

# A Study to assess the effectiveness of structured teaching programme On knowledge regarding Polycystic Ovarian Syndrome among B.Sc Nursing and GNM 1st year students in Florence College of Nursing Irba, Ranchi Jharkhand

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"Your positive action combined with positive thinking results in success." Shiv Khera The study was carried out to assess the level of knowledge regarding Polycystic Ovarian Syndrome among B.Sc Nursing and G.N.M Ist year students in Florence College of Nursing, Irba, Ranchi, Jharkhand. It was conducted by Basic B.Sc Nursing 4th year students (2017 – 2021) at Florence College of Nursing, Irba, Ranchi, Jharkhand partial fulfillment of the requirement for the degree of Basic B.Sc Nursing under the Ranchi University, Jharkhand.

**INTRODUCTION:** Polycystic Ovarian Syndrome is the most common endocrine disorder among women between the age of 18-44. It affects approximately 2% to 20% of this age group. It is one the leading endocrine disease which affects one in 15 women in worldwide. The main aim of the present study was to evaluate the effectiveness of structured teaching programme regarding Polycystic Ovarian Syndrome among B.Sc Nursing and G.N.M Ist year students.

**STATEMENT OF THE PROBLEM:** A study to assess the effectiveness of Structured teaching programme on knowledge regarding Polycystic Ovarian Syndrome among B.Sc Nursing and G.N.M Ist year students in Florence College of Nursing, Irba, Ranchi, Jharkhand.

**OBJECTIVES:** To assess the pre- test knowledge score regarding 'Polycystic Ovarian Syndrome' among B.Sc Nursing and GNM Ist year students, Florence college Of Nursing Irba, Ranchi, Jharkhand. To develop the structured teaching programme on Polycystic Ovarian Syndrome'. To evaluate the effectiveness of structured teaching programme on knowledge regarding polycystic ovarian syndrome among B.Sc Nursing and GNM Ist year students in Florence college Of Nursing Irba, Ranchi, Jharkhand." To find out the association between pre- test knowledge score of B.Sc Nursing and GNM Ist year students and their selected demographic variables.

**DESIGN:** A quantitative approach using pre-experimental one group pre-test post test research design.

**PARTICIPANTS:** 60 B.Sc Nursing and GNM Ist year students was selected using non probability convenient sampling in Florence college Of Nursing Irba, Ranchi, Jharkhand.

**TOOLS:** Structured multiple choice questionnaire on demographic variables and knowledge regarding Polycystic Ovarian Syndrome, are used for data collection.

**INTERVENTION:** Structure teaching programme on Polycystic Ovarian Syndrome was given for 45 minutes on the third day.

**RESULT:** After the structured teaching programme, In the pre- test, Majority of 60% (36) of the B.Sc Nursing and GNM Ist year students had Good knowledge, Average knowledge observed on the 31.66% (19) from B.Sc Nursing and GNM Ist year students and only 8.33% (5) had Very good knowledge.. And in the post- test, Majority of 63.33% (38) of the B.Sc Nursing and GNM Ist year students had Excellent knowledge, Very good knowledge observed on the 26.66% (16) from B.Sc Nursing and GNM Ist year students and only 10% (6) had Good knowledge, Analysis used Chi- square and found significant value at  $p < 0.05$  level.

**CONCLUSION:** This study finding conclude that structured teaching programme was effective in improving knowledge regarding Polycystic Ovarian Syndrome among B.Sc Nursing and GNM Ist year students.

**KEYWORDS:** Assess, effectiveness, knowledge, Polycystic Ovarian Syndrome.

**CHAPTER –I****INTRODUCTION**

**“Learning is the beginning of wealth,**

**Learning is the beginning of health,**

**Learning is the beginning of spirituality,**

**Searching and learning is where the miracle process all begins”**

**- Jim Rohn**

Polycystic Ovarian Syndrome is the most common endocrine disorder among women between the age between 18-44. It affects approximately 2% to 20% of this age group. It is one the leading endocrine disease and which affects one in 15 women in worldwide. The incidence of PCOS among adolescents is estimated to be between 11 and 26% (3) and about 50% are overweight.

The term Polycystic Ovarian Disease was first described by Irving stein and Micheal Leventhal as a Triad of ‘Amenorrhea’, ‘Obesity’, and ‘Hirsutism’ in 1935 when they observed the relation between obesity and reproductive disorders. It is hence also known as the ‘Stein- Leventhal Syndrome’ or ‘Hyper androgenic An ovulation’ and is the most common endocrine ovarian disorder affecting approximately 2-8% women of reproductive age. Now a day’s, it is also referred to as the ‘Syndrome O’ i.e. over nourishment, overproduction of insulin, ovarian confusion and ovulatory description.

Polycystic Ovary Syndrome is a set of symptoms due to elevated androgens in women. Signs and Symptoms of Polycystic Ovarian Syndrome include irregular or no menstrual periods, heavy periods, excess body and facial hair, acne pelvic pain, difficulty getting pregnant, and patches of thick darker, Velvety skin. Associated conditions include type 2 diabetes, obesity , obstructive sleep apnea, heart disease, mood disorders, endometrial cancer, hypertension, dyslipidemia, hyperinsulinaemia, and infertility. Polycystic ovary syndrome cannot be prevented. But early diagnosis and treatment helps prevent long-term complications, such as infertility, metabolic syndrome, obesity, diabetes, and heart disease.

The main risk factor for polycystic ovary syndrome is a family history of it. A family history of diabetes may increase the risk for PCOS because of the strong relationship between diabetes and PCOS. Long-term use of the seizure medicine valproate has been linked to an increased risk of PCOS. Girls with low birth weight as well as a family history of diabetes mellitus, premature birth, cardiovascular disease, hypertension, hormonal imbalance, genetic problem, endocrine disease, weekend immune system, environmental factors, toxin effect are at risk for developing Polycystic Ovarian Syndrome.

Adolescence is a transitional stage of physical and psychological development that generally occurs during the period from puberty to legal adulthood. Adolescence is a period having the sense of identity and the sense of intimacy. It is the transition from childhood to adulthood. Also many serious diseases in adulthood have their roots in adolescence. For example, tobacco use, sexually transmitted infections including HIV, and poor eating and exercise habits lead to illness or premature death later in life.

The word adolescent comes from the latin word ‘adolescere’ which means to grow. Adolescents represent a period of intensive growth and changes in nearly all aspects of child’s physical, mental, social, and emotional life. During adolescence, young women are primarily concerned with finding their identity and expressing who they are in the world. Puberty causes many physical changes to take place, and adolescents must adapt to their changing bodies. All of these changes can make adolescence a confusing and stressful period.

Children as young as 16 years are diagnosed with polycystic disease which occurs due to the imbalances or abnormalities in the hormones. Hormonal abnormalities can make the ovaries produce more eggs. These eggs turn into cysts and the ovaries become large and studded with numerous cysts. It begins as early as in teenagers and mostly effects adult ovarian girls of childbearing age.

The establishment of a regular menstrual cycle is an important process for an adolescent girl. The challenge is to distinguish normal individual variation from real endocrine or organic problems. Avoiding too early unnecessary intervention without missing relevant abnormalities requires a firm grasp of process of physiological sexual development as well as of the symptoms and etiology of relevant abnormalities.

Gynecological problems of adolescents occupy a special space in the spectrum of gynecological disorders of all ages. This is because of the physical nature of the problems which are so unique, special, and specific for the age group, and also because of the associated and psychological factors which are very important in the growth and psychological remodeling of someone in the transition between childhood and womanhood. Although PCOS is a common disorder, the diagnosis may be overlooked during adolescence, as irregular menses with anovulatory cycles, obesity, and acne are frequent in adolescent women. The incidence of PCOS among adolescents is estimated to be between 11 and 26% (3) and about 50% are overweight.

There is no cure for PCOS, but controlling it lowers the risks of infertility, miscarriages, diabetes, heart disease, and cancer.

Present day lifestyle, food habits, environmental exposure to toxins along with hereditary predisposition for metabolic syndrome like obesity, hyperlipidemia, diabetes and hypertension and stress has contributed to the common problem faced by today's female population.

## NEED FOR THE STUDY

**“Every human being is the author of his own health and disease”**

### - Sri Buddha

Adolescents form a large section of population of India, about 22.5%. Adolescent girls have to be focused more as it is a period of rapid physical growth, sexual, physiological, and psychological changes. Habits and behavior picked up during adolescence have lifelong impact.

Polycystic Ovarian Syndrome is common health problem which increase among adolescent girls and young women during their reproductive years. It is a problem in which a woman's hormones are out of balance leading to menstrual disturbance as well as multiple abnormal cysts in enlarged ovaries, so they do not produce the normal number of eggs and normal ovulation which leads to difficulty of getting pregnant. If it is not treated over time, it can lead to serious health problems such as diabetes and heart disease.

According to a study by PCOS Society, One in every 10 women in India has polycystic ovary syndrome (PCOS), a common endocrinal system disorder among women of reproductive age. And out of every 10 women diagnosed with PCOS, six are teenage girls.

A population study revealed that overt and occult PCOD accounted for 90% of patients with oligomenorrhea and 37% with amenorrhea, or 73% with oligo- or amenorrhea. Oligo- or amenorrhea accounted for 21% of couples with infertility and the annual incidence was 247 patients per million of the general population. The annual incidence of infertility due to PCOD per million was 41 with overt PCOD and 139 with occult PCOD (total 180). Of those, 140 appeared to respond well to clomiphene (78%) but 40 (22%) failed, requiring alternative therapy.

A study on teen girls and college girls in several colleges around India was found to show a higher percentage of college girls with PCOD and there was around 36 % of increase in cases of PCOD compared from a period of 2007-08, showing a severe fast increase of cases of PCOD among college girls in an alarming rate.

A study conducted by the department of endocrinology and metabolism, AIIMS, shows that about 20-25 per cent of Indian women of childbearing age are suffering from PCOS. While 60 per cent of women with PCOS are obese, 35-50 per cent have a fatty liver. About 70 per cent have insulin resistance, 60-70 per cent have high level of androgen and 40-60 per cent have glucose intolerance.

About 6 to 10% of girls gets affected by PCOD and are even not aware of their presence. In a prospective study of 400 women of reproductive age, 4% to 4.7% of white women and 3.4% of African American women had PCOS. A similar rate of 4% to 6% has been found in other populations.

A comprehensive community-based study among 3443 adolescent girls (15-18 years) done to find out the prevalence of PCOS from 10 schools, Trivandrum. Among them, 339 girls are with the symptoms of PCOS and they were under-nourished (37.6%), normal weight (51.2%), overweight (8.6%) and obese (2.6%). Lack of awareness and lifestyle changes are considered to be the major factor leading to this phenomena.

