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# "Effectiveness Of Structured Teaching Programme On Knowledge Regarding PCOD Among The Students In Selected Colleges Of Guwahati, Kamrup (M) Assam: A Pre-Experimental Study."

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## INTRODUCTION:

Among the various health disorders in the girls and women, PCOD is the most common health problems but not acknowledge by many girls. It is most common endocrinopathies in women of reproductive age which affects the hormones and caused damage to the physical appearance and further leads to infertility.

## OBJECTIVES:

1. To assess the knowledge regarding PCOD among the students before and after administration of structured teaching programme.

2. To evaluate the effectiveness of STP among the students.

3. To find out the association between the pre test knowledge score of PCOD with selected demographic variables among the students.

## METHOD AND MATERIAL:

A quantitative research approach and pre experimental one group pre test post test research design was adopted in this study. 117 students from selected colleges of Guwahati, Assam were selected by using multi sampling technique. Knowledge of PCOD was assessed by self reporting. Validity of the tool was established in consultation with guide and from experts in Obstetrics and Gynecology and from Community health nursing. The reliability of the tool was 0.81 for knowledge on PCOD.

## RESULTS:

Out of 117 students ,majority 87(74.4%) did not history of delayed menarche in the family,97(82.9%) were having dysmenorrhoa during menstruation , excessive weight gain, 26(22.2%) were having excessive weight gain, 26(22.2%) were having family history of PCOD.

In pre-test, all the students had inadequate knowledge whereas in the post test, majority i.e. 59(50.4%) had adequate knowledge. The findings also revealed that the structure teaching programme was also effective at p-value <0.05. There was no significant association with knowledge and demographic variables .

## CONCLUSION:

In the pretest, majority i.e. All (100%) had inadequate knowledge. In the post test majority i.e. 59 (50.4%) had adequate knowledge, 36 (30.8%) had inadequate knowledge and 22(18.8%) had moderate knowledge regarding PCOD. The association was statistically tested by fisher exact test and analysis depicted that there was no significant association between pretest knowledge score and selected demographic variables.

## KEY WORDS:

Knowledge, PCOD

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Ms Karabi Das

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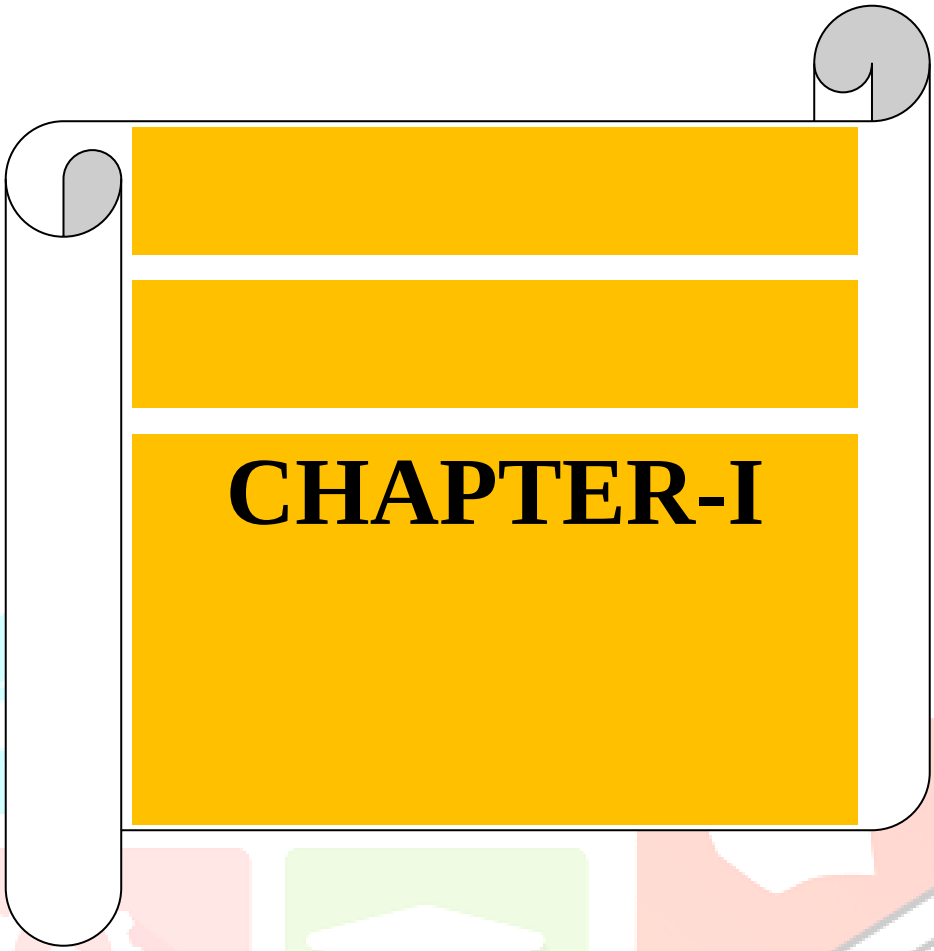


# CHAPTER-I

## INTRODUCTION

**“If you want to change the world, start with yourself.”**

**-Mahatma Gandhi**

In developing countries like India, women are mostly observed to neglect their health. Due to the absence of knowledge and ignorance, women used to suffer from many health issues. Some are preventable, some are curable if it is recognized at an early level, and some are not curable if it is already late. Among those health problems, one of the major health issues is Polycystic Ovarian Disease (PCOD), an endocrine or hormonal disorder that women can face mostly during their reproductive years. PCOD, which affects 5-10% of reproductive-age women, is among the most prevalent endocrine diseases in females." It's a combination of certain symptoms associated with a hormone imbalance that may affect women and most girls at reproductive age. Mostly it is common in the young reproductive age group.[1]

Experts in India stated that 10 percent of women suffer from PCOD, but the statistics on the incidence of PCOD in India are not yet accessible. It is predicted that PCOD is affected by 116 million women globally in 2010, as pert the "World Health Organization" (3.4% of the population). It is one of the common issues for women that affects one out of every five women of reproductive age, causing many disturbances like irregular menses, hirsutism, acne or pimples, alopecia, depression, mood swings, and even infertility, etc. Due to lack of knowledge and unawareness, often girls cannot recognize the features of this syndrome and are thus left untreated,and later on, they even suffer more.

PCOD was first explained by Leventhal and Stein in 1935, who explained this syndrome as manifested by certain symptoms such as amenorrhea, obesity, and hirsutism correlated with enlarged polycystic ovaries. The ovaries produce excessive production of male hormones "androgen," and in such conditions, the body becomes resistant to "insulin." It is not only multifactorial but also a polygenic condition.[4]

This female endocrine illness is a complicated, heterogeneous etiological problem, but substantial evidence suggests that it may also be classified as a genetic disease. More research must be conducted to detect the precise etiology of PCOD, preventive measures, and appropriate treatment to eliminate other reasons for androgen and menstrual disruption.[6]

In 2003, the ASRM ("American Society of Reproductive Medicine") and the ESHRE ("European Society for Human Reproduction and Embryology") did a consensus summit in Rotterdam, and they suggested a diagnosis of PCOD if two of the three standards were fulfilled: the presence of

(1) Biochemical or clinical features of increased androgen (hyperandrogenism),

(2) Oligoovulation or anovulation (i.c., disturbance of menstrual period) and

(3) Polycystic ovaries on ultrasound, once suitable examinations were done.

Genetics, unhealthy diet, e.g., habits of having frequent fast-food diet, higher consumption of carbohydrate-containing items, habit of having a diet containing lower legumes and vegetables, irregular menstrual cycle, e.g., missed or irregular menstrual periods, unhealthy lifestyle, e.g., obesity BMI greater than

25, a waist-hip ratio above 0.8, absence of physical activity are all recognized as aggravating factors for PCOD.[9]

The largest group of females with PCOD are women who are at risk for type 2 diabetes, as well as cardiovascular disease. They are also more likely to develop uterine cancer. In addition, PCOD women are more likely to have depression, anxiety, and other mental health conditions. Family history is strongly linked to the effect of the disease and its manifestation. The symptoms of PCOD have been identified as stressful. PCOD women are at greater risk for the cardio-metabolism of COVID-19 as a risk factor.[7]

Medical treatments are intended to control and decrease the symptoms or effects of PCOD, and the treatment is mainly intended to correct the biochemical abnormalities.No single test for PCOD diagnosis is available. The gynecologists used to gather medical history, including menstrual cycles and changes in weight, to assist you in identifying PCOD and exclude other reasons for your symptoms. The gynecologists might continue to treat the client or refer her to an Endocrinologist to coordinate the care mainly.Management of PCOD primarily focuses on lowering body weight and levels of insulin, restoring fertility, and treating hirsutism or acne .Medicines alone have not been superior to improvements in healthy living (such as losing weight, doing exercises, etc.).

Without any medical treatment, many women who suffer from PCOD manage signs and long-term health concerns effectively. They accomplish this by following a good diet, frequently exercising, and keeping their life healthy. This issue is not something to be ignored, and getting it checked soon to avoid PCOD-related health effects. [5]

## BACKGROUND OF THE STUDY:

Research indicates that more women suffer from a hormone condition, termed PCOD, in their reproductive age. Gynecologists believe that there is a need to raise knowledge about the disease PCOD, which may be managed or avoided, even for a lifetime. In the global context, PCOD prevalence rates are extremely varied from 2.2 to 26%. In India, specialists have said that 10% of women are afflicted with PCOD, although no statistical information on PCOD prevalence is currently available in India.[12]

Studies have also indicated that PCOD is affected by 20 percent (one out of five Indian women). The disease will have severe health effects if it is not evaluated or managed at an early stage. According to a Gynecologist and fertility specialist, Dr. Duru Shah, PCOD is a condition rather than a disease that can present itself differently. Research studies have shown that young females may experience irregular periods because of PCOD, they can suffer from hirsutism (unwanted masculine patterns of hair growth), and obesity, infertility, the chance of miscarriage, and many other health issues may be caused as well.[12]

Accordingly, about 18% of women having PCOD, 70% were earlier undiagnosed according to one community-based prevalence research study utilizing the Rotterdam standards. Studies also indicate that polycystic ovaries are extremely prevalent throughout the Indian subcontinent of Asian women. They also have an estimated frequency of five to ten percent of women in their reproductive age in the general population. [13]

Research studies state that the prevalence of India ranges from 3.7 % to 22.5 % depending on the population studied regarding the pathogenesis of PCOD. Around 28 percent of college students were identified to be at high risk of developing PCOD. [13]

It is very much important to have adequate and right knowledge regarding PCOD, and women also should be aware of recognizing the features of PCOD to protect themselves and others and enhance the quality of life.

## NEED OF THE STUDY:

PCOD is one of the commonly occurring endocrine diseases that females face, mostly during reproductive years, and it is most frequent in the young reproductive age group.

PCOD accounts for high health-care costs and distress and has an important influence on infertility. Approximately 4%-10% of the world population experiences this syndrome PCOD, although the incidence rate is higher for India, rounding off to 20%-26%.Anovulatory infertility PCOD comprises 80% of cases. It is one of the frequent conditions in women's health during reproduction and may lead to many changes in their menstrual cycle, failure to understand, and other health issues, including acne, hirsutism, depression, alopecia, mood swings, etc. [1]

**Mugdha L,Nair P, Gode S (2020)** conducted a retrospective cohort study on PCOD on clinical Picture of PCOD patients in a Peri- Urban Tertiary Care Hospital of Central India, researching the clinical profile of PCOD females in a tertiary and medical college hospital in the urban peri region of central India. The present retrospective cohort research covers the clinical presents of 130 females with PCOD, diagnosed using Rotterdam criteria, who are present at the Institute's gynecologic OPD during 6 months, particularly October 2019-March 2020. PCOD is an early reproductive age illness with >70% of women from 21 to 30 years (24.2 Years, mean age). The clinical characteristics were hyperandrogenism (64%),menstruation (92.3%), and >10% weight gain over the last six months (38 percent). The suggestive findings indicate PCOS in 96.2 percent of individuals with USG. The most frequent PCOD androgenic norm (49.2 percent), followed by conventional PCOD was the PCOD norm (42.3 percent).

Conclusion: Women with PCOD in gonecology, endocrinology, or dermatology may be present in OPD due to various clinical presentations.[1]

**Chatterjee M, Aditya S (2018)** conducted a research study on assessment of the Prevalence of PCOD among College Students. A cross-sectional analysis was designed to examine the occurrence of PCOD and its relationship with body composition variables between September 2017 and March 2018. The study population comprised randomly chosen students (age group 18-20 years) of all disciplines. The student data was gathered utilizing the structured Rotterdam questionnaire, and anthropometric measurements were taken using standard techniques. Around 28 percent of the college students were at high risk of developing PCOD. More than 85% of the PCOD cases had oligomenorrhea, 19% were hirsute, 41% had acne, 63% had emotional disturbance. and 22% with a positive family history. Furthermore, the body mass index of the PCOD students demonstrated a trend of Grade I obesity than the normal females of the same age.In this study it is found that there is increased awareness among the students for early and proper diagnosis, which is the primary step to treat PCOD. [2]

**Choragadi S, Rayapu V and Jonnalagadda M (2018)** conducted a descriptive study among 92 nursing students to assess the knowledge regarding PCOS in selected colleges at Costur district, Andra Pradesh. They found that, out of 92 students 86493.47%) students had inadequate knowledge of PCOS.

After going through the extensive review of literature about knowledge and prevalence of Polycystic Ovarian Syndrome among women, the investigator found that there was lack of knowledge and increase incidence of Polycystic Ovarian syndrome among Indian women. So, the investigator was motivated to assess the knowledge level and risk factors of PCOS among the girl students in Guwahati, Assam.

Though the major cause of PCOD is not known yet, knowledge regarding it among young women will help them to get knowledge about PCOD, to identify the sign and symptoms of PCOD, to get treated as soon as possible, and thus to get relief from the sign and symptoms of PCOD and also to avoid fertility-related problems in future perspective. The prevalence of infertility is also rising day by day.

So as a health care worker, the investigator wanted to identify the knowledge gap among the students and provide awareness regarding PCOD by administration of STP with a motive to improve knowledge among them so that they can get knowledge, become aware, and can protect themselves. They can even help others by sharing knowledge. Regular monitoring, as well as appropriate management, is not only delayed but also beneficial for optimal treatment of the illness for predisposing risk variables. [3]

## CONCEPTUAL FRAMEWORK:

Conceptualization means the development of abstract concepts. For a systematic interpretation of observed data, a conceptual framework offers logical thinking.

The conceptual framework serves as a basis for the research study. The framework work aims to generalize and significant scientific results. It offers clinical practice, education, and research with a particular framework of assistance. The framework may inform the researcher not only about the "what" of natural occurrences but also about the "why" of the occurrence. They also assist with the practical issue (Polit and Hungler).[18]

The current work aims at assessing the efficacy of teaching on PCOD among students in a specified colleges of Kamrup (M), Assam. The researcher construct the conceptual framework of this analysis on the basis of general theory/input of the system, and it has been modified to use the present study.[19]

## GENERAL SYSTEM THEORY:

The system theory was given by an Austrian biologist Ludwig Von Bertalanffy in the 1940s and later modified by Ross Ashbey in 1964.

"Inputs and Outputs"- Input is anything placed in or used to generate output or outcome in a system in its execution. Output is the information generated from a certain input by a system or process. In the system theory framework, the inputs are the results of a system and, after a whole process or a partial portion of the process, the outputs are achieved. Since the outputs may be obtained from one single process unit, one process part can be input into another process part. [20]

By defining the intended outputs, a system may be designed to understand which inputs are required. Some essential output systems must be produced to fulfill the requirements of system users, and the inputs are essential for their transformation to generate the desired output. Feedback is the procedure of observing output to evaluate whether or not the system is working. It is a process through which the system output is back to the input. It should be evaluated and then put back into the system to improve the future output. In the system, feedback loops are required for producing a mutually defined care plan. If the plan intervention is not successful, the additional evaluation is required. [20]

The model comprises of three primary components-

1. Resource/inputs

2. Activities/ Process

3. Results/ Outputs

Resource/ Inputs- This study includes previous knowledge of students regarding PCOD by considering the relationships with socio-demographic variables, which was evaluated by pre-test through a self-administered structured questionnaire.

Activities/ Process- Modification of the knowledge of the subject by administration of structured teaching programe (STP) regarding PCOD allows the input to the output to be converted so that the system may easily be utilized.

Results/ Outputs- Influence by the perceived benefits of action such as adequate knowledge regarding PCOD was evaluated by post-test through a structured questionnaire.

Feedback- Feedback serves to inform a system about how the process works. This is the Process of arriving at judgments and decisions based on a conceptual appraisal and follow up on data and information. It was not under study.

In this research, the researcher evaluates the teaching efficiency in PCOD knowledge. The knowledge gain shows a good programme result. Further evaluation of the field of interest is needed if no increase in knowledge is observed.

In this modified conceptual framework, the following is indicated:

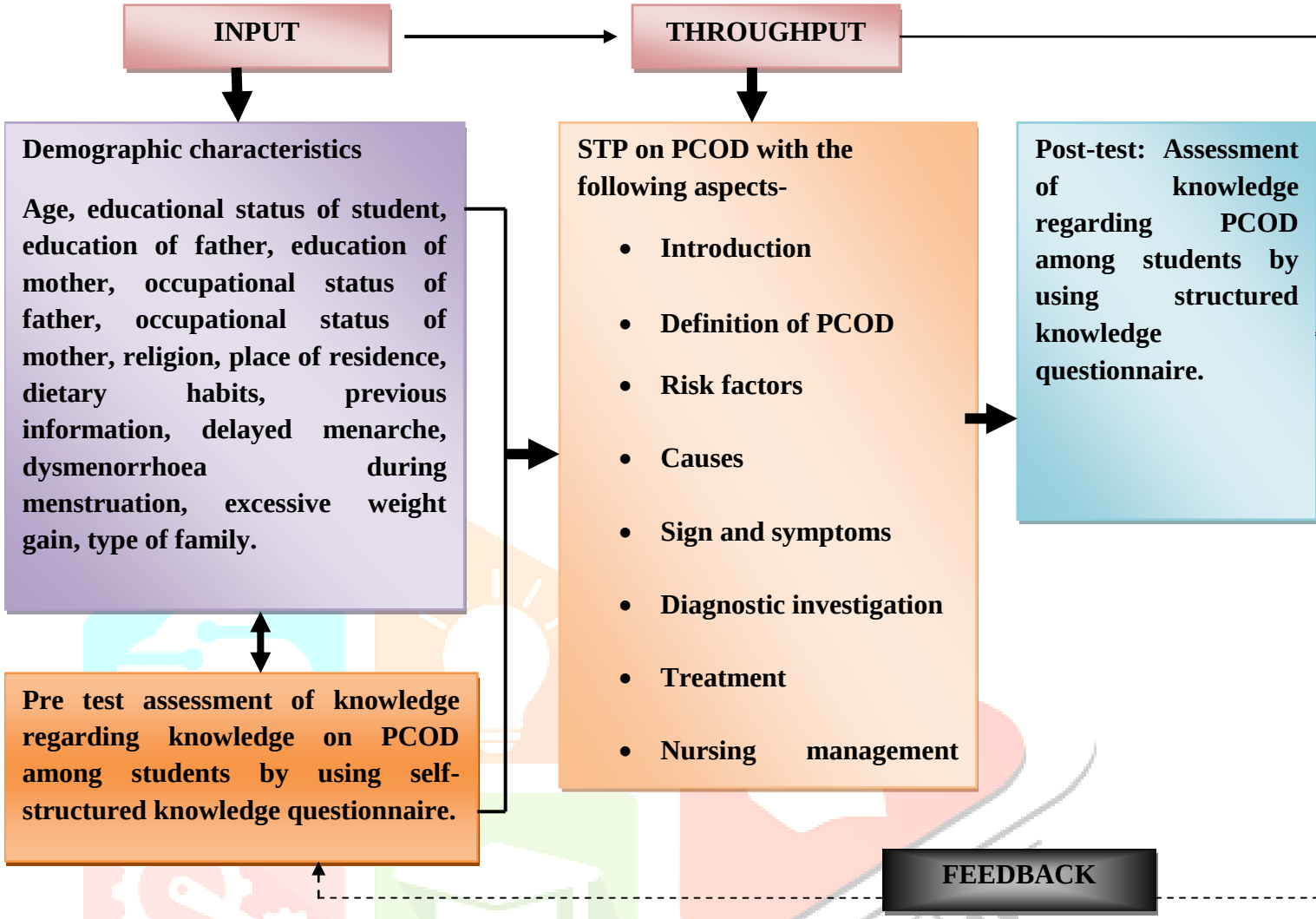


**FIGURE 1: CONCEPTUAL FRAMEWORK BASED ON MODIFIED GENERAL SY**

## PROBLEM STATEMENT:

**"Effectiveness of structured teaching programme on knowledge regarding PCOD among the students in selected colleges of Guwahati, Kamrup (M) Assam: A pre-experimental study."**

## OBJECTIVES:

1.To assess the knowledge regarding PCOD among the students before and after administration of structured teaching programme in selected colleges of Guwahati, Kamrup (M) Assam.

2.To evaluate the effectiveness of structured teaching programme regrarding PCOD among the students in selected colleges of Guwahati, Kamrup (M) Assam.

3.To find out the association between the knowledge score of PCOD with selected demographic variables among the students in selected colleges of Guwahati, Kamrup (M) Assam.

**OPERATIONAL DEFINITIONS:**

## EFFECTIVENESS:

**According to oxford dictionary,** effectiveness means the fact of producing the result that is wanted or intended,the fact of producing a successful result.

In this study, effectiveness refers to the changes in the knowledge scores regarding PCOD, acquired by the students after the structured teaching programme (STP).

## STRUCTURED TEACHING PROGRAMME:

According to the oxford english dictionary, structured teaching programme (STP) refers to a well defined and planned structured or organization having a pre-determined pattern.

In this study, the structure teaching programmed is meaningful interaction between the researcher and students using a prepared teaching programme which includes:

- ✓ Definition of PCOD
- ✓ Risk factors
- ✓ Causes

- ✓ Sign and symptoms
- ✓ Diagnostic investigation
- ✓ Treatment
- ✓ Nursing management and prevention

## KNOWLEDGE:

According to Oxford Dictionary, knowledge refers to the facts, information and skills acquired through experience or education;the theoretical or practical understanding of a subject.

In this study, knowledge refers to the correct responses to the items regarding PCOD elicited by using structured questionnare among the students.

## POLYCYSTIC OVARIAN DISEASE:

According to the medical dictionary,polycystic ovarian disease is a condition in women characterized by irregular or no menstrual period,acne,obesity and excess hair growth.It is a disorder of chronically abnormal ovarian function and hyperandrogenism (abnormal elevated androgen level).

In this study,it means the same.

## STUDENT:

According to Oxford Dictionary, a student refers to a person studying at a higher education institution or university.

In this students,it referred to the students studying in bachelor degree of Arts, Science & Commerce in selected colleges of Kamrup (M), Assam,under a recognized university.

## ASSUMPTIONS:

The researcher assumed that-

College students may have some knowledge regarding polycystic ovarian disease.

STP may help to enhance the level of awareness of college students related to the polycystic ovarian disease and it will be helpful to create some changes regarding unhealthy lifestyles that could be a risk factor for the polycystic ovarian disease.

## HYPOTHESIS:

1.$H_1$-There will be significant association between the knowledge of PCOD among students with their demographic variables.

2. $H_2$-The mean post test score will be significantly higher than the mean pretest score among the students regarding knowledge on PCOD.

## DELIMITATION:

The study was delimited to only three selected colleges - .

Karmashree Hiteswar Saikia College, Guwahati,Assam

Beltola College, Guwahati,Assam and

S.B.Deorah College,Guwahati,Assam

## SCOPE OF STUDY:

1. The study will help to understand the knowledge of PCOD among the students.

2. The finding of the study will give information for further related studies.

**SUMMARY:**

The chapter covers the introduction, background of the study, need for the study together with the statement of the problem, objectives of the study, operational definition, assumptions, conceptual framework used in the study, also hypothesis and delimitations of the study, scope of study.

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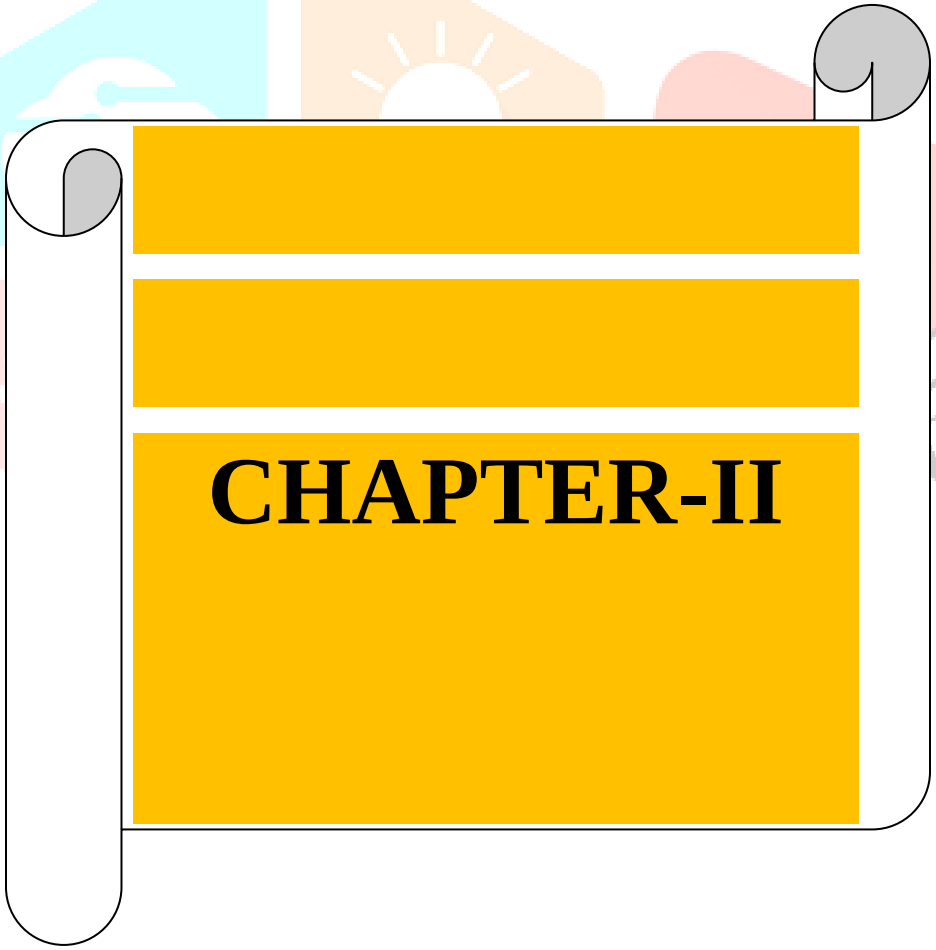
CHAPTER-II

# CHAPTER-II

# REVIEW OF LITERATURE

**“Read a thousand books and your words will flow like a river”**

**-Virginia Woolf**

## INTRODUCTION:

A literature review is a preliminary step for collecting data to enlighten the researcher about prior research results on the topic under study. To have a better understanding of the problem and gather maximum relevant material for the study's development, the researchers should carry out a thorough literature analysis of the research topic.

The review of the literature is an important part of the research process. This chapter covers research literature studies that examine the chosen study chapter and acquire knowledge into it.

A review of the literature is a written overview of the current research area knowledge.The goal of the research literature is to identify, choose a critical analysis, and describe in writing existing knowledge on a study topic.

- Polit D.F. and Hungler [1]

The investigator additionally utilized the newest books and publications online to gather the information.Research and non-research publications have been reviewed. Here a review of literature is presented under the following headings-

1.Review of literature related to Prevalence of polycystic ovarian disease.

2. Review of literature related to knowledge or awareness regarding polycystic ovarian syndrome (PCOD).

3. Review of literature related to the effectiveness of STP and other interventions on knowledge regarding polycystic ovarian disease (PCOD).

