



A Study to Evaluate the Knowledge and Attitude Regarding Polycystic Ovarian Syndrome among Adolescent Girls in Selected Higher Secondary Schools at Trivandrum with a View to Develop a Self-instructional Module

S. Sindhu^{a#} and C. C. Linson^{at}

^a SRK University, Bhopal, India.

Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

Article Information

DOI: 10.9734/JPRI/2021/v33i50A33379

Editor(s):

(1) Dr. Francisco Cruz-Sosa, Metropolitan Autonomous University, Mexico.

Reviewers:

(1) Lasma Lidaka, Riga Stradins University, Latvia.

(2) Seyedeh Fatemeh Dalil Heirati, Guilan University of Medical Sciences, Iran.

(3) Manal Madani Abdul Qader, Al Mustansiriyah Collage of Medicine, Iraq.

Complete Peer review History: <https://www.sdiarticle4.com/review-history/76509>

Original Research Article

Received 01 September 2021

Accepted 06 November 2021

Published 15 November 2021

ABSTRACT

Poly cystic ovarian syndrome is a hormonal disorder common among women of reproductive age. Women with PCOD may have infrequent or prolonged menstrual periods or excess male hormone levels. This hormone imbalances cause them to skip menstrual periods and leads to infertility. The study is attempted to assess the knowledge and attitude regarding PCOD among adolescent girls in selected higher secondary schools. The research design of the study was non experimental descriptive survey design. Study was conducted among 60 adolescent girls in selected higher secondary schools at Trivandrum. The result shows that 88.33 percent of adolescent girls have less adequate knowledge regarding PCOD and only 11.67 percent have moderately adequate knowledge and 75 percent of samples have neutral attitude, 25 percent have negative attitude and no one have positive attitude regarding PCOD. The correlation shows

[#] Ph. D Research Scholar

[†] Professor

*Corresponding author: E-mail: sindhukoikal@gmail.com;

moderately positive correlation between knowledge and attitude. The above findings shows that adolescent girls having less adequate knowledge and negative attitude regarding PCOD, so it is important to develop a self instructional module regarding PCOD for an education program.

Keywords: Polycystic ovary syndrome; knowledge; nursing students.

1. INTRODUCTION

A healthy lifestyle is the most crucial part of properly managing polycystic ovarian syndrome, since it lowers the risk of type 2 diabetes and cardiovascular disease [1]. Polycystic ovarian syndrome can be managed and treated with a variety of approaches, including a good diet and physical exercise, medicines, and alternative treatments. Oral contraceptives, antidepressants, anti-anxiety medicines, insulin sensitising agents such metformin, and other treatments were used [2].

Polycystic ovarian syndrome affects 116 million women (3.4 percent) globally, according to the WHO (World Health Organization). Polycystic ovarian syndrome prevalence estimates vary widely over the world, ranging from 2.2 percent to as high as 26 percent.

According to a research by the polycystic ovarian syndrome organisation, one in every ten women in India has polycystic ovarian syndrome, or prevalent endocrine system problem among women of reproductive age. Six teenage girls are diagnosed with polycystic ovarian syndrome for every ten women [3-4]. According to the AIIMS department of endocrinology and metabolism, roughly 20-25 percent of Indian women of reproductive age have polycystic ovarian syndrome, and 60 percent of women with polycystic ovarian syndrome are obese 35- 505 and have a fatty liver [5].

Polycystic ovarian syndrome is a hormonal condition that results in larger ovaries with tiny cysts around the margins. In India, it affects around one million people, usually between the ages of 14 and 40 [6]. Polycystic ovarian syndrome, first discovered by Sleon and Haventhal in 1935, is an increasing concern among adolescent females, according to studies. Polycystic ovarian syndrome affects 5% to 10% of women, making it one of the most frequent endocrine conditions [7]. Polycystic ovarian syndrome is a condition that affects between 22 and 26 percent of women between the ages of 15 and 18. Polycystic ovarian syndrome (PCOS)

is a frequent endocrine condition among adolescents in India (9.13 percent).