A retrospective study done in 58 preadolescent and adolescent girls to study the age at diagnosis of PCOS and to compare risk factors involved in causing PCOS highlighted that PCOS may occur at a younger age in girls who develop early puberties and thelarche. Therefore, the diagnosis and workup should be considered in young girls with risk factors suggestive of PCOS.

PCOS affects between 8% and 20% of reproductive-age women worldwide. Because there is no universal definition of PCOS, the exact number of women in the United States with PCOS is unknown, but is thought to be approximately 5 million. Most women are diagnosed during their twenties or thirties, but PCOS may affect girls as young as 11 who haven't even had their first period.

U.S. Scientists reported that the prevalence of Polycystic Ovarian Syndrome may be as high as 11.2% in girls of reproductive years. Among this group, adolescent girls make up a large part, perhaps as high as 50% of young girls suffer with polycystic ovarian disease (PCOD).

PCOS is the most common endocrinologic disorders during adolescence, so there is always a need to investigate all new relevant data. Early recognition and prompt treatment of PCOS in adolescents is important to prevent long term complications. From all the above studies the researcher found that adolescent girls have to obtain adequate knowledge regarding PCOS because they are future mothers and they are the one to make the new generation.

Lack of knowledge and the negative lifestyle attitude towards polycystic ovarian disease among college girls and not taking any measures to improve their lifestyles is observed by the investigator that these college girls can be helped by assessing their knowledge and with a view to change their lifestyle by providing necessary information.

The researcher has a pivotal role in creating awareness among adolescent girls about how to identify the symptoms and modification to be brought in order to prevent further complications of PCOS. Hence the researcher felt that information education and communication package will be an effective teaching strategy to impart knowledge of adolescent girls regarding polycystic ovarian syndrome.

### **PROBLEM STATEMENT**

“A Study to assess the effectiveness of structured teaching programme on knowledge regarding polycystic ovarian syndrome among B.Sc Nursing and GNM I<sup>st</sup> year students in Florence college Of Nursing Irba, Ranchi, Jharkhand.”

### **OBJECTIVE:-**

- ❖ To assess the pre- test knowledge score regarding ‘Polycystic Ovarian Syndrome’ among B.Sc Nursing and GNM I<sup>st</sup> year students, Florence college Of Nursing Irba, Ranchi, Jharkhand.
- ❖ To develop the structured teaching programme on Polycystic Ovarian Syndrome’.
- ❖ To evaluate the effectiveness of structured teaching programme on knowledge regarding polycystic ovarian syndrome among B.Sc Nursing and GNM I<sup>st</sup> year students in Florence college Of Nursing Irba, Ranchi, Jharkhand.”
- ❖ To find out the association between post- test knowledge score of B.Sc Nursing and GNM I<sup>st</sup> year students and their selected demographic variables.

### **HYPOTHESIS :-**

**H1-** There will be significant difference between the pre-test and post-test knowledge score regarding among B.Sc Nursing and GNM I<sup>st</sup> year students.

**H2-** There will be significant association between the pre-test knowledge and selected socio-demographic variables at 0.05 level of significance.

### **OPERATIONAL DEFINATION:-**

1. **ASSESS:** It refers to the evaluation of B.Sc Nursing and GNM I<sup>st</sup> year students knowledge on polycystic ovarian syndrome.
2. **EFFECTIVENESS:** It refers to significant gain in knowledge as determined by increased in post-test knowledge score.
3. **KNOWLEDGE:** It refers to the response of B.Sc Nursing and GNM I<sup>st</sup> year students regarding polycystic ovarian syndrome by structured multiple choice questionnaire in terms of knowledge scores.
4. **POLYCYSTIC OVARIAN SYNDROME:** It refers to the hormonal imbalance which causes irregular menstrual periods, obesity, unwanted or excess hair growth and acne.

### **ASSUMPTIONS:-**

- B.Sc Nursing and GNM I<sup>st</sup> year students possess some knowledge regarding Polycystic Ovarian Syndrome.
- Proper knowledge regarding Polycystic Ovarian reduces the risk of getting polycystic ovarian syndrome among B.Sc Nursing and GNM I<sup>st</sup> year students.
- Structure teaching programme will helps to improve the level of knowledge regarding polycystic ovarian syndrome.

### **DELIMITATIONS:-**

- The study is delimited to a Florence college Of Nursing Irba, Ranchi, Jharkhand. Who in the age group of 16-18 years.
- This study was limited to the B.Sc Nursing and GNM I<sup>st</sup> year students in Florence college Of Nursing Irba, Ranchi, Jharkhand. Who are willing to participate in the structured teaching programme.
- This study was limited to the B.Sc Nursing and GNM I<sup>st</sup> year students in Florence college Of Nursing Irba, Ranchi, Jharkhand. Who are able to understand and speak English.

### **CONCEPTUAL FRAME WORK GENERAL SYSTEMS THERORY LUDWIG VON BERTALANFFY (1968)**

Conceptual framework are interrelated concepts or abstractions that are assembled together in some rational skin by the virtue of their relevance to a common theme.

A conceptual framework is a set of broad ideas and principles taken from relevant field of inquiry and used to structure a subsequent presentation. It carries potential usefulness as a tool, to scaffold research and assessed the researcher to make meaning of subsequent findings.

The conceptual framework for the present study has been derived from the modified Ludwig von Bertalanffy's open system theory (1968).

Polit and Hungler (1995) states that a "conceptual frame work is the interrelated concepts or abstractions that are assembled together in the relevance to the common theme. It is a device that helps to stimulate research and extension of knowledge by providing both directions and impetus".

The present study aims to assess the effectiveness of structured teaching programme on knowledge regarding Polycystic Ovarian Syndrome among BSc Nursing and GNM I<sup>st</sup> year students. The conceptual frame work for this study was based on Modified Ludwig Von Bertalanffy's open system theory (1968).

A system is set of interacting parts or components with in a boundary that interact among various components to achieve the goal. A system can be individual, families, communities. The fundamental component of system are matter, energy and communication without any one of these component, system does not exist. The system continuously monitors self and the environment for information to guide its own operation.

### **There are two types of system:**

- **A closed system:**

A closed system does no exchange energy, matter or information with its environment. It receives no input from environment and gives no output to the environment.

- **A open system:**

Energy, matter and information move into and out of the system through the system boundary. All living systems such as plants, animals, people, families, and communities are open system, since their survival depends on a continuous exchange of energy. They are therefore, in a constant state of change. For its functioning an open system depends on the quality and the quantity of its input, output and feedback.

In the present study the concepts can be interpreted as follows.

### **Open system**

In the present study individual is considered as open system.

### **Input:-**

The information that enters into the system from the environment through its boundaries.

In this present study input is the assessment of knowledge regarding Polycystic Ovarian Syndrome among BSc Nursing and GNM I<sup>st</sup> year students by using multiple choice questionnaire with a effect of demographic variables and the structured teaching programme.

### **Through put:-**

It is the operation phase. It is the process that allows the input to be changed as output in such a way that it can be readily used by the system.

In this study during the activity phase the investigator administer structured teaching programme.

### **Output:-**

It is any information continuously processed through the system and enters the environment through system boundaries.

Output is improvement in level of knowledge, which is reassessed by using same multiple choice questionnaire, after 7days of structured teaching programme .

### **SUMMARY:-**

This chapter deals with the background of the study that is introduction, need of the study, statement of problem objective on which the study is based, purpose of the study, assumptions, delimitations and operational definitions of some common terminology.

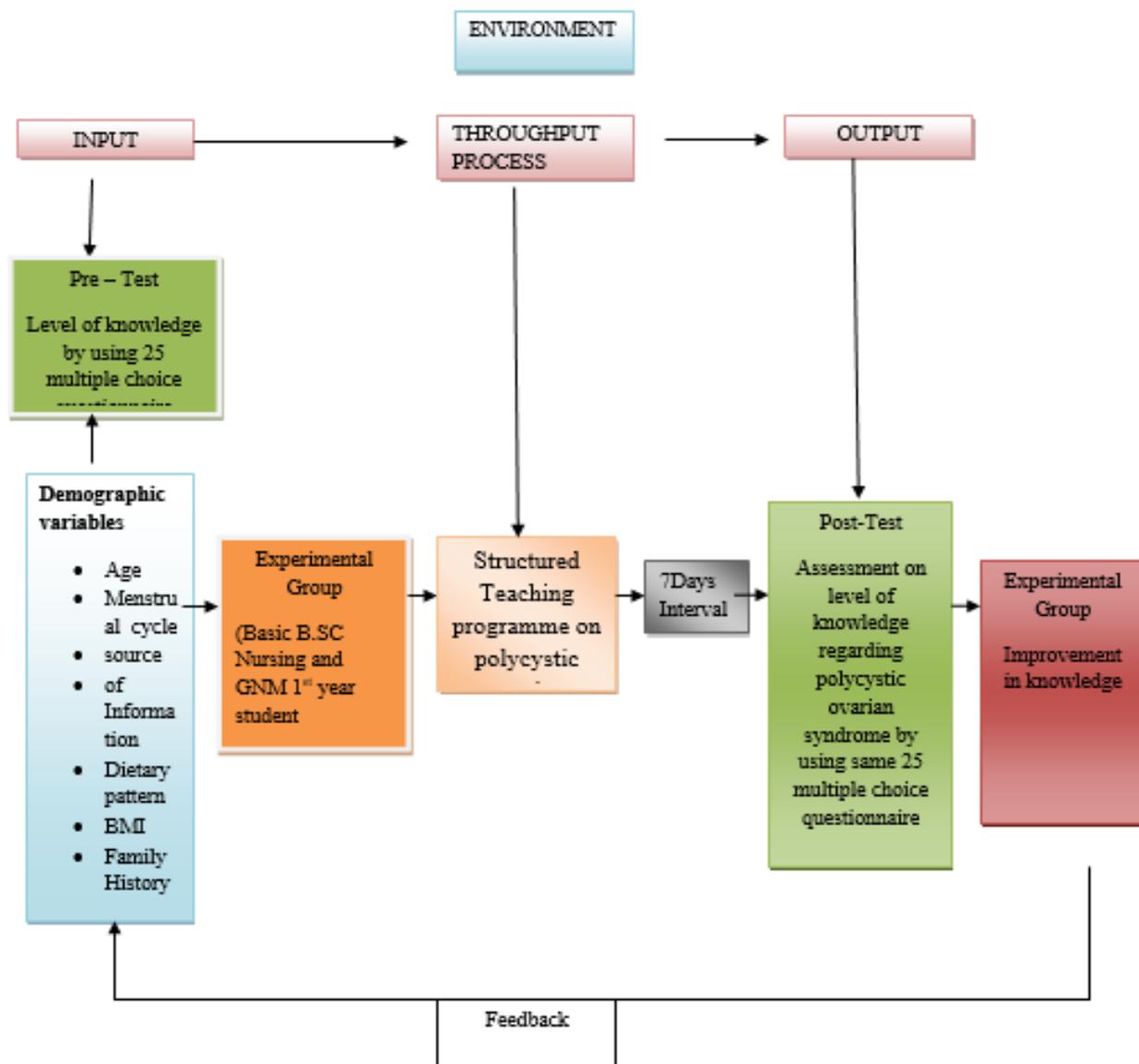


Figure 1.1 Conceptual framework based on modified Ludwig Von Bertalanffy's open system theory (1968)

**CHAPTER II****REVIEW OF LITERATURE**

The review of literature in a research report is a summary of current knowledge about a particular practice problem and includes what is known and not known about the problem. The literature is reviewed to summarize knowledge for use in practice or to provide a basis for conducting a study.