**Section I: Review of literature related to Prevalence of polycystic ovarian disease.**

**Chaudhari AP, et al. (2018)** conducted a cross-sectional study among 70 women with the age group of 18-45 years to find out the prevalence of anxiety and depression among outpatients suffering from PCOD visiting department of Psychiatric department in coordination with Department of Obstetrics and Gynaecology at Government hospital in Mumbai. The women were interviewed for anxiety and depressive disorder and rated according to Hamilton scales which include assessment for the presence of depressed mood, feeling of guilty, suicide, insomnia, work and interest, retardation, agitation and anxiety. Out of 70 women, 27(38.6%) and 18 (25.7%) were found to be suffered from anxiety and depressive disorder respectively and 10 (14.3%) suffered from both disorder. 3

**Upadhya RSS, et al. (2018)** conducted a cross sectional study to assess the prevalence of Polycystic Ovarian syndrome among 246 students aged 17-23 years old in tertiary care teaching hospital of South India. The diagnosis of PCOD was made on the basis of Rotterdam criteria which tells that the patient should have two of three criteria: oligo or chronic anovulation, clinical and/or biochemical signs of hyperandrogenism, polycystic ovaries. The study found that out of 246 students, 79 (32.11%) met the criteria. Out of 79 students, 13 (5.2%) had a history of thyroid dysfunction. The other clinical features of hyperandrogenism among those who had PCOD were like oily skin (13.82%), acne (8.53%), increased hair growth (5.69%), male pattern thinning of hair (9.75%), high degree of intolerance to heat and cold (3.25%). 4

**Das BP, et al. (2017)** conducted a cross-sectional study at the hospital of Guwahati Medical Colleges and Hospital on prevalence of metabolic syndrome in PCOD and its phenotype among 66 newly diagnosed PCOS as

per Rotterdam Criteria. The study found that metabolic syndrome was present in 36.37% of the study group. The common metabolic syndrome presents were increased waist circumference 69.7%, raised Blood pressure 48.48%, Low high density lipoprotein (HDL) 46.97%, raised fasting blood sugar 24.24% and increased triglyceride 22.72%.6

**Gupta M, et al. (2017)** conducted a non-comparative cross sectional study to find out the prevalence, to assess knowledge and study the risk factors associated with PCOS among 500 students of ages between 17-24 in Bhopal, Central India. They interviewed after taking consent for screening and suspected girls were confirmed by Ultrasonography. From the study they found that among 500 students, 19 (8.20%) had oligo/anovulation, 8 (1.60%) girls had hirsutism, 29 (5.80%) girls had both oligo/anovulation and hirsutism, in 409 (81.80%) girls acne was present and 103 (20.60%) girls had complain of hair fall. 56 probable cases were identified to have PCOS. Among 500 students 21.60% were aware of PCOS and 78.40% were having lack of knowledge regarding PCOS.7

**Dargham SR, et al (2017)** conducted a cross sectional analysis to assess the prevalence and metabolic characteristics of polycystic ovary syndrome among 750 volunteered women ages between 18-40 years old in the Qatari population by adopting National Institute of Health (NIH) Guidelines of a raised androgen level (free androgen index >4.5 or a raised total testosterone) and a menstrual irregularity for diagnosis of PCOS. Out of 720 women, 87 women fulfilled the criteria for diagnosis of PCOS. So, they found that among the Qatari women, the prevalence of PCOS was 12.1% by NIH guidelines which reflect that it was 20% by Rotterdam criteria.8

## Review of literature related to knowledge regarding polycystic ovarian disease:

**Shyam A, Razia M and Parag K Sancheti (2020)** conducted a cross-sectional study on "Knowledge, attitude and practiced towards exercise in young females diagnosed with polycystic ovary syndrome" among 100 PCOD diagnosed people for evaluating attitude, knowledge, as well as the practice of exercise in young females who suffer from PCOD as a treatment option. This comprised 100 PCOD diagnosed individuals who were requested to complete a self-structured questionnaire. PCOD is one of the most prevalent lifestyle diseases in 93 percent of responders. 22.5% knew that obesity is a consequence of PCOD, whereas only 23.1% knew weight loss as an exercise benefit. A physiotherapist has been contacted by 5.4 percent of respondents to address the problem. Seventy percent said that their primary source of PCOD knowledge was healthcare providers. The significance of PCOD treatment for its potential consequences was firmly acknowledged by 74 percent, and 66 percent agreed to spend some time on a workout. 84% knew that exercise in PCOD management is a therapeutic option. However, only 67% consistently performed exercise.

The major reason for the not frequent exercise was 34.8 percent of the population who selected a lack of time. This study conclude with suggested efforts to raise awareness of the difficulties of PCOD and the significance of exercise as the first line of management for healthy eating should be stepped up. It is important to highlight a multidisciplinary approach to the treatment of PCOD.[9]

**Karkar M, Feba A A, Joseph D (2019),** conducted a research study on PCOD among 100 samples of student in chosen Institutions in Pune. A quantitative research approach was used to carry out this study in selected undergraduate colleges of Pune city to evaluate the knowledge on PCOD. Non-probability purposive sampling techniques have been employed to choose the samples, and a non-experimental descriptive study design was implemented to perform this survey. It was revealed from the study that 39% of undergraduate students had good knowledge about PCOD, 73% of undergraduate students had average awareness, and 24% of undergraduate students had poor knowledge about PCOD. [12]

**Patel J, Rai. S (2018)** conducted a study on polycystic ovarian disease (PCOD) awareness among young 400 women of central India, ages of 18 to 30 years studying at colleges or working in the city of Indore. Only 41 percent of the females were known about the term PCOD among 400 respondents. 46% of individuals knowledgeable of the organ system associated with this illness have also been shown. The different symptoms linked with PCOD were known to 49 percent of women. In this study,it was found that very few young women recognize this illness and the early signs that they should be alarmed about consulting a doctor. [22]

**Krishnan S (2018)** carried out descriptive research on "Knowledge and Attitude on PCOD Among 359 Adolescent Girls of Selected College at Mangalore," with a descriptive correlational research design by using a convenience sampling technique. A knowledge questionnaire and an attitude scale were utilized for data collection. Data analysis was based upon inferential and descriptive statistics. One of the objectives of this research is to assess adolescent girls' degree of PCOD knowledge. The overall mean score of knowledge was 9.4 with a mean percentage is 47% and SD of 4.3, and an overall mean score of attitudes was 12.7 with a mean percentage of 31.8% and SD of 5.6. On the basis of study results, it was proposed that a similar survey might be carried out on a relatively huge sample for broader simplification. This study concluded that programs are organized to educate the Pre-university students regarding knowledge on polycystic ovaries, and its prevention and Awareness programs can be arranged for the Pre-university students to improve their reproductive health. [25]

**Kumara D, et al. (2017)** conducted a true experimental study to evaluate the effectiveness of structured teaching programme and attitude on PCOS among 50 nursing students at Shimla nursing college. The study found that, pre-test mean knowledge score of control group was 7.84 and post-test was 8.28 and pre-test mean score of experimental group was 7.44 and post- test was 12.6, whereas the mean pre-test attitude score of control group was

29.84 and post- test was 35 and pre-test mean score of attitude in experimental group was 30.48 and post-test was 32.72. So improvement happens in knowledge and attitude regarding PCOS after administering the structured teaching programme.23

**Alessa A, et al. (2017)** conducted a cross-sectional study to assess the awareness level of PCOS among 2000 Saudi females from urban and rural background. The study found that the awareness level among Saudi population was 56.7%, while 43.3% of Saudi female were not aware or do not have prior knowledge of the disease. Among people who have prior knowledge about PCOS, 15.3% were already PCOS patient, 21.3%, 10.4%, 10.8% and 3.0% have known about PCOS via internet, patients, doctors and books respectively. Awareness of 21 risk factors was also assessed, among aware females, most of them aware of associated symptoms as irregular menstrual cycle, facial acne, hirsutism, reduce fertility, weight gain, abortion, pelvic pain and some of its complications as breast and uterus cancer, increased level of androgen, anxiety and psychological disturbance. They conclude that there is a high level of awareness of PCOS among Saudi women.24

**Jahangir S (2017)** conducted a survey to assess knowledge and awareness of PCOS at Dhaka, Bangladesh among 350 students aged between 20-27 years old of Private and Public University by using structured questionnaire through face to face interview and questionnaire supply. The study reveals that 6% of the population were highly aware of the reasons and consequences of PCOS, 58% of the population were minimally aware of PCOS and 36% of the population were poorly aware regarding PCOS. Among PCOS patients 67.65% of the subject had receive information regarding PCOS from doctors and 26.47 were from internet. 25

**Devi B, et al. (2017)** conducted a survey to study the knowledge of nursing students regarding PCOS and the self preventive measures adopted by the students diagnosed with PCOS among the 100 students of B.Sc nursing at Gangtok, East Sikkim. The study shows that majority of the students were in the age group of 20-21 years (78%) and all students had inadequate knowledge regarding PCOS with the mean score of 14.97. The subject had a minimal score on regarding the meaning of PCOS (29%) and the causes and risk factors for developing PCOS (44%). The subject had a maximum score on knowledge about the diagnosis of PCOS (66%). From the study 5 students were diagnosed with PCOS. They concluded that majority of the students diagnosed with PCOS had a very unhealthy life practices. 26

## Review of literature related to the effectiveness of STP and other interventions on knowledge regarding polycystic ovarian disease (PCOD):

**Chauhan P, Siddiqui MI, Singh A (2021)** carried out a research study to evaluate the efficacy and the use of a quantitative evaluative research method coupled with a pre-and post- testing group before and post-test design, Structured Learning Program on knowledge of PCOD and associated infertility among female students of Isabella Thoburn College Lucknow. The sample size was 100 students chosen by simple random selection, and they used proforma of demographical variable, self-structured knowledge questionnaire as tools. Pre-existing knowledge levels were evaluated after a structured PCOD knowledge, and the associated infertility program was delivered the same day by giving a knowledge questionnaire. The researcher conducted the test after seven days. The study results showed that the mean post-test (32.05) and pre-test (13.69) knowledge levels were considerably varied. It denotes that increased knowledge level after an intervention. The results indicated that the STP was an efficient approach for enhancing the knowledge of female students about PCOD and that it was more effective and beneficial for them. Based on the results of the research, they recommended a similar investigation for a bigger sample for a wider generalization to be performed, similar research with the control group may be repeated, a similar study among students in arts and commerce, and a similar study among rural students may also be carried out.[27]

**Hadayat A, Manar H (2019)** conducted a study on "Implementation & Evaluation of Effectiveness of Educating Program for Upgrading Nurses" among 50 nursing personnel "department of Obstetrics & Gynecological Nursing. Faculty of Nursing", Port Said University, Egypt. The aim is to assess the knowledge About PCOD, and they adopted a quasi-experimental "one-group pre-test/ post-test" design to carry out the analysis. The nurses' sociological-demographic statistics and their knowledge about polycystic ovarian syndrome were examined using a semi-structured questionnaire. The findings show that nurses do not know about PCOD, and the average variation in "pre-test & post-test" findings (P<.001) is statistically significant. The degree of knowledge and the socio-demographic variables were not closely correlated.The study concluded with indicating the necessity for the staff development program to improve the awareness of PCOD in maternity nurses.[28]

**Thapar L, Naveena J H (2019)** performed a study on "Effectiveness of Self-Instructional Module (SIM) on Knowledge Regarding Polycystic Ovarian Syndrome (PCOD) among Late Adolescent Girls (17 to 19 years) in Selected Colleges at Gurugram, Haryana". Quantitative and pre-experimental approach for this research, one group was chosen, and the study was performed "pre-and post-test" design. In SGT University and Starex University, Gurugram among 80 adolescent girls. The convenient sampling method was selected. The data was gathered utilizing structured surveys before and after the auto-learning module to evaluate the degree of knowledge of girls. The gathered data were examined by inferential and descriptive statistics. Findings have demonstrated that the self-instruction module is successful before and after manipulating teenagers according to the degree of knowledge. The t- value (12,551) was statistically important at 0.05 and significant with demographic factors, i.e., exercise and menstruation (regular/irregular). This study showed that the Self Instruction Module significantly improves young girls' knowledge.[30]

**M.A.Sheelamma (2018)** conducted a study on "Effectiveness of Structured Teaching Programme on Knowledge about PCOD among Nursing Student to improve the awareness of the nursing students regarding PCOD through organized teaching sessions on PCOD. The total study samples were 30, and those were 3rd-year GNM students aged 19 years to 21 years and above. One group "pre-test post-test" design was utilized for the analysis. Structured knowledge questionnaires were the technique utilized for this research. It is also noted that most (63.3 percent) of the samples were Christians. Most samples (63.3%), and most (76.6%), received data from books or articles were from urban regions. The results revealed that 33.3% of participants were poorly informed in pre-testing. 56.6% had average knowledge, and 10 percent had excellent knowledge. Following the test results, 53.3% had excellent knowledge, 46.6% had moderate knowledge, and none had a bad knowledge. The results of this research show that the knowledge values following the designed instruction program have improved substantially. The study end with no substantial relationship between knowledge size and information source, and residential area.[32]

**Devi A (2017)** conducted a research study on "Effectiveness of STP regarding polycystic ovarian disease among 60 adolescent girls in a selected college at Theni," . A quantitative approach was used, one group pre-and post -test to conduct the study. The respondents were selected by using non-probability convenient sampling. As a method for data collecting on demographic characteristics and for assessing knowledge of PCOD, a structured multiple-choice questionnaire was employed. The STP was administered on PCOD for 45 min. The results show that the majority (86.7%) of teenage girls had sufficient knowledge, moderate knowledge of 11.7% of teenage girls was found, and just 1.7% had inadequate information. Inferential and descriptive statistics, such as paired 'T tester, were used for analysis.A significant $p < 0.01$ value is observed.It was found that STP increasing PCOD awareness of teenage females was beneficial.[31]

**Abdel H , Mohamed A (2016)** carried out a study on "Effect of educational program on the level of knowledge regarding polycystic ovarian syndrome among adolescent girls" Quasi-experimental survey design was used, and 96 students were chosen. For the gathering of data, the questionnaire interview and the knowledge evaluation tool are utilized. In terms of diagnosis, causes and risk factors, problems. and treatment after the instruction session, most pupils have accurate information following the education session. A majority of students were well-informed (92.7%). with average knowledge of students (6.25%) and just (1.04%) with inadequate understanding after an instructional session. After the educational program, mean post- test results were much greater than pre-test values ($p<0001$). Statistically significant differences in demographic characteristics, including student age and family history. were identified with pre-test student knowledge ($p <02$ & $p <.05$). The research findings show that the majority (84.4 percent) of students had inadequate knowledge about PCOD before using instructional sessions. Following the education sessions, my understanding of PCOD was enhanced. The overall value post-test (54.66) was greater than the total mean value post-test (25.5). Educational sessions, therefore, improve teenage girls' knowledge effectively. To enhance the level of knowledge in the PCOD and the nursing curriculum, the present research suggested that

detailed information on PCOD should be updated to raise knowledge of other women once in practice. Studies on a larger sample may be repeated to generalize the outcomes.[32]

## SUMMARY:

This chapter deals with various review of literature about polycystic ovarian disease (PCOD). The investigator carries an extensive review of literature on the research topic in order to gain deeper insight to the problem and to collect maximum relevant information about prevalence, knowledge and management including other interventions related to polycystic ovarian disease (PCOD).

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# LESSON PLAN

# ON

# PCOD

Subject: Obstretics and Gynaecology

Topic:- PCOD

Group: BA 1$^{ST}$ year students

Place :-Beltola College,Guwahati

Method of teaching :- Lecture cum discussion

Teaching AIDS :- Power point presentation

Knowledge assumed :- Group have previous knowledge on PCOD

General objectives :- After completion of the topic , the group will be able to gain knowledge regarding PCOD.

Specific objectives :-At the end of the topic the group will be able to :-

1. define the definition and causes of PCOD

2.describe the risk factors

3. define complications and sign and symptoms

4. explain the treatment of PCOD

| Time | Specific objectives | Learning content |
|---|---|---|
| 4 minutes | Introduction | All women have two ovaries that release an egg alternately every month. The ovaries produ minute quantities. PCOD (Polycystic Ovarian Disease) is a condition where the ovaries rele mature eggs which eventually turn into cysts. Some of the common symptoms are abdomin pattern hair loss and infertility. In this condition, the ovaries usually become enlarged and s can cause havoc with a woman's fertility and her body. The best treatment for PCOD often symptoms. |
| 3 minutes | Definition | **What is PCOD?**<br><br>PCOD is a condition in which the ovaries produce an abnormal amount of androgens, male in women in small amounts. The name polycystic ovary syndrome describes the numerous in the ovaries. |
| 3 minutes | Incidence | PCOD, the major endocrinopathy among reproductive-aged women, is not yet perceived as world. It affects 4%–20% of women of reproductive age worldwide. |
| 4 minutes | Risk factors | Risk factors for PCOD in adults includes type 1 diabetes, type 2 diabetes, and gestational di 70% of women with PCOS leading to a number of comorbidities including metabolic syndr glucose intolerance, and diabetes.others includes lack of physical activity,irregular menstru |
| 5 minutes | Causes | The exact cause of PCOD is unknown. There is evidence that genetics play a role. Several c PCOD:<br><br>• **Higher levels of male hormones called androgens:** High androgen levels prevent (ovulation), which causes irregular menstrual cycles. Irregular ovulation can also ca the ovaries. High androgen also causes acne and excess hair growth in women.<br><br>• **Insulin resistance:** Increased insulin levels cause the ovaries to make and release m male hormone, in turn, suppress ovulation and contribute to other symptoms of PC processes glucose (sugar) and uses it for energy. Insulin resistance means your body leading to high glucose levels in your blood. Not all individuals with insulin resistar |

| | | |
|---|---|---|
| | | diabetes, but insulin resistance can lead to diabetes. Being overweight or having obe resistance. An elevated insulin level, even if your blood glucose is normal, can indic<br><br>• **Low-grade inflammation:** People with PCOD tend to have chronic low-grade infla perform blood tests that measure levels of C-reactive protein (CRP) and white blood inflammation in your body. |

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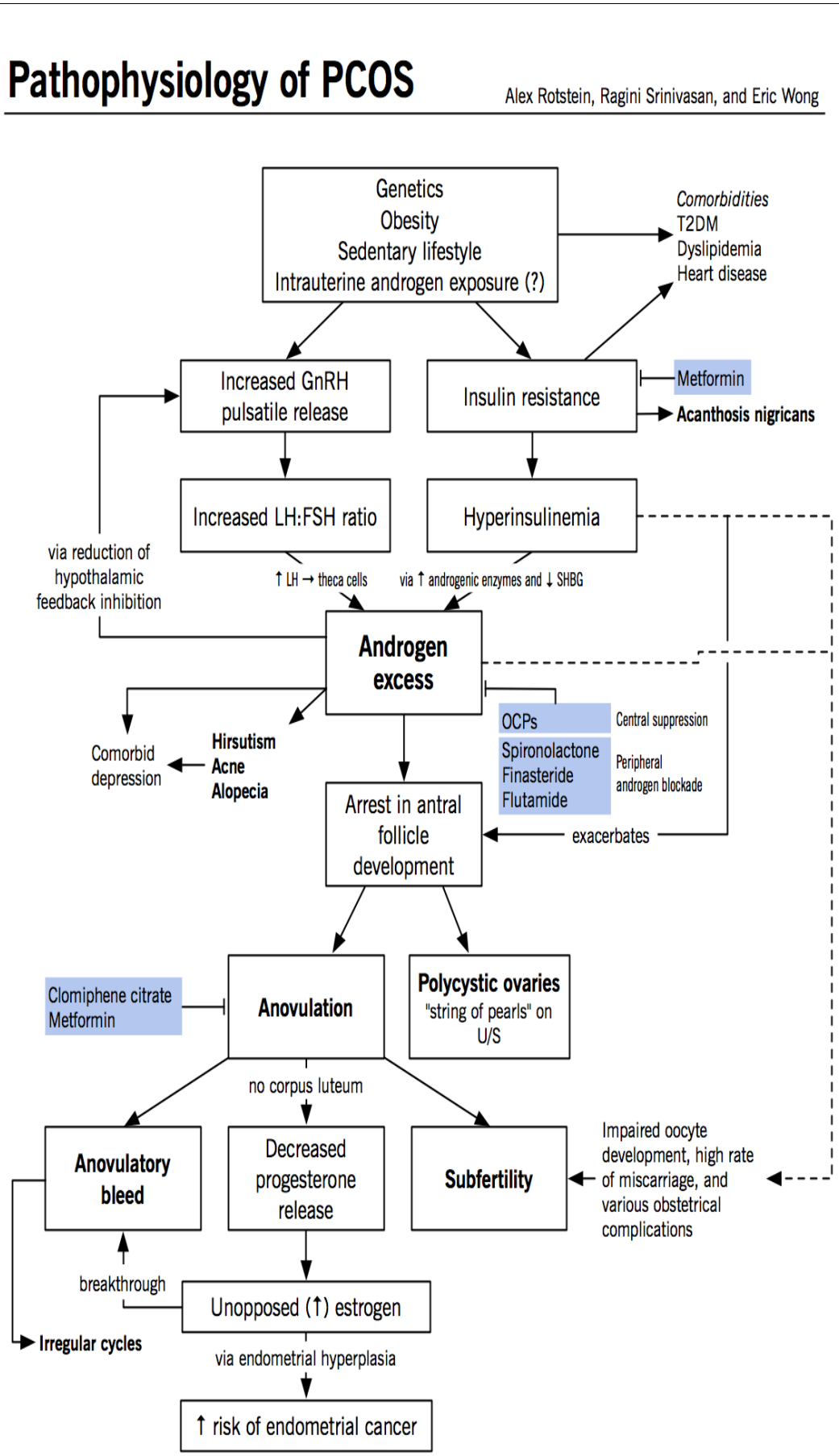
| 3 minutes | Pathophysiology |  |
| 5 | Sign and | **The most common symptoms of PCOD include:** |

| | | |
|---|---|---|
| minutes | symptoms | • **Irregular periods:** Abnormal menstruation involves missing periods or not having heavy bleeding during periods.<br>• **Abnormal hair growth**: Excess facial hair and heavy hair growth on the arms, ches up to 70% of women with PCOD.<br>• **Acne:** PCOD can cause acne, especially on the back, chest and face. This acne may may be difficult to treat.<br>• **Obesity:** About 80% of women with PCOD are overweight or have obesity, and ha<br>• **Darkening of the skin:** Patches of dark skin, especially in the folds of your neck, a under the breasts. This is known as acanthosis nigricans.<br>• **Cysts:** Many women with PCOD have small pockets of fluid in their ovaries. |
| 5 minutes | Diagnostic evaluation | **Physical Examination**<br>**check blood pressure, BMI (body mass index), and waist size. They may also look extra hair growth, acne, and discolored skin, which can all happen if one have PC**<br>**Pelvic exam:** This is just like what happens when you get a regular checkup. Your doctor will including the vagina, cervix, uterus, fallopian tubes, ovaries, and rectum, checking for anythin<br>**Pelvic ultrasound (sonogram):** This produces an image of what ovaries look like. For the ult the doctor briefly places an ultrasound device in your vagina. The doctor will check for cysts i in the uterus. ovaries may be 1½ to 3 times larger than normal when one have PCOD. The ul about 90% of women who have PCOD. |

| | | |
|---|---|---|
| | | **Tests:**<br><br>**Blood tests:** Doctor or other health care provider will take a small amount of blood from a vei levels of these hormones:<br><br>• **Follicle-stimulating hormone** affects the ability to get pregnant. This level might be one have PCOD.<br>• Luteinizing hormone **(LH)** encourages ovulation. It could be higher than normal.<br>• Testosterone is a sex hormone that would be higher in women with PCOD.<br>• Estrogens are group of hormones that allow women to get their periods. Your level ma<br>• A sex hormone called **androstenedione** may be at a higher-than-normal level.<br><br>**Human chorionic gonadotropin (hCG):** This is a hormone test that can check to see if you'r |
| 3 minutes | Treatment | **What's the Treatment for PCOD?**<br><br>Treatments can help to manage the symptoms of (PCOD) and lower the odds for long-term as diabetes and heart disease.<br><br>**Lifestyle Changes for PCOD:**<br><br>One of the best ways to deal with PCOD is to eat well and exercise regularly and also by m free from stress.<br><br>Many women with PCOD are overweight or obese. Losing just 5% to 10% of the body wei make your periods more regular. It may also help to manage problems with blood sugar lev<br><br>Since PCOD could lead to high blood sugar, the doctor may want to limit starchy or sugary have plenty of fiber, which raise your blood sugar level slowly.<br><br>Staying active helps you control your blood sugar and insulin, too. And exercising every da<br><br>**Treatments for PCOD:**<br><br>Many women need a combination of lifestyle changes and medications to treat the biochem doctor will create a treatment plan to treat the individuals symptoms following the weight r<br><br>**A medicine called clomifene is usually the first treatment recommended for women with PCO**<br>Clomifene encourages the monthly release of an egg from the ovaries (ovulation). If clomifene is u another medicine called metformin may be recommended. |

| | | |
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| | | **Birth control pills** - Some birth control pills contain oestrogen and progestin and help reduce the A<br>.<br>Refined carbohydrates should also be avoided for those who are at risk of PCOD.<br>Need to do regular exercises to reduce the weight.<br>yoga should be advised to do regularly. |
| 5<br>minutes | Complication | **Endometrial Cancer:**<br><br>Women with PCOD do have a lightly higher chance of developing endometrial cancer than<br>more irregular and fewer periods a woman has, the greater her risk becomes.<br><br>**Heart Disease:**<br><br>Having PCOD increases a woman's chances of getting high blood pressure and<br><br>cardiovascular disease. This is due to the high insulin levels that have been associated with<br>risk for high triglycerides, inflammatory markers, blood pressure, and atherosclerosis.<br><br>**Diabetes:**<br><br>Women with PCOD frequently have insulin resistance, meaning their body is resistant to us<br>glucose levels and more insulin produced. Over time, consistently high levels of glucose in<br><br>**Metabolic Syndrome:**<br><br>Metabolic Syndrome is a grouping of risk fa ctors that commonly occur together and incre<br>disease. The most common metabolic changes associated with this syndrome include the fo<br><br>• Increased abdominal weight<br>• High levels of triglycerides.<br>• Low levels of good cholesterol, or HDL<br>• High blood pressure<br><br>**Others:**<br><br>• Miscarriage |

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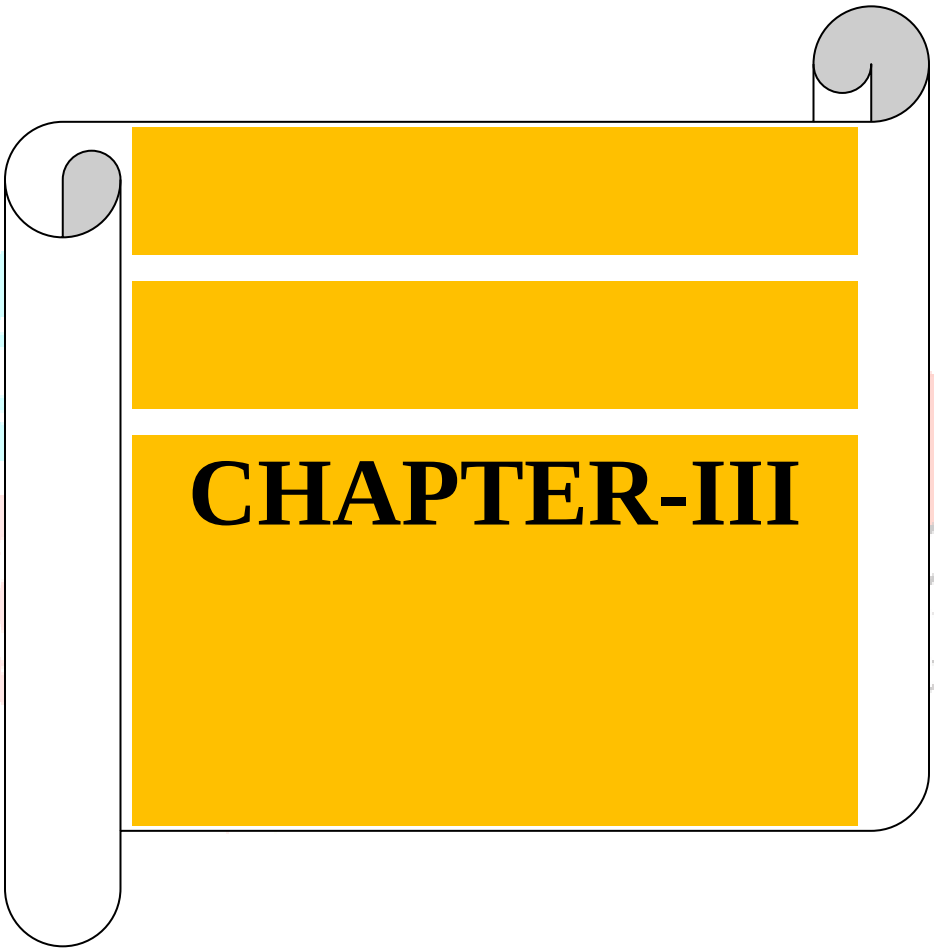
| | | • Anxiety |
| 3 minutes | Natural treatment | 1. Mulethi<br>Mulethi is also known as **liquorice**. It was found that it may be beneficial for managing PC stimulates the production of an enzyme which converts androgen into estrogen (female hor<br>2. Flaxseeds<br>It was found in studies that **flaxseeds** contain a compound which aids in decreasing the leve a reduction of symptoms of PCOD that occur due to increased androgen levels, like abnorm found to help in weight reduction.<br>3. Omega 3 Supplements or Fish Oil<br>Studies have shown that by taking **omega 3 fatty acids** supplements, the regularity of the n However, there is no change in weight, bleeding, size of the ovary or number of ovarian fol<br>4. Chamomile Tea<br>Chamomile tea was found to reduce the symptoms of PCOD in animal studies. In the same were observed under a microscope after treating with **chamomile** extract, the signs of PCO<br>5. Aloe Vera Gel<br>Aloe vera is used along with certain other compounds to make formulations to manage PC of a hormone in the ovaries.<br>.<br>Other Lifestyle Modifications For PCOD:<br>• **Balanced diet:** Adopting a healthier lifestyle with a balanced diet can prove to be bene reducing the symptoms.A balanced diet containing all the necessary nutrients in health the doctor.<br>• **Weight management:** Weight management leads to the reduction in symptoms of PC body hair and acne. An improvement in mood due to the restoration of normal hormon turn might lead to the regulation of periods and improved fertility. All of this can be ac weight in those for whom the occurrence of PCOD is due to increased weight. |
| 3 minutes | Conclusion | PCOD is one of the most common disorders affecting women of reproductive age. As a sy including reproductive, metabolic, and cardiovascular, with long-term health concerns that one with the symptoms of PCOD should consult with the gynaecologist and should follow |

| | | |
|---|---|---|
| | | |
| 1 minute | References | (1)https://www.mayoclinic.org/diseases-conditions/pcos/symptoms-causes/syc-20353439<br>(2)https://www.ijrcog.org/index.php/ijrcog/article/view/6740<br>(3)https://my.clevelandclinic.org/health/diseases/8316-polycystic-ovary-syndrome-pcod#:~:text=The%20exact%20cause%20of%20PCOS,which%20causes%20irregular%20<br>(4)https://www.mayoclinic.org/diseases-conditions/pcos/diagnosis-treatment/drc-20353443<br>(5)https://pharmeasy.in/blog/home-remedies-for-pcod |


CHAPTER-III

# CHAPTER-III

# RESEARCH METHODOLOGY

**"Good designers design what they would design before they start designing it"**

**-M.Cobanli**

A research methodology is the specific procedure or techniques used to identify, select, process, and analyse information about a topic. In a research paper, the methodology section allows the reader to critically evaluate a study's overall validity and reliability.1

It is a science of studying how research is to be carried out. Essentially, the procedures by which researchers go about their work of describing, explaining and predicting phenomena. It is also defined as the study of methods by which knowledge is gained. It aim is to give the work plan of research.