Polycystic ovarian syndrome has been on the rise in the teenage population, accompanied by obesity, impaired glucose in type 2 diabetes, and metabolic syndrome. In addition, this condition has been linked to a number of genes [8]. There is a need to raise awareness of polycystic ovarian syndrome in the teenage population, as well as boost diagnosis and the frequency of existing morbidities including obesity and type 2 diabetes. There should be services available to teenagers to assist them understand more about the condition and obtain the psychotherapy they require [9]. To avoid medical co-morbidities, early intervention with lifestyle changes and the use of various drugs is critical. In a survey of children aged 15 to 18 years old in 10 schools in Trivandrum, it was shown that 13.56 percent of the females had menstrual disorder, with 72.3 percent of them having polycystic ovarian syndrome. Polycystic ovarian syndrome was shown to be prevalent in 9.8% of these adults and girls [10-11].

1.1 Statement of the Problem

A study to evaluate the knowledge and attitude regarding Polycystic ovarian syndrome among adolescent girls in selected Higher Secondary Schools at Trivandrum with a view to develop a self-instructional module.

1.2 Objectives

- To assess the level of knowledge of adolescence girls regarding Polycystic ovarian syndrome.
- Assess the level of attitude of adolescent girls regarding Polycystic ovarian syndrome.
- To determine the association between knowledge and attitude of adolescent girls regarding Polycystic ovarian syndrome with their selected demographic variables.
- To determine the correlation between knowledge and attitude regarding Polycystic ovarian syndrome.

1.3 Operational Definition

Evaluate: In this study evaluate refers to assessment of knowledge of adolescent girls regarding Polycystic ovarian syndrome.

Knowledge: In this study knowledge refers to the correct response from the adolescent girls regarding Polycystic ovarian syndrome elicited through structural questionnaire.

Attitude: In this study attitude refers to the word of opinion to adolescence girls regarding Polycystic ovarian syndrome.

Polycystic ovarian syndrome: In this study Polycystic ovarian syndrome refers to a complex condition affection meaning organ sites in reproductive age women including hypothalamus, pituitary, ovary, pancreas, peripheral glucose sensitive tissues and skin in different individuals.

Adolescent girls: In this study adolescence girls refer to the girls belongs to the age between 15-17 years.

Self instructional module: It refers to systematically develop program for adolescent girls to provide information regarding Polycystic ovarian syndrome, which will be provided to the subject of self-reading and gaining information.

Conceptual framework: The conceptual Framework for the present study is based on NolaJ Pender's revised health promotional model.

Research approach: In this study in order to assess the level of knowledge and attitude regarding Polycystic ovarian syndrome among adolescent girls, quantitative research approach was selected.

2. MATERIALS AND METHODS

The design used in this study is known experimental descriptive survey design

2.1 Population

Target population: It consists of adolescence girls between 15-17 years of age child in selected schools at Trivandrum district.

Accessible population: It consists of adolescent girls between 15- 17 years of age in St. John's Model Higher Secondary School Nalanchira at Trivandrum district.

Sample & Sample size: In this study the sample for adolescent girls in St. John's Model Higher Secondary School Nalanchira at Trivandrum district. In this study the sample consists of 60 adolescent girls in St. John's Model Higher Secondary School Nalanchiraat Trivandrum district.

Sampling technique: In this study the sample was selected by using non probability purposive sampling technique.

2.2 Variables

Independent variables: In this study has no independent variable.

Dependent variable: In this study the dependent variables on knowledge and attitude

Demographic variables: In this study the socio-demographic variables includes age, educational status of the mother, source of information etc.

2.3 Sampling Criteria

- 1) sample selected only age group within 15 to 17 years
- 2) Adolescent girls who are willing to participate in this study
- 3) Adolescent girls who can communicate in either Malayalam or English
- 4) Adolescent girls who are studied in selected Higher Secondary Schools.

2.4 Exclusion Criteria

- 1) Adolescence girls who are not willing to participate in this study
- 2) Student who are receiving treatment for Polycystic ovarian syndrome.
- 3) Students for how psychomotor and sensory problems.