**POLIT (1978):**

“Review of literature is an essential activity of scientific research project; “Literature review involves system identification, location securing and summary of written material that information on research problem”.

Literature was reviewed and organized under the following headings :

- Review related to incidence and prevalence of Polycystic Ovarian Syndrome.
- Review related to knowledge regarding Polycystic Ovarian Syndrome.
- Review related to effectiveness of structured teaching programme.

**I. REVIEW RELATED TO INCIDENCE AND PREVALENCE OF POLYCYSTIC OVARIAN SYNDROME:-**

**Dr. Shaktisinh vaghela and Dr. Prafulla kotak, (2019)**, conducted a cross sectional study was carried out among 112 students in tertiary care teaching hospital of kutch, Gujarat. The percents of students having only menstrual irregularity with cyst (14.79%) which is higher than those having only the other two combinations (6.1% and 1.6%) showing that a student with menstrual irregularity is more likely to have a cyst and vice versa.

**Sunanda B., Sabitha Nayak, (2020)**, conducted a descriptive survey approach and descriptive design was conducted on 150 Nursing student of Nitte Usha Institute of Nursing sciences by using simple random sampling technique. Most of the students, 82.7% were consuming mixed diet, 4% of the students were exclusively vegetarians 92% of the students had regular menstrual cycle.

Level of knowledge of the students was assessed through frequency and percentage which depicts that most of the students (114) and average knowledge (76%).

**II. REVIEW RELATED TO KNOWLEDGE REGARDING POLYCYSTIC OVARIAN SYNDROME:-**

**Jayshree J. Upadhye, Chaitanya A. Shembekar, (2017)**, the study was conducted to assess the knowledge on POCS among 200 medical students. The data was collected from the students by using structured questionnaire. The study revealed that 33% girls had information from teacher, 19% got information from friends, 11.5% got information a doctor, 3.5% got from newspaper, 5% got information from internet.28% girls were unaware of PCOS. The study concluded that knowledge of the disorder and counseling for adolescents should be included in the curriculum.

**Sunanada B, Sabitta Nayak, (2016)**, conducted a descriptive study to assess the knowledge on the polycystic ovarian syndrome among 150 student nurses in Mangalore. The study revealed that 76% of the samples were with average knowledge and 10.7% with good knowledge regarding polycystic ovarian syndrome. The study concluded that source of information, consumption of junk food, dietary food patterns of the student were associated with their level of knowledge on PCOS.

**Pothiraj Pitchai, S.R.Sreeraj, Parmar Recma Anil, (2016)**, the descriptive study was conducted in Mumbai, India. Subject were recruited through purposive sampling method with the sample size of 100 who were visited gynecological clinics and around Mumbai, India. The study revealed that 21% of the respondents are very well aware about polycystic ovarian syndrome. The study concluded that efforts need to intensity in creating awareness on the general public about PCOS.

**Nomanui Haq, Zarmina Khan, Sohail Riaz, etc.all (2016)**, the mixed methodology research was conducted study to assess the knowledge of polycystic ovarian syndrome among 500 female science students in Pakistan. The study revealed that the 90.2% subject were having adequate knowledge about polycystic ovarian syndrome after educational intervention. The study concluded that different educational programs should be done to provide knowledge about polycystic ovarian syndrome.

**Manita Dalal , Dr. Mrs. Molly Babu, Mrs. Sharda Rastogi, (2014)**, conducted a exploratory survey design to assess the knowledge and practice of women with polycystic ovarian syndrome among 275 women of 12-14 years age group women in New Delhi. The study revealed that prevalence of PCOS among women attended gynec OPD of Safdarjung Hospital was found to be 10.09%. The knowledge of the women with PCOS regarding PCOS and its management was found to be inadequate with mean score of 12.1 out of 33. The study concluded that was developed for women with Polycystic Ovarian Syndrome.

### III. REVIEW RELATED TO EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON POLYCYSTIC OVARIAN SYNDROME:-

**Shulamma M.A., (2018)**, conducted the groupe pre- test post- test design to assess the effectiveness of structure teaching programme knowledge regarding polycystic ovarian syndrome among nursing students. The finding of study was in pre- test 33.3% were having poor knowledge 56.6% as and 10% good in post- test 53.3% around good, 46.6% non poor knowledge.

**Soniya John (2021) conducted a quasi experimental one group pre-test post design** was adopted to assess the effectiveness of structured teaching programme on knowledge regarding polycystic ovarian syndrome ,among adolescent girl,Banglore .A technique collect data was analyzed by using descriptive and information statistics. More than half 54(90.0%) were having inadequate knowledge and 6(10%) were having moderate knowledge regarding polycystic ovarian syndrome before structured teaching programme.

**Sharki, Ranu, Negi, Hansi, (2018)**, conducted a pre- experimental one group pre- test post- test design was used for the study. The study showed that out of 50 samples most of the students were having poor knowledge whereas only 2% students scored was 11.78. After intervention 84% students scored good, 16% scored in average and 0% students were found in poor knowledge category. The post- test mean (21.78) was found significantly higher than the pre-test (11.78) score with a mean difference 9.82 as evidenced from 't' value of 21.33 for at and it 0.05 level of significance.

**Sheela Williams, Lissa J, Saraswathi. K. N (2017)**, conducted a one group is pre test and other post test, pre-experimental design was used for the study. The study reveal that the significance of difference between the mean pre- test and mean post- test scores which was statistically tested using paired 't' test. The mean difference between the mean pre- test and mean post test knowledge scores was 2.5 with standard deviation difference +\_0.5. the paired 't'test (59)=11.6 which was found to be highly significant at 0.05 level of significance. The result also shows that the knowledge score of adolescent girls had no significant association with their selected demographic variables expect for monthly income, known case of PCOD and previous source of information.

**Mala', Anney Avarachan', Gijji John<sup>3</sup> (2019)**, conducted a one- group pre- test post- test design was selected, 60 adolescent girls were selected by convenient sampling technique. The data was analyzed using descriptive and inferential statistics and the findings showed that the mean post – test knowledge scores (25.5+\_3.71) was higher than the mean pre- teat knowledge scores (15.85+\_3.6) with a mean difference of 9.65. The obtained mean difference was found to be statistically significant as evident from calculated 't' value of 16\* which is greater than table value of 2.00 at 0.05 level of significance. A significant association was found between pre- test knowledge scores and education stream of adolescent girls.

#### **SUMMARY :-**

This chapter deals with the review of literature in which Review related to Incidence and prevalence of Polycystic Ovarian Syndrome, Knowledge regarding Polycystic Ovarian Syndrome and Effectiveness of structured teaching programme.

**CHAPTER III****METHODOLOGY**

According to Sharma research methodology involves the systematic procedure by which the researcher starts from initial identification of the problem to its final conclusion. The role of methodology consists of procedures and techniques for conducting the study.

This chapter deals with the research approach, research design, setting of the study population, criteria for the selection of sample, sample size, sampling techniques instrument, data collection and data analysis. This also describes the pilot study.

**RESEARCH APPROACH**

Polit and Hungler (2004) defined the as “a general set of orderly discipline procedures used to acquire information”.

In this study quantitative evaluative research approach was used to assess the effectiveness of structured teaching programme on knowledge regarding Polycystic Ovarian Syndrome among B.Sc Nursing and GNM I<sup>st</sup> year students, Florence College of Nursing, Irba, Ranchi, Jharkhand.

**RESEARCH DESIGN**

Nancy burns, Susan.K.Groove (2005), defined research design as “a blue print for conducting the study that maximizes control over the validity of the findings.

The research design guides the researcher in planning and implementing the study in a way that is most likely to achieve the intended goal.

Pre-experimental one group pretest post test design without control group was selected for the pretest study to assess the effectiveness of structured teaching programme on knowledge regarding Polycystic Ovarian Syndrome among B.Sc Nursing and GNM I<sup>st</sup> year students, Florence College of Nursing, Irba, Ranchi, Jharkhand.

The diagrammatic representation of research design is given below:-

<b>GROUP</b>	<b>DAY 1</b>	<b>DAY 7</b>
<b>EXPERIMENTAL</b>	<b>01</b>	<b>02</b>

**Keys:**

**O1** = Pre test knowledge regarding Polycystic Ovarian Syndrome before administration of structured teaching programme (Day 1).

**X** = Intervention structured teaching programme on knowledge regarding Polycystic Ovarian Syndrome (Day 1).

**O2** = Post test knowledge regarding Polycystic Ovarian Syndrome after administration of structured teaching programme (Day 7).

