS.

Distribution of samples according to the family history of diabetes mellitus revealed that 65 (54.16%) samples were having family history of diabetes mellitus, 55 (45.84%) samples were not having family history of diabetes mellitus.

Distribution of sample according to the family history of cardiovascular disease revealed that 39 (32.5%) samples were having family history of cardiovascular disease, 81 (67.5%) samples were not having family history of cardiovascular disease.

Distribution of samples according to BMI revealed that 14 (11.67%) samples were having BMI of below 18, 88 (73.34%) were having BMI between 18-22, 17 (14.1%) samples were having BMI between 23-29,1 (0.83%) sample were having BMI above 29.

Distribution of samples according to age of menarche revealed that 117 (97.5%) samples were between the age of 10-16 and 3 (2.5%) samples were after 16 years.

Distribution of samples according to the socioeconomic status revealed that 97.5% were from middle class,and 2.5% were from lower class.

Distribution of samples according to residing revealed that 115 (95.83%) samples were residing in hostel and 5 (4.17%) samples were residing in home.

Distribution of samples according to other endocrine disorders revealed that 6 (5%) samples were having other endocrine disorder and 114 (95%) samples were not having other endocrine disorders.

Section 2: Distribution of samples according to grading of risk factors of PCOS

Distribution of samples according to assessment of risk of PCOS among students revealed that 28 (23.37%) samples have high risk, 45 (37.5%) samples have moderate risk, 45 (38.33%) samples have poor risk, 1 (0.83%) sample has no risk.

Section 3: Association of risk factors of PCOS and social demographic variables

The Chi square value for age ($\chi 2=43.71$), menstrual cycle ($\chi 2=9.34$), family history of diabetes mellitus ($\chi 2=9.321$), family history of cardiovascular disease ($\chi 2=12.61$) at $p > 0.05$ were greater than the table value, so there is a significant association between the risk factors of PCOS among nursing students and the selected socio demographic variables like age, menstrual cycle, family history of diabetes mellitus, family history of cardiovascular disease.

NURSING IMPLICATIONS

The study findings have several implications in the field of nursing practice, nursing education, nursing administration and nursing research.

Nursing Practice

1. Nurses can assess the risk of PCOS among the patients.

2. Early identification of the risk to control the severity of the complications.

3. Nurses can also act as health advocate in patient care settings by discussing the benefits of maintaining a healthy lifestyle.

Nursing Education

1. The nurse can act as an educator by educating the students.

2. A nurse can act as an educator by educating the females regarding the risk of getting PCOS and to minimize the severity of the complications.

3. The awareness of student nurses regarding the risk of PCOS should be improved by conducting webinar, orientation programs and quiz competitions.

4. Community health nurses can take an active role in health awareness programs and conduct health education programs, health camps and exhibition to educate women regarding PCOS.

Nursing Administration

1. The nurse administrators can use the study result as the baseline data to organize educational programs regarding the risk of PCOS among outpatient department and community settings.

2. Nurse administrator can play many important roles in uplifting the control of PCOS.

3. They can incorporate the research evidences obtained, while assessing the risk of PCOS.

4. Improve the knowledge level of staff nurses by conducting campaigns and awareness programs.

Nursing Research

1. There is a need for an extensive and intensive research in this area so that strategies for educating nurses regarding various aspects of minimizing the severity of PCOS can be promoted.

2. The present study may inspire other researchers for conducting the studies in the same area.

3. Researchers can do studies related to various aspects of PCOS, so that intellectual and perceptual diversities will be reflected.

CONCLUSION OF THE STUDY

PCOS is a hormonal disorder that affects women of reproductive age and can cause a range of symptoms, including irregular menstrual cycles, hirsutism, acne, weight gain, hyperpigmentation and fertility issues. PCOS can be a challenging condition to manage, both physically and emotionally. The core aims of PCOS treatment are to manage symptoms, regulate menstrual cycle,

promote fertility if desired and address any underlying health concerns such as insulin resistance and hormonal imbalances. The treatment approach may involve lifestyle modifications, medications and hormonal therapy tailored to the individual's specific needs and goals.

Thus, the present study concluded that information booklet was found to be effective in the prevention of PCOS among nursing students.

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