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KNOWLEDGE REGARDING POLYCYSTIC OVARIAN SYNDROME AMONG NURSING STUDENTS

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ABSTRACT

Title: Knowledge regarding polycystic ovarian syndrome (PCOS) among nursing students. Background: Polycystic ovarian syndrome (PCOS) is a common endocrine disorder that affects adolescent girls. Awareness regarding PCOS among nursing students and Health care personnel is essential for early diagnosis and to prevent its complications.

Objective: This study is intended to assess the knowledge regarding PCOS among nursing students, to determine the associations between knowledge and socio demographic variables. Methodology: A descriptive study was done in Rahman Institute of Nursing and Paramedical Sciences, Guwahati on 40 subjects selected by simple random sampling technique. The data collection tool assessed demographic variables and a semi structured questionnaire was used to assess knowledge regarding PCOS. Descriptive and inferential statistics were used to analyze the study findings.

Results: The study findings revealed that the participants had mean knowledge score of 1.42±0.50 regarding PCOS. There was a statistically significant association between mother's education, mother's occupation, menstrual cycle and eating habits with knowledge regarding PCOS. 57.5% of the participants had inadequate knowledge, 42.5% moderately adequate and none of the participants had adequate knowledge regarding PCOS.

Conclusion: Every nursing students need to be aware of PCOS. The health care personnel should emphasize on providing information to every teenagers regarding PCOS. Conduction of planned teaching programs is necessary to increase comprehensive knowledge with regard to detection of presenting symptoms and foster early diagnosis and treatment of the syndrome thereby promoting overall health.

Keywords: Knowledge, polycystic ovarian syndrome (PCOS), nursing students

INTRODUCTION

"I am dedicated to ensuring reproductive health and freedom for all "

-Kathleen Turner

Polycystic ovarian syndrome (PCOS) is a common hormonal condition that affects women of reproductive age. It usually starts during adolescence but symptoms may fluctuate over time. PCOS is associated with various long-term health problems that affect physical and emotional wellbeing. PCOS can cause hormonal imbalance, irregular periods, excessive androgen levels and cysts in ovaries. PCOS can also lead to fertility problems in later life.

It is a vital role to improve women's health and reproductive well-being globally. The health care personnel should enhance public awareness related to PCOS and to generate guidance towards community on how it can be identified and treated[5]. In addition, WHO promotes focuses on the most effective ways of preventing, diagnosing and treating infertility due to PCOS and identifies the most important unanswered questions related to it.

The World Health Organization (WHO) in the year 2021 reported that approximately 116 million women (3.4%) are affected by PCOS globally and in India was 3.7 to 22.5%. Polycystic ovary syndrome (PCOS) affects an estimated 8–13% of reproductive-aged women. Up to 70% of affected women remain undiagnosed worldwide. The prevalence of polycystic ovarian syndrome are ranging from 2% to 7.5% in China and 6.3% in Sri Lanka. Although, incidence of polycystic ovarian syndrome was stated as 9.13% and 22.5% by studies done in South India and Maharashtra.

Nursing students play a key role in imparting direct patient health education in the community and hospital setting. Upgrading the knowledge not only helps in imparting health education to the patient but also encourage them to modify their lifestyle and reduce the possible complication of polycystic ovarian syndrome[4]. Polycystic ovarian syndrome is most commonly reported endocrine disorder which has lifelong potential health consequences. Life style modification and diet can prevent obesity, polycystic ovarian syndrome and risk factors. It was also felt that very less study was conducted on polycystic ovarian syndrome in India and no such study has been conducted in Assam so far.

Lack of knowledge and the negative lifestyle attitude towards polycystic ovarian disease among college girls and not taking any measure to improve their lifestyle is observed by the investigators. These college girls can be helped by assessing their knowledge and with a view to change their lifestyle by providing necessary information[1]. Therefore, the nurses have a pivotal role to identify the symptoms and modification to be brought in order to prevent further complications of PCOS.