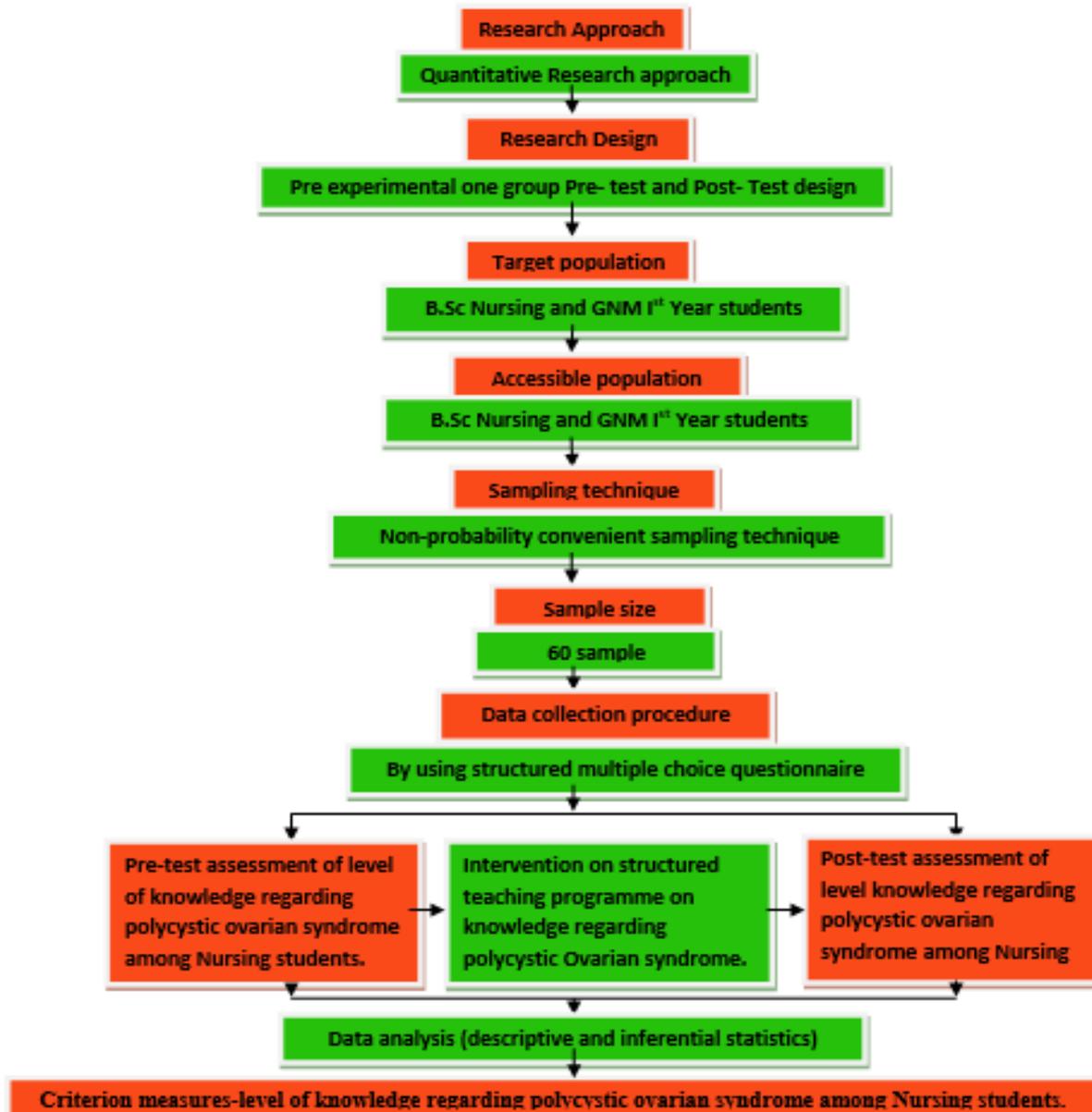


Figure 3.1: The Schematic Representation of Research Methodology.

#### Variables:-

Polit and Hungler (2013) defined the variables is “an attribute of a person or object that varies, that is, taken on different values”.

- **Dependent Variables :** The dependent variable in this study is Level of knowledge regarding Polycystic Ovarian Syndrome.
- **Independent Variables:** The independent variable in this study is structured teaching programme on knowledge regarding Polycystic Ovarian Syndrome.
- **Extraneous Variables :** Age, Religion, Marital status, Types of family, Educational status, Dietary pattern, Menstrual cycle, BMI, Number of children, any associated disease, History of taking junk foods, Amount of water intake per day, Prevalence of menstrual disorder, Source of information regarding PCOS, Intake of non vegetarian foods.

**Setting of the Study :** The study was conducted in Florence College of Nursing at Ranchi which is located district in Jharkhand.

**Population :** According to Polit and Hungler(2005), “A population is the entire aggregation of cases in which a researcher is interested”.

Target population selected for this study was all the B.Sc Nursing and GNM Ist year students, Florence College of Nursing, Irba, Ranchi, Jharkhand. Accessible population selected for this study includes adolescent girls in Florence College of Nursing, Irba, Ranchi, Jharkhand.

**Sample and sample size :** Polit and Hungler, (2005) stated that “sample consists of a subset of population selected to participate in a research study.

The sample of this study was 60 adolescent girls between the age group of 18- 20 years.

#### **Criteria for sample selection :**

##### ❖ **Inclusion criteria :**

- B.Sc Nursing and GNM Ist year students who are aged 17year and above.
- B.Sc Nursing and GNM Ist year students who are willing to participate in the study.
- B.Sc Nursing and GNM Ist year students who are present during by the day of data collection.
- B.Sc Nursing and GNM Ist year students who can able to read and write English.

##### ❖ **Exclusion criteria :**

- The study is delimited to selected other nursing colleges in Ranchi.
- The study is delimited to the A.N.M. and P.B.B.Sc Nursing.

#### **Sampling technique:-**

Polit and Hungler(1991) stated that “sampling technique is a process of selecting the portion of the population”.

Non- probability convenient sampling technique was used in this study.

#### **Development of Tool:-**

Treece and Treece (1960), emphasized that “the instrument selected in research should be as for as possible be the vehicle that would best obtain data for drawing conclusion”.

The investigator developed the tool after an extensive review of literature and experts opinion. The structured multiple choice questionnaire were developed to assess the level of knowledge regarding Polycystic Ovarian Syndrome.

#### **Description of the Tool:**

It consists of two sections.

##### **Section A:**

It contains data related to demographic variables of adolescent girls such as age in years, marital status, religion, types of family, educational status, dietary pattern, menstrual cycle, BMI, number of children, etc.

##### **Section B:**

It consists of structured multiple choice knowledge questionnaire to assess the level of knowledge regarding Polycystic Ovarian syndrome among Nursing students.. which includes 25 multiple choice questions to assess knowledge regarding anatomy and function of ovary, definition, risk factors, signs and symptoms, diagnosis, management, prevention, complication, effects of polycystic ovarian syndrome in pregnancy.

#### **Scoring Procedure:**

##### **Section II**

Each correct answer carried out ‘one’ mark and wrong answer carried out ‘zero’ mark. The total maximum score was ‘20’.

SCORE	LEVEL OF KNOWLEDGE
0-5	POOR
6-10	AVERAGE
11-15	GOOD
16-20	VERY GOOD
21-25	EXCELLENT

#### **SUMMARY :-**

This chapter deals with the description of the research approach, research design, variables, setting of the study, population, selection of sample and sampling technique, sample criteria, development of tool, description of tool and scoring procedure.

**CHAPTER IV****DATA ANALYSIS AND INTERPRETATION**

This chapter deals with the analysis and interpretation of the collected data from 60, B.Sc Nursing and GNM I<sup>st</sup> year students to assess the effectiveness of structured teaching programme and level of knowledge regarding Polycystic Ovarian Syndrome among B.Sc Nursing and GNM I<sup>st</sup> year students. The purpose of analysis was to reduce the data to a manageable and interpretable form, so that the research problem can be studied and tested.

Kerlinger (1986) has defined analysis as “the categorizing, reducing, manipulating and summarizing of data to obtain assures to research hypothesis questions”.

The analysis and interpretation of data of this study are based on data collected by using through structured method. The results were computed by using descriptive and inferential statistics.

John Tukey (1961) has defined interpretation as “examining the results from data analysis, forming conclusions, considering implication for nursing, exploring significance of the finding and suggesting the study.”

**OBJECTIVE:-**

- ❖ To assess the pre- test knowledge score regarding ‘Polycystic Ovarian Syndrome’ among B.Sc Nursing and GNM I<sup>st</sup> year students, Florence college Of Nursing Irba, Ranchi, Jharkhand.
- ❖ To develop the structured teaching programme on Polycystic Ovarian Syndrome’.
- ❖ To evaluate the effectiveness of structured teaching programme on knowledge regarding polycystic ovarian syndrome among B.Sc Nursing and GNM I<sup>st</sup> year students in Florence college Of Nursing Irba, Ranchi, Jharkhand.”
- ❖ To find out the association between pre- test knowledge score of B.Sc Nursing and GNM I<sup>st</sup> year students and their selected demographic variables.

**ORGANIZATION OF DATA FOR ANALYSIS :**

The analysis of data is organized and presented under the following broad headings:

Section I : Description of socio demographic variables in frequency and percentage.

Section II : Overall analysis of knowledge through mean, mean% and standard deviation.

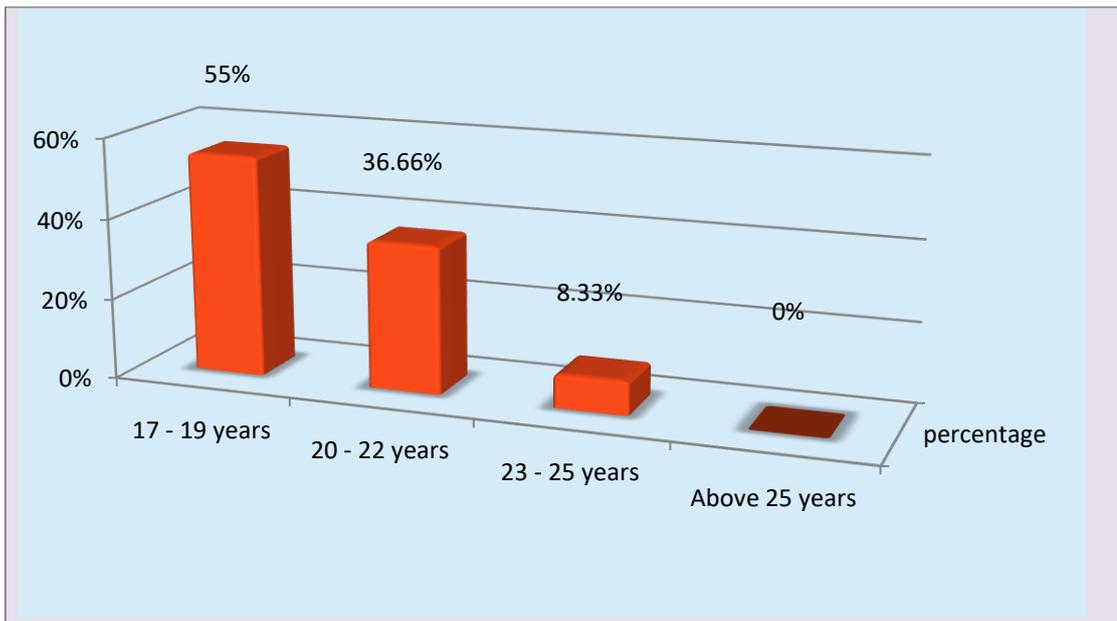
**SECTION – I****DISTRIBUTION OF SUBJECTS ACCORDING TO SOCIO DEMOGRAPHIC VARIABLES****TABLE-4.1**

**Distribution of subjects according to age in years**

(N = 60)

Age Group	Frequency	Percentage(%)
17- 19years	33	55%
20-22years	22	36.66%
23-25years	5	8.33%
Above 25 years	0	0%

**Percentage Distribution According to Age**



**Fig 4.1 Bar diagram showing the frequency and percentage distribution according to age group.**

**Table No. 4.1 (fig 4.1)** represent that majority of B.Sc Nursing and G.N.M 1st year students 55% (33) belong to age group 17 – 19 years, 36.66%(22) belongs to 20 – 22 years, 8.33%(5) belong to 23 – 25 years and 0%(0) belongs to above 25 years.