Description of the tool: The tools consists of section A and section.

Section A:

It includes sociodemographic data, which includes age, education, religion, parental educational level, income, family type, community region, and previous information about Polycystic ovarian syndrome. To analyse the background of the sample and assess relationship using statistical analysis, scoring was generated by coding the socio demographic characteristics.

Section B:

Part 1 - structured knowledge questionnaire [5]

It includes structured questionnaire to assess the level of knowledge on Polycystic ovarian syndrome. It consists of 25 multiple choice questions. The correct answer has accorded 1 and wrong answer was accorded 0. The maximum score of knowledge questionnaire was 25 and minimum score was 0.

Grading of knowledge

Less adequate	< 50%
Moderately adequate	50-69%
Adequate	70-100%

Likert's scale scoring was prepared according to the Likert's five point scale. It contains 25 items which have 24 positive attitudes and one negative statement. Each statement is marked as strongly agree is 5 agree is 4 neutral is 3 disagrees is 2 strongly disagree is 1. E statements is scored 5 strongly agree and agree is considered as positive attitude, neutral and disagree and strongly disagree as negative attitudes.

Positive attitude	225-159
Neutral attitude	158-92
Negative attitude	91-25

2.5 Content of Validity

The amount to which an element in a measuring technique is relevant and indicative of the construct that will be measured is the content of validity. Two specialists in the fields of medicine and obstetrics and gynaecology were given the developed. The tool was adjusted based on the expert's advice, and the final tool was built.

2.6 The Tool's Dependability

The degree of consistency and precision with which an instrument measures the traits that it is supposed to assess is referred to as reliability.

2.7 Pilot Study

On 9/01/21, after getting approval from the relevant authorities, a pilot research with a sample size of 6 was conducted in Government Girls Higher Secondary School. In order to pick a sample that met the inclusion and exclusion criteria, a non-probability purposive selection

approach was applied. The researchers use a structured knowledge questionnaire and an attitude scale to obtain data from each sample on an individual basis. The research was determined to be viable and useful. After the pilot study, no changes to the tool were made.

2.8 Data Collection

The formal permission was obtained from the principal St. John's Model Higher Secondary School, Nalanchira. Before the data collection the adolescent where expand and oral consent were obtained using non probability purpose of sample technique 100% samples who satisfied the sampling criteria were selected.

2.9 Plan of Data Analysis

The data was organised and collated, and demographic characteristics such age, religion, education, mother's educational status, community region, and income were studied using frequency analysis. The mean and standard deviation were used to assess the level of knowledge and attitude towards polycystic ovarian syndrome. The Chi square test was performed to look for a link between knowledge and attitude and the demographic factors that were chosen. The correlation coefficient approach of Karl Pearson is utilised to detect a link between adolescent girls' knowledge and attitudes about polycystic ovarian syndrome.

3. RESULTS

3.1 Data Analysis and Interpretation

The data were analyzed on the basis of objectives and hypothesis by the descriptive and in inferential statistics. Frequency percentage and chi square test were used for the analysis of the obtained data.

Section 1: frequency and percentage distribution of demographic variables of the samples.

66.6 % of samples belongs to age of 16 years Where are 33.3 % belongs to age of 17 years. 56.6% of samples are Hindus, 28.3 % of samples are Christians and 15 % of samples are Muslims. 100% of samples are plus one students. 3.3 % of samples have parents with no formal education, 30 % of samples how parents with SSLC, 38.3 % have pre-university educated

parents and 28.3 % of samples have graduated parents.

18.3 percent of samples have a family income of less than 1000 dollars, 31.6 percent have a family income of 1000 to 5000 dollars, and 50 percent of samples have a family income of 5000 dollars or more. 81.6 percent of samples live in a nuclear family, 13.3 percent live in a joint family, and 5% live in an extended family. 81.6 percent of samples live in a nuclear family, 13.3 percent live in a joint family, and 5% live in an extended family. 73.3 percent of the samples live in an urban setting, whereas 26.6 percent live in a rural setting. 1.6 % of samples have previous information from health personal, 5 % of samples are information from friends and teachers, 5 % have information from mass media and 88.3 % of samples have no information regarding polycystic ovarian syndrome.