In this study, research methodology is to assess the knowledge on PCOD among the students in selected colleges of Guwahati Kamrup (M) Assam.

This chapter deals with different steps which were undertaken by the investigators for gathering and organizing the data. It includes the description of research approach, research design, development of tools, setting of study, population, sample and sampling techniques, plan for pilot study, plan for data collection and plan for data analysis.

## RESEARCH APPROACH:

According to Suresh K.Sharma ,research approach involves the description of the plan to investigate the phenomenon under in a structured (quantitative), unstructured(qualitative),or a combination of the two methods (quantitative-qualitative integrated approach).[2]

The research approach describes the basic process of data collection. The selection of approach depends upon the objective of the research. In this study, quantitative research approach was used.

## RESEARCH DESIGN:

Research Design is the master plan specifying the methods and procedures for collecting and analyzing the needed information in a research study.[2]

According to Suresh K Sharma, research design is the master plan specifying the methods and procedures for collecting and analyzing the needed information in a research study.

In this study, pre experimental one group pre test post test research design was used.

"Research design is a blueprint for conducting a study that maximizes control over factors that could interfere with the validity of the findings." The research design is the researcher's overall plan for answering the research question or testing the research hypothesis. The type of research design chosen will depend on the research problem to be examined.
Pre-experimental (one group pretest- posttest) design was adopted for this present study to assess the effect of STP on knowledge regarding PCOD among students in selected colleges, Guwahati, Assam.

Pre-experimental design is a research design that does not include mechanisms to compensate for the absence of either randomization or a control group. In pretest posttest design, data are collected from the research subjects both before and after introducing the experimental intervention; also called a before-after design.

Symbolic representation of the Research Design:

| | | |
|---|---|---|
| K1 | X | K2 |

Where,

KI-pre-test knowledge score of students

K2-post-test knowledge score of students

X-Intervention STP on PCOD

## VARIABLES:

Variables are qualities, attributes, quantities, characteristics or properties, of people. situations or things that vary or change.[4]

The variables for the current study are:

1.Demographic variables: The characteristics and attribute of the study subjects are considered as the demographic variables.[2]

In this study,demographic variables were age,educational status, education of father,education of mother,occupational status of the father. occupational status of the mother,religion,place of residence,dietary habits, previous information about PCOD, history of delayed menarche,history of dysmenorhoea during menstruation,history of excessive weight gain,family history of PCOD,type of family.

2.Independent variable:An independent variable is the cause while a dependent variable is the effect in a causal research study.[2]

In my study, the STP on PCOD was the independent variable.

3.Dependent Variable:The dependent variable is the variable that is being measured or tested in an experiment.[2]

In this study,the knowledge of selected students related to PCOD was the dependent variable in the study.

## SETTING OF THE STUDY:

The setting to the specific areas where the study is conducted.It may be natural setting depending upon the study topic and investigator's choice.[3]

The study was respectively conducted at-

Karmashree Hiteswar Saikia College, Guwahati Assam

Beltola College, Guwahati Assam and

S.B.Deorah College,Guwahati,Assam

The rationale for the selection is:

a) Availability of the participants.

b) Feasibility of conducting the study.

c) Easy administrative approval and co-operation for the study.

d) Easily accessible and economy of time.

**Karmashree Hiteswar Saikia College:** Karmashree Hiteswar Saikia College established in 1988 and college offer general and major degree.College situated in Guwahati,Assam.This college is affiliated with the Gauhati University. The college offers different bachelor's degree courses in arts and commerce.

**Beltola College:** Beltola College is situated in Guwahati in Assam state of India. Established in 1983, is a Private college. Beltola College offers 8 courses.

**S.B. Deorah College:** S.B. Deorah College was established in 1984. S.B. NAAC accredits Deorah College as an A-grade college. (SBDC) S.B. Deorah College offers a Degree in Bachelor of Arts, B.A.,B.Sc, B.Com courses.The minimum Eligibility criteria for this course, the students must be pass 10+2 from a recognized board or Institute.

## POPULATION:

Population refers to a whole aggregate of cases that fulfill a certain set of criteria or the totality of the object, members of which confirm a set of specifications.

-Polity and Hungler [1]

In the present study, The population was referred to students.

Target population: Target population refers to the population that the researcher wishes to study, the population about which the researchers wishes to make generalization.[5]

In this study, the target population were students in selected colleges of Guwahati Kamrup (M), Assam.

Accessible population: Accessible population refers to the aggregate of the cases which confirm to the designated criteria and which was accessible to the researchers as pool of subjects for the aggregates and meet the criteria for inclusion in the study and that was available to the researcher.[3]

In this study, accessible population were college students of selected colleges of Guwahati Kamrup (M), Assam.

## SAMPLE AND SAMPLE SIZE:

SAMPLE: The sample comprises of a subset of units of the population chosen by the researcher to engage in a study project.[4]

In this study, the sample were students in selected colleges of Guwahati, Assam and who fulfilled the inclusion criteria.

## SAMPLE SIZE:

Sample size is the number of subjects, events, behaviors, or situations that examined in a study.

Sample size: The total sample size was 117 students.

Sampling technique: Multi sampling technique.

The sample size was taken as per sample size calculation using Cochran formula:

$n=Z\alpha 2Npqe2(N-1)+Z\alpha 2pq$

Where:

$n$ = sample size

$Z$= standard error associated with the chosen level of confidence (1.96)

$N$ =Total number of population

$p$ = variability / standard deviation (taken from previous study i.e. (0.10)

$q$ = 1 - p (0.90)

$e$=acceptable error (5%)

$n$=3.8416×935×0.10×0.900.0025×934+3.84×0.10×0.90=120.57≅117

Here, 121 is the desired sample size and recommended sample size is 117

## SAMPLING TECHNIQUES:

It is a process of choosing representative units from a whole population of a study.It is the process of selecting representative units from an entire population of a study. In this study, multi sampling technique was used.[2]

## SAMPLING CRITERIA:

Burns and Grove describe sampling criteria as, "the characteristics essential for membership in the target population."[4]

In this study, sample criteria were divided into inclusion and exclusion criteria.

Inclusion criteria:The criteria that specify population characteristics are referred to as inclusion criteria.[4]

In this study, the inclusion criteria were the students

- whose age group is 17-22 years.
- that are willing to participate in the study at a selected college.
- Who were present at the selected colleges while collecting data.

Exclusion criteria: The criteria that specify the characteristics that a population does not possess.[3]

In this study, the exclusion criteria was the students below 17 years.

## DEVELOPMENT OF THE TOOL:

Treece and Treece (1998) stated that "the instrument selected in a research should as far as possible,be the vehicles that would best elicit data for drawing conclusions to the study and the same time added to the body of the knowledge in the discipline."[3]

A review of research and non-research material was done related to the topic. Consultation with experts was done to ensure the clarity and appropriateness of the items. Then the following steps are followed:

STEP 1: A draft of self-administered structured tool for knowledge was constructed.

STEP 2: Content validity was done, and modifications were made per advice and suggestions from various experts in the field. Exposure of the researcher in the area of research was considered and incorporated for the development of the tool.

STEP 3: Reliability was compounded.

STEP 4: Final construction of self-administered structured questionnaire tools for knowledge was prepared.

## DESCRIPTION OF THE TOOL:

**SECTION I:** DEMOGRAPHIC PROFORMA

Demographic proforma was used to collect the background information.It includes Demographic variables.

The study tool consists of age, educational status, education of father, education of mother, occupational status of the father. occupational status of the mother, religion, place of residence, dietary habits, previous information about PCOD, history of delayed menarche, history of dysmenorrhoea during menstruation, history of excessive weight gain, family history of PCOD, type of family.

**SECTION II:** SELF STRUCTURED KNOWLEDGE QUESTIONNAIRE SCHEDULE TO ASSESS THE KNOWLEDGE REGARDING POLYCYSTIC OVARIAN DISEASE

- The items or the sub areas are prepared as per the following heading:
- The concept regarding Polycystic Ovarian Disease (PCOD).
- Anatomy and physiology of female reproductive system.
- Etiology of PCOD.
- Risk factors of PCOD.
- Sign and symptoms of PCOD.
- Assessment and diagnostic tests related to PCOD.
- Management of PCOD.
- Various complications associated to the polycystic ovarian disease.
- Overall health implications or effects linked to the polycystic ovarian disease.

## SCORING AND INTERPRETATION:

The adopted score pattern was one mark (1) for accurate reply and 0 for incorrect response. The results of the knowledge were classified into three categories.

Inadequate knowledge=50%≤11 (score)

Moderate knowledge= 50-75% 12-17 (score)

Adequate knowledge= ≥75% 18-23 (score)

**SECTION III:** Effectiveness of STP on knowledge regarding PCOD among the students.

**SECTION IV:** Association of pre-test level of knowledge regarding PCOD among the students with their selected demographic variables.

## CONTENT VALIDITY OF THE TOOL:

Validity is the degree to which an instrument measures what it is supposed to measure.[4]

To ensure the content validity, the tools along with the statement of the problem, objectives of the study and content validity criteria was given to six experts at different field. The experts were, four from the field of Obstetrics and Gynaecological nursing, one expert in the field of obstetrics and Gynaecological department and one nursing expert from Community health nursing department.

The experts were requested to give their opinion regarding accuracy, relevancy and appropriateness of the content.Based on the suggestion given by the experts, necessary modification and correction were made after consulting with the guide.

## RELIABILITY OF TOOL:

Reliability is the degree of consistency and accuracy with which an instrument measures the attribute for which it is designed to measure.[2]

Reliability is defined as the ability of an instrument to create reproducible result. Therefore, reliability is concerned with consistency of the measurement tools. A tool only can be reliable if it measures an attribute with similar results on repeated use.

The reliability of the tool was done by test- retest method using Karl pearson's correlation coefficient formula.

$$r = \frac{n(\Sigma xy) - (\Sigma x)(\Sigma y)}{\sqrt{[n\Sigma x^2 - (\Sigma x)^2][n\Sigma y^2 - (\Sigma y)^2]}}$$

The result revealed that the tool was reliable as the reliability of knowledge questionnaire was 0.81.

## ETHICAL CONSIDERATIONS:

Ethical considerations in research are a set of principles that guide the research designs and practices. Scientist and researchers must always adhere to a certain code of conduct when collecting data from people.

The goals of human research often include understanding real-life phenomena, studying effective treatments, investigating behaviors and improving lives in other ways. What the researcher decide to research and how you conduct that research involve key ethical considerations.

Following were the considerations of the study:

1. Ethical permission to proceed with the study was taken from the Ethics committee, INS trust.
2. The investigator obtained permission from the Principals of the selected Colleges of Guwahati, Assam.
3. Nature of the study and the purpose was explained to the selected samples and informed consent was obtained from the study samples before data collection.
4. Confidentiality was ensured.
5. Participants had the liberty to leave the study at any point of time as desired.

## PILOT STUDY:

According to Polit and Beck "Pilot study is a small-scale version, or trail run, done in preparation for major study; sometimes call a feasibility study".[5]

A pilot study was conducted after obtaining permission from the institutional ethical committee. At first, the list of the colleges was made having all arts, science, and commerce streams in Kamrup (M) Assam. Then, the principal of the chosen college was granted official administrative approval. A sample of 10% was taken, i.e, 12 samples at S.B.Deorah college. After seeking formal administrative permission from the principal, a pilot study was performed from 2-09-2022 to 9-09-2022.Twelve samples were drawn by using multi sampling techniques. Self- introduction is given, and the objective and significance of the study were conveyed to students.

They were also informed that privacy as well as confidentiality which will be maintained. All respondents had signed informed permission before the research was conducted. Demographic proforma is collected. The participants were provided with a self-administered structured survey to evaluate their previous PCOD test knowledge.STP was provided to the participants. The post-test self-administered structured questionnaire was conducted after seven days of STP on 9th September 2022.

The data were obtained and kept ready for analysis with inferential and descriptive statistics. The tools were discovered to be comprehensible, feasible, acceptable by the study samples. Certain words & terms in the questionnaire were found to be difficult by students, which was changed and modified later. The results of the pilot study indicated that it was feasible enough to conduct for the final study.

## FINAL DATA COLLECTION PROCEDURE:

1.Period of data collection: The data collection period was scheduled from 15th November to 26th November, 2022 from 9am to 2pm as per scheduled.

2.Permission from the concerned authority: After getting clearance from Principal of Karmashree Hiteswar Saikia College, S.B.Deorah College and Beltola College Guwahati, Assam.

3.Data collection procedure:

Data collection process refer to the identification of subjects and the precise, systematic gathering of information (data) relevant to the research purpose or the specific objectives, questions or hypothesis of the study.

The data collection was scheduled from 15th November to 26th November, 2022. According to the feasibility of the study and availability of the sample, three colleges were selected. A formal written permission was obtained for the respective Principals of the selected colleges for conducting the research study by the investigator before the collection of the data.

The investigator visited the colleges on the given respective dates and was introduced to the students who fulfilled the pre-determined selection criteria. The investigator explained the purpose of her study and she assured them of the confidentiality and anonymity to get their co-operation and prompt responses during data collection.

The list of students of each colleges were taken from the concern authorities.

In the first setting the investigator identified the number of students to be taken from each class. Multi sampling technique was used to gathered the required samples then the. students were gathered in one classroom.

A written informed consent was also taken from the students who fulfill the selection criteria. Then the pre-test knowledge questionnaire was administered which took 30-45 minutes to complete in average. A STP was implemented on the same day after completion of the pre-test respectively. The students interacted and cooperated well with the investigator and were satisfied with the information they got. Post-test was administered to the same group of students using the same knowledge questionnaire on the 7th day after implementing the STP on PCOD. Similarly the the same method was used in the other settings.

## PLAN FOR DATA ANALYSIS:

The data collected from the subjects were organized and tabulated. The data were grouped and analyzed in terms of objectives of the study by using descriptive and inferential statistical measure, which are necessary to provide substantial summary of the results.

 Collected data were coded and transformed to the master sheet for statistical analysis.

 Summarization of sample characteristics in frequency and percentage.

 Computation of Mean and standard deviation of knowledge before and after the intervention.

 Computation of "t" test to find out significance of the differences between the mean scores of the pre-test and post- test knowledge scores.

 Fisher Exact test was used to find out the association between pre-test knowledge of students regarding PCOD with the selected demographic variables such as age,type of family, educational stream,residence, family income per month, occupational status of father,occupational status of mother, family history of PCOD,previous information about PCOD in terms of yes or no,source of previous information about PCOD,characteristics of periods.place of residence, religion, dietary habits, history of delay menstruation in the family and previous information about PCOD.

## PREPARATION OF BLUEPRINT:

The blueprint was prepared on knowledge questionnaire. The knowledge questionnaire consisted of 23 multiple choice questions.

## SUMMARY:

This chapter explained in details about the research methodology of the study i.e. the research approach, research design, setting of the study, variables, population, study sample, sample size, sample technique, criteria for sample selection, tools and technique used for data collection, development of the tool, description of tool, validity of the tool, reliability of the tool, ethical consideration. It also discusses about the pilot study, process of data collection and the process of data analysis of the study.

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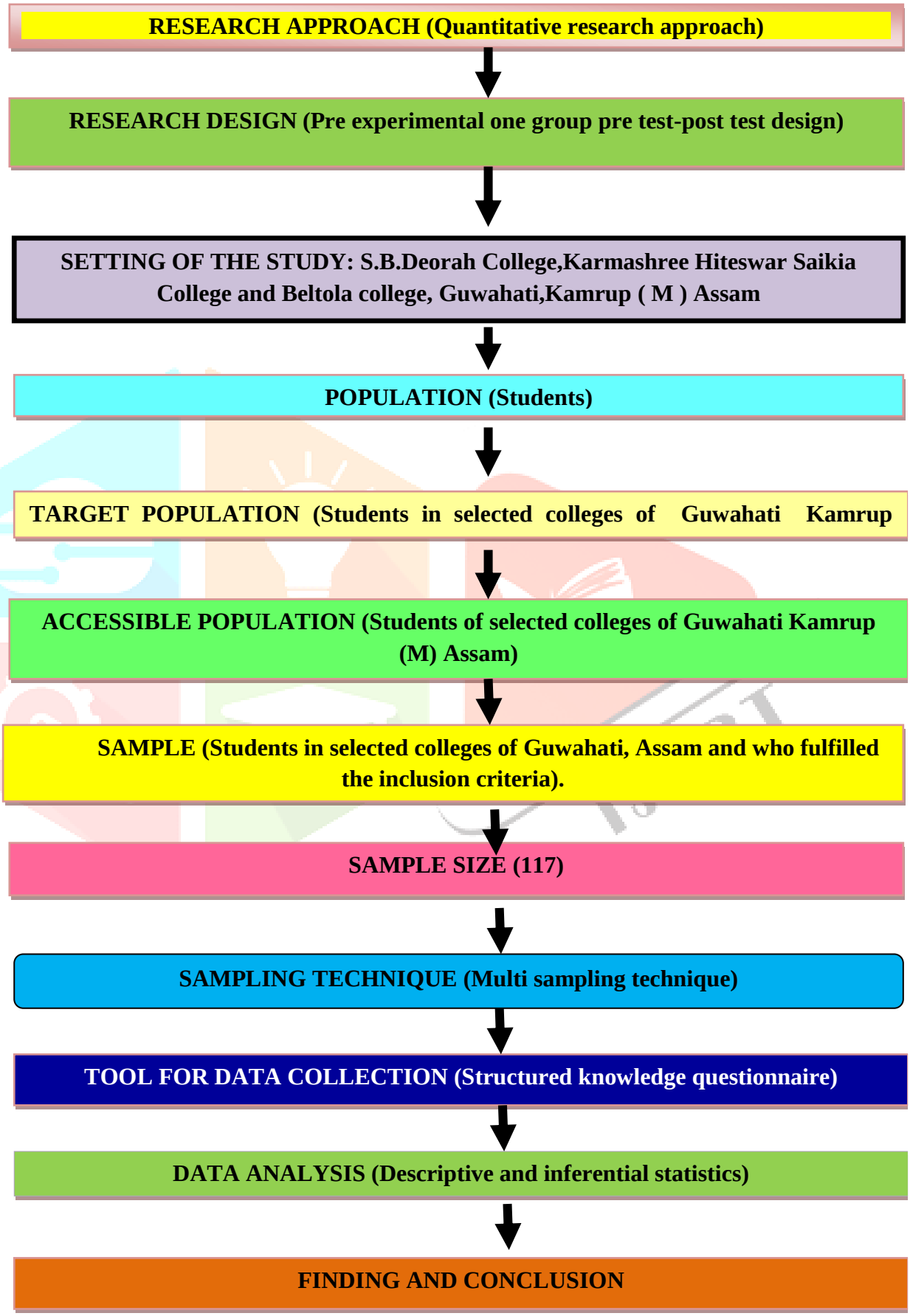


FIGURE-2: SCHEMATIC REPRESENTATION OF RESEARCH METHODOLOGY

**FIGURE-2: SCHEMATIC REPRESENTATION OF RESEARCH METHODOLOGY**

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# CHAPTER-IV

# DATA ANALYSIS AND INTERPRETATION

**"Winners are not those who never fail but those who never quit."**

**- Dr.A.P.J.Abdul Kalam**

This chapter deals with the statistical analysis and interpretation of the data collected to the knowledge regarding effectiveness of structured teaching programme on knowledge regarding PCOD among the students in selected colleges of Guwahati, Kamrup (M) Assam.

Analysis refers to the computation of certain measures along with searching for the pattern of relationship that exist among data group. The analysis of data involves the objectives material in the possession of the researcher and his subjective reactions and desire to drive from the data the inherent meaning of the relation to the problem. The collected data may be adequate, valid and reliable to any extent, it does not serve any worthwhile purpose unless it is carefully edited, systematically classified and tabulated, scientifically analysed, intelligently interpreted and rationally concluded. By interpretation of data, it means the task of drawing conclusions or inferences and of explaining their significance, after careful analysis of the collected data. The process of interpretation is essentially one of the stating that what the findings show. It has also been stated that the interpretation of tabulated data can bring to light the real meaning of the finding of study."[1]

The data collected through structured questionnaire on knowledge regarding PCOD was tabulated analysed and interpreted by using descriptive and inferential statistics, which were necessary to provide a substantive summary of results to the objectives.

## PRESENTATION DATA:

The obtained data were grouped and analysed under the following sections:

**Section I-** Frequency and percentage distribution of the students according to the demographic variables.

**Section II -** Frequency and percentage distribution of the students according to the level of knowledge regarding PCOD before and administration of structured teaching programme.

**Section III-** Effectiveness of structured teaching programme on knowledge regarding PCOD among the students.

**Section IV-** Association of pre test level of knowledge regarding PCOD among the students with their selected demographic variables.