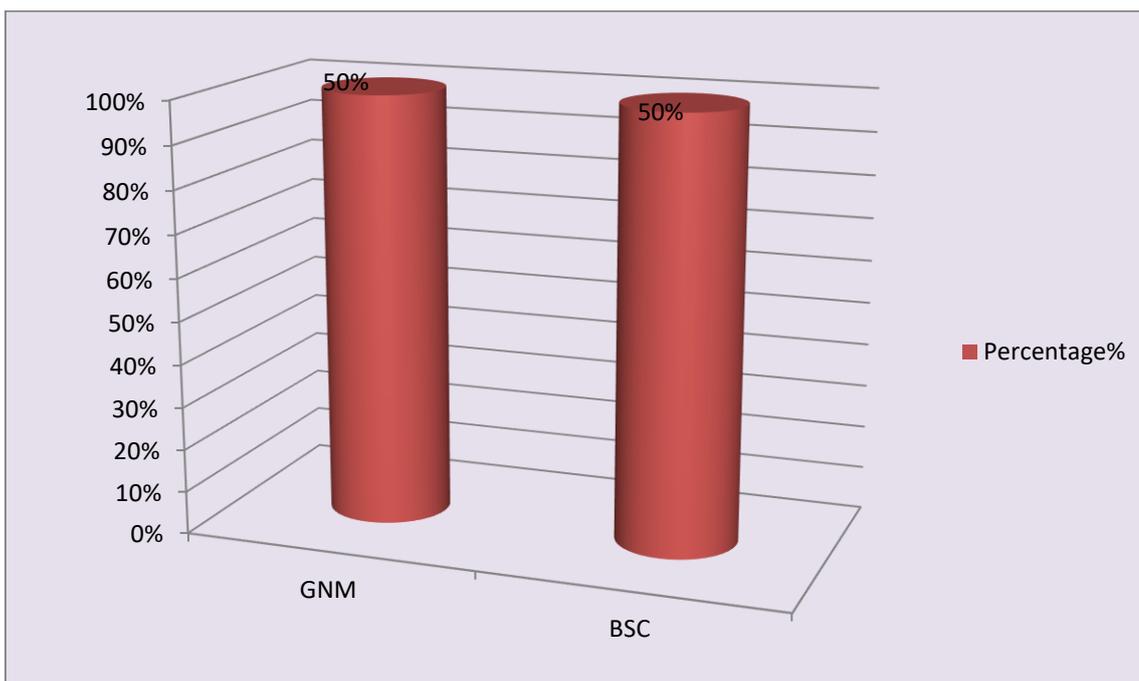
**TABLE-4.2**

**Distribution of subject according to course of study**

(N = 60)

Course of study	Frequency	Percentage(%)
GNM	30	50%
B.SC	30	50%

**Percentage Distribution According To Course of Study**



**Fig 4.2 Cylinder diagram showing the frequency and percentage distribution according to Course of study.**

**Table 4.2(fig 4.2)** represent that majority of B.Sc Nursing and G.N.M 1st year students were 50% (30) belong to G.N.M 1st year students and 50% (30) belongs to B.Sc Nursing students.

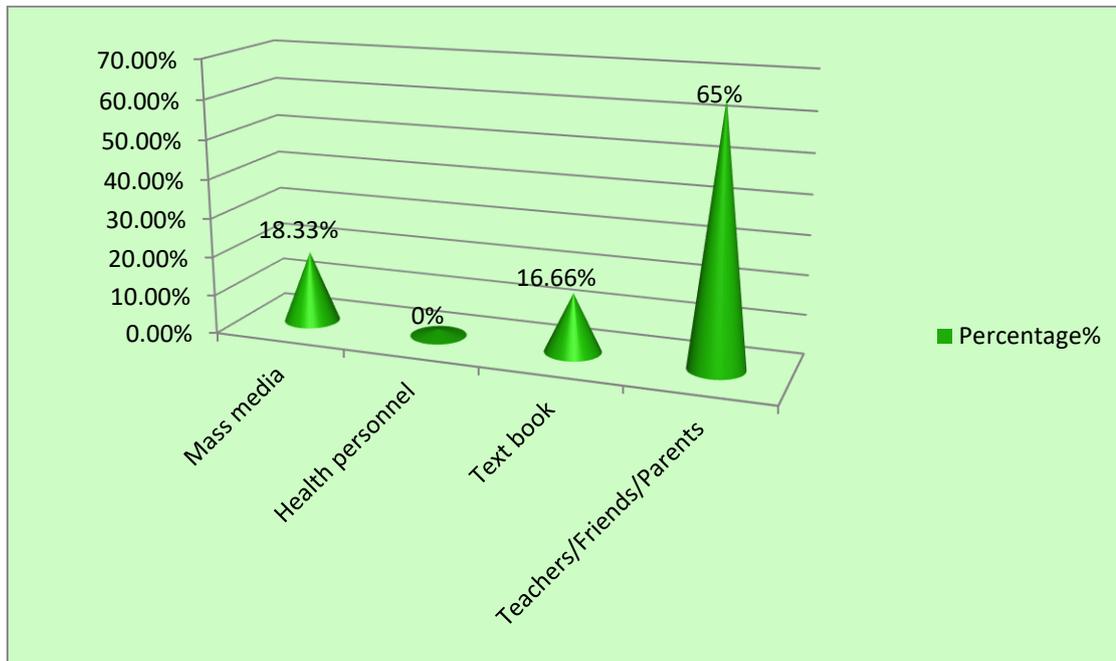
**TABLE-4.3**

**Distribution of subject according to source of information**

(N = 60)

Source of information	Frequency	Percentage
Mass Media	11	18.33%
Health personnel	0	0%
Text book	10	16.66%
Teachers/friends/parents	39	65%

**Percentage Distribution According To Source of information**



**Fig 4.3** Cone diagram showing the frequency and percentage distribution according to source of information.

**Table 4.3(fig 4.3)** represent that majority B.Sc Nursing and G.N.M 1st year student's source of information, 65%(39) from Teachers/Friends/Parents, 18.33%(11) from Mass media, 15%(9) from Text book, 1.66%(1) from Health personnel.

TABLE-4.4

Distribution of subject according to BMI

(N = 60)

Body Mass Index	Frequency	Percentage
18- 21	34	56.66%
22 - 25	22	36.66%
26 - 29	4	6.66%
Above 30	0	0%

Percentage Distribution According To BMI

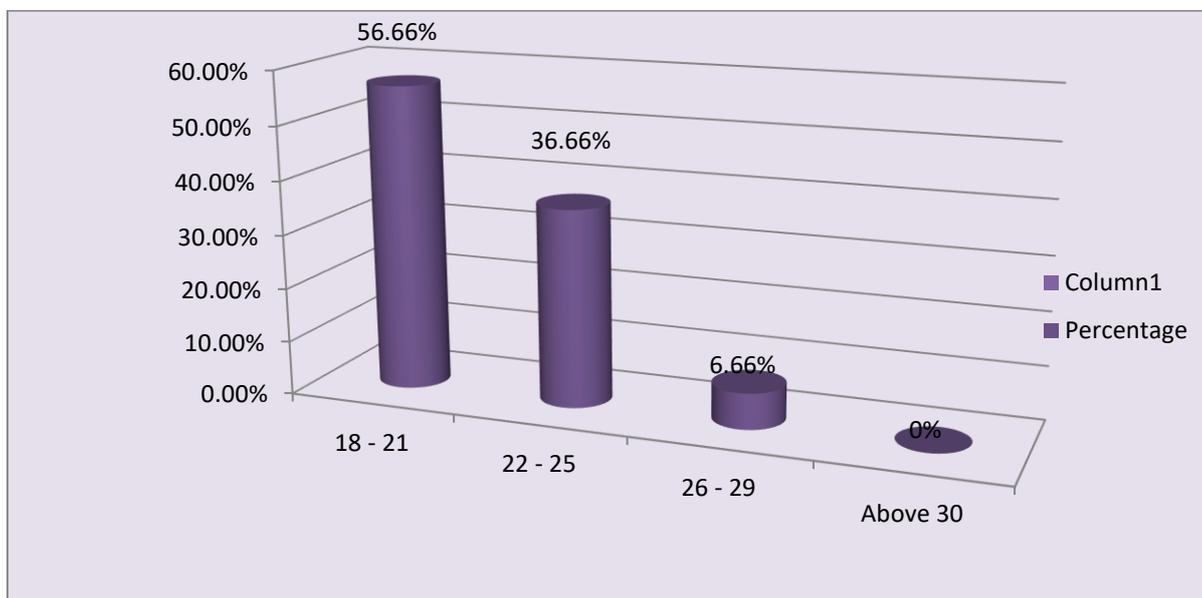


Fig 4.4 Cylinder diagram showing the frequency and percentage distribution according to BMI.

Table 4.4(fig 4.4) represent that majority B.Sc Nursing and G.N.M 1st year student's, 56.66% (34) belongs to 18 – 21 BMI rate, 36.66% (22) belongs to 22 – 25 BMI rate, 6.66% (4) belongs to 26 – 29 BMI rate, 0% (0) belongs to Above 30 BMI rate.