With a view to understand and identify gap in knowledge related to this health problems, the researchers felt the need to conduct this study among nursing students. The nurses hold a critical role to provide comprehensive care to adolescent afflicted with the syndrome. Therefore, up gradation of knowledge regarding PCOS to nursing students will enhance the adolescent girls to modify their lifestyle and to reduce the risks for further complications. Hence, the researchers wanted to explore the knowledge regarding PCOS among nursing students.

OBJECTIVES

1. To assess the knowledge regarding polycystic ovarian syndrome among the nursing students.
2. To determine the association between the knowledge regarding polycystic ovarian syndrome among nursing students and their selected socio-demographic variables.

HYPOTHESIS

H1 – There is a significant association between knowledge regarding polycystic ovarian syndrome among nursing students and the selected socio-demographic variables.

MATERIALS AND METHODS

Research design
A descriptive study design was used to assess the knowledge regarding polycystic ovarian syndrome among nursing students in Rahman Institute of Nursing and Paramedical Sciences, Guwahati.

Setting of the study
The study was conducted in the Rahman Institute of Nursing and Paramedical Sciences, Sixmile, Guwahati. The institution offers GNM, B.Sc, M.Sc. Nursing courses affiliated to Indian Nursing Council, Assam Nurses' Midwives' and Health Visitors' Council and Srimanta Sankaradeva University of Health Sciences, Guwahati.

Sample Size
The sample size was calculated based on the study done by Gajbe,H. et al. (2022). According to this study, awareness on polycystic ovarian syndrome among nursing students was 80.0%. By assuming 5% precision 95% confidence level, 40 nursing students were included in the present study. The following formula was used:

$$n=Z^2pq/d^2$$

Sampling technique
Probability simple random sampling was used to select nursing students.

CRITERIA FOR SAMPLE COLLECTION

INCLUSION CRITERIA
1. Nursing students who were studying in Rahman Institute of Nursing and Paramedical Sciences, Guwahati.
2. Age group of 18-21 years.
3. Students who could read English.
4. Only female students were included.

EXCLUSION CRITERIA
1. Students who were not available during the data collection period.
2. Students who were not willing to participate in the study.
3. BSC Nursing and MSc Nursing students were not included in this study.

DATA COLLECTION INSTRUMENTS
The instrument consisted of 40 semi structured questionnaires to assess knowledge regarding awareness on polycystic ovarian syndrome. The tool used for this study consisted of two sections –

Section A: socio-demographic variables of nursing students
A section consist of information and demographic variable such as age, religion, student's educational status, mother's education and occupation, father's education and occupation, type of family, student's residence, family income per month, previous information on reproductive health and family history of polycystic ovarian syndrome.

Section B: Semi structured questionnaire to assess knowledge regarding awareness of polycystic ovarian syndrome

A semi structured questionnaire consisted of 30 items to assess knowledge regarding polycystic ovarian syndrome among nursing students. It included eight domains such as anatomy and physiology, prevalence, causes, clinical manifestations, diagnosis, treatment, lifestyle modification and complications.

SCORING AND INTERPRETATION

SECTION B:

It consisted of 30 Questions. The total score was 30. The correct answer was given score of '1' and wrong answer was given '0'. The final interpretation was done as below:

SCORE	INTERPRETATION
0-15(0-50%)	Inadequate knowledge
16-22(51-75%)	Moderate adequate knowledge
23-30(76-100%)	Adequate knowledge

DATA COLLECTION PROCEDURE

The data was collected after getting approval and permission from Principal, Rahman Institute of Nursing and Paramedical Sciences, Guwahati. The data was collected for a period of one week. The investigator selected 40 samples from GNM first year and second year who attended Rahman Institute of Nursing and Paramedical Sciences, Guwahati and fulfilled inclusion criteria. The investigator visited Rahman Institute of Nursing and Paramedical Sciences, Guwahati from Monday to Saturday and worked from 12 MD to 1 pm for 6 days in a week. The investigator enquired from the class coordinators of the GNM first year and second year about the students who were available in the college. The class registers of the students reviewed to identify the samples who fulfilled the inclusion criteria by using simple random sampling technique. Lottery method was used to recruit the samples for the study.