## SECTION I:

## FREQUENCY AND PERCENTAGE DISTRIBUTION OF DEMOGRAPHIC VARIABLES OF STUDENTS

### TABLE-I:

### FREQUENCY AND PERCENTAGE DISTRIBUTION OF STUDENTS ACCORDING TO THEIR AGE GROUP

**n =117**

| AGE (IN YEARS) OF THE STUDENT | FREQUENCY (f) | PERCENTAGE (%) |
|---|---|---|
| 17 – 18 | 97 | 82.9 |
| 19 – 20 | 14 | 12.0 |
| 21 – 22 | 6 | 5.1 |
| ≥22 | - | - |
| **TOTAL** | **117** | **100** |

Table I depicts that out of 117 of the students, majority i.e. 97(82.9%) were in the age group of 17-18 years, 14(12.0%) were in the age group of 19-20years, 6(5.1%) were in the age group of 21-22, and there is no respondent in the age group of ≥22years. The results are shown in bar diagram in figure no.III

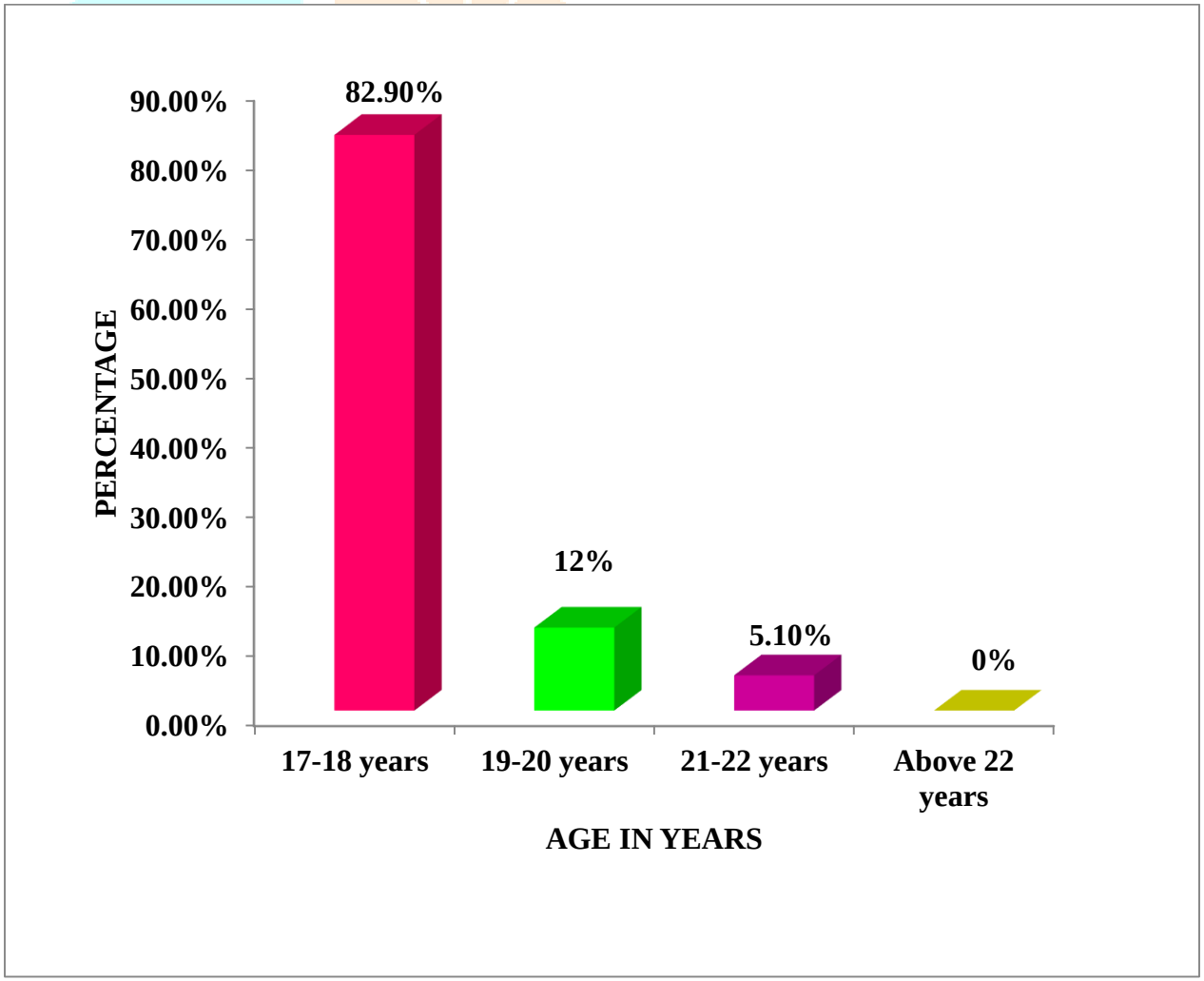
90.00%
80.00%
70.00%
60.00%
50.00%
40.00%
30.00%
20.00%
10.00%
0.00%
PERCENTAGE
82.90%
12%
5.10%
0%
17-18 years
19-20 years
21-22 years
Above 22 years
AGE IN YEARS

**FIGURE III**

**BAR DIAGRAM SHOWING PERCENTAGE DISTRIBUTION OF STUDENTS ACCORDING TO THEIR AGE GROUP**

**TABLE-II:**

**FREQUENCY AND PERCENTAGE DISTRIBUTION OF STUDENTS ACCORDING TO THEIR EDUCATIONAL STATUS**

**n =117**

| EDUCATIONAL STATUS OF STUDENTS | FREQUENCY (f) | PERCENTAGE (%) |
|---|---|---|
| BA/BCA 1st year students | 117 | 100.0 |
| BA 2nd year students | - | - |
| BA 3rd year students | - | - |
| **Total** | **117** | **100%** |

The data presented in Table II depicts that, out of 117 students majority i.e. 117(100%) were in BA /BCA 1ST year. The results are shown in the pie diagram in figure no.IV

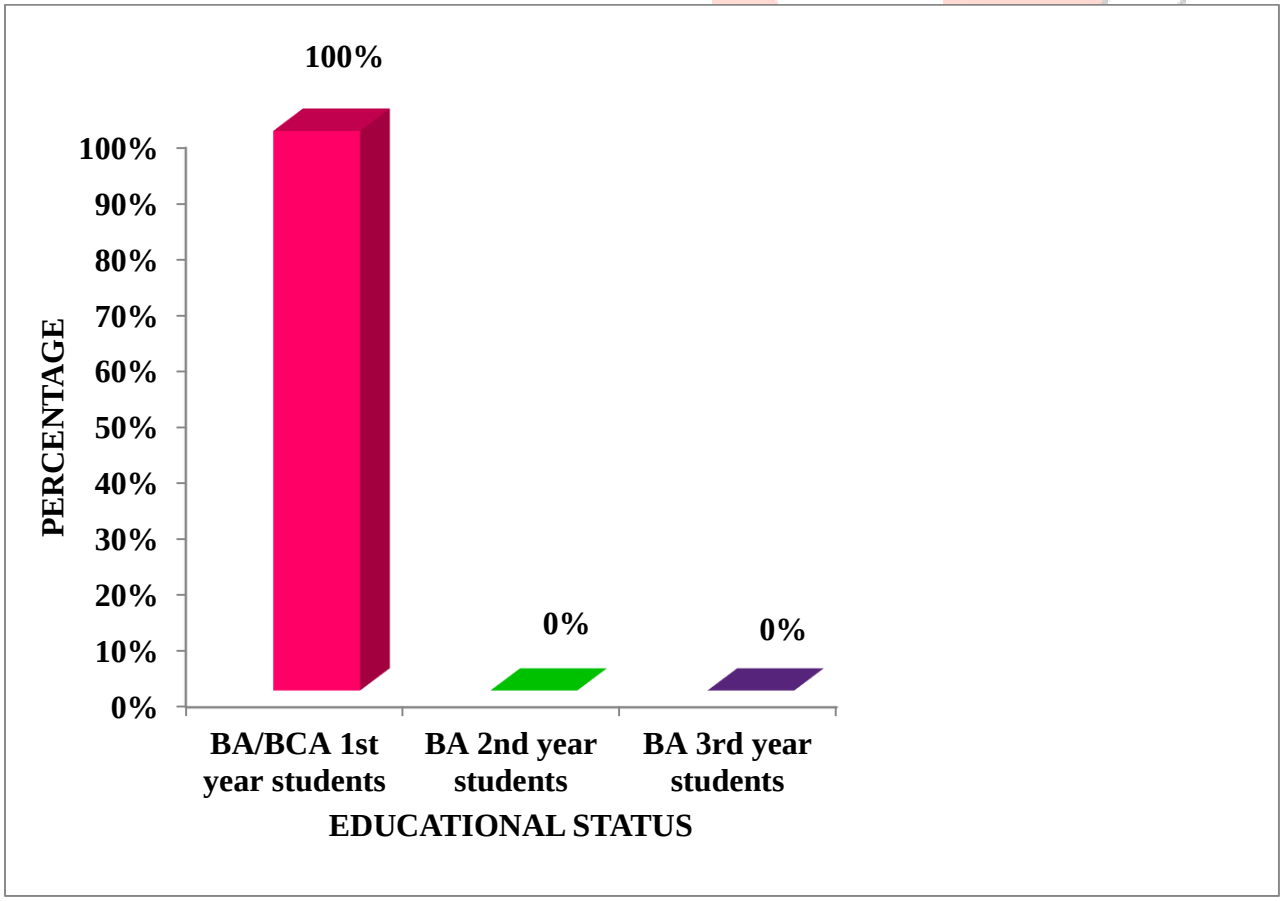
100%
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
PERCENTAGE
0%
0%
BA/BCA 1st year students
BA 2nd year students
BA 3rd year students
EDUCATIONAL STATUS

**FIGURE IV**

**BAR DIAGRAM SHOWING PERCENTAGE DISTRIBUTION OF STUDENTS ACCORDING TO THEIR EDUCATIONAL STATUS**

## TABLE-III:

## FREQUENCY AND PERCENTAGE DISTRIBUTION OF STUDENTS ACCORDING TO THE EDUCATIONAL STATUS OF FATHER

**n =117**

| EDUCATIONAL STATUS OF THE FATHER | FREQUENCY (f) | PERCENTAGE (%) |
|---|---|---|
| Primary school | 79 | 67.5 |
| High school | 16 | 13.7 |
| Secondary education | 16 | 13.7 |
| Graduate and above | 6 | 5.1 |
| **Total** | **117** | **100** |

The data presented in Table III depicts that, out of 117 students majority of the students father i.e. 79(67.5%) were in the primary school, 16(13.7%) were in high school, 16(13.7%) were in the secondary school,6(5.1%)were graduated and above. The results are shown in pie diagram in figure no.V

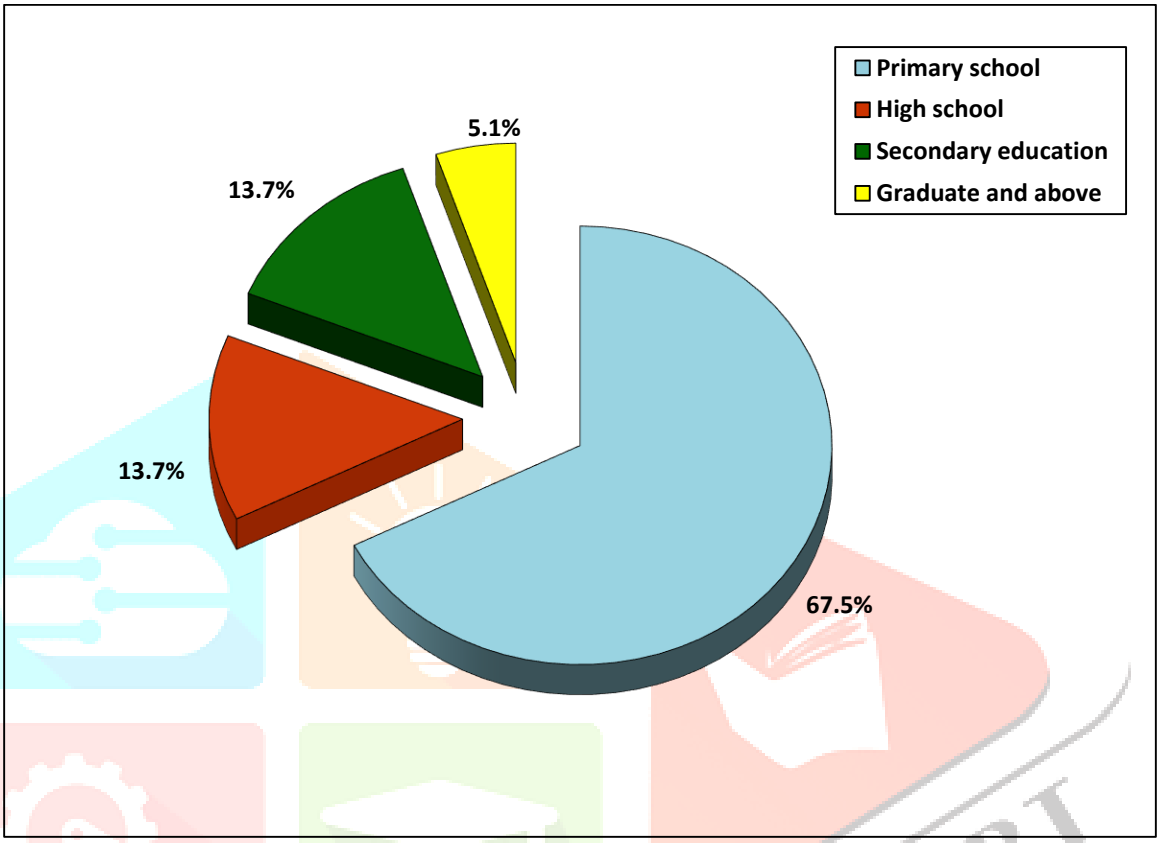


**FIGURE V**

**PIE DIAGRAM SHOWING PERCENTAGE DISTRIBUTION OF STUDENTS ACCORDING TO THE EDUCATIONAL STATUS OF FATHER**

**TABLE-IV:**

**FREQUENCY AND PERCENTAGE DISTRIBUTION OF STUDENTS ACCORDING TO THE EDUCATIONAL STATUS OF MOTHER**

**n =117**

| EDUCATION OF THE MOTHER | FREQUENCY (f) | PERCENTAGE (%) |
|---|---|---|
| Primary school | 85 | 72.6 |
| High school | 2 | 1.8 |
| Secondary education | 20 | 17.1 |
| Graduate and above | 10 | 8.5 |

| | | |
|---|---|---|
| **Total** | **117** | **100** |

The data presented in Table IV depicts that out of 117 students majority of the students mother i.e. 85(72.6%) were in primary school, 2(1.8%) were in high school, 20(17.1%) were in the secondary education,and 10(8.5%)were graduated and above. The results are shown in pie diagram in figure no. VI

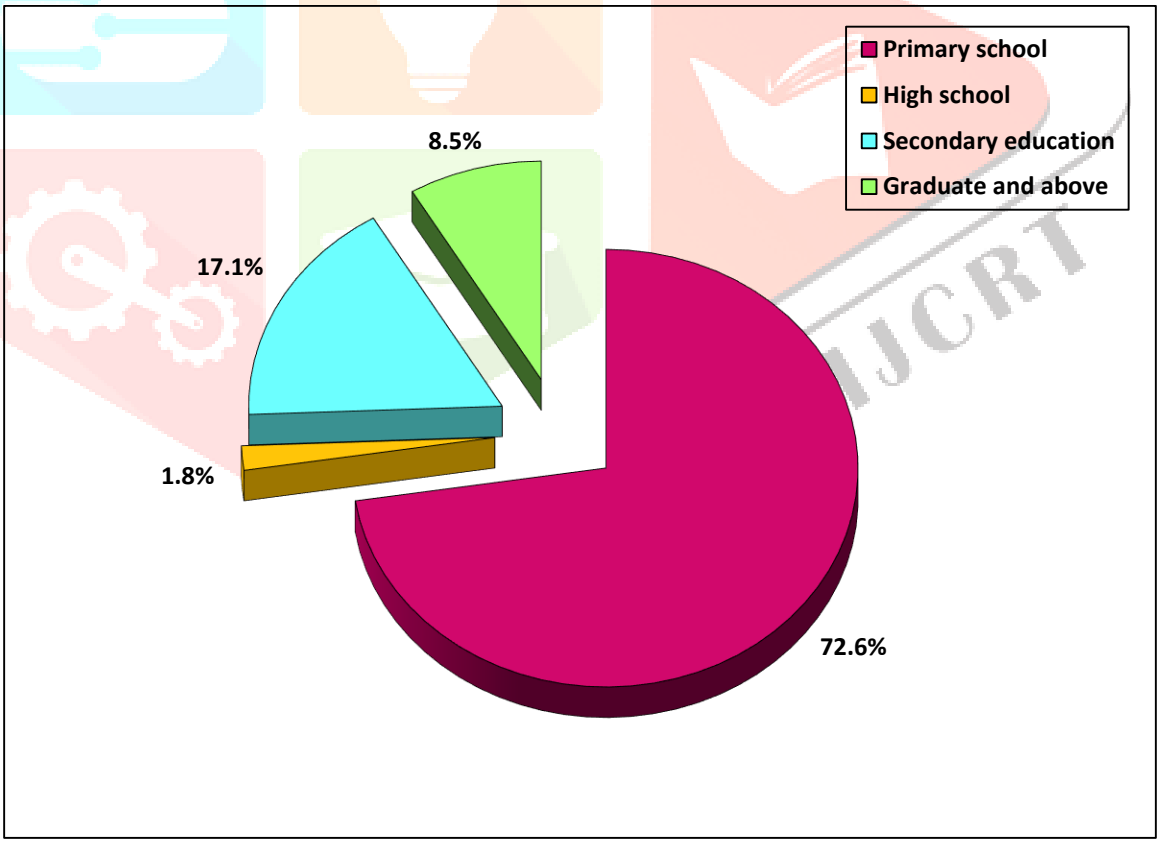


**FIGURE VI**

**PIE DIAGRAM SHOWING PERCENTAGE DISTRIBUTION OF STUDENTS ACCORDING TO THEIR EDUCATIONAL STATUS OF MOTHER**

**TABLE-V:**

**FREQUENCY AND PERCENTAGE DISTRIBUTION OF STUDENTS ACCORDING TO THEIR OCCUPATIONAL STATUS OF FATHER**

**n =117**

| OCCUPATIONAL STATUS OF FATHER | FREQUENCY (f) | PERCENTAGE (%) |
|---|---|---|
| Unemployed | 26 | 22.2 |
| Daily wage labour | 8 | 6.8 |
| Private service | 77 | 65.9 |

| | | |
|---|---|---|
| Government service | 6 | 5.1 |
| **Total** | **117** | **100** |

The data presented in Table V depicts that, out of 117 of the students majority of the students father i.e. 26(22.2%) were unemployed, 8(6.8.%) were daily wage labour, 77(65.9%) were private employee,and only 6(5.1% )were government employee. The results are shown in pie diagram in figure no.VII

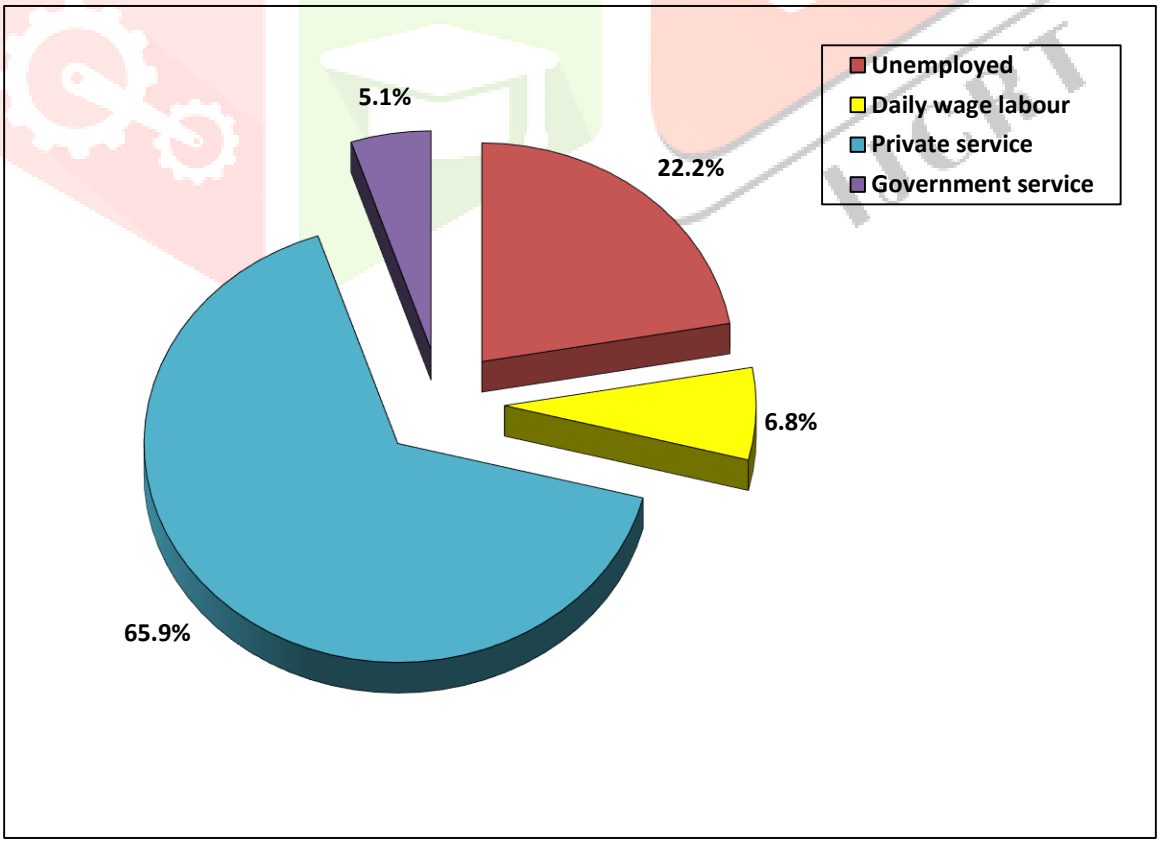

**FIGURE VII**

**PIE DIAGRAM SHOWING PERCENTAGE DISTRIBUTION OF STUDENTS ACCORDING TO THEIR OCCUPATIONAL STATUS OF FATHER**

## TABLE-VI:

## FREQUENCY AND PERCENTAGE DISTRIBUTION OF STUDENTS ACCORDING TO THEIR OCCUPATIONAL STATUS OF MOTHER

**n =117**

| OCCUPATIONAL STATUS OF MOTHER | FREQUENCY (f) | PERCENTAGE (%) |
|---|---|---|
| Private employee | 93 | 79.5 |
| Government employee | 16 | 13.7 |
| Self employed | - | - |
| Housewife | 8 | 6.8 |
| **Total** | **117** | **100** |

The data presented in Table VI depicts that out of 117 of the students majority of the students mother i.e. 93(79.5%) were in private employee,16(13.7%) were government employee,8(6.8%) were housewife.The results are shown in pie diagram in figure no. VIII

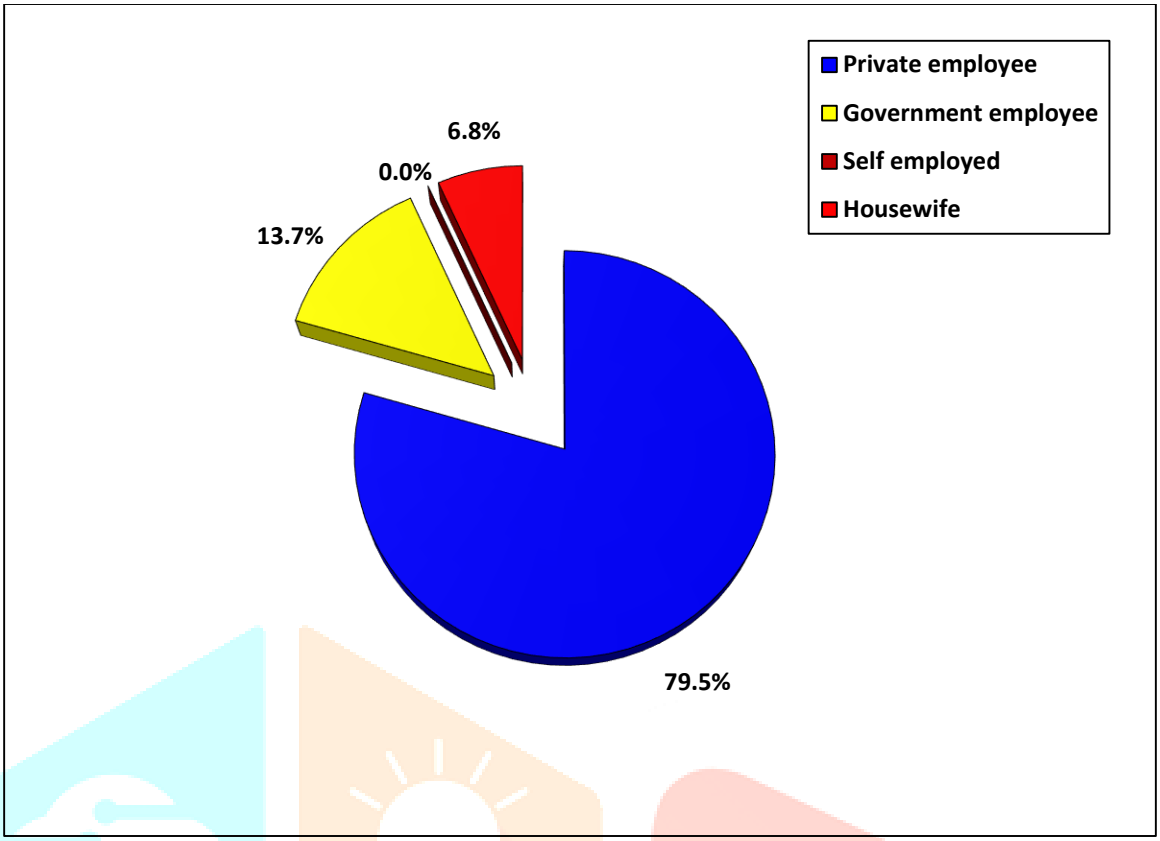


**FIGURE VIII**

**PIE DIAGRAM SHOWING PERCENTAGE DISTRIBUTION OF STUDENTS ACCORDING TO THEIR OCCUPATIONAL STATUS OF MOTHER**

## TABLE-VII:FREQUENCY AND PERCENTAGE DISTRIBUTION OF STUDENTS ACCORDING TO THEIR RELIGION

**n =117**

| RELIGION | FREQUENCY (f) | PERCENTAGE (%) |
|---|---|---|
| Hindu | 77 | 65.8 |
| Muslim | 40 | 34.2 |
| Christian | - | - |
| Others | - | - |
| **Total** | **117** | **100** |

The data presented in Table VII depicts that out 117 of the students, majority i.e.77(65.8%)students were Hindu,40(34.2%) students were Muslim,whereas none of them belongs to Christian and others .The results are shown in bar diagram in figure no. IX

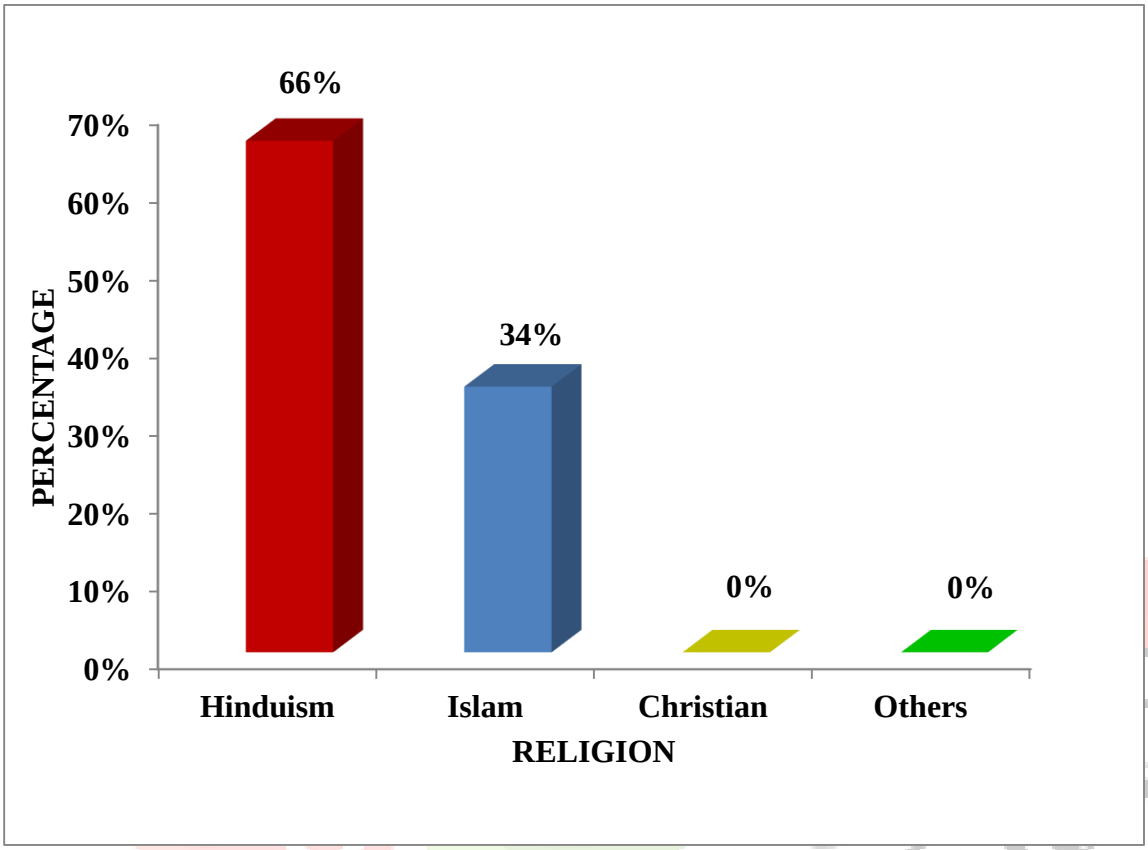


**FIGURE IX**

**BAR DIAGRAM SHOWING PERCENTAGE DISTRIBUTION OF STUDENTS ACCORDING TO THEIR RELIGION**

## TABLE-VIII:FREQUENCY AND PERCENTAGE DISTRIBUTION OF STUDENTS ACCORDING TO THEIR TYPE OF FAMILY

**n =117**

| TYPE OF FAMILY | FREQUENCY (f) | PERCENTAGE (%) |
|---|---|---|
| Joint | 50 | 42.7 |
| Nuclear | 67 | 57.3 |
| **Total** | **117** | **100** |

The data presented in Table VIII depicts that out of 117 of the respondent, majority i.e. 50(42.7%) were joint family whereas 67(57.3%) were nuclear family,The results are shown in pie diagram in figure no.X