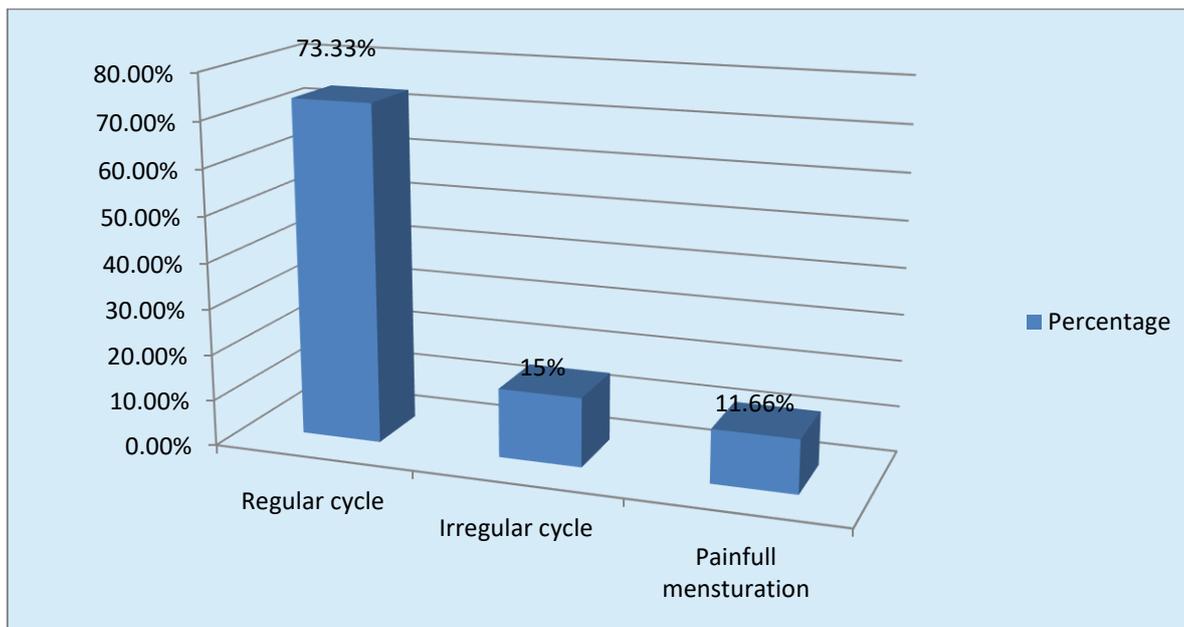
TABLE-4.5

Distribution of subject according to history of menstrual cycle

(N = 60)

History of Menstrual cycle	Frequency	Percentage
Regular cycle	44	73.33%
Irregular cycle	9	15%
Painful menstruation	7	11.66%

**Percentage Distribution According to History of Menstrual Cycle**



**Fig 4.5** Bar diagram showing the frequency and percentage distribution according to history of menstrual cycle.

**Table No. 4.5 (fig 4.5)** represent that majority of B.Sc Nursing and G.N.M 1st year students 73.33% (44) have regular cycle, 15% (9) have irregular cycle, 11.66% (7) have painful menstrual cycle.

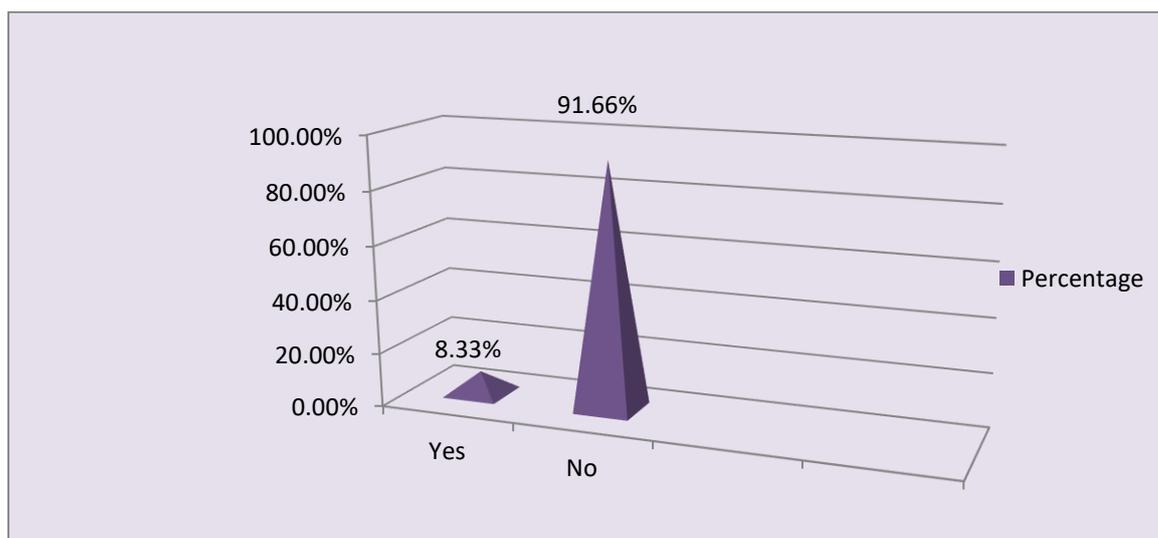
**TABLE-4.6**

**Distribution of subject according to any clinical history of polycystic ovarian syndrome.**

(N = 60)

Any clinical history of polycystic ovarian syndrome	Frequency	Percentage
Yes	5	8.33%
No	55	91.66%

**Percentage Distribution According to Any Clinical History Of Polycystic Ovarian Syndrome**



**Fig 4.6** Cone diagram showing the frequency and percentage distribution according to any clinical history of polycystic ovarian syndrome.

**Table 4.6(fig 4.6)** represent that majority B.Sc Nursing and G.N.M 1st year student's 8.33% (5) have present clinical history of polycystic ovarian syndrome and 91.66% (55) have no any present clinical history of polycystic ovarian syndrome.

## SECTION II

### OVERALL KNOWLEDGE ANALYSIS USING MEAN, MEAN%, STANDARD DEVIATION

**TABLE – 4.7**

Overall knowledge analysis using Mean, Mean%, Standard Deviation

Analysis knowledge Level	Mean	Mean%	Standard Deviation
Pre- Test	12.31	61.55%	± 2.70
Post - Test	20.91	83.64%	± 3.310

**TABLE – 4.8**

Overall Analysis of knowledge according to knowledge level

Analysis through knowledge level	Poor (0-5)	Average (6-10)	Good (11-15)	Very Good (16-20)	Excellent (21-25)
Pre- test	0(0%)	19(31.66%)	36(60%)	5(8.33%)	0(0%)
Post - test	0(0%)	0(0%)	6(10%)	16(26.66%)	38(63.33%)

### Distribution According To Criteria of Knowledge Level

## SECTION III

### CHI – SQUARE ANALYSIS FOR ASSOCIATION BETWEEN THE PRE- TEST LEVEL OF KNOWLEDGE WITH SELECTED SOCIO- DEMOGRAPHIC VARIABLES.

**TABLE 4.9**

Chi – square analysis for association between the Pre- test level of knowledge with selected Sociodemographic variables.

Sl. No	Socio Demographic data	Level of knowledge					Total	D F	Calculated Chi-square	Significance
		Poor	Average	Good	Very Good	Excellent				
1.	Age group							4	4.13	X <sup>2</sup> = 9.49 P > 0.05 NS
	17-19 years	0	8	23	2	0	33			
	20-22 years	0	8	11	3	0	22			
	23-25 years	0	3	2	0	0	5			
	Above 25 years	0	0	0	0	0	0			
2.	Course of study							2	2.5	X <sup>2</sup> = 5.99 P > 0.05 NS
	G.N.M	0	12	15	3	0	30			
	B.Sc	0	7	21	2	0	30			

3.	Source of information							4	9.93	$X^2 = 9.49$ $P < 0.05$ <b>Signi</b>
	Mass Media	0	9	6	3	0	18			
	Health Personnel	0	0	0	0	0	0			
	Text Book	0	8	3	2	0	13			
	Teacher / Friends / Parents	0	8	20	1	0	29			
4.	BMI							4	1.46	$X^2 = 9.49$ $P > 0.05$ <b>NS</b>
	18 - 21	0	12	18	4	0	34			
	22 - 25	0	6	15	1	0	22			
	26 - 29	0	1	3	0	0	4			
	Above 30	0	0	0	0	0	0			
5.	History of menstrual cycle							4	0.48	$X^2 = 9.49$ $P > 0.05$ <b>NS</b>
	Regular cycle	0	13	27	4	0	44			
	Irregular cycle	0	3	5	1	0	9			
	Painful menstruation	0	3	4	0	0	7			
6.	Any clinical history of PCOS in family							2	19.81	$X^2 = 5.99$ $P < 0.05$ <b>Signi</b>
	Yes	0	11	6	2	0	19			
	No	0	8	30	3	0	41			

(N=60)

**Table 4.9:-** Reveals that there is association with the pre- test knowledge score and selected socio- demographic variables. The Chi-square value in source of information is 9.93 at degree of freedom 4, which is greater than the table value 9.49 at 0.05 level of significance and any clinical history of PCOS in family is 19.81 at degree of freedom 2, which is greater than table value 5.99 at 0.05 level of significance, where as age group, course of study, BMI and history of menstrual cycle is found to be not significance. Hence the research hypothesis  $H_1$  is rejected.

#### **SUMMARY :-**

This chapter deals with the data analysis and interpretation of findings of the study. It includes analysis of findings under different sections such as distribution of subjects according to Sociodemographic variables, area wise analysis of rating scales to assess attitude, overall compression of knowledge and attitude, association of knowledge and attitude with Sociodemographic and study parameters.

**CHAPTER – V****DISCUSSION**

The study was conducted by using pre- experimental one group pre- test post- test design. To assess the level of knowledge regarding PCOS among B.Sc Nursing and G.N.M 1st year students at Florence College of Nursing Irba, Ranchi Jharkhand.

**STATEMENT OF PROBLEM :-**

“A study to assess the effectiveness of structured teaching programme on knowledge regarding B.Sc Nursing and G.N.M 1<sup>st</sup> year students at Florence College of Nursing Irba, Ranchi, Jharkhand.

**ORGANIZATION OF DATA FOR ANALYSIS :-**

The analysis of data is organized and presented under the following broad headings.

- ❖ Section I :- Description of socio demographic variables in frequency and percentage.
- ❖ Section II :- Overall analysis of knowledge through mean, mean%, and standard deviation.
- ❖ Section III :- Chi- square analysis for association between the level of knowledge score with selected socio- demographic variables.

**Section I :- Description of socio demographic variables in frequency and percentage :**

1. Fig 4.1 Bar diagram showing the frequency and percentage distribution according to age group.

Table No. 4.1 (fig 4.1) represent that majority of B.Sc Nursing and G.N.M 1st year students 55% (33) belong to age group 17 – 19 years, 36.66%(22) belongs to 20 – 22 years, 8.33%(5) belong to 23 – 25 years and 0%(0) belongs to above 25 years.

2. Fig 4.2 Cylinder diagram showing the distribution of subject according to Course of study.

Table 4.2(fig 4.2) represent that majority of B.Sc Nursing and G.N.M 1st year students were 50% (30) belong to G.N.M 1st year students and 50% (30) belongs to B.Sc Nursing students.

3. Fig 4.3 Cone diagram showing the frequency and percentage distribution according to source of information.

Table 4.3(fig 4.3) represent that majority B.Sc Nursing and G.N.M 1st year student's source of information, 65%(39) from Teachers/Friends/Parents, 18.33%(11) from Mass media, 15%(9) from Text book, 1.66%(1) from Health personnel.