Section 2: Level of knowledge of adolescent girls regarding Polycystic ovarian syndrome

The knowledge score of adolescent girls regarding Polycystic ovarian syndrome. In this 88.33 % of samples have less adequate 11.67 % have moderately adequate and no one have adequate knowledge regarding Polycystic ovarian syndrome. The mean deviation is 9.93 and standard deviation is 2.15.

Section 3: level of attitude of adolescent girls regarding Polycystic ovarian syndrome

The attitude score of adolescent girls regarding Polycystic ovarian syndrome in this 75 % of samples have a neutral attitude, 25 % have negative attitude and no one have positive attitude regarding Polycystic ovarian syndrome. The mean deviation is 86.83 and standard deviation is 6.80.

Section 4: Association of knowledge and attitude regarding Polycystic ovarian syndrome among adolescent girls with their selected demographic variables

The square value is less than p value in demographic variables such as age, religion, education status of parents, community area, type of family, income and previous knowledge. This shows there is no significant association between the knowledge and attitude of adolescent girls towards Polycystic ovarian

syndrome with their demographic variables such as age, religion, educational status of parents, community area and type of family, income and previous knowledge, so null hypothesis is accepted.

Section 5: correlation between level of knowledge and attitude regarding Polycystic ovarian syndrome

The correlation between knowledge and attitude regarding Polycystic ovarian syndrome. Mean of knowledge is 9.93 and mean of attitude is 86.83. Standard deviation of knowledge is 2.51 and attitude is 6.80. The r value is 0.36. Thus exists a moderately positive correlation between knowledge and attitude.

4. DISCUSSION

The present study was intended to assess the level of knowledge and attitude regarding Polycystic ovarian syndrome among adolescent girls. Data were collected from 60 adolescent girls between the age group of 15 -17 in selected Higher Secondary Schools. The findings of this study are discussed with other reference to the objectives and hypothesis.

The main objective of the study was to assess the knowledge and attitude of adolescent girls regarding Polycystic ovarian syndrome. In present study that 88.33 % have less adequate knowledge regarding Polycystic ovarian syndrome and only 11.67 % have moderately knowledge regarding Polycystic ovarian syndrome [4]. 75 % of samples have neutral attitude and 25% of samples have negative attitudes regarding Polycystic ovarian syndrome. The main purpose of the study was to evaluate the knowledge and attitude regarding Polycystic ovarian syndrome among adolescent girls in selected higher secondary schools at Trivandrum, with a view to develop a self-instructional module. A descriptive non experimental research study design was used for this study. The objective of this study was to assess the level of knowledge and attitude regarding Polycystic ovarian syndrome among adolescent girls, determine the association between knowledge and attitude of adolescent girls regarding Polycystic ovarian syndrome with their selected demographic variables and to determine the correlation between knowledge and attitude of adolescent girls regarding Polycystic ovarian syndrome [2].

4.1 Nursing Implications

The finding of the present study has got an implication to the field of nursing practice and nursing research

4.2 Nursing Practice

In the present scenario the knowledge of adolescent girls regarding Polycystic ovarian syndrome is remains a challenge at nursing practice. Early identification of adolescence knowledge is effective in decreasing Polycystic ovarian syndrome. The result of this study shows that knowledge of adolescent girls regarding Polycystic ovarian syndrome are moderately adequate. Based on the study formulating an effective instructional module regarding Polycystic ovarian syndrome will be beneficial for adolescent girls. In addition to this nursing personal care plan, teach and implement this instructional module for prevention of Polycystic ovarian syndrome. Thus this instructional module means to be an adjunct to Polycystic ovarian syndrome for prevention of Polycystic ovarian syndrome among adolescent girls.