Brief summary of self and the purpose of the study were explained to them using the participant information sheet and written informed consent was obtained from the samples. The data was collected using the semi structured administered questionnaire to assess knowledge regarding polycystic ovarian syndrome. Every day, the questionnaires were administered to 10-12 samples. The entire process of data collection took 10-15 minutes for each sample.

VALIDITY OF THE INSTRUMENTS

Content validity for knowledge was done by medical and nursing experts in the field of Obstetrics and Gynaecology. Suggestions and comments given by the experts were considered and the tool was modified. Content validity index for semi structured questionnaire for the assessment of knowledge was found 0.90.

RELIABILITY OF THE INSTRUMENTS

The reliability of the structured questionnaire was done by using correlation coefficient. The Cronbach's alpha for internal consistency of semi structured questionnaire for the assessment of knowledge was found 0.79. Therefore, the tool was considered as reliable and was used for the study.

DATA ANALYSIS

Descriptive statistics were used. For continuous variables mean (standard deviation)/median percentage were presented. For categorical variables, frequency and percentage was used. The association between Knowledge (inadequate/moderately adequate/adequate) and demographic variables were assessed by using Chi-square test/Fisher's exact test. P value at <0.05 considered as statistically significant. All the statistical analysis was performed using SPSS version 21.0.

RESULTS

This chapter deals with the details of the data analysis. The data was collected from 40 participants who fulfilled the inclusion criteria by using probability simple random sampling technique. Semi-structured questionnaire was administered to the participants by the researcher to collect data and for the assessment of knowledge regarding polycystic ovarian syndrome among nursing students. All the statistical analysis was performed using SPSS version 21.0.

Figure 1: Distribution of samples based on the knowledge regarding polycystic ovarian syndrome among nursing students (n=40)