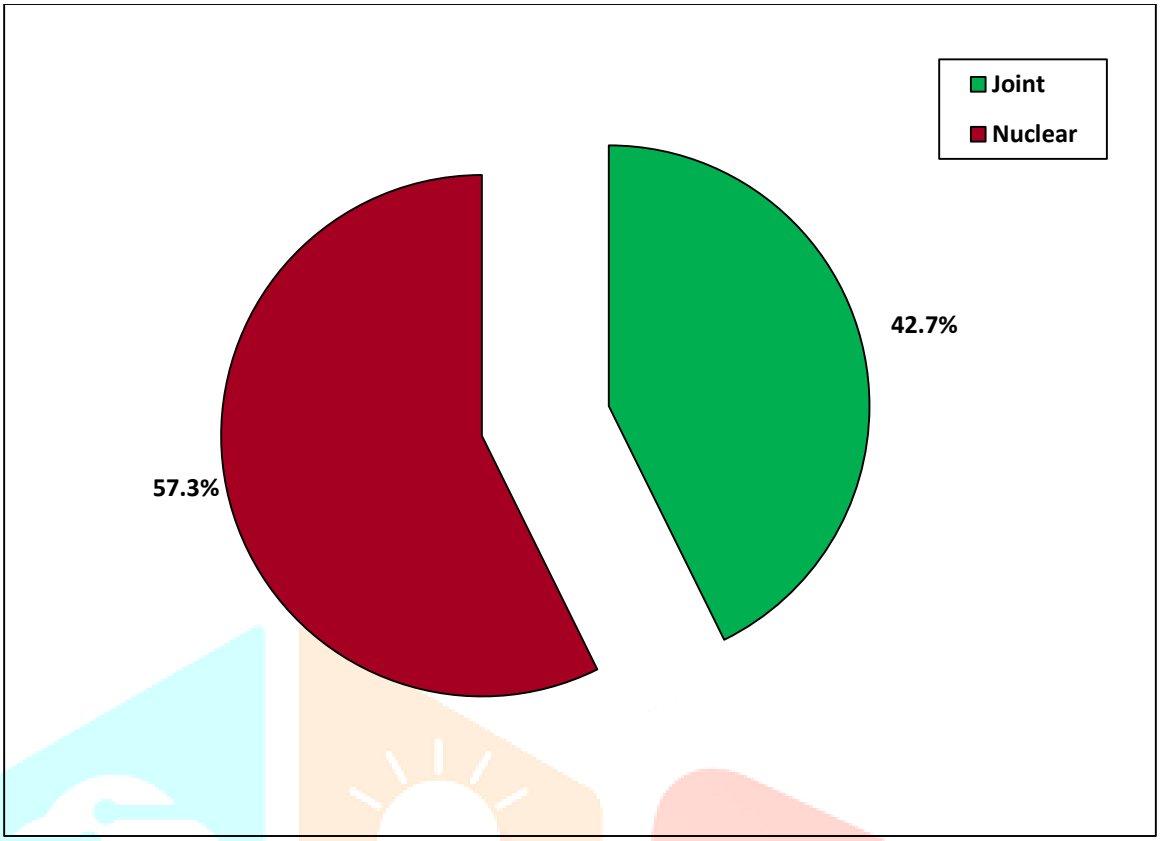


**FIGURE X**

**PIE DIAGRAM SHOWING PERCENTAGE DISTRIBUTION OF STUDENTS ACCORDING TO THEIR TYPE OF FAMILY**

# TABLE-IX:FREQUENCY AND PERCENTAGE DISTRIBUTION OF STUDENTS ACCORDING TO THEIR PLACE OF RESIDENCE

**n =117**

| PLACE OF RESIDENCE | FREQUENCY (f) | PERCENTAGE (%) |
|---|---|---|
| Urban | 67 | 57.3 |
| Rural | 50 | 42.7 |
| **Total** | **117** | **100** |

The data presented in Table IX depicts that out of 117 of the students, majority i.e. 67(57.3%) of the student were living in urban area whereas 50(42.7%) were living in rural area.The results are shown in pie diagram in figure no.XI

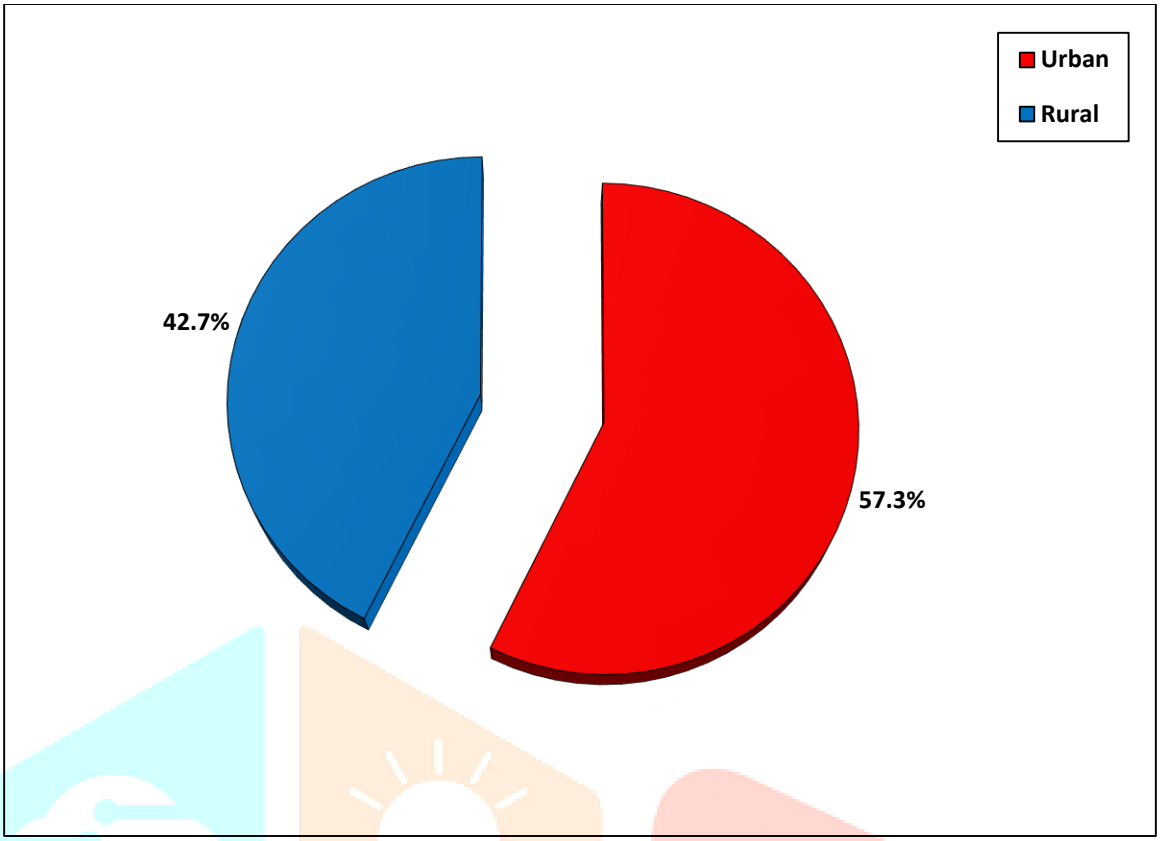


**FIGURE XI**

**PIE DIAGRAM SHOWING PERCENTAGE DISTRIBUTION OF STUDENTS ACCORDING TO THEIR PLACE OF RESIDENCE**

## TABLE-X:FREQUENCY AND PERCENTAGE DISTRIBUTION OF STUDENTS ACCORDING TO THEIR DIETARY HABITS

**n =117**

| DIETARY HABITS | FREQUENCY (f) | PERCENTAGE (%) |
|---|---|---|
| Vegetarian | 12 | 10.3 |
| Non-vegetarian | 105 | 89.7 |
| **Total** | **117** | **100** |

The data presented in Table X depicts that out of 117 of the students, majority i.e. 105 (89.7%) were non-vegetarian whereas 12(10.3%) were vegetarian.The results are shown in pie diagram in figure no.XII

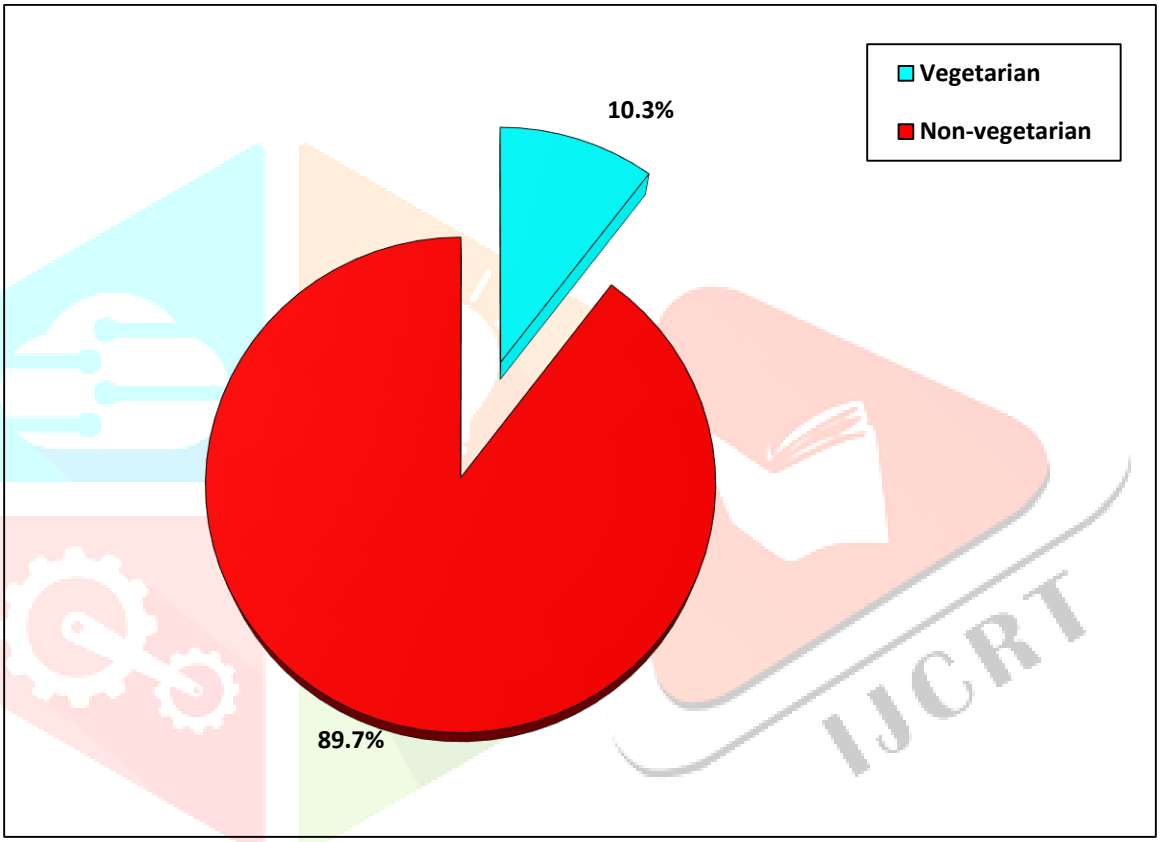


**FIGURE XII**

**PIE DIAGRAM SHOWING PERCENTAGE DISTRIBUTION OF STUDENTS ACCORDING TO THEIR DIETARY HABITS**

## TABLE-XI:AND PERCENTAGE DISTRIBUTION OF STUDENTS ACCORDING TO THEIR PREVIOUS INFORMATION ABOUT PCOD

**n =117**

| PREVIOUS INFORMATION ABOUT PCOD | FREQUENCY (f) | PERCENTAGE (%) |
|---|---|---|
| Yes | 30 | 25.6 |
| No | 87 | 74.4 |
| **Total** | **117** | **100** |

The data presented in Table XI depicts that out 117 of the respondent, majority i.e.87(74.4%) were not having previous information about PCOD whereas only 30(25.6%) were having previous information about PCOD. The results are shown in pie diagram in figure no.XI

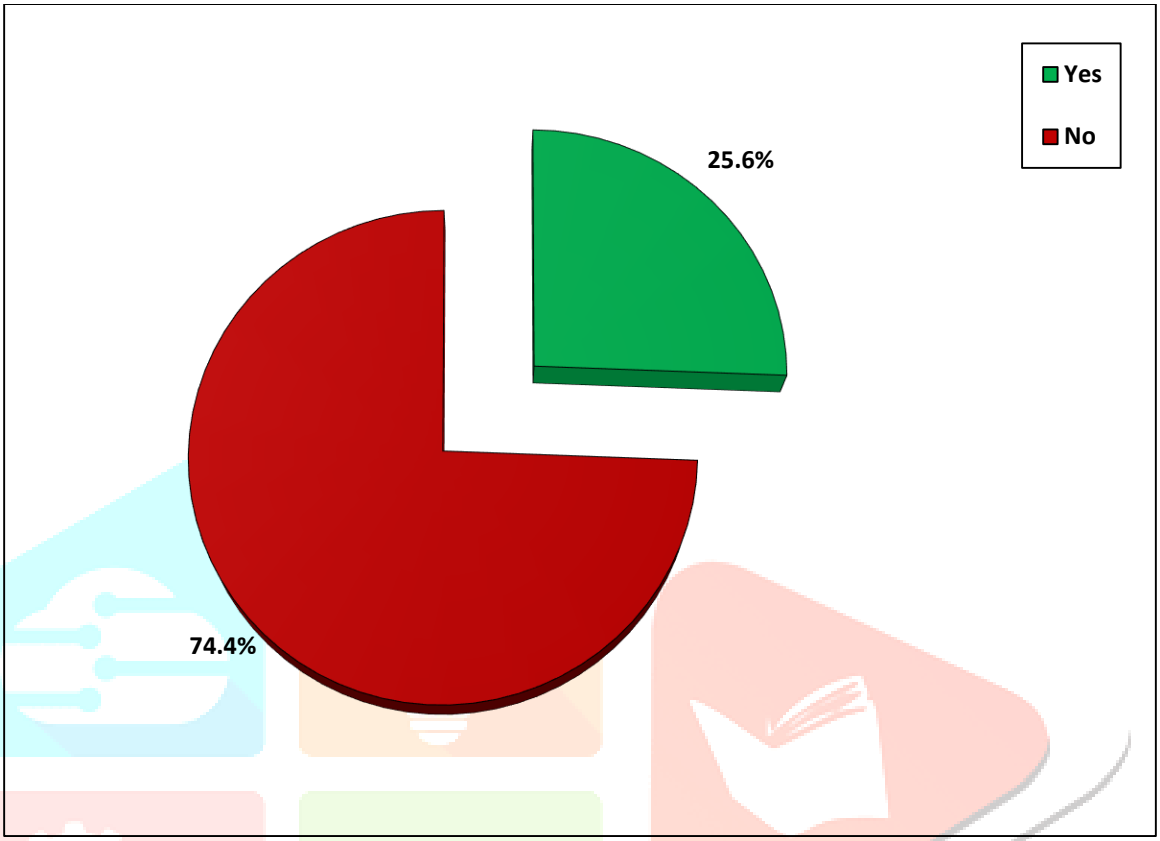


**FIGURE XIII:PIE DIAGRAM SHOWING PERCENTAGE DISTRIBUTION OF STUDENTS ACCORDING TO THEIR PREVIOUS INFORMATION ABOUT PCOD**

**TABLE-XII:FREQUENCY AND PERCENTAGE DISTRIBUTION OF STUDENTS ACCORDING TO THEIR PREVIOUS INFORMATION ABOUT PCOD THROUGH**

**n =117**

| PREVIOUS INFORMATION ABOUT POLYCYSTIC OVARIAN DISEASE THROUGH | FREQUENCY (f) | PERCENTAGE (%) |
|---|---|---|
| Health personnel | 89 | 76.1 |
| Family member | 10 | 8.5 |
| Friends | 6 | 5.1 |
| Mass media | 12 | 10.3 |
| Others | - | - |
| **Total** | **117** | **100** |

The Table XII depicts that out of 117 of the students who are having previous information about PCOD, majority through i.e. 89(76.1%) from health personnel , 12(10.3%) from mass media 10(8.5%) from family members, and only 6(5.15) from friends,.The results are shown in bar diagram in figure no.XIV

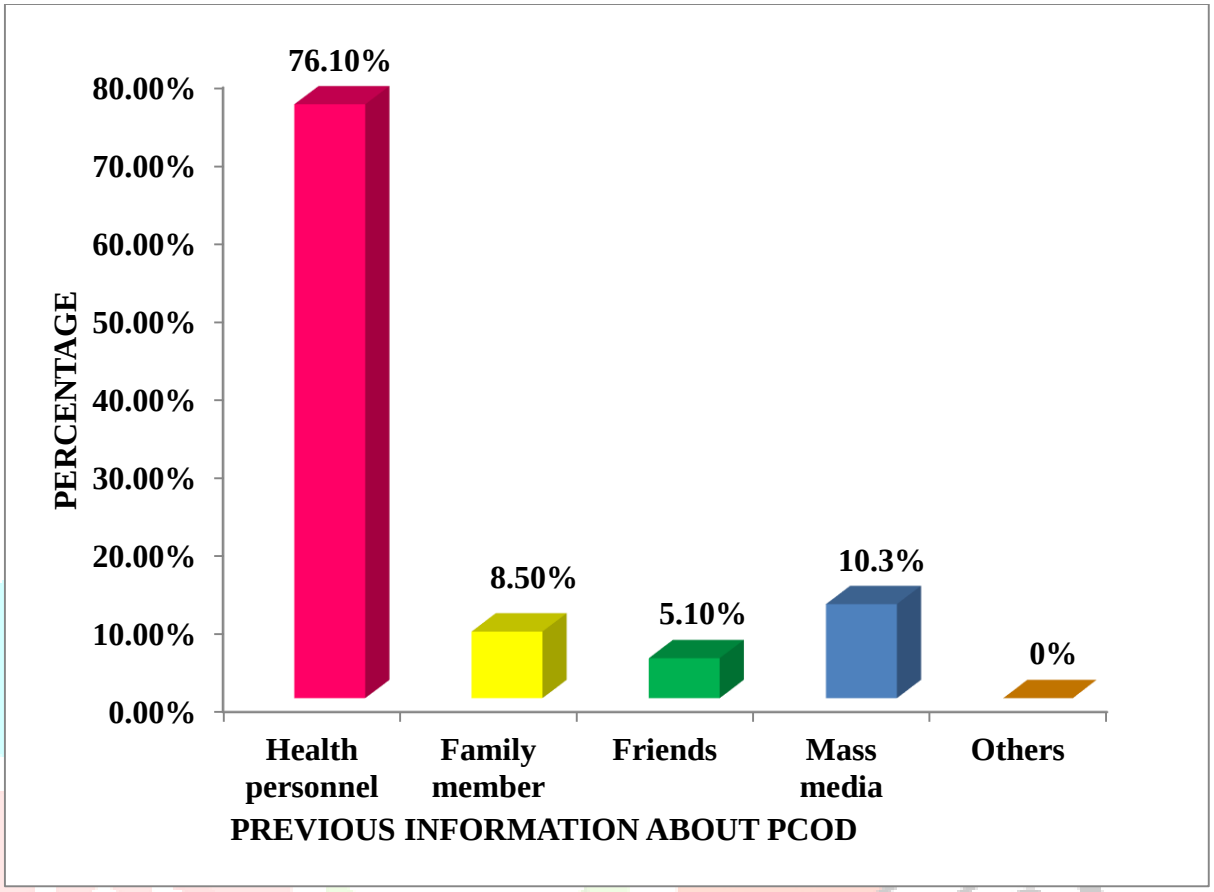


**FIGURE XIV**

**BAR DIAGRAM SHOWING PERCENTAGE DISTRIBUTION OF STUDENTS ACCORDING TO THEIR PREVIOUS INFORMATION ABOUT PCOD**

# TABLE-XIII:FREQUENCY AND PERCENTAGE DISTRIBUTION OF STUDENTS ACCORDING TO THEIR HISTORY OF DELAYED MENARCHE IN THE FAMILY

**n =117**

| HISTORY OF DELAYED MENARCHE IN THE FAMILY | FREQUENCY (f) | PERCENTAGE (%) |
|---|---|---|
| Yes | 30 | 25.6 |
| No | 87 | 74.4 |
| **Total** | **117** | **100** |

The data presented in Table XIII depicts that out 117 of the respondent, majority i.e.87(74.4%)were not having a history of delayed menarche in the family whereas only 30(25.6%) were having a history of delayed menarche in the family. The results are shown in pie diagram in figure no.XV

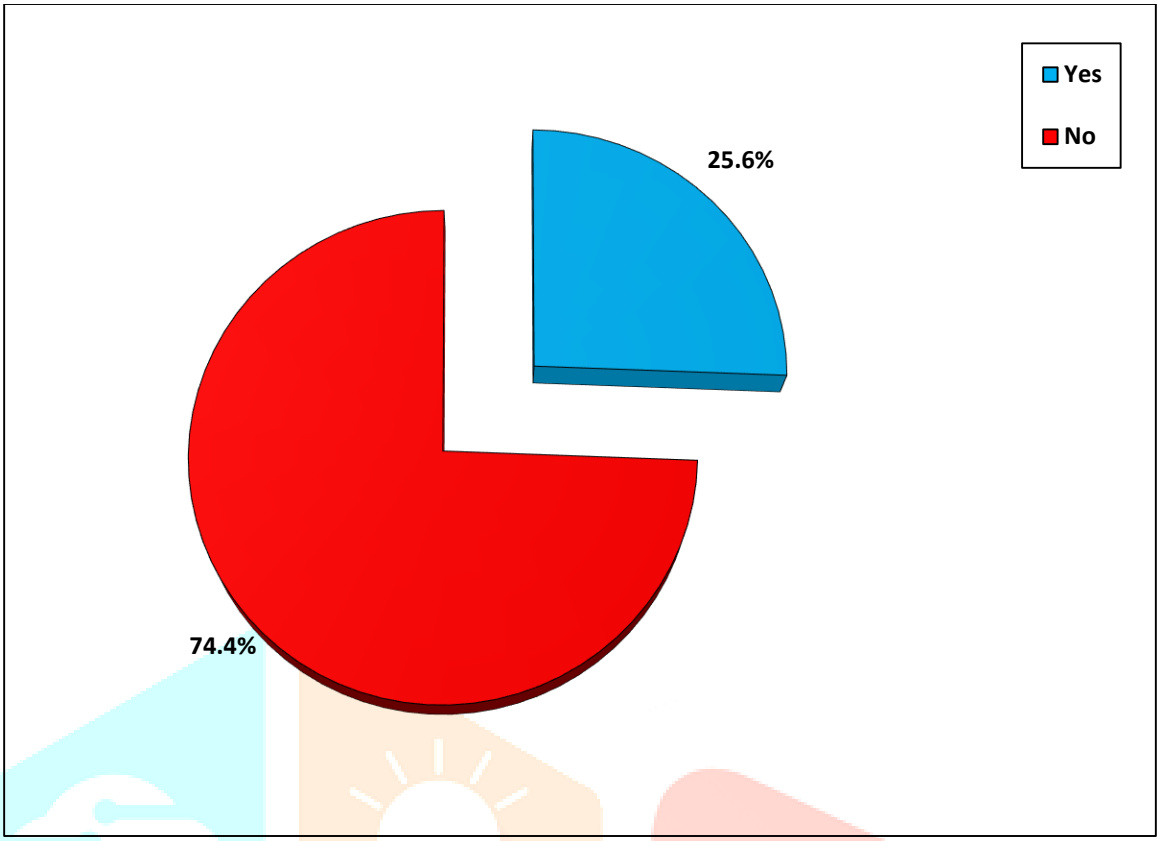


**FIGURE XV**

**PIE DIAGRAM SHOWING PERCENTAGE DISTRIBUTION OF STUDENTS ACCORDING TO THEIR HISTORY OF DELAYED MENARCHE IN THE FAMILY**

## TABLE-XIV:FREQUENCY AND PERCENTAGE DISTRIBUTION OF STUDENTS ACCORDING TO THEIR DYSMENORRHOA DURING MENSTRUATION

**n =117**

| DO YOU HAVE DYSMENORRHOEA DURING MENSTRUATION | FREQUENCY (f) | PERCENTAGE (%) |
|---|---|---|
| Yes | 97 | 82.9 |
| No | 20 | 17.1 |
| **Total** | **117** | **100** |

The data presented in Table XIV depicts that out 117 of the respondent, majority i.e. 97(82.9% were having dysmenorrhoa during menstruation whereas only 20(17.1%) were not having dysmenorrhoa during menstruation.The results are shown in pie diagram in figure no.XVI

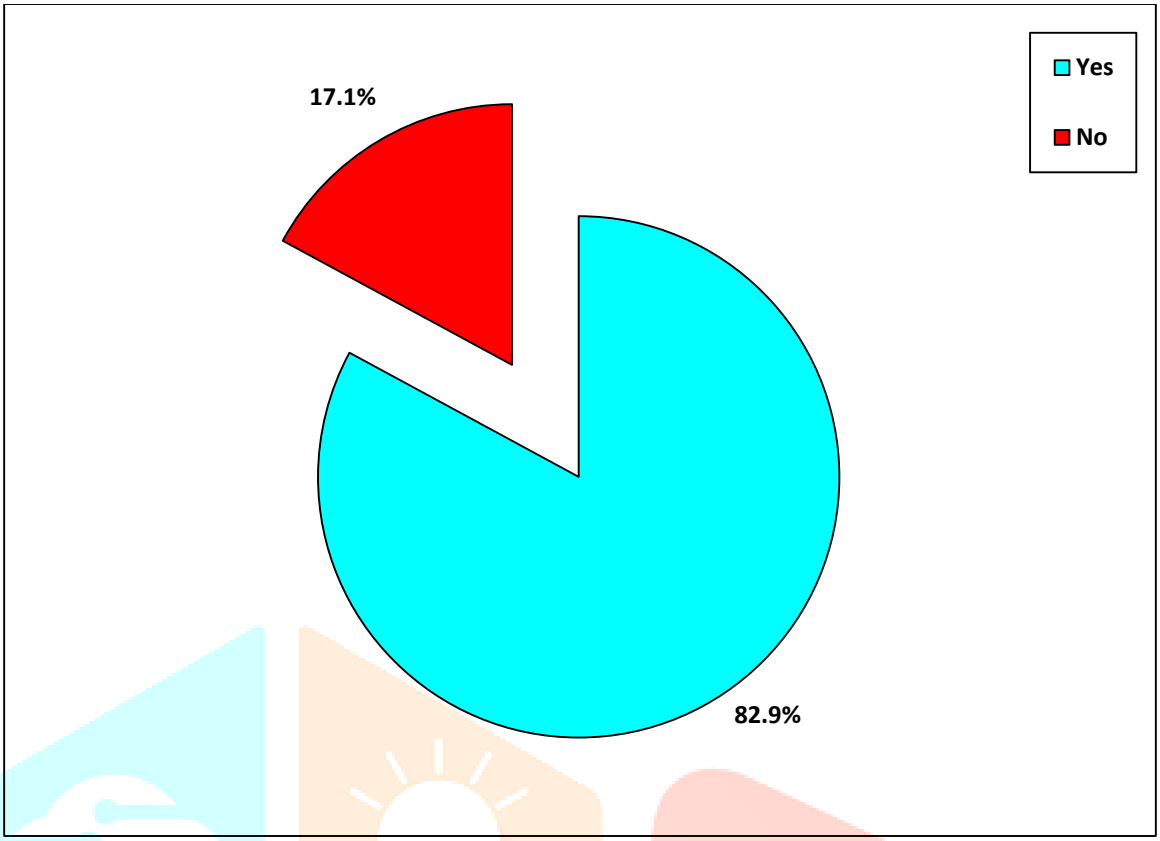


**FIGURE XVI**

**PIE DIAGRAM SHOWING PERCENTAGE DISTRIBUTION OF STUDENTS ACCORDING TO THEIR DYSMENORRHOEA DURING MENSTRUATION**

## TABLE-XV:FREQUENCY AND PERCENTAGE DISTRIBUTION OF STUDENTS ACCORDING TO THEIR EXCESSIVE WEIGHT GAIN

**n =117**

| EXCESSIVE WEIGHT GAIN | FREQUENCY (f) | PERCENTAGE (%) |
|---|---|---|
| Yes | 26 | 22.2 |
| No | 91 | 77.8 |
| **Total** | **117** | **100** |

The data presented in Table XV depicts that out 117 of the respondent, majority i.e.