4.3 Nursing Education

At the present Healthcare system gives more emphasis on preventive rather than curative aspects. To impact knowledge to the public nursing curriculum should in co-operative activities like preparation of self-instructional module.

4.4 Nursing Research

Attitude and knowledge of adolescent girls regarding Polycystic ovarian syndrome helps for improvements in professional knowledge upon which further results can be conducted.

4.5 Nursing Administration

More Healthcare workers can be assigned in the field to provide knowledge regarding Polycystic ovarian syndrome to the adolescent girls.

5. CONCLUSION

Adolescent girl's knowledge is important for the prevention of Polycystic ovarian syndrome. In the present study it was found that 88.33% have less adequate knowledge regarding Polycystic ovarian syndrome. And only have 11.67%

moderately adequate knowledge. About 0 % have positive attitude, 75 % have a neutral attitude and 25 % have negative attitude regarding Polycystic ovarian syndrome. There is no association was found between knowledge and attitude regarding Polycystic ovarian syndrome. Moderately positive correlation was found between knowledge attitudes of adolescent girls regarding Polycystic ovarian syndrome.

6. RECOMMENDATION

- A study can be conducted to assess the knowledge and attitude regarding Polycystic ovarian syndrome among adolescent girls with their selected demographic variables in a large population.
- A comparative study can be conducted regarding the knowledge and attitude of PCOD among infertile women.
- A descriptive study can be conducted difference in knowledge regarding PCOD among urban and rural women.

CONSENT AND ETHICAL APPROVAL

As per international standard or university standard guideline participant consent and ethical approval has been collected and preserved by the authors.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. El-Sharkawy AA, Abdelmotaleb GS, Aly MK, Kabel AM. Effect of metformin on sleep disorders in adolescent girls with polycystic ovarian syndrome. *J Pediatr Adolesc Gynecol.* 2014;27:347–52.
2. Nafiye Y, Sevtap K, Muammer D, Emre O, Senol K, Leyla M. The effect of serum and intrafollicular insulin resistance parameters and homocysteine levels of nonobese, non hyper androgenemic polycystic ovary syndrome patients on in vitro fertilization outcome. *Steril.* 2010;93:1864.
3. Louwers YV, Laven JS. Characteristics of polycystic ovary syndrome throughout life. *Ther Adv Reprod Health.* 2020;14:2633-49.

4. Maqbool M, Khan M, Mohammad M, Adesina MA, Fekadu G. Awareness about reproductive health in adolescents and youth: a review. *Int Res J Pharmaceut Appl Sci.* 2019;1–5.
5. Allahbadia GN, Merchant R. Polycystic ovary syndrome and impact on health. *Middle East Fertil Soc J.* 2011;16:1937.
6. Azziz R, Marin C. "Health care-related economic burden of the polycystic ovary syndrome during the reproductive life span". *J Clin Endocrinol Metab.* 2005 ;90(8):4650-8.
7. Bronstein J, et al. Retrospective chart review and systematic review of the literature among 58 girls (age \leq 18 yrs) with a diagnosis of PCOS based on the Rotter damcriteria. *J Pediatr Adolesc Gynecol.* 2011;24(1):1520.
8. Chakrabarti J. Correlation study on serum leptin level in women with polycystic ovary syndrome. *Ann Med Health Sci Res.* 2013; 3(2):191-6.
9. Creatsas G, Deligeoroglou E. Polycystic ovarian syndrome in adolescents. *Abstract of Curr Opin Obstet Gynecol.* 2007;19(5): 420-6.
10. Ene-ObongH et al., Prevalence of overweight, obesity, and thinness among urban school-aged children and adolescents in southern Nigeria. *Food Nutr Bull.* 2012;33(4):24250.
11. Guo X1 et al., Prevalence and risk factors of being overweight or obese among children and adolescents in northeast China. *Pediatr Res.* 2013; 74(4):443-9.

© 2021 Sindhu and Linson; This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Peer-review history:
The peer review history for this paper can be accessed here:
<https://www.sdiarticle4.com/review-history/76509>