4. Fig 4.4 Cylinder diagram showing the frequency and percentage distribution according to BMI.

Table 4.4(fig 4.4) represent that majority B.Sc Nursing and G.N.M 1st year student's, 56.66% (34) belongs to 18 – 21 BMI rate, 36.66% (22) belongs to 22 – 25 BMI rate, 6.66% (4) belongs to 26 – 29 BMI rate, 0% (0) belongs to Above 30 BMI rate.

5. Fig 4.5 Bar diagram showing the frequency and percentage distribution according to history of menstrual cycle.

Table No. 4.5 (fig 4.5) represent that majority of B.Sc Nursing and G.N.M 1st year students 73.33% (44) have regular cycle, 15% (9) have irregular cycle, 11.66% (7) have painful menstrual cycle.

6. Fig 4.6 Cone diagram showing the frequency and percentage distribution according to any clinical history of polycystic ovarian syndrome.

Table 4.6(fig 4.6) represent that majority B.Sc Nursing and G.N.M 1st year student's 8.33% (5) have present clinical history of polycystic ovarian syndrome and 91.66% (55) have no any present clinical history of polycystic ovarian syndrome.

**SECTION II :- OVERALL KNOWLEDGE ANALYSIS USING MEAN, MEAN%, STANDARD DEVIATION.**

The objective was to assess the pre- test knowledge score regarding 'Polycystic Ovarian Syndrome' among B.Sc Nursing and GNM 1<sup>st</sup> year students, Florence college Of Nursing Irba, Ranchi, Jharkhand.

**TABLE – 4.7 Overall knowledge analysis using Mean, Mean%, Standard Deviation**

Table 4.7 depicts the analysis of overall knowledge level through pre- test mean (12.31), mean% (61.55%), standard deviation(±2.70) and post- test mean (20.91), mean % (83.64%), standard deviation (±3.310).

**Fig 4.8 Pie diagram represent the analysis of knowledge according to criteria of knowledge level.**

**Table 4.8 (fig 4.8)** represent the B.Sc Nursing and G.N.M 1st year students 31.66% (19) were having average knowledge, 60% (36) were having good knowledge and 8.33% (5) were having very good knowledge.

### SECTION - III

#### CHI – SQUARE ANALYSIS FOR ASSOCIATION BETWEEN THE PRE- TEST LEVEL OF KNOWLEDGE WITH SELECTED SOCIO- DEMOGRAPHIC VARIABLES.

The objective is to find out the association between the pre- test knowledge score of B.Sc Nursing and G.N.M 1st year students and their selected demographic variables.

**TABLE 4.9 Chi – square analysis for association between the Pre- test level of knowledge with selected sociodemographic variables.**

**Table 4.9**

- ❖ There is significant association between source of information and knowledge score as the calculated Chi- square value is 9.93(df 4) is greater than table value 9.49 at 0.05 level of significance.
- ❖ There is significant association between any clinical history of Polycystic Ovarian Syndrome in Family and knowledge score as the calculated Chi- square value is 19.81 (df 2) is greater than table value 5.99 at 0.05 level of significance.

**So the above findings indicate that Hypothesis H<sub>2</sub>** - There will be significant association between the pre-test knowledge and selected socio-demographic variables at 0.05 level of significance.

- ❖ There is no significant association between age group and knowledge score as the calculated Chi- square value is 4.13 (df 4) is less than table value 9.49 at 0.05 level of significance.
- ❖ There is no significant association between course of study and knowledge score as the calculated Chi- square value is 2.5 (df 2) is less than table value 5.99 at 0.05 level of significance.
- ❖ There is no significant association between Body Mass Index (BMI) and knowledge score as the calculated Chi- square value is 1.46 (df 4) is less than table value 9.49 at 0.05 level of significance.
- ❖ There is no significant association between history of menstrual cycle and knowledge score as the calculated Chi- square value is 0.48 (df 4) is less than table value 9.49 at 0.05 level of significance.

**CHAPTER – VI****SUMMARY, CONCLUSION AND RECOMMENDATIONS**

This chapter presents a brief account of the present study. Conclusions are drawn from the findings and the implications of the result are stated. It also includes recommendations and implications for the nursing practice, nursing education, nursing administration and nursing research.

**Summary of the Study**

The aim of the study is to assess the effectiveness of structured teaching programme. among B.Sc and G.N.M 1<sup>st</sup> year students in a selected college at Florence college of nursing Irba, Ranchi.

**The Objectives of the Study were**

❖ To assess the pre- test knowledge score regarding ‘Polycystic Ovarian Syndrome’ among B.Sc Nursing and G.N.M 1st year students, Florence college Of Nursing Irba, Ranchi, Jharkhand.

To develop the structured teaching programme on Polycystic Ovarian Syndrome’

❖ To evaluate the effectiveness of structured teaching programme on knowledge regarding polycystic ovarian syndrome among B.Sc Nursing and G.N.M 1st year students at Florence college Of Nursing Irba, Ranchi, Jharkhand.”

❖ To find out the association between pre- test knowledge score of B.Sc Nursing and G.N.M 1st year students and their selected demographic variables.

Pre experimental one group pre- test and post – Test design was used to assess the effectiveness of structured teaching programme on knowledge regarding polycystic ovarian syndrome among B.sc Nursing and G.N.M 1<sup>st</sup> year students in selected florence college of Nursing Irba, Ranchi. The 60 samples were selected by non- probability convenient sampling technique with inclusion criteria.

The data collection tool consisted of 2 parts.

Part 1

Demographic variables.

Part 2

Structured multiple choice questionnaires to assess the level of knowledge regarding Polycystic Ovarian Syndrome among B.sc Nursing and G.N.M 1<sup>st</sup> year students.

Prior to data collection permission was obtained from principal, of Florence college of Nursing Irba, Ranchi. In this study 60 B.Sc Nursing and G.N.M 1<sup>st</sup> year students were involved. On day 1, before giving structured multiple choice questionnaire, the purpose of the study was explained to the B.Sc Nursing and G.N.M 1<sup>st</sup> year students with self introduction. Pre test questionnaire were given to the sample and they took 15-20 minutes for answering it. On day 3 Structured teaching programme were conducted on Polycystic Ovarian Syndrome was given for 45 minutes through power point presentation, chart paper, Flash card, white board. On 7th day the same questionnaire was provided to the samples and were asked them to answer, they took 10-15 minutes to complete the questionnaire.

The collected data were analyzed by using both descriptive statistics and inferential statistics paired Chi-square.

**Major Study Findings**

The major study findings were,

❖ With regard to the knowledge most of them had Good knowledge in pre- test and most of them had excellent knowledge in post-test.

❖ With regard to the effectiveness of structured teaching programme on knowledge regarding Polycystic Ovarian Syndrome among B.Sc Nursing and G.N.M 1<sup>st</sup> year students, the mean post-test knowledge score was 20.91 more than the mean pre-test knowledge score was 12.31. The study revealed that structured teaching programme was effective in improving the level of knowledge regarding Polycystic Ovarian Syndrome.

❖ With regard to the association between the knowledge with their selected demographic variables in the present study findings revealed that there was a significant association between the knowledge among B.Sc and G.N.M 1<sup>st</sup> year Nursing students and their Distribution of students according to age in year N = 60, Distribution of subject according to course of study, Distribution of subject according to source of information, Distribution of subject according to BMI, distribution of subject according to History of Menstrual cycle. Distribution of subject according to history of polycystic ovarian syndrome.

## Conclusion

The main conclusion drawn in this present study was majority of the B.Sc and G.N.M 1<sup>st</sup> year Nursing students had Good, Very Good and Excellent level of knowledge. After structured teaching programme regarding Polycystic Ovarian Syndrome the level of knowledge was increased significantly.

## Implication of the Study

According to Tolsma (1995), the section of the research report that focuses on nursing implication usually includes specific suggestions for nursing practice, nursing education, nursing administration and nursing research.

## Nursing Practice

The nurses can

- Learn accurate assessment of level of knowledge by using Self administered questionnaire.
- The structured teaching programme can be incorporated in nursing as specific health education measures to teach about Polycystic Ovarian Syndrome among B.Sc Nursing and G.N.M 1<sup>st</sup> year students.
- The nursing personnel can be able to develop specific knowledge and skill in providing health education regarding Polycystic Ovarian Syndrome among B.Sc Nursing and G.N.M 1<sup>st</sup> year students.

## Nursing Education

- The structured teaching programme can be taught to all the Nursing students to upgrade their knowledge on Polycystic Ovarian Syndrome among B.Sc Nursing and G.N.M 1<sup>st</sup> year students.
- The structured teaching programme can be taught to all nursing students posted in College campus to provide health education.

## Nursing Administration

- In service education program can be organized for the nursing students on polycystic ovarian syndrome.
- The nurse can become an effective coordinator and leader by arranging the health education program at various settings.

## Nursing Research

- Findings of the study can be added to the research review regarding the Effectiveness of structured teaching programme regarding Polycystic Ovarian Syndrome to increased knowledge among B.Sc Nursing and G.N.M 1<sup>st</sup> year students.
- The study findings can be used as the baseline data and further studies can be conducted and expand the study in various fields.

## Limitations

- The study was limited to 6 weeks
- The study was limited to students in B.Sc Nursing and G.N.M 1<sup>st</sup> year students at Florence college of Nursing Irba Ranchi

## Recommendations

- The same study can be replicated on large sample to generalize the findings
- The same study can be conducted in different settings.
- Nursing curriculum should be updated to include comprehensive information about PCOS to improve the awareness of other women once in practice.
- A similar study can be conducted by assessing the knowledge and attitude regarding Polycystic Ovarian Syndrome among B.sc Nursing and G.N.M 1<sup>st</sup> year students.

## SUMMARY :-

This chapter deals with the summary of the study, objective of the study, major study findings, conclusion, implication of the study, limitations and recommendations.

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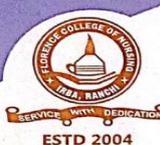
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- [www.ncbi.nlm.nih.gov](http://www.ncbi.nlm.nih.gov)
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- <http://rbej.biomedcentral.com>
- [www.tiprc.org](http://www.tiprc.org)
- [www.ijneronline.com](http://www.ijneronline.com)
- <http://www.ijcrar.com>

**CHAPTER – VIII**  
**APPENDIX – I**

**LETTER SEEKING PERMISSION TO CONDUCT THE MAIN STUDY**



**FLORENCE**  
College of Nursing  
(A unit of : Haji Abdur Razzaque Educational Society)  
Recognised by : The Govt. of Jharkhand & Affiliated to Jharkhand Nursing Council & Ranchi University  
Approved by : Indian Nursing Council

Ref. No. : FCN/127/21-22      Date : 06/11/21

**LETTER SEEKING PERMISSION FOR CONDUCTING RESEARCH STUDY**

To,

The Principal  
Florence College of Nursing  
Irba, Ranchi (Jharkhand)

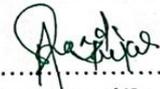
Subject: - Requesting permission to conduct data collection for research project.