91(77.8%) of them were not having excessive weight gain whereas 26(22.2%) were having excessive weight gain.The results are shown in pie diagram in figure no.XVII

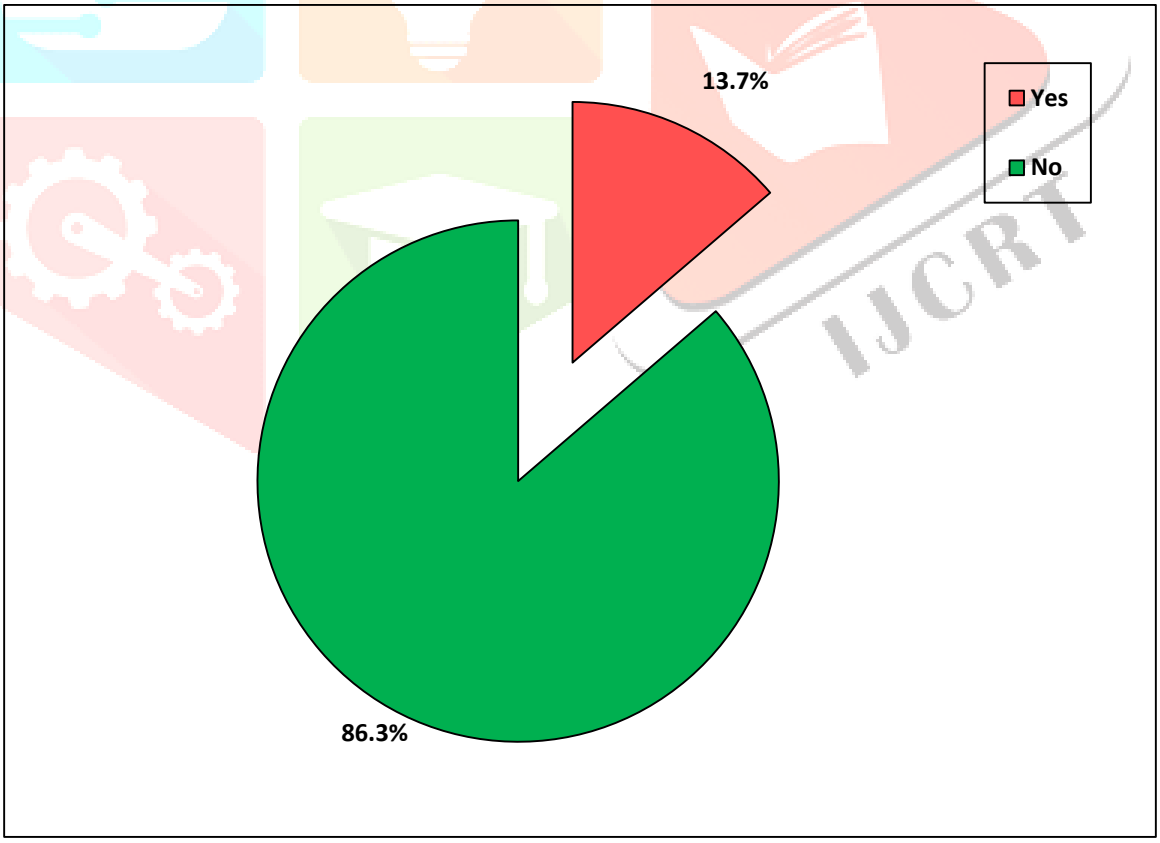


**FIGURE XVII**

**PIE DIAGRAM SHOWING PERCENTAGE DISTRIBUTION OF STUDENTS ACCORDING TO THEIR EXCESSIVE WEIGHT GAIN**

## TABLE-XVI:FREQUENCY AND PERCENTAGE DISTRIBUTION OF STUDENTS ACCORDING TO THEIR FAMILY HISTORY OF PCOD

**n =117**

| FAMILY HISTORY OF PCOD | FREQUENCY (f) | PERCENTAGE (%) |
|---|---|---|
| Yes | 26 | 22.2 |
| No | 91 | 77.8 |
| **Total** | **117** | **100** |

The data presented in Table XVI depicts that out of 117 students, majority of the students i.e. 91(77.8%) were not having family history of PCOD whereas 26(22.2%) were having family history of PCOD. The results are shown in pie diagram in figure no.XVIII

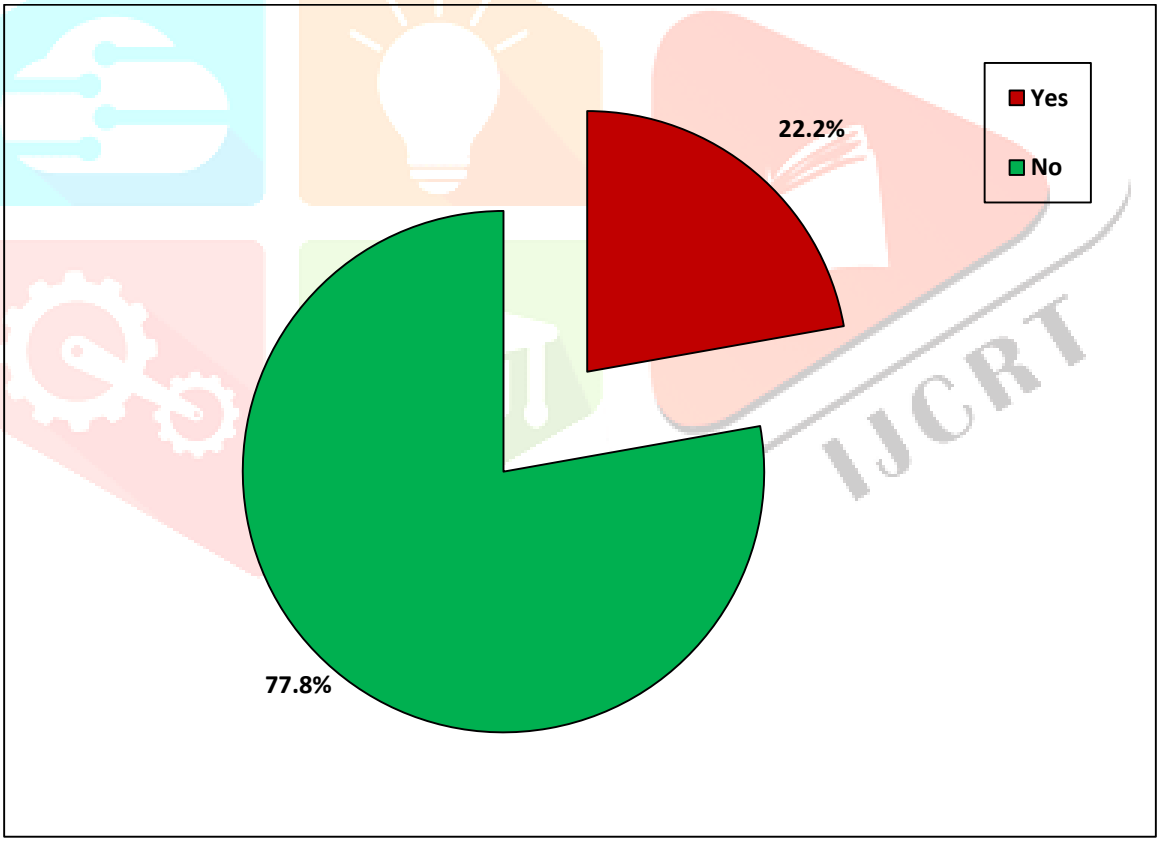


**FIGURE XVIII**

**PIE DIAGRAM SHOWING PERCENTAGE DISTRIBUTION OF STUDENTS ACCORDING TO THEIR FAMILY HISTORY OF PCOD**

**Table XVII: Frequency and percentage distribution of level of knowledge regarding PCOD among students before and after administration of STP.**

**n = 117**

| | Pre test | | Post test | |
|---|---|---|---|---|
| | **F** | **%** | **F** | **%** |
| Inadequate (≤11) | 117 | 100.0 | 36 | 30.8 |

| | | | | |
|---|---|---|---|---|
| Moderately adequate (12 – 18) | 0 | 0 | 22 | 18.8 |
| Adequate (18 – 23) | 0 | 0 | 59 | 50.4 |

The table XVII depicts the frequency and percentage distribution of level of knowledge regarding PCOD among students before and after administration of STP.

It shows that during pre-test , all (100%) had inadequate knowledge whereas in the post test 59(50.4%) students had adequate knowledge, 36(30.8%) had inadequate knowledge and only 22(18.8%) had moderately adequate knowledge regarding PCOD among students.

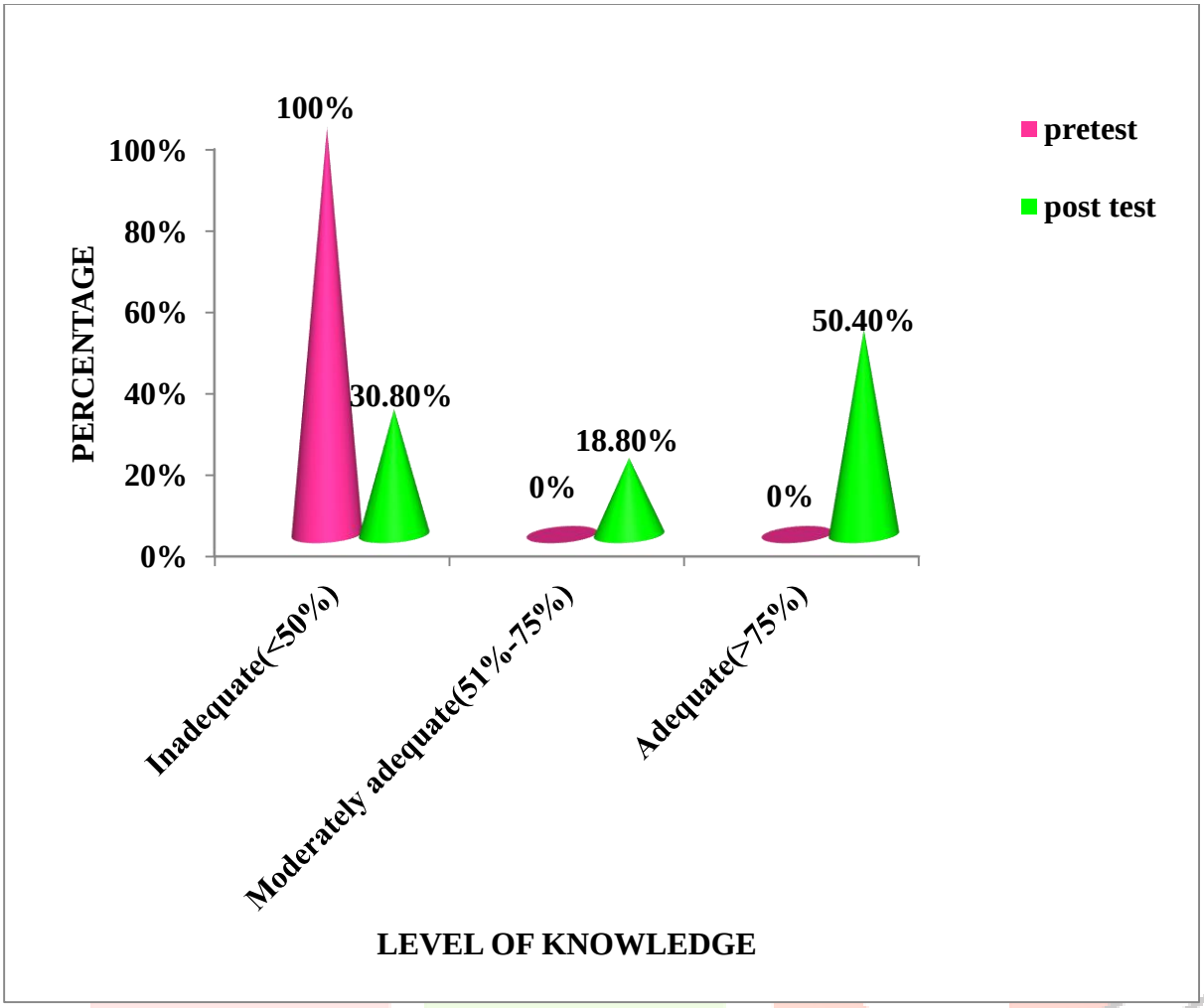


**FIG XIX: CONE DIAGRAM SHOWING THE PERCENTAGE DISTRIBUTION OF LEVEL OF KNOWLEDGE REGARDING PCOD AMONG STUDENTS BEFORE AND AFTER ADMINISTRATION OF STP**

## Table XVIII: Effectiveness of structured teaching programme on knowledge regarding PCOD among the students.

**H1:** There will be significance difference between mean pretest knowledge score and post test knowledge score among the students regarding knowledge on PCOD.

**H0:** There will be no significance difference between mean pretest knowledge score and post test knowledge score among the students regarding knowledge on PCOD.

**n = 117**

| Variables | Mean | S.D | Mean Difference Score | Level of significance | Paired 't' test value & p-value |
|---|---|---|---|---|---|
| Pre- test | 6.03 | 1.57 | 8.95 | 0.05 | **t=16.211 p=0.0001, S*** ** |
| Post- test | 14.98 | 5.80 | | | |

***p<0.001, S – Significant

The table XVIII shows the effectiveness of STP on knowledge regarding PCOD among students. The table depicts that the pretest mean score of knowledge was 6.03±1.57 and the post test mean score of knowledge was 14.98±5.80. The mean difference score was 8.95. The calculated paired 't' test value of t=16.211 and p=0.0001. Since p value is less than 0.001, H0 was rejected and H1 was accepted which infers that there will be significant difference between mean pre test knowledge score and post test knowledge score among the students regarding knowledge on PCOD. This showed that the administration of STP on knowledge regarding PCOD among students was found to be effective in improving the post-test level of knowledge which was also evident from the increase in the mean score from 6.03 to 14.98. The result is shown in box plot diagram.

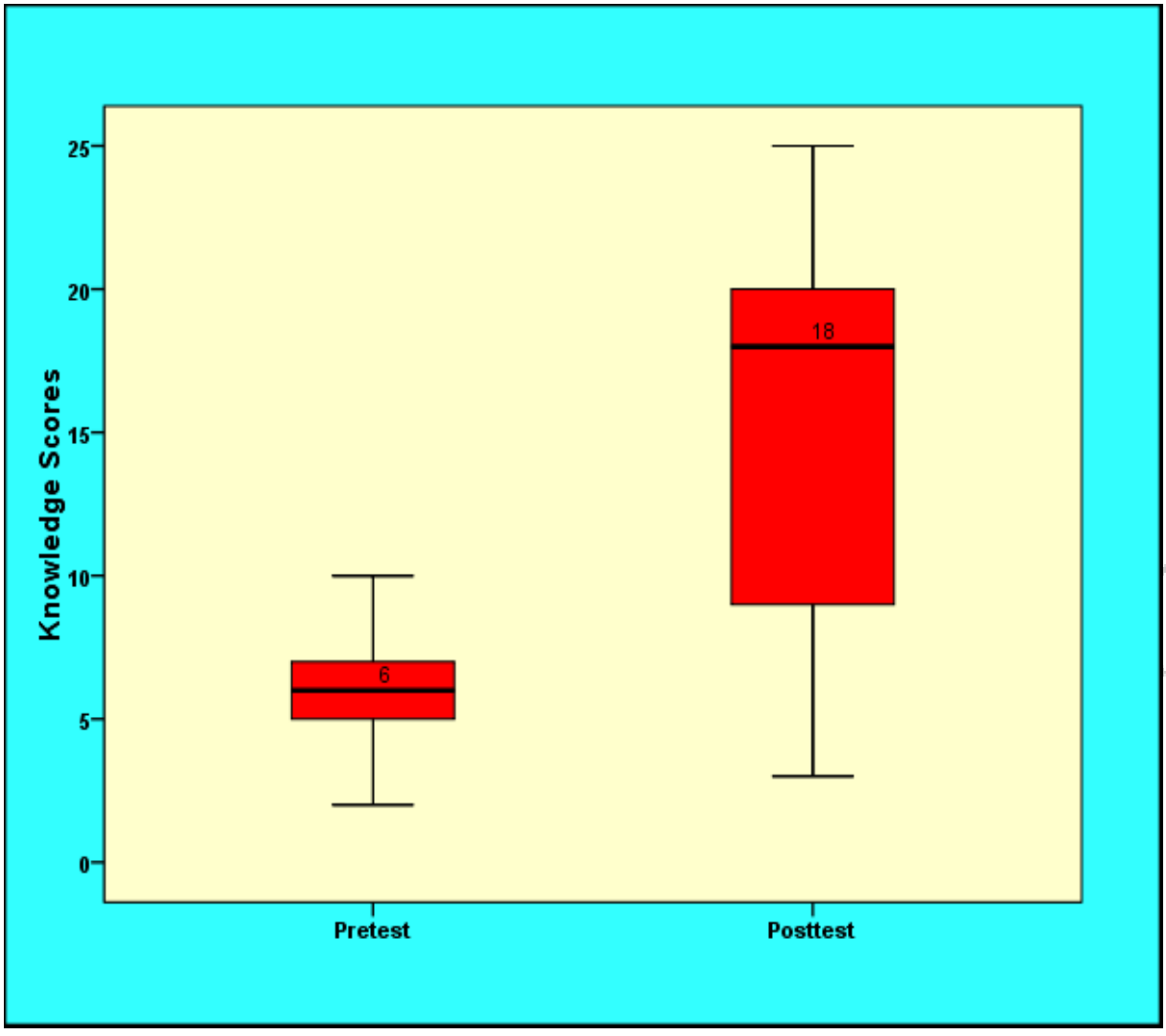


**Fig XX -Boxplot showing the effectiveness of structured teaching programme on knowledge regarding PCOD among the students**

**(Median: pretest – 6.0, posttest – 18.0)**

**Table XIX: Association of pre test level of knowledge regarding PCOD among the students with their selected demographic variables.**

**H1= There is a significant association between mean pre-test knowledge scores regarding knowledge on PCOD with selected demographic variables among students.**

**H0 = There is no significant association between mean pre-test knowledge scores regarding knowledge on PCOD with selected demographic variables among students.**

**n = 117**

| Demographic Variables | ≤Mean | | >Mean | | Chi-Square p-value / Fisher Exact test p-value | Remarks |
|---|---|---|---|---|---|---|
| | f | % | f | % | | |
| **Age (in years) of the student** | | | | | p=0.712 | NS |
| 17 – 18 | 66 | 56.4 | 31 | 26.5 | | |
| 19 – 20 | 11 | 9.4 | 3 | 2.6 | | |
| 21 – 22 | 4 | 3.4 | 2 | 1.7 | | |
| ≥22 | - | - | - | - | | |
| **Educationalst status of the father** | | | | | p=0.524 | NS |
| Primary school | 51 | 43.6 | 28 | 23.9 | | |
| High school | 13 | 11.1 | 3 | 2.6 | | |
| Secondary education | 12 | 10.3 | 4 | 3.4 | | |
| Graduate and above | 5 | 4.3 | 1 | 0.9 | | |
| **Educational status of the mother** | | | | | p=0.473 | NS |
| Primary school | 56 | 47.9 | 29 | 24.8 | | |
| High school | 1 | 0.9 | 1 | 0.9 | | |
| Secondary education | 16 | 13.7 | 4 | 3.4 | | |
| Graduate and above | 8 | 6.8 | 2 | 1.7 | | |
| **Occupational status of father** | | | | | p=0.850 | NS |
| Unemployed | 19 | 16.2 | 7 | 6.0 | | |
| Daily wage labour | 6 | 5.1 | 2 | 1.7 | | |
| Private service | 51 | 43.6 | 26 | 22.2 | | |
| Government service | 5 | 4.3 | 1 | 0.9 | | |
| **Occupational status of mother** | | | | | p=0.496 | NS |
| Private employee | 62 | 53.0 | 31 | 26.5 | | |
| Government employee | 12 | 10.3 | 4 | 3.4 | | |
| Self employed | - | - | - | - | | |

| Demographic Variables | ≤Mean | | >Mean | | Chi-Square p-value / Fisher Exact test p-value | Remarks |
|---|---|---|---|---|---|---|
| | f | % | f | % | | |
| Housewife | 7 | 6.0 | 1 | 0.9 | | |
| **Religion** | | | | | p=0.091 | NS |
| Hindu | 49 | 41.9 | 28 | 23.9 | | |
| Muslim | 32 | 27.4 | 8 | 6.8 | | |
| Christian | - | - | - | - | | |
| Others | - | - | - | - | | |
| **Type of family** | | | | | p=0.105 | NS |
| Joint | 39 | 33.3 | 11 | 9.4 | | |
| Nuclear | 42 | 35.9 | 25 | 21.4 | | |
| **Place of residence** | | | | | P=0.105 | NS |
| Urban | 42 | 35.9 | 25 | 21.4 | | |
| Rural | 39 | 33.3 | 11 | 9.4 | | |
| **Dietary habits** | | | | | p=0.753 | NS |
| Vegetarian | 9 | 7.7 | 3 | 2.6 | | |
| Non-vegetarian | 72 | 61.5 | 33 | 28.3 | | |
| **Previous information about polycystic ovarian disease** | | | | | p=0.651 | NS |
| Yes | 22 | 18.8 | 8 | 6.8 | | |
| No | 59 | 50.4 | 28 | 23.9 | | |
| **Previous information about polycystic ovarian disease through** | | | | | p=0.761 | NS |
| Health personnel | 60 | 51.3 | 29 | 24.8 | | |
| Family member | 7 | 6.0 | 3 | 2.6 | | |
| Friends | 4 | 3.4 | 2 | 1.7 | | |
| Mass media | 10 | 8.5 | 2 | 1.7 | | |
| Others | - | - | - | - | | |
| **History of delayed menarche in the family** | | | | | p=0.651 | NS |
| Yes | 22 | 18.8 | 8 | 6.8 | | |
| No | 59 | 50.4 | 28 | 23.9 | | |
| **Do you have dysmenorrhoea during menstruation** | | | | | p=0.791 | NS |
| Yes | 68 | 58.1 | 29 | 24.8 | | |
| No | 13 | 11.1 | 7 | 6.0 | | |
| **Do you have excessive weight gain** | | | | | p=0.773 | NS |
| Yes | 12 | 10.3 | 4 | 3.4 | | |
| No | 69 | 59.0 | 32 | 27.4 | | |
| **Family history of PCOD** | | | | | p=1.000 | NS |
| Yes | 18 | 15.4 | 8 | 6.8 | | |
| No | 63 | 53.8 | 28 | 23.9 | | |

N.S – Not Significant

The table XIX shows the association of pre-test mean score of knowledge regarding PCOD among the students with their selected demographic variables. It was observed that the demographic variables did not show statistically significant association with level of pre-test mean score of knowledge regarding PCOD among the students with the demographic variables such as age, educational status of girls, education of the father, education of the mother, occupational status of father, occupational status of mother, religion, place of residence, dietary habits, previous information, history of delayed menarche in the family, history of excessive weight gain, family history of PCOD, type of family.

**Table XX: Association of post test level of knowledge regarding PCOD among the students with their selected demographic variables**

**n = 117**

| Demographic Variables | ≤Mean | | >Mean | | Chi-Square p-value / Fisher Exact test p-value |
|---|---|---|---|---|---|
| | f | % | f | % | |
| **Age (in years) of the student** | | | | | p=0.457 |
| 17 – 18 | 34 | 29.1 | 63 | 53.8 | |
| 19 – 20 | 7 | 6.0 | 7 | 6.0 | |
| 21 – 22 | 3 | 2.6 | 3 | 2.6 | |
| ≥22 | - | - | - | - | |
| **Educational status of the father** | | | | | p=0.456 |
| Primary school | 27 | 22.2 | 53 | 45.3 | |
| High school | 7 | 6.0 | 9 | 7.7 | |
| Secondary education | 8 | 6.8 | 8 | 6.8 | |
| Graduate and above | 3 | 2.6 | 3 | 2.6 | |
| **Educational status of the mother** | | | | | p=0.520 |
| Primary school | 29 | 24.8 | 56 | 47.9 | |
| High school | 1 | 0.9 | 1 | 0.9 | |

| Demographic Variables | ≤Mean | | >Mean | | Chi-Square p-value / Fisher Exact test p-value |
|---|---|---|---|---|---|
| | f | % | f | % | |
| Secondary education | 10 | 8.5 | 10 | 8.5 | |
| Graduate and above | 4 | 3.4 | 6 | 5.1 | |
| **Occupational status of father** | | | | | |
| Unemployed | 12 | 10.3 | 14 | 12.0 | p=0.570 |
| Daily wage labour | 4 | 3.4 | 4 | 3.4 | |
| Private service | 26 | 22.2 | 51 | 43.6 | |
| Government service | 2 | 1.7 | 4 | 3.4 | |
| **Occupational status of mother** | | | | | |
| Private employee | 33 | 28.2 | 60 | 51.3 | p=0.594 |
| Government employee | 7 | 6.0 | 9 | 7.7 | |
| Self employed | - | - | - | - | |
| Housewife | 4 | 3.4 | 4 | 3.4 | |
| **Religion** | | | | | |
| Hindu | 27 | 23.1 | 50 | 42.7 | p=0.546 |
| Muslim | 17 | 14.5 | 23 | 19.7 | |
| Christian | - | - | - | - | |
| Others | - | - | - | - | |
| **Type of family** | | | | | |
| Joint | 22 | 18.8 | 28 | 23.9 | p=0.250 |
| Nuclear | 22 | 18.8 | 45 | 38.5 | |
| **Place of residence** | | | | | |
| Urban | 21 | 17.9 | 46 | 39.3 | p=0.125 |
| Rural | 23 | 19.7 | 27 | 23.1 | |
| **Dietary habits** | | | | | |
| Vegetarian | 6 | 5.1 | 6 | 5.1 | p=0.363 |
| Non-vegetarian | 38 | 32.5 | 67 | 57.3 | |
| **Previous information about polycystic ovarian disease** | | | | | |
| Yes | 14 | 12.0 | 16 | 13.7 | p=0.277 |
| No | 30 | 25.6 | 57 | 48.7 | |
| **Previous information about polycystic ovarian disease through** | | | | | |
| Health personnel | 32 | 27.4 | 57 | 48.7 | p=0.890 |
| Family member | 4 | 3.4 | 6 | 5.1 | |
| Friends | 3 | 2.6 | 3 | 2.6 | |
| Mass media | 5 | 4.3 | 7 | 6.0 | |
| Others | - | - | - | - | |
| **History of delayed menarche in the family** | | | | | |
| Yes | 14 | 12.0 | 16 | 13.7 | p=0.277 |
| No | 30 | 25.6 | 57 | 48.7 | |
| **Do you have dysmenorrhoea during menstruation** | | | | | |
| Yes | 34 | 29.1 | 63 | 53.8 | p=0.217 |
| No | 10 | 8.5 | 10 | 8.5 | |
| **Do you have excessive weight gain** | | | | | |
| Yes | 8 | 6.8 | 8 | 6.8 | p=0.281 |
| No | 36 | 30.8 | 65 | 55.6 | |

| Demographic Variables | ≤Mean | | >Mean | | Chi-Square p-value / Fisher Exact test p-value |
|---|---|---|---|---|---|
| | f | % | f | % | |
| **Family history of PCOD** | | | | | p=0.170 |
| Yes | 13 | 11.1 | 13 | 11.1 | |
| No | 31 | 26.5 | 60 | 51.3 | |

N.S – Not Significant

The above table XX shows the association of post test mean score of knowledge regarding PCOD among the students with their selected demographic variables. It was observed that the demographic variables did not show statistically significant association with level of post test mean score of knowledge regarding PCOD among the students.

## SUMMARY:

This chapter deals with the analysis and interpretation of data. The data gathered were summarized using descriptive and inferential statistics for analysis. It was presented in the form of tables, pie chart, bar graphs etc. The analysis has been organized and presented under various sections based on the objectives of the study. The study was conducted mainly to find out the effect of STP on knowledge regarding PCOD among students in selected Colleges, Guwahati,Kamrup (M) Assam. The result showed that the STP was effective in increasing knowledge of the students regarding knowledge on PCOD.