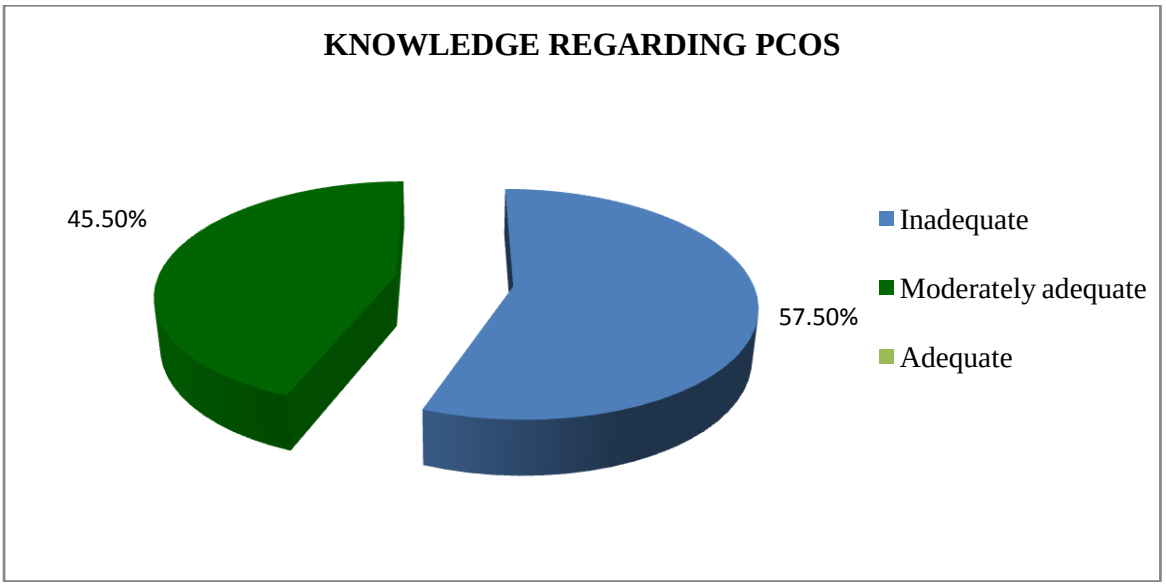
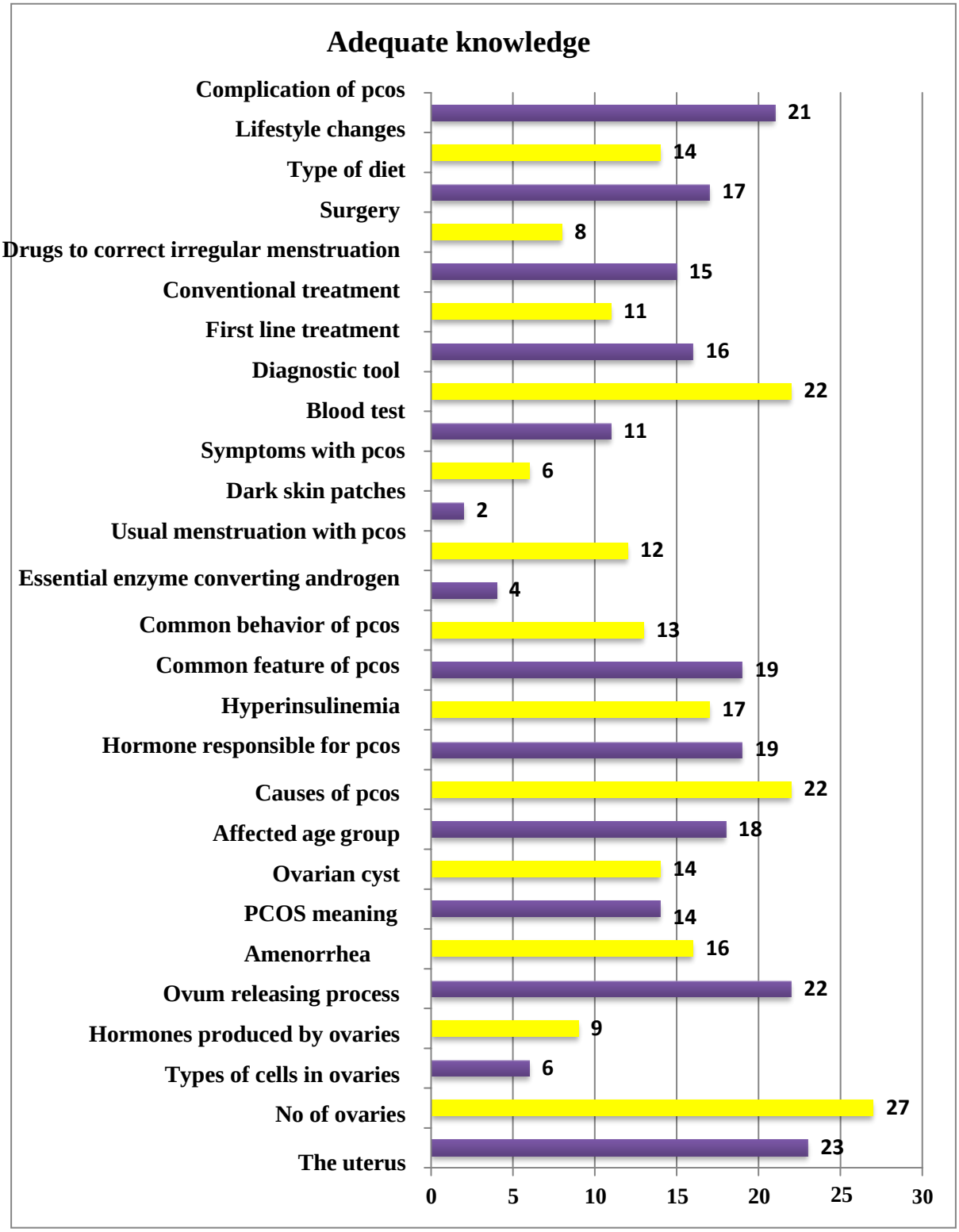


Figure 1 shows that only 57(57.50%) of the participants had inadequate knowledge, 43(42.50%) had moderately adequate knowledge and none of the participants had adequate knowledge regarding polycystic ovarian syndrome.

Figure 2: Frequency of correct responses to the knowledge questionnaire (n=40)



DISCUSSION

First objective of the study was to assess the knowledge regarding polycystic ovarian syndrome among nursing students.