As per the above cited subject, Miss Vibha Kumari, Miss Suchita Lakra, Miss Pratima Xess, Miss Shivani Turkey, Miss Sumitra Beck, Mr. Ahmad Ali, are the Basic B.sc Nursing Student of our Institution .They have selected the below state Topic for their Research project.

**Topic: - "A study to assess the effectiveness of structure teaching programme on knowledge regarding Polycystic Ovarian Syndrome among B.Sc Nursing and GNM 1<sup>st</sup> Year students in Florence College of Nursing, Irba, Ranchi (Jharkhand).**

The ethical committee of our college has approved this study .There for, I request you to kindly grant permission to conduct data collection. We assure that this study will not have any harmful effect to the subject.

Thanking you in Anticipation

  
 .....  
 Signature of Principal  
 Principal  
 Florence College of Nursing  
 Irba, Ranchi, Pin-835238

---

A Unit of : Haji Abdur Razzaque Educational Society



Irba, Ranchi-835219  
(Jharkhand)



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7903999411



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**APPENDIX – II****CONSENT FROM THE RESPONDENTS**

Dear participant,

We are the students of B.Sc Nursing final year of Florence College of Nursing, Irba, Ranchi (Jharkhand).

In partial fulfilment of my course, I propose to do a study to assess the knowledge regarding Polycystic Ovarian Syndrome among B.Sc Nursing and GNM I<sup>st</sup> Year students in Florence College of Nursing, Irba, Ranchi (Jharkhand).

Your honest response would be very valuable from my study. I assure you that your response will be kept confidential and would be used only for the purpose of making general observation regarding the subjects.

Requesting you again to co-operate sincerely and honestly to make my study reliable and fruitful.

Miss. Vibha Kumari

Miss. Suchita Lakra

Miss. Pratima Xess

Miss. Shivani Tirkey

Miss. Sumitra Beck

Mr. Ahmad Ali

I am willing to participate in the study and I am aware that the information provided will be kept confidential and used only for study purposes.

Date -

.....

Place -

Signature of Participant

**APPENDIX – III****SELF-STRUCTURE QUESTIONNAIRE TO ASSESS THE EFFECTIVENESS OF STRUCTURE TEACHING PROGRAMME ON KNOWLEDGE REGARDING POLYCYSTIC OVARIAN SYNDROME.****SECTION – A****SOCIO- DEMOGRAPHIC VARIABLES**

Please read each item or statement carefully and give your appropriate response. All the information (response) given by kept confidential and used only for the study purpose kindly answer all the questions.

1. Age in years
  - a. 17-19 ( )
  - b. 20-22 ( )
  - c. 23-25 ( )
  - d. Above 25 ( )
  
2. Course of study
  - a. GNM ( )
  - b. B.sc ( )
  
3. Source of information
  - a. Mass Media ( )
  - b. Health personnel ( )
  - c. Text book ( )
  - d. Teachers/ Friends/ parents ( )
  
4. Body mass index
  - a. 18-21 ( )
  - b. 22-25 ( )
  - c. 26-29 ( )
  - d. Above 30 ( )
  
5. History of menstrual cycle
  - a. Regular cycle ( )
  - b. Irregular cycle ( )
  - c. Painful menstruation ( )
  
6. Any clinical history of polycystic ovarian syndrome in the family
  - a. Yes ( )
  - b. No ( )

**SELF-STURCTURE QUESTIONNARIRE TO ASSESS THE EFFECTIVENESS OF STURCTURE TEACHING PROGRAMMEON KNOWLEDGE REGARDING POLYCYSTIC OVARIAN SYNDROME.**

**SECTION – B**

**PART-I**

**ANATOMY AND PHYSIOLOGY OF FEMALE REPRODUCTIVE SYSTEM**

1. Gonads of female reproductive system

- a. The xx chromosomes ( )  
 b. The external genitalia ( )  
 c. The ovaries ( )  
 d. The Bartholin's glands ( )

2. The shape of normal ovary

- a. Small almond ( )  
 b. Oval ( )  
 c. Round ( )  
 d. Pear ( )

3. Hormones secreted by ovary

- a. Androgen ( )  
 b. Oestrogen and Progesterone ( )  
 c. Gonadotropin Hormone ( )  
 d. FSH & LH ( )

4. The Size of the normal ovary

- a. 3.5(L) × 2.5(w) × 1.5(T) ( )  
 b. 3.5(L) × 1.5(w) × 2.5(T) ( )  
 c. 1.5(L) × 2.5(W) × 3.5(T) ( )  
 d. 2.5(L) × 3.5(W) × 1.5(T) ( )

5. Vital Functions of ovary

- a. Egg Release ( )  
 b. Produce hormones ( )  
 c. A and B both ( )  
 d. Only A ( )

**PART-II**

**KNOWLEDGE REGARDING POLYCYSTIC OVARIAN SYNDROME**

6. PCOS stands for

- a. Polycystic ovarian syndrome ( )  
 b. Polycystic ovarian symptom ( )  
 c. Polycystic ovulation syndrome ( )  
 d. Polycystic ovulation symptom ( )

7. Polycystic ovarian syndrome is

- a. Cardiovascular disorder ( )  
 b. Musculoskeletal disorder ( )  
 c. Endocrine disorder ( )  
 d. Cerebrovascular disorder ( )

8. In polycystic ovarian syndrome the tiny fluid present in ovary is called as
- Scar ( )
  - Wound/Lesion ( )
  - Egg ( )
  - Cysts ( )
9. Causes of polycystic ovarian syndrome is
- Imbalance female sex hormones ( )
  - More intake of sodium ( )
  - Less Intake of calcium ( )
  - Kidney dysfunction ( )
10. Mostly affected age group by polycystic ovarian syndrome is
- 12 - 18 years ( )
  - 18 - 44 years ( )
  - 40 - 60 years ( )
  - Above 70 years ( )
11. The common features for patients with polycystic ovarian syndrome is
- Malnourished ( )
  - Obese ( )
  - Anemia ( )
  - Dehydrated ( )
12. Common sign and symptom of polycystic ovary syndrome
- Menstrual disorder ( )
  - Infertility ( )
  - Hormonal imbalance ( )
  - All of the above ( )
13. Pre-disposing factors for polycystic ovarian syndrome is
- Family history of polycystic ovarian syndrome ( )
  - History of heart disease ( )
  - Communicable disease ( )
  - Age of the girl ( )
14. Metabolic disorder can occur due to polycystic ovarian syndrome
- Cushing syndrome ( )
  - Diabetes ( )
  - Hyperparathyroidism ( )
  - Goiter ( )
15. Polycystic ovarian syndrome can be confirmed through
- surgery ( )
  - X-ray ( )
  - Vaginal ultrasound ( )
  - Palpation ( )
16. Patient with polycystic ovarian syndrome have elevated level of
- Androgen ( )
  - Hydrogen ( )
  - Nitrogen ( )
  - Ammonia ( )

17. The first drug of choice for women with polycystic ovary syndrome
- a. Metformin
  - b. Oxytocin
  - c. Methergine
  - d. Folic acid
18. Complication of polycystic ovarian disease
- a. Fertility
  - b. In-Fertility
  - c. Metrorrhagia
  - d. Amenorrhea
19. Women with polycystic ovarian syndrome have higher rate of
- a. Miscarriage
  - b. Gestational diabetes mellitus
  - c. Pre-eclampsia
  - d. Ectopic pregnancy
20. Women with polycystic ovarian syndrome have a higher risk of which one of the following
- a. Impaired glucose tolerance
  - b. Sexual dysfunction
  - c. Ovaries malignancy
  - d. Adrenal hyperplasia
21. Attributable finding to hyper androgenism in polycystic ovarian syndrome
- a. Weight loss
  - b. Excess body and facial hair
  - c. Cell structure
  - d. Abdominal distension
22. The major reason for women with polycystic ovarian syndrome to refer from infertility
- a. Obesity
  - b. An ovulatory menstrual cycle
  - c. Excess insulin levels
  - d. Malnourished
23. The conservative indication for polycystic ovarian syndrome
- a. Missed period for 1 months
  - b. Less than 6 periods in a year
  - c. Increased vaginal discharge
  - d. Abdominal distension
24. Initial management for polycystic ovarian syndrome
- a. Regular exercises
  - b. Metformin
  - c. Oophrectomy
  - d. Hysterectomy
25. Increased androgen will leads to
- a. Increased appetite
  - b. Increased hair growth
  - c. Increased urine output
  - d. Increased sweating

**APPENDIX- IV****SCORING KEY****ANSWER KEY FOR KNOWLEDGE QUESTIONNAIRE:**

<b>Question Number</b>	<b>Answers</b>	<b>Score</b>
1.	C	1
2.	A	1
3.	B	1
4.	A	1
5.	C	1
6.	A	1
7.	C	1
8.	D	1
9.	A	1
10.	B	1
11.	B	1
12.	A	1
13.	B	1
14.	C	1
15.	C	1
16.	A	1
17.	A	1
18.	B	1
19.	A	1
20.	A	1
21.	B	1
22.	B	1
23.	B	1
24.	A	1
25.	B	1

**APPENDIX -V****LIST OF FORMULA**

1. **MEAN** =  $\frac{\sum x}{N}$
2. **MEAN SCORE PERCENTAGE** =  $\frac{\text{mean}}{\text{no of score}} \times 100 \dots$
3. **STANDARD DEVIATION** =  $s = \sqrt{\frac{\sum x^2 - \frac{(\sum x)^2}{n}}{n-1}}$
4. **CHI SQUARE** =  $\chi^2 = - \frac{\sum(O-E)^2}{E}$
5. **DEGREE OF FREEDOM (df)** = (R-1)(C-1)

**APPENDIX-VI****Evaluation criteria rating for validating the tool****Section A : Demographic variables**

SI. NO	Item	Poor	Average	Good	V. good	Excellent	Remark
1,	Age in year						
2.	Course of study						
3.	Source of Information						
4.	Body mass Index						
5.	History of menstrual cycle						
6.	Any clinical history of polycystic ovarian syndrome in the family						

**SECTION – B****Structured knowledge questionnaire**

SI NO	Item	Poor	Average	Good	V. good	Excellent	Remark
1.							
2.							
3.							
4.							
5.							
6.							
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