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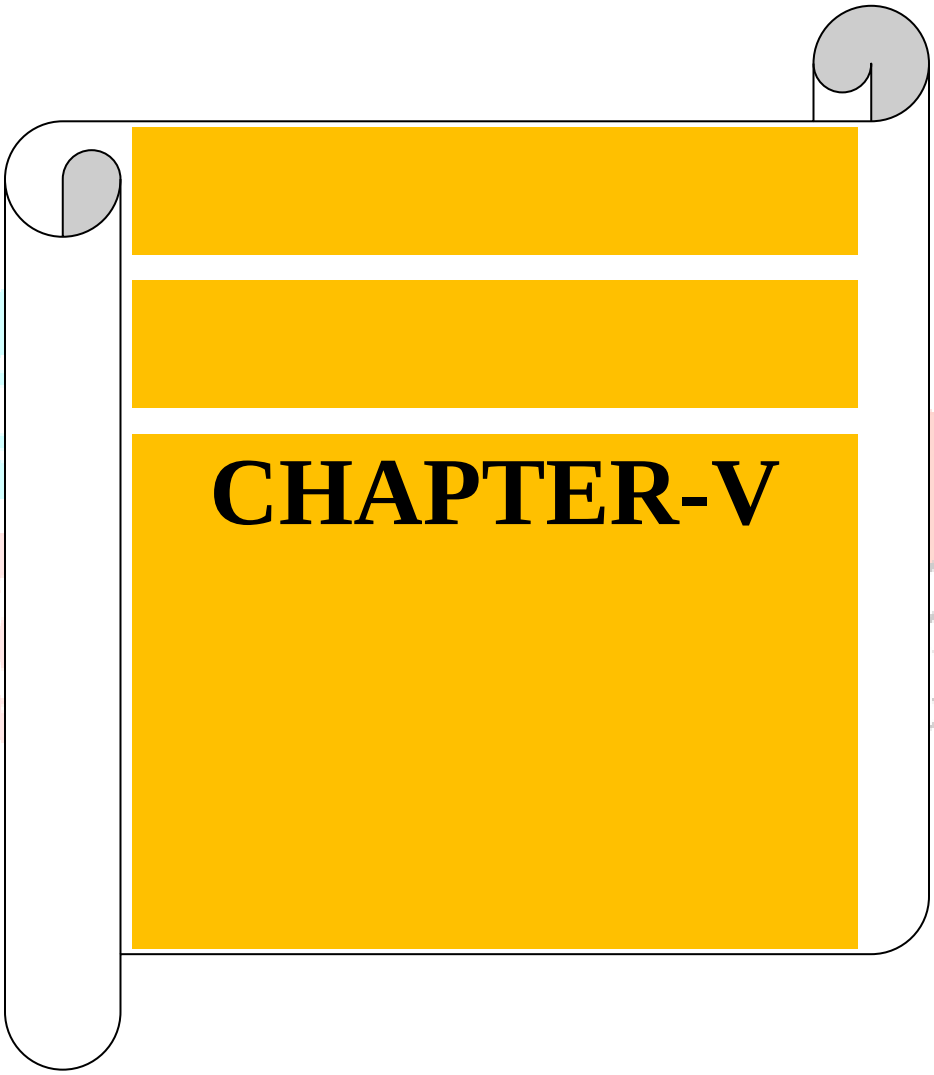
CHAPTER-V

# CHAPTER-V

# SUMMARY, FINDINGS, CONCLUSION AND RECOMMENDATIONS

"**Self-reverence, self-knowledge, self control these thee alone lead life to sovereign power**"

**- Tennyson**

This chapter presents a brief account of the summary, major findings, conclusion, implications and recommendation of the study.

This study was conducted to assess the knowledge and risk factors of the PCOD among the girl students of Guwahati, Assam. The discussion in this chapter was based on the findings obtained from the statistical analysis and interpretations in the previous chapter.

PCOD is an endocrinological disorders affecting the reproductive age of women. It is the presence of fluid filled cyst in the ovary which forms during ovulation. Its symptoms is mostly manifested by obesity especially central obesity, menstrual abnormality likes oligomenorrhea, amenorrhea or dysfunctional uterine bleeding, acne and hirsutism, acanthosis nigricans (thickened, pigmented skin) over nape of the neck, inner thighs and axilla and also fertility. It was diagnosed if there was two of these symptoms i.e high androgens level, irregular menstrual cycle or cyst in the ovaries.

PCOD can leads to endometrial cancer, heart disease, diabetes mellitus and metabolic disorder so early diagnosis and proper management is very important. Management is usually by medical method which includes correction of biochemical abnormality with oral pills, GnRH and Provera. Lifestyle modification is important to prevent PCOD. Healthy food habits and exercise is a great way to help in preventing obesity and PCOD.

## PROBLEM STATEMENT:

“Effectiveness of structured teaching programme on knowledge regarding PCOD among the students in selected colleges of Guwahati, Kamrup (M) Assam: A pre-experimental study”

## OBJECTIVES:

1. To assess the knowledge regarding PCOD among the students before and after administration of structured teaching programme.

2. To evaluate the effectiveness of STP among the students.

3. To find out the association between the pre test knowledge score of PCOD with selected demographic variables among the students.

## RESEARCH METHODOLOGY:

Research approach: Quantitative research approach was used for the study.

Research design: Pre experimental one group pre test post test research design was used in this study.

## VARIABLES:

**Dependent variable:** Knowledge

**Independent variable:** STP

**Demographic variables**: In this study, demographic variables were age, educational status of student, education of father, education of mother, occupational status of father, occupational status of mother, religion, type of family, place of residence, dietary habits, previous information about PCOD, delayed menarche, dysmenorrhoea during periods, excessive weight gain, family history of PCOD.

**Setting of the study**: The study was conducted in Karmashree Hiteswar Saikia College, Beltola College and S.B. Deorah College Guwahati, Assam.

**Population of the study**: The population in this study referred to students.

**Target population**: In this study, the target population was students in selected colleges of Guwahati Kamrup (M), Assam.

**Accessible population**: In this study, it referred to the students of selected colleges of Guwahati Kamrup (M), Assam.

**Sample**: In this study, the sample was students in selected colleges of Guwahati, Assam and who fulfilled the inclusion criteria.

**Sample size**: The total sample size was 117 students.

**Sampling technique**: Multi sampling technique.

## TOOLS AND TECHNIQUE:

**Tools**: The tool used was structured questionnaire to assess the knowledge on Polycystic Ovarian Disease.

**Technique**: The technique was self-report.

## VALIDITY OF THE TOOL:

The prepared tool was submitted to six experts of Obstetrics and Gynecological nursing. Four experts from obstetrics and gynecological nursing, one physician of Obstetrics and Gynecology and one expert from Community health nursing. The experts were requested to give their opinion regarding accuracy, relevancy and appropriateness of content. Based on the suggestion given by the experts, necessary modification and correction were made after consulting the guide.

## RELIABILITY OF THE TOOL:

The reliability of the tool was done by using test- retest method. The reliability of knowledge questionnaire was 0.81 which revealed that the tool was reliable.

## PILOT STUDY:

A pilot study was conducted from 2nd September to 9th September, 2022 after obtaining permission from the Principal of Asian Institute of Nursing Education, Guwahati, Assam. The tool was administered to 12 students. The pilot study report shows that the students had significant gain in knowledge after administration of the STP regarding PCOD. Thus, the pilot study helped in establishing the feasibility of the study.

## DATA COLLECTION PROCESS:

The data collection was scheduled from 15th November to 26th November, 2022. According to the feasibility of the study and availability of the sample, three colleges were selected.

A formal written permission was obtained for the respective Principals of the selected colleges for conducting the research study by the investigator before the collection of the data. The investigator explained the purposes of her study and assured them of the confidentiality and anonymity to get their co-operation and prompt responses during collection. A written informed consent was also taken from 117 students who fulfills the selection criteria. 50 samples were taken from Karmashree Hiteswar Saikia college, 17 samples were taken from S.B.Deorah college and 50 samples were taken from Beltola college.

Investigator distributed the pre-test knowledge questionnaire which took 30-45 minutes to complete in average. A STP was administered on the same day after completion of the pre-test. The students interacted and cooperated well with the investigator and were satisfied with the information they got. Post-test was conducted to the same group of students using the same knowledge questionnaire and on the seventh day of administration of STP on knowledge regarding PCOD.

## PLAN FOR DATA ANALYSIS:

The collected data was tabulated, analyzed and interpreted by using descriptive methods like frequency, percentage, mean, standard deviation and presented in the form of tables and graph, and the inferential statistical methods like paired “t” test and fisher exact test.

## MAJOR FINDINGS OF THE STUDY:

The major findings of the study were as follows:

### SECTION 1: DEMOGRAPHIC DATA

**1. Age**: Majority i.e. 97(82.9%) were in the age group of 17-18 years.

**2. Educational status of girls**: It was observed that the majority i.e 117(100%) were in BA /BCA 1$^{ST}$ year.

**3.Education of the father :** It was observed that majority of the student's father i.e. 79(67.5%) were in the primary school.

**4.Education of the mother:** It was observed that majority of the student's mother i.e. 85(72.6%) were in primary school.

**5.Occupational status of father :** It was observed that majority of the student's father i.e. 26(22.2%) were unemployed.

**6.Occupational status of mother:** It was observed majority of the student's mother i.e. 93(79.5%) were private employee.

**7.Religion:** It was observed that majority i.e.77(65.8%) students were Hindu.

**8.Type of family:** It was observed that majority i.e. 67(57.3%) were in the nuclear family.

**9.Place of residence:** It was observed that majority i.e. 67(57.3%) were living in urban area.

**10.Dietary habits:** It was observed that majority i.e. 105(89.7%) were non-vegetarian.

**11.Previous information about PCOD:** It was observed that majority i.e.87(74.4%) were not having previous information about PCOD whereas only 30(25.6%) were having previous information about PCOD.

**12.Previous information about PCOD through:** It was observed that majority i.e. 89(76.1%) were getting previous information about PCOD through health personnel.

**13.History of delayed menarche in the family:** It was observed that majority i.e.87(74.4%)were not having a history of delayed menarche in the family.

**14.History of dysmennohoea during menstruation:** It was observed that majority i.e. 97(82.9% were having dysmenorrhoa during menstruation.

**15.Excessive weight gain**: It was observed that majority i.e.91(77.8%) of them were not having excessive weight gain.

**16.Family history of PCOD:** It was observed that majority of the students i.e. 91(77.8%) were not having family history of PCOD.

**Section II**: Frequency and percentage distribution of students according to the level of knowledge regarding PCOD before and after administration of STP.

The first objective is to assess the pre and post test knowledge score regarding PCOD among students in selected colleges of Guwahati, Kamrup (M) Assam before and after administration of STP.

In the pretest, majority i.e. All (100%) had inadequate knowledge. In the post test majority i.e. 59 (50.4%) had adequate knowledge, 36 (30.8%) had inadequate knowledge and 22(18.8%) had moderate knowledge regarding PCOD.

This study was supported by the study,

**Rekha MM, Manasa M and Kumari RC (2018),** conducted an observational and interventional study to identify the risk factors in developing Polycystic Ovarian Syndrome among teenagers and minimizing them by Life Style Modifications through advanced patient counselling by Doctors of Pharmacy among the women in Bahudha womens Hostel, Andra Pradesh. The study sample consists of 530 women with age group ranging from 18-24 years old. From the study it was found that out of 530 sample 271 (51.1%) were in the chance for getting PCOS, 159 (30.01%) were in high risk to get PCOS and 100(18.87%) were unpredictable to PCOS.4

**Upadhye JJ, et al. (2017)** conducted a survey to assess the knowledge level of PCOD at Department of Obstetrics and Gynaecology. Omega Hospital, LIC colony, Nagpur, Maharastra, India among 200 medical students of 1, 2 and 3 year of different colleges by using simple random sampling technique for sample collection. The study found that 51% of girls had normal Body Mass Index (BMI), 19.5% were overweight. 16.5% were obese while 13% were underweight, 33.5% had acne, 16% had irregular of menses, 5% had hirsutism while 2% had infertility. 28% of the girls were unaware of PCOD while 72% were having some knowledge from friends, doctor, teacher and newspaper.[7]

**Brar K. et.al (2016),** conducted a research study to assess the knowledge of teenagers regarding Polycystic Ovarian Disease at Mohali district, Punjab. The study consists of 200 teenagers which was selected by using convenient sampling technique. Structured questionnaire was used to assess the knowledge. The study result shows that out of 200 samples, majority of the girls i.e 164(82%) had inadequate knowledge and minority i.e 1 (0.5%) had excellent level of knowledge and only 35(17.5%) had good level of knowledge with a mean score of 8.0. [3]

**Sunanda B, et al. (2016)** conducted a descriptive survey study to assess the knowledge of PCOS among 150 students ages between 18-25 years at Nitte Usha Institute of Nursing Sciences (NUINS). The data was collected by using structured questionnaire on PCOD which consist of 20 items. They found that 76% (144) of the samples had average knowledge, 10.7% (16) had good knowledge and 13.3% (16) had poor knowledge regarding polycystic ovarian disease.[8]

**Section 3:** Effectiveness of STP on knowledge regarding PCOD among the students.

The second objective was to identify the effectiveness of STP among the students.

The analysis depicted that the mean knowledge score in pre-test was 6.03 with standard deviation of 1.57. In post-test, the mean knowledge score was 14.98 with standard deviation of 5.80. The mean difference score was 8.95. The improvement was statistically tested by paired t test. The calculated paired t test value of t=16.211 and p=0.0001. Since p value is less than 0.001, H0 was rejected and H1 was accepted which infers that there was significant difference between mean pre test knowledge score and post test knowledge score among the students regarding knowledge on PCOD. This showed that the administration of STP on knowledge regarding PCOD among students was found to be effective in improving the post-test level of knowledge which was also evident from the increase in the mean score from 6.03 to 14.98.

This study was supported by:

**Sheelam MA (2018)** performed a survey on "Effectiveness of Structured Teaching Programme on Knowledge about PCOD among Nursing Student in improve the awareness of the nursing students regarding

PCOD through organi aching enson PCOD. The total study samples we 30, and those were 3nd-year GNM students aged 19 years to 21 years and above. One group "pre-test puid-test" design was utilized for the analysis. Structured knowledge questionnaires were the technique tilized for this research. It is also noted that most (63.3 percent) of the samples wire Christians. Most samples (63390), and most (766), revived data from books or articles were from urban regions. The results revealed the 33.3% of participants were poorly informed in pre-testing, 56.65% had average knowledge, and 10 percem had excellent knowledge Following the test result, 53.3% had excellent knowledge, 46.6% had moderate knowledge, and none had a hid knowledge. The results of this research show that the knowledge values following the designed into program have improved substantially. There was also no substantial relationship between knowledge size and information source and residential area.[4]

**Rawat S, et al. (2017)** conducted a study to assess the effectiveness of structured teaching programme on knowledge about Polycystic Ovarian Syndrome among 94 adolescent girls at Himalaya College of Nursing, SRHU, Dehradun, Uttarakhand by adopting a quantitative approach with pre-experimental design. The study found that the post-test knowledge score (22.55±3.57) was higher than that of the mean knowledge score (11.13 ± 3.32) and the mean difference was 11.42. They interpreted that STP was effective in improving the knowledge of adolescent girls.[8]

**Section**IV:Association of pre test level of knowledge regarding PCOD among the students with their selected demographic variables.

The third objective was to find out the association between pre test knowledge score of STP with selected demographic variables among students in selected colleges of Guwahati, Assam.

Hypothesis was formulated to see the significant association between pre test knowledge with selected demographic variables.

The analysis depicted that there was no significant association between pretest knowledge score and selected demographic variables such as age, type of family,educational stream,residence, family income per month, occupational status of father,occupational status of mother, family history of PCOD,previous information about PCOD in terms of yes or no,source of previous information about PCOD,characteristics of periods.place of residence, religion, dietary habits, history of delay menstruation in the family and previous information about PCOD.

2.This study was supported by:

**Shareef RA, et al. (2018)** conducted a prospective observational study to assess the association between acne and PCOD among 100 women of 18-35 years old in department of Dermatology, Dharanalakshmi Srinivasan medical college and hospital, Permabalur. The study found that, out of 100 women, 38% were reported to have irregular menstrual cycle. 49% were overweight and 32% were obese. 79% had hirsutism, alopecia grade 1, 2 and 3 in 61%, 28% and 11% respectively. Skin tags were present in 79% of the women. The proportion of women having PCOD was 30%.[6]

**William S, Lissa J and Saraswati KN (2017)** conducted an experimental research approach to assess the knowledge regarding PCOD among adolescent girls before and after structured teaching programme and assess the effectiveness of structured teaching programme on knowledge regarding PCOD among adolescent girls and to find out the association between pre-test knowledge of adolescent girls regarding PCOD with selected demographic variables. among 60 adolescent girls in selected college of Mysuru by using non probability convenient sampling technique. It was found that, the pre test finding showed most of the

adolescent girls 51(85%) were having inadequate knowledge, 5(8.3%) were having adequate knowledge and 4(6.6%) were having moderate knowledge regarding PCOD. There was an increase in knowledge scores after undergoing structured teaching programme with the t-test value of 11.6 at 0.05 level of significance. It was also found that, the association between pre test knowledge score of adolescent girls with selected demographic variables were found to be not significance at level of 0.005 except monthly income, known case of PCOD and previous source of information.[5]

## CONCLUSION

Based on the analysis of the findings of the study, the following inferences were drawn:

Out of 117 student's, age: majority 97(82.9%) belongs to 17-18 years age,14(12.0%) belongs to 19-20 years age, 6(5.1%) belongs to 21-22 age and there is no respondent in the age group of ≥22years,educational status of students:117(100%) were in BA /BCA 1$^{ST}$ year,education of father:2(1.8%) were in high school, 20(17.1%) were in the secondary education,and 10(8.5%)were graduated and above, education of the mother: 85(72.6%) were in primary school, 2(1.8%) were in high school, 20(17.1%) were in the secondary education,and 10(8.5%)were graduated and above,occupational statas of father:26(22.2%) were unemployed, 8(6.8.%) were daily wage labour,77(65.9%) were private employee,and only 6(5.1%) were government employee,occupational status of mother : 93(79.5%) were in private employee,16(13.7%) were government employee,8(6.8%) were housewife, religion:77(65.8%)students were Hindu,40(34.2%) students were Muslim,whereas none of them belongs to Christian and others, type of family:50(42.7%) belongs to joint family whereas 67(57.3%) belongs to nuclear family,place of residence:67(57.3%) of the student were living in urban area whereas 50(42.7%) were living in rural area,dietary habits:105(89.7%) were non-vegetarian whereas 12(10.3%) were vegetarian**,** previous information about PCOD:89(76.1%) from health personnel ,12(10.3%) from mass media 10(8.5%) from family members, and only 6(5.15) from friends, history of delayed menarche in the family**:**87(74.4%)were not having history of delayed menarche in the family whereas only 30(25.6%) were having a history of delayed menarche in the family, dysmenorrhoa during menstruation: 97(82.9%) were having dysmenorrhoa during menstruation whereas only 20(17.1%) were not having dysmenorrhoa during menstruation, excessive weight gain: 91(77.8%) of them were not having excessive weight gain whereas 26(22.2%) were having excessive weight gain, family history of PCOD: 91(77.8%) were not having family history of PCOD whereas 26(22.2%) were having family history of PCOD.

In pre-test, majority i.e.117 (100%) had inadequate knowledge whereas in the post test, majority i.e. 59(50.4%) had adequate knowledge, 36(30.8%) had inadequate knowledge and only 22(18.8%) had moderate knowledge regarding PCOD.

The mean knowledge score in pre-test was 6.03 with standard deviation of 1.57. In post-test the mean knowledge score was 14.98 with standard deviation of 5.80.

The improvement was statistically tested by Paired 't' test. The calculated paired t test value of t=16.211 and p=0.0001. Since p value is less than 0.001, H0 was rejected and H1 was accepted which infers that there will be significant difference between mean pre test knowledge score and post test knowledge score among the students regarding knowledge on PCOD. This showed that the administration of STP on knowledge regarding PCOD among students was found to be effective in improving the post-test level of knowledge which was also evident from the increase in the mean score from 6.03 to 14.98.

The association was statistically tested by fisher exact test and analysis depicted that there was no significant association between pretest knowledge score and selected demographic variables such as age,type of

family,educational stream,residence, family income per month, occupational status of father,occupational status of mother, family history of PCOD,previous information about PCOD in terms of yes or no,source of previous information about PCOD,characteristics of periods,place of residence, religion, dietary habits, history of delay menstruation in the family and previous information about PCOD at the 0.01 level of significant.

## NURSING IMPLICATIONS

The investigator has drawn the following implications from the study which is a necessary concern to the field of nursing practice, nursing service, nursing education, nursing administration and nursing research.

### Nursing practice

1. Nurses can provide education to the adolescent girls about prevention of PCOD by giving upto date information and its importance.

2. Nurses can put greater emphasis on the different ways to maintain good and healthy dietary habit.

### Nursing education

1. The student nurse can provide health education to the girls by organizing health awareness campaign in different schools or colleges.

2. Student nurses can give education about the healthy dietary habit and healthy lifestyles.

### Nursing research

1. Nurse researcher should emphasis more to assess the knowledge of PCOD on the prevention, healthy lifestyle and treatment.

2. Nurse researcher should encourage more to assess the risk factors of PCOD among the adolescents and young women.

3. Nurse researcher can conduct a study by developing health teaching programme.

4. This study can also be replicated and implemented with larger samples.

### Nursing administration

1. The nurse administrator should organize in service education programme among the nurses on prevention of PCOD to improve their knowledge regarding PCOD and its importance.

2. The nurse administrator should take initiative in guiding and supervising the student nurses in creating awareness on PCOD.

### Limitation

The investigator could not access the large number of sample as most of the colleges were having final exams. So, findings of the study could not be generalized.

### Recommendation

On the basis of the findings recommendation can be offered for further research

1. A comparative study can be done to find out the similarities or difference in knowledge between arts students and science students regarding PCOD.

2. A similar study can be conducted by using information booklet.

**Summary**

This chapter dealt with summary of the research process, summary of the main findings, conclusion, limitations and implication of the study in nursing practice, nursing education, nursing administration and research. Study suggestions and recommendation for further studies and improvement have been incorporated in this chapter.

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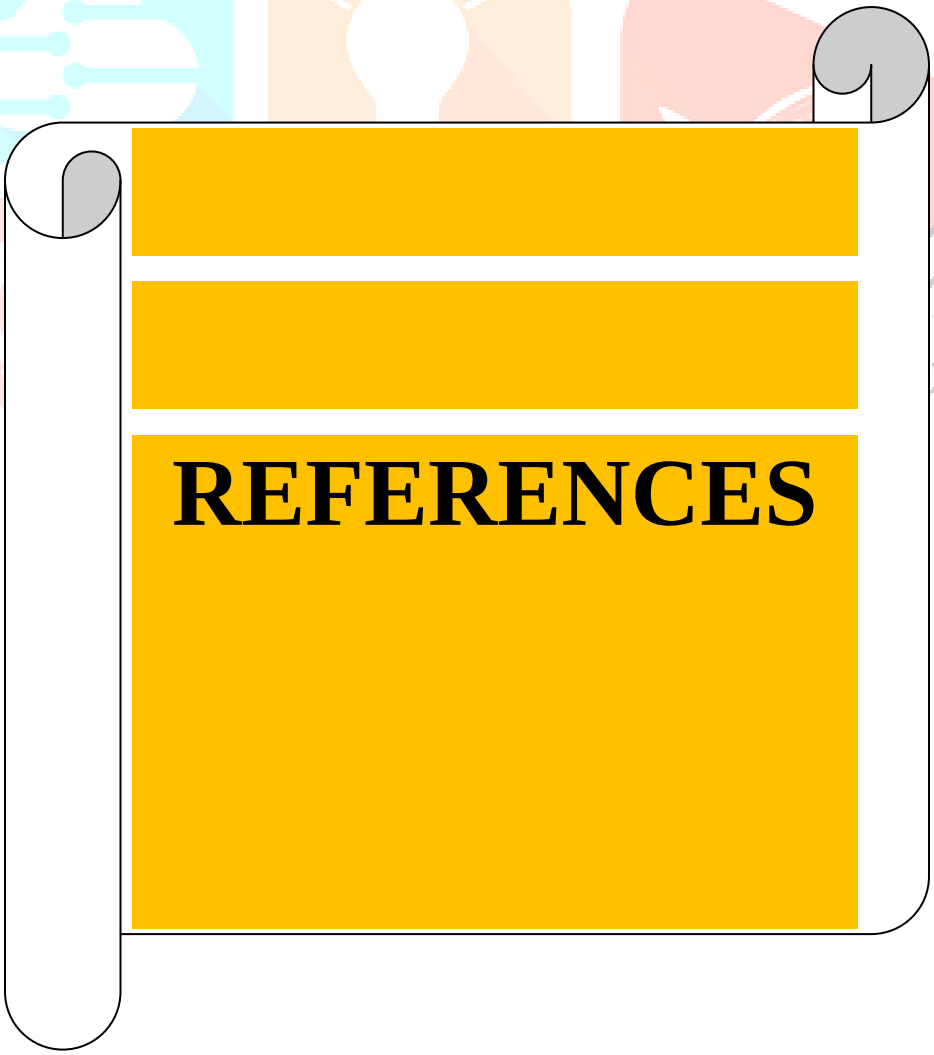

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**APPENDIX-A(1)**

INS TRUST

ETHICS COMMITEE

Regn.No-ECR/778/Inst/AS/2015 (gs Cler Geof)

GNRC Complex, Dispur, Guwahati-781006

**Following items of agenda were taken up for discussion.**

Item1: Confirmation of records of discussions Records of Discussion of the Ethics Committee held on were confirmed.

Item2: The Chairperson intimated the members regarding presentation of the following new proposal for approvals.

Item 3.Application for Ethical Clerance of Research Studies of M Sc.Nursing Students of AINE.

The topics were explained by Mrs Bijaya Thongam, Faculty AINE.

Dated:

Jatin Hazarika

Chairperson

Ethics Committee,INS Trust

Dispur Guwahati

Copy to-

1) Managing Director, GNRC Ltd.

2) Dr. Anup Kumar Boro,GNRC Hospitals, Dispur

3) Dr.Rupiyoti Das, GNRC Hospital, Dispur

4) Principal AINE,Guwahati

6) Dr. S.D Bhagabati, Member Secretary. He is requested to intimate the Investigators of the studies accordingly. He will also forward the copies of this records of discussion to all the Members of the Ethics Committee.