Polycystic ovarian syndrome is a common endocrine disorder among reproductive age group of women that is defined by a combination of androgen excess and ovarian dysfunction. It is also associated with physiological, psychological, social and emotional problems. About 5-10% of reproductive female have biochemical sign of androgen excess. The current study finding showed that 57.5% of the participants had inadequate knowledge, 42.5% of the participants had moderately adequate knowledge and none of the participants had adequate knowledge with the mean knowledge score of 1.42±0.50.

This current study finding is supported by another study conducted by Srujana,C., Miryani, J., at Andhra Pradesh, India in the year 2020 has found that 93.47% of the respondents had inadequate knowledge, 6.52% of the respondents had moderately adequate knowledge, none of the participants had adequate knowledge[6]. However, contradicting this current study findings by another study conducted by Susila.C,. Birjeni,D. at Uttar Pradesh, India in the year 2022 has found that 77.9% participants had moderately adequate knowledge, 13.6% of the respondents had inadequate knowledge and 8.4% of the participants had adequate knowledge[2].

Although nursing students are aware about PCOS but there is a gap of knowledge and practice among the nursing personnel. The nurses have a crucial role in early detection, education, counseling and to improve the women's reproductive health. Therefore, effective educational interventions for the nurses to be conducted to improve their level of knowledge and awareness program to be organized in every college to increase the level of understanding about PCOS among teenage girls[3].

Second objective of the study to determine the association between the knowledge regarding polycystic ovarian syndrome among nursing students and their selected socio demographic variables.

Chi-square test and Fishers Exact test was used to identify the association between knowledge regarding polycystic ovarian syndrome among nursing students and their selected socio-demographic variables. There is a statistically significant association between the knowledge and demographic variables such as mother's education and occupation, menstrual cycle and eating habits. It also reveals that there is no statistically significant association between age, religion, student's residence status, father's education and occupation, type of family, student's residence, family income per month, previous information on polycystic ovarian syndrome and family history of PCOS. The current study finding is supported by another study conducted by Devi,S.B., in the year 2017 has found that qualification of the mother and other variables such as age, history of polycystic ovarian syndrome, other health problem apart from polycystic ovarian syndrome are statistically significant with knowledge regarding polycystic ovarian syndrome[2].

RECOMMENDATIONS

- Educational classes should include teaching on polycystic ovarian syndrome and information materials such as leaflet, pamphlet, posters and videos can be made available to the adolescent girls.

Community based educational programs can be organized by the health care personnel to provide correct information on PCOS.

IMPLICATIONS FOR NURSING PRACTICE

- The nurses can motivate the adolescent girls to follow the preventive measures of polycystic ovarian syndrome and to protect themselves.
- Health education and awareness program regarding preventive measures of polycystic ovarian syndrome can be organized to help the adolescent girls and to prevent negative impacts on health.

IMPLICATIONS FOR NURSING EDUCATION

- Nurse educators should teach the student about to improve the knowledge of the student and to update their knowledge regarding polycystic ovarian syndrome.
- The nursing students should be encouraged to conduct mass educational campaigns in the community as well as in every college regarding polycystic ovarian syndrome and its effects on health.
- Information materials such as booklets, handouts, pamphlets and leaflets can be prepared by the nursing students to create awareness about polycystic ovarian syndrome.

LIMITATIONS

- The study was limited to nursing students.
- The study was limited to the students studying in Rahman institute of nursing and paramedical sciences, Guwahati.
- The sample size was limited to 40 samples.
- The data collection is limited to one week.

CONCLUSION

There is an urgent need to increase the level of knowledge about PCOS among nursing students as well as health care personnel. Nursing students are the personals who will give awareness and promote health to the people in the future. Hence, it is essential to improve their knowledge regarding PCOS. The health care providers should emphasis more on education, counseling and awareness programs on different aspects and indicators of polycystic ovarian syndrome among the teenage girls.

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ETHICAL CONSIDERATION: The study was conducted after obtaining the permission from the Principal, Rahman Institute of Nursing and Paramedical Sciences, Guwahati. Samples were selected only after getting written informed consent. Information collected from the participants was kept confidential and will be accessible only to the researcher and utilized only for research purpose.

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