Jatin Hazarika

## ASIAN INSTITUTE OF NURSING EDUCATION

## LIST OF DISSERTATION TOPIC 2022-2023

| l. No | Name of the student | Topics | Speciality | Name of the guide and co-guide |
|---|---|---|---|---|
| 1. | Ms. Lily Kulo | Awareness and interest to practice Independent Nurse- Midwifery Practitioner among student nurses at selected nursing colleges in Guwahati, Assam: A descriptive study. | Obstetric and Gynaecological Nursing | Dr. Unmona B. Saikia<br>Ms Sushmita Mali |
| 2 | Ms Padmaja Kalita | Awareness of junk food effects and exploring eating habits with a view to develop a dietary manual among adolescents in selected schools of Guwahati, Assam- A descriptive study. | Community Health Nursing | Dr. Unmona B. Saikia<br>Ms Sushmita Mali |
| 3. | Ms Aremsungla | Knowledge and attitude regarding catheter associated urinary tract infection (CAUTI) bundles among B.Sc Nursing students in selected Nursing | Medical –Surgical (CTVS ) Nursing | Dr. Ranju Rani Das<br>Ms Pallabi Sarma |

| | | | | |
|---|---|---|---|---|
| | | Colleges in Guwahati, Assam with the view to develop an information booklet: A descriptive study. | | |
| 4. | Ms. Rajshree Saikia | Knowledge regarding menopausal symptoms and its management among rural and urban women of Kamrup, Assam, with a view to develop an information booklet : A Comparative Study | Community Health Nursing | Ms. Sabita Bayan<br>Ms Baswati Das |
| 5. | Ms Trishna Devi | Job satisfaction of Community Health officer in selected PHCs and Health and Wellness Centre in Kamrup District, Assam: A descriptive study | Community Health Nursing | Ms. Sabita Bayan<br>Ms Baswati Das |
| 6. | Ms Kamlin Tham | Prevalence of self medication practices and it's associated factors among patients of selected hospitals of Guwahati, Assam: A descriptive study. | Medical Surgical (CTVS ) Nursing | Ms Mitali Barman<br>Ms Richa Hazarika |
| 7. | Ms Monmika Phukon | Assessment of knowledge regarding cardiovascular drugs among nursing students in selected nursing colleges in Guwahati, Assam with a view to develop an information booklet: A descriptive study. | Medical Surgical (CTVS ) Nursing | Ms Mitali Barman<br>Ms Richa Hazarika |
| 8.. | Ms. Karabi Das | Effectiveness of structure teaching programme on knowledge regarding PCOD among the students in selected colleges of Guwahati, Assam: pre-ecperimental study | Obstetric and Gynaecological Nursing | Ms. Bijaya Thongam |
| 9. | Ms Kritika Chakraborty | Prevalence of Non-communicable diseases and its associated factors among adults in selected offices of Guwahati, Assam: A descriptive study" | Community health Nursing | Ms. Bijaya Thongam<br>Ms. Jessica Warlarpih |
| 10.. | Ms Dipanjali Kalita | Assessment of knowledge regarding child birth preparedness among primigravida mother in Antenatal OPD , in selected hospitals of Guwahati, Assam with a view to develop an information booklet :A descriptive study | Obstetric and Gynaecological Nursing | Ms Arline Besra<br>Ms Nandita Das |
| 11. | Ms. Ilawanpyntngen kharsohnoh | Knowledge and attitude regarding dysmenorrhea and health seeking behaviour among adolescent girls in selected schools of Guwahati, Kamrup (M) Assam: A descriptive study | Obstetric and Gynaecological Nursing | Ms Arline Besra<br>Ms Nandita Das |
| 12. | Odessey Pangkhum | Knowledge and attitude regarding stem cell harvesting among nursing students in selected institutes of Guwahati, | Obstetric and Gynaecological | Ms Rashmi Rekha<br>Ms Monalisa Ahmed |

| | | | | |
|---|---|---|---|---|
| | | Assam, with the view to develop an information booklet: A descriptive study. | | |
| 13. | Maryir Geyi | Stress and its associated factors among students in selected Nursing Institutes of Guwahati, Assam: An exploratory study. | Child Health Nursing | Ms Rashmi Rekha<br>Ms Monalisa Ahmed |
| 14. | Ms Ruchi Aktar | Knowledge and practice regarding myths and misconceptions of perinatal care among postnatal mothers in selected hospitals, Guwahati, Assam: A descriptive Study . | Community health Nursing | Ms Monika Kalita |
| 15. | Ms Sabrin Jahan | Knowledge and attitude regarding prevention of "TORCH" infection among students of selected colleges, Guwahati, Assam: A descriptive Study. | Obstetric and Gynaecological Nursing | Ms Rikynti Nongkynrih |
| 16. | Ms Apsara Chetry | Knowledge and attitude regarding infertility among students in selected colleges of Guwahati, Assam: A descriptive study. | Obstetric and Gynaecological Nursing | Ms Rikynti Nongkynrih |
| 17. | Ms. Simi Das Purkayastha | Knowledge and attitude regarding behavioural problems of school age children among mothers in selected schools of Guwahati, Assam: A descriptive study. | Child Health Nursing | Ms Soma Debnath |
| 18. | Ms M. Bijaya Devi | Prevalence of obesity among adults in selected offices in urban areas of Guwahati, Assam, with a view to develop an information booklet: A descriptive study | Community Health Nursing | Ms Bijaya Thongam<br>Ms Reshma Begum |

# APPENDIX-E

## RESEARCH TOOLS

## DEMOGRAPHIC CHARACTERISTICS OF THE RESPONDENTS

### Section-A

### Instructions:-

The following items are related to demographic data of the respondent.the interviewee will write in space provided and place a tick mark (√)

1. Age (in years) of the student:

a.17-18 ( )

b.19-20 ( )

c.21-22 ( )

d. ≥22 ( )

2.Educational status of student:

a.BA/BCA 1st year students ( )

b.BA 2nd year students ( )

c.BA 3rd year students ( )

3.Educational status of the father:

a.Primary school ( )

b.High school ( )

c.Secondary education ( )

d.Graduate and above ( )

4.Educational status of the mother:

a.Primary school ( )

b.High school ( )

c.Secondary education ( )

d.Graduate and above ( )

5.Occupational status of father:

a.Unemployed ( )

b.Daily wage worker ( )

C.Private service ( )

d.Government service ( )

6.Occupational status of the mother:

a.Private employee ( )

b.Government employee ( )

c.Self employed ( )

d.Housewife ( )

7.Religion:

a.Hindu ( )

b.Muslim ( )

c.Christian ( )

d.Others ( )

8.Type of family:

a.Joint ( )

b.Nuclear ( )

9.Place of residence:

a.Urban ( )

b.Rural ( )

10.Dietary habit:

a.Vegetarian ( )

b.Non-vegetarian ( )

11.Previous information about polycystic ovarian disease:

a.Yes ( )

b.No ( )

11.1.If yes, source of the information:

a.Health personnel ( )

b.Family member ( )

c.Friends ( )

d.Mass media ( )

e.Others ( )

12.History of delayed menarche in the family:

a.Yes ( )

b.No ( )

13.Do you have dysmenorrhoea during menstruation:

a.Yes ( )

b.No ( )

14.Do you have excessive weight gain:

a.Yes ( )

b.No ( )

15.Family history of PCOD:

a.Yes ( )

b.No ( )

## Section-B

## STRUCTURE QUESTIONNAIRE

## FOR THE ASSESSMENT OF KNOWLEDGE REGARDING PCOD AMONG STUDENTS

Please read the following question carefully and select the correct answer among the option given below and place a tick (√) in the appropriate answer.

**Related to menstrual cycle:**

1.The average menstrual cycle for a young women is:

a. 14 days

b. 18days

c. 28days

d. 24days

**Related anatomy**:

2.The part of female reproductive system involved in PCOD is:

a. Cervix

b. The urethra

c. Vaginal opening

d. Ovaries

3.The hormones group that is important to male traits and reproductive activity is:

a. Androgen

b. Estrogen

c. Progesterone

d. Follicle-stimulating hormone

**About the disease**:

4. What do you mean by PCOD -

a. There is a pus – filled sac in the ovary

b. There is a fluid –filled sac in the ovary

c. There is an air-filled sac in the ovary

d. There is a solid filled sac in the ovary

5.Polycystic ovarian syndrome is a condition in which-

a. There is only one cyst in the ovary

b. There are many cysts in the uterus

c. There are many cysts in the ovary

d. There are many cysts in the ovary and uterus

**Causes:**

6.PCOD is a disease which occurs due to-

a. Infection in the reproductive tract

b. Presence of calculi in the urinary tract

c. Alteration in hormones level

d. No specific cause

7.PCOD is caused by-

a. Excessive production of female hormone

b. Excessive production of male hormone

c. No production of female hormone

d. Equal production of male and female hormone

**Risk factors:**

8.Female who are in high risk for having PCOD is-

a. Thin body build

b. Post surgery

c. Obese women

d. Menopause women

9.PCOD is the most common disorder in a women during:

a. Childhood

b. Reproductive age

c. Late adulthood

d. Old age

**Symptoms:**

10.The symptom seen in PCOD women is:

a. Weight loss

b. Irregular bleeding

c. Decrease appetite

d. Regular menstrual bleeding

11.The patient having PCOD include recognizing feature of:

a. Weight gain

b. Respiratory distress

c. Muscle pain

d. Abdominal pain

**Investigation & treatment:**

12. Treatment in the case of PCOD is mainly aimed to improve the:

a. Biochemical abnormalities

b. Correction of dietary pattern

c. Sedentary lifestyle

d. Reduction of stress

13. PCOD is generally rule out by the investigation of:

a. History

b. Urine test

c. Ultrasonography

d. X-ray

14.In PCOD,the first line of treatment for an obese patient is:

a. Medication only

b. Diet containing decreased sugar

c. Meditation

d. Weight reduction

**Management:**

15.Management of PCOD mainly depends on:

a. Presenting symptoms

b. Only history of medical illness

c. Lifestyle information

d. Dietary pattern

16.The food items that should be avoided in PCOD is:

a. Refined carbohydrate

b. Fruits

c. Fish

d.Vegetables

17.The food items that should be added to the PCOD diet are:

a. Lean proteins and vegetables enriched with fiber

b. Excess amount of sugar

c. Refined carbohydrate

d. Less protein

18.The benefit of doing regular exercises in PCOD is to:

a.Increase body fat

b.Increase insulin resistance

c.Increase blood glucose level

d.Lower blood glucose level

19.The self-strategy that can be used to improve stress and mental well being of with PCOD include-

a.Listening to loud music

b.Yoga

c.Medication only

d.Only by watching movies

20.In PCOD, the health implication related to obesity leads to:

a.Respiratory difficulties

b.Hypotension

c.Headache

d.Diabetes mellitus

21.The person having PCOD should consult with-

a.Medicine specialist

b.Surgeon

c.Urologist

d.Gynaecologist

**Complications:**

22.The psychiatric complication in a women with PCOD usually include:

a. Anxiety

b. Personality disorder

c. Loss of memory

d. Eating disorder

23.Complications related to PCOD include:

a. Miscarriage

b. Skin infection

c. Dental problems

d. Stress disorder

---

# APPENDIX-F

## SCORING KEY

## FOR STRUCTURED QUESTIONNAIRE ON KNOWLEDGE

| Question number | Correct answer | Scoring |
|---|---|---|
| 1 | c | 1 |
| 2 | d | 1 |
| 3 | a | 1 |
| 4 | b | 1 |
| 5 | c | 1 |
| 6 | c | 1 |
| 7 | b | 1 |
| 8 | c | 1 |
| 9 | b | 1 |
| 10 | b | 1 |

| | | |
|---|---|---|
| 11 | a | 1 |
| 12 | a | 1 |
| 13 | c | 1 |
| 14 | d | 1 |
| 15 | a | 1 |
| 16 | a | 1 |
| 17 | a | 1 |
| 18 | d | 1 |
| 19 | d | 1 |
| 20 | d | 1 |
| 21 | d | 1 |
| 22 | a | 1 |
| 23 | a | 1 |
| | **Total score** | **23** |

## APPENDIX-G

## BLUEPRINT FOR KNOWLEDGE QUESTIONNAIRE

| no | Content | Knowledge | Comprehension | Application | Total | Percent (%) |
|---|---|---|---|---|---|---|
| 1 | Knowledge on general information of PCOD | 1,2,5,8,9,21 | - | - | 6 | 26.08 |
| 2 | Knowledge on causes of PCOD | 3,4,6,7 | - | - | 4 | 17.39 |
| 3 | Knowledge on sign and symptoms of PCOD | 10,11 | - | - | 2 | 8.69 |
| 4 | Knowledge on diagnosis and complication of PCOD | 15,20,22,23 | - | - | 4 | 17.39 |
| 5 | Knowledge on treatment of PCOD | 12,13,14,18 | - | - | 4 | 17.39 |
| 6 | Knowledge on prevention of PCOD | 16,17,19 | - | - | 3 | 13.04 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | **23** | **100 (%)** |

## Appendix-A(ii)

# ASIAN INSTITUTE OF NURSING EDUCATION

*(A unit of INS TRUST) Recognized by Indian Nursing Council*

Ref No. AINE/16/2022/617 Date. 24/8/2022

From,

Prof. (Dr.) Unmona Borgohain Saikia

Principal, Asian Institute of Nursing Education

Guwahati-6

To,

The Principal,

KHS College

(Through Proper Channel)

Sub: Permission to conduct a Research study in your esteemed Institute.

Respected Sir/Madam,

With reference to the subject cited above, I kindly request you to grant permission to Miss Karabi Das M.Sc. Nursing 2nd year, student of Asian Institute of Nursing Education Guwahati-6, to conduct the research study among nursing students in your esteemed institute as a part of partial fulfilment of M.Sc. Nursing course. The respondents will only fill up the structure questionnaire and there will be no intervention in the study which will cause any harm to the respondents. The title of her study is **"Effectiveness of structure teaching programme on knowledge regarding PCOD among the students in selected colleges of Guwahati, Kamrup, (M) Assam: An evaluative study".**

Looking forward with a positive response.

Thanking You,

With regards,

Prof.(Dr.) Unmona Borgohain Saikia

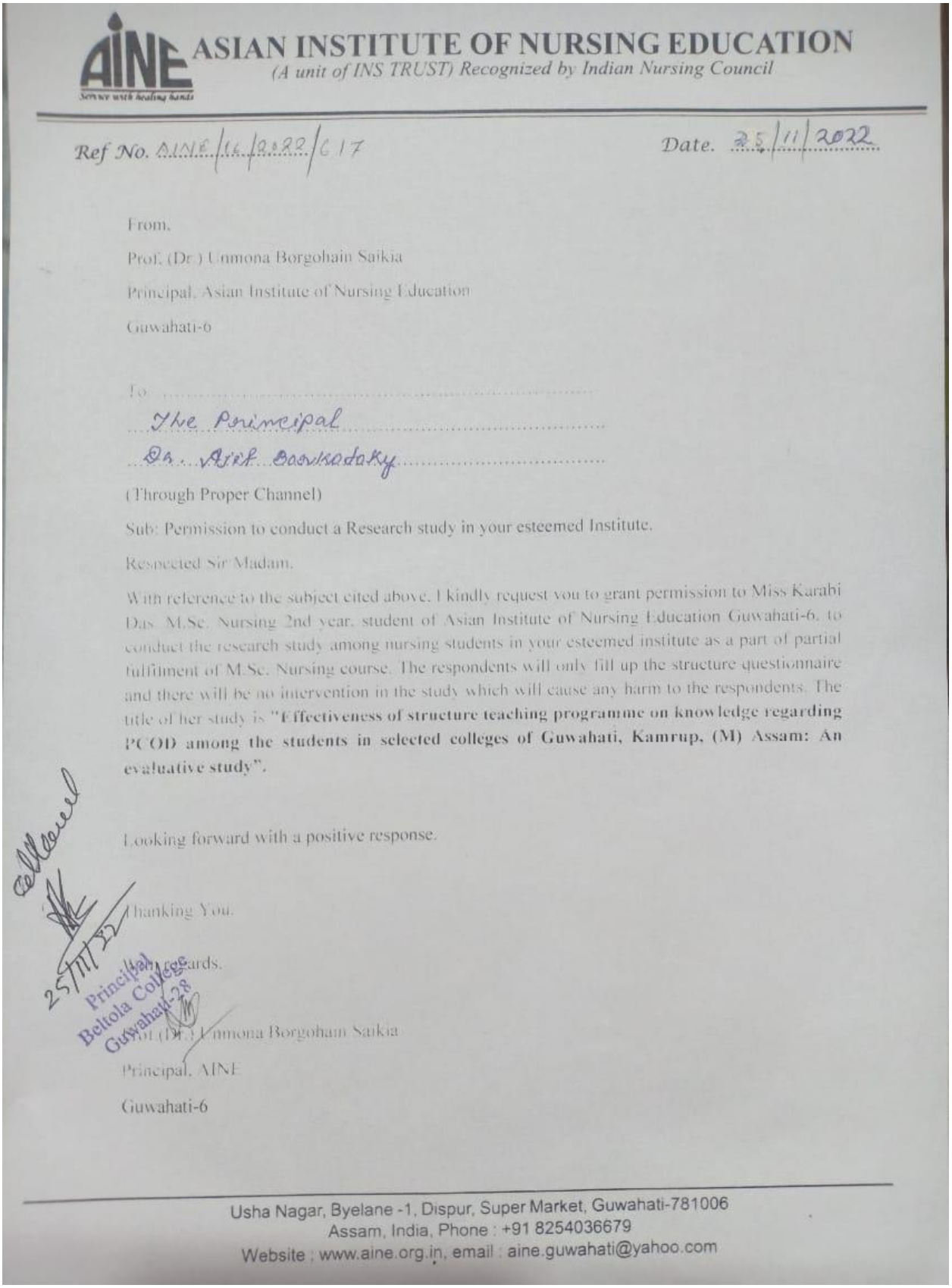
Principal, AINE

Guwahati-6

Karmashree Hiteswar Saikia College ESTD 1968 GUWAHATI-22

Received 24/8/22

Usha Nagar, Byelane -1, Dispur, Super Market, Guwahati-781006
Assam, India, Phone : +91 8254036679
Website : www.aine.org.in, email : aine.guwahati@yahoo.com



AINE
Serve with healing hands

# ASIAN INSTITUTE OF NURSING EDUCATION

*(A unit of INS TRUST) Recognized by Indian Nursing Council*

Ref No. AINE/IE/2022/617 Date. 25/11/2022

From,

Prof. (Dr.) Unmona Borgohain Saikia

Principal, Asian Institute of Nursing Education

Guwahati-6

To,

The Principal

Dr. Arif Boowkodaky

(Through Proper Channel)

Sub: Permission to conduct a Research study in your esteemed Institute.

Respected Sir Madam,

With reference to the subject cited above, I kindly request you to grant permission to Miss Karabi Das M.Sc. Nursing 2nd year, student of Asian Institute of Nursing Education Guwahati-6, to conduct the research study among nursing students in your esteemed institute as a part of partial fulfilment of M.Sc. Nursing course. The respondents will only fill up the structure questionnaire and there will be no intervention in the study which will cause any harm to the respondents. The title of her study is **"Effectiveness of structure teaching programme on knowledge regarding PCOD among the students in selected colleges of Guwahati, Kamrup, (M) Assam: An evaluative study".**

Looking forward with a positive response.

Thanking You.

Yours regards.

25/11/22

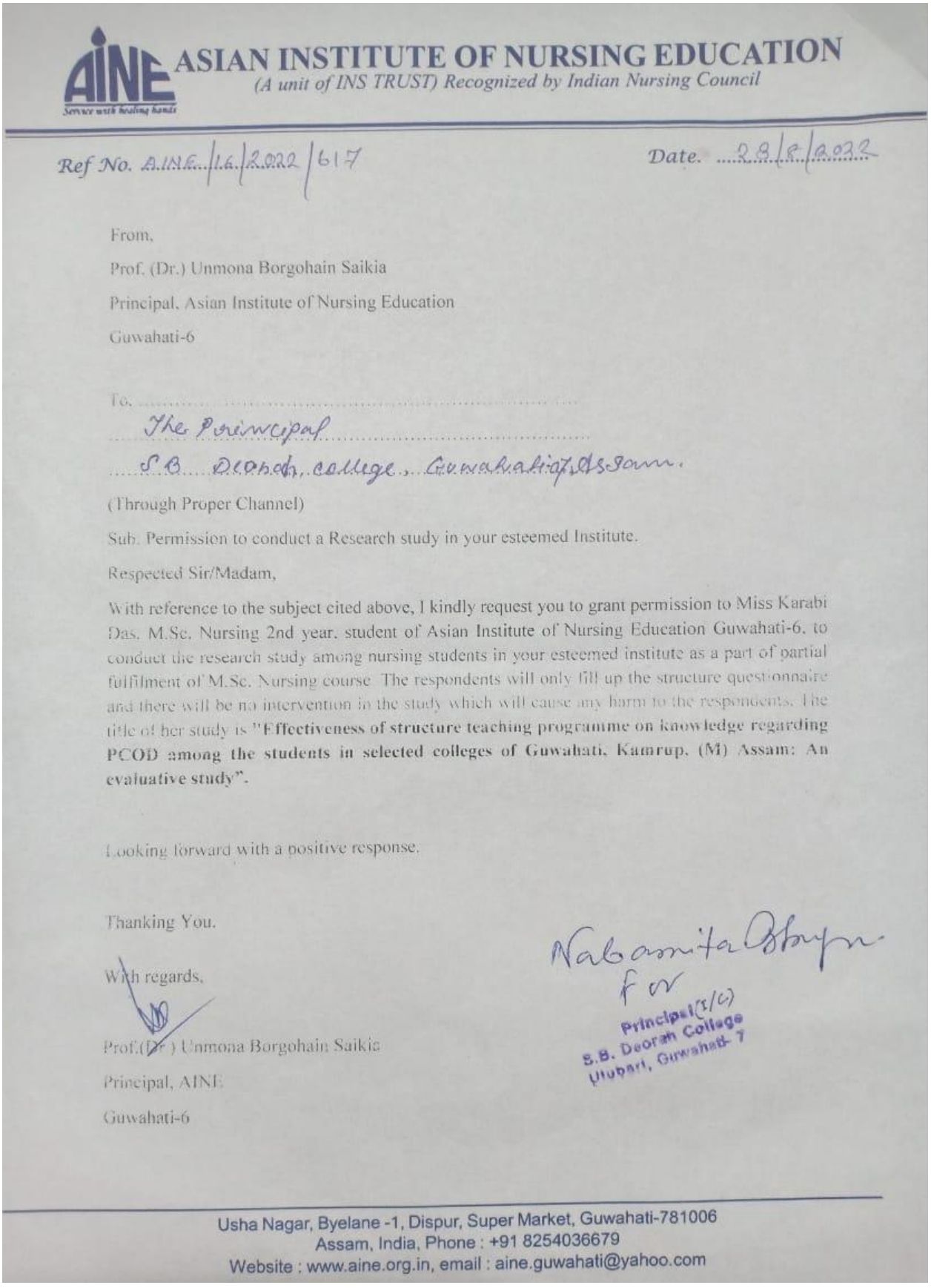
Principal
Beltola College
Guwahati-28

Prof (Dr.) Unmona Borgohain Saikia

Principal, AINE

Guwahati-6

Usha Nagar, Byelane -1, Dispur, Super Market, Guwahati-781006
Assam, India, Phone : +91 8254036679
Website : www.aine.org.in, email : aine.guwahati@yahoo.com



ASIAN INSTITUTE OF NURSING EDUCATION
(A unit of INS TRUST) Recognized by Indian Nursing Council

Ref No. AINE/16/2022/617 Date. 28/8/2022

From,

Prof. (Dr.) Unmona Borgohain Saikia

Principal, Asian Institute of Nursing Education

Guwahati-6

To,

The Principal

S.B. Deorah College, Guwahati, Assam.

(Through Proper Channel)

Sub. Permission to conduct a Research study in your esteemed Institute.

Respected Sir/Madam,

With reference to the subject cited above, I kindly request you to grant permission to Miss Karabi Das, M.Sc. Nursing 2nd year, student of Asian Institute of Nursing Education Guwahati-6, to conduct the research study among nursing students in your esteemed institute as a part of partial fulfilment of M.Sc. Nursing course. The respondents will only fill up the structure questionnaire and there will be no intervention in the study which will cause any harm to the respondents. The title of her study is **"Effectiveness of structure teaching programme on knowledge regarding PCOD among the students in selected colleges of Guwahati, Kamrup, (M) Assam: An evaluative study".**

Looking forward with a positive response.

Thanking You.

With regards,

Prof.(Dr.) Unmona Borgohain Saikia

Principal, AINE

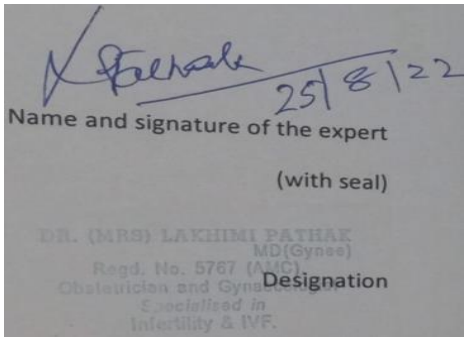
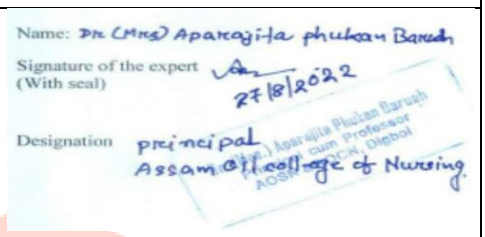
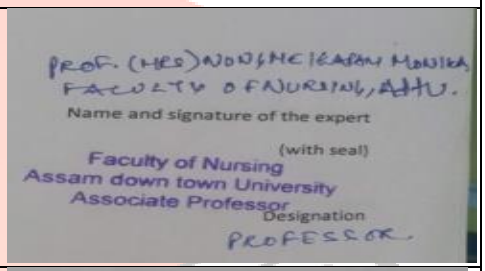
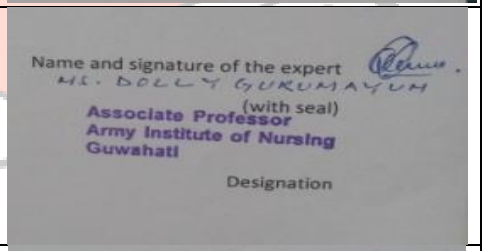
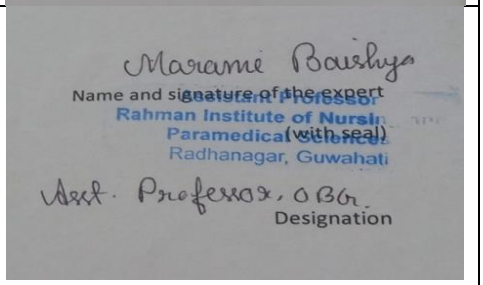
Guwahati-6

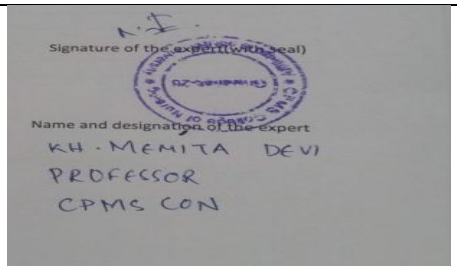
Nabamita Bhuyan
for
Principal (I/C)
S.B. Deorah College
Uluabari, Guwahati-7

Usha Nagar, Byelane -1, Dispur, Super Market, Guwahati-781006
Assam, India, Phone : +91 8254036679
Website : www.aine.org.in, email : aine.guwahati@yahoo.com

## APPENDIX-B

## LIST OF EXPERT ON THE VALIDITY FOR TOOL

| SL NO | NAME OF THE VALIDATORS | DESIGNATION | SIGNATURE |
|---|---|---|---|
| 1 | Dr. Mrs. Lakhimi Pathak | Obstetrician and Gynaecologist Specialised in Infertility and IVF |   |
| 2 | Dr. Mrs. Aparajita Phukan Baruah | Principal Assam oil College of Nursing |   |
| 3 | Prof. Mrs.Nongmeikapam Monika | Associate Professor Obstetric and Gynaecology, Assam Downtown University Guwahati |   |
| 4 | Ms. Dolly Gurumayum | Associate Professor Army Institute of Nursing, Guwahati |   |
| 5 | Mrs. Marami Baishya | Assistant Professor Obstetric and Gynaecology Rahman Institute of Nursing Paramedical Sciences,Guwahati |   |

| | | | |
|---|---|---|---|
| 6 | Kh. Memita Devi | Professor<br>CPMS College of Nursing |  |

## APPENDIX-C

## CONTENT VALIDITY CERTIFICATE

I hereby certify that I have validated the tools of Ms Karabi Das, 2 nd year M.Sc Nursing of Asian Institute of Nursing Education, Guwahati, (Affiliated to S.N.D.T Women's University, Mumbai) who is under taking the dissertation titled as "Effectiveness of structured teaching programme on knowledge regarding PCOD among the students in selected colleges of Guwahati, Kamrup (M) Assam: A pre-experimental study."

Date:

Place:

Name and signature of the expert

(with seal)

Designation

## APPENDIX-D

## CONSENT OF THE SUBJECTS TO PARTICIPATE IN RESEARCH STUDY

Dear Respondent,

I Ms Karabi Das, M.Sc Nursing student of Asian Institute of Nursing Education, conducting research on **"Effectiveness of structured teaching programme on knowledge regarding PCOD among the students in selected colleges of Guwahati, Kamrup(M) Assam: A pre-experimental study."**

The purpose of this study is to assess the knowledge on PCOD among students. Your kind co-operation is highly esteemed and your honest responses are valuable. I requested you to answer all the given questions with the most appropriate responses with regard to your situation. Kindly do not leave any question unattended. I assure you that the information given by you will be kept strictly confidential.

I thank you for agreeing to participate in this study, kindly fill the proforma given below.

Place: Guwahati

Yours sincerely

(Ms Karabi Das)

## CONSENT FORM

I ---------- Here with the consent for the above said study knowing that all the information provided by me would be treated with utmost.

Signature of the respondent

Place:

Name & Address

## APPENDIX-H

## STATISTICAL FORMULA

1. **Mean**

$\bar{x}=\Sigma\, x/n$

Where, **n**=no. of samples

2. **Standard deviation**

$$\sigma = \sqrt{\frac{\Sigma\ (x-\bar{x})^2}{n}}$$

Where **n**=no. of samples

3. **Cochran formula**

$$n = \frac{Z\alpha^2 Npq}{e^2(N-1) + Z\alpha^{2pq}}$$

Where, **n**=sample size

***Z***= standard error associated with the chosen level of confidence (1.96)

$N$ =Total number of population

$p$ = variability /standard deviation (taken from previous study i.e.

$q$ = 1 - p , = acceptable error (5%)

4. **Reliability**

$$r = \frac{n(xy)-(\Sigma x)(\Sigma y)}{\sqrt{[n\Sigma x^2-(\Sigma x^2][n\Sigma y^2-(\Sigma y^2]}}$$

5. **Paired t test**

$$t = \frac{\Sigma d}{\sqrt{\frac{n(\Sigma d^2)-(\Sigma d)^2}{n-1}}}$$

Where, **d**=difference per paired value

**n**=no. of samples

6. **Fisher's exact test**

$$p = \frac{(a+b)!(c+d)!(a+c)!(b+d)!}{N!a!c!d!}$$

Where, **p**= Exact p value

**!**= Factorial operator