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Effectiveness of structured teaching programme on knowledge regarding boosting fertility in women with polycystic ovarian syndrome in selected hospitals, Anekal

Dr. Sukanya[1*], Shilpa N[2]
[1] Principal, Government College of Nursing, Fort, Bangalore, Karnataka, India
[2] 2nd Year M.Sc (N) Student, Government College of Nursing, Fort, Bangalore, Karnataka, India

Abstract
Background of the Study: Polycystic ovary syndrome (PCOS) is a hormonal disorder common among women of reproductive age. Women with PCOS may have infrequent or prolonged menstrual periods or excess male hormone (androgen) levels. The ovaries may develop numerous small collections of fluid (follicles) and fail to regularly release eggs. The exact cause of PCOS is unknown. Early diagnosis and treatment along with weight loss may reduce the risk of long-term complications such as type 2 diabetes and heart disease, Infertility. Since it is one of the cause for infertility, we have to educate the women about boosting fertility in PCOS for their own use as well as others. The study was conducted to evaluate the effectiveness of structured teaching program on knowledge regarding boosting fertility in women with polycystic ovarian syndrome in selected hospitals, Anekal".

Objectives:
1. To assess the existing knowledge regarding boosting fertility in women with polycystic ovarian syndrome in selected hospitals, Anekal.
2. To evaluate the effectiveness of structured teaching programme regarding boosting fertility in women with polycystic ovarian syndrome in selected hospitals, Anekal.
3. To find the association between pre-test knowledge scores and their selected demographic variables in women with polycystic ovarian syndrome.

Methods: The research design used in the study was pre-experimental one group pre-test and post-test and non-probability purposive sampling technique was used to draw sample. The data was collected from 30 PCOS women using the structured interview schedule. STP was conducted and post test was administered after 7 days using the same structured interview schedule to find out the effectiveness of STP.

Results: The overall mean percentage knowledge score in the pre-test and post-test were 50.2 % and 83.2% respectively. Enhancement mean percentage knowledge scores was found to be 33.0%. The statistical paired 't' test indicates that enhancement in the mean percentage knowledge score was found to be significant at 0.05 level for all aspects under study. The association found to be partly significant between pre-test knowledge scores and selected demographical variables at 0.05 level (<0.05).

Interpretation and Conclusion: The study findings suggested that structured teaching programme is an effective instructional method in improving the knowledge of PCOS women.

Keywords: assess knowledge, PCOS, boosting fertility, structured teaching programme

Introduction

"Don't be discouraged. It's often the last key in the bunch that opens the lock". -Anonymous

Motherhood is the greatest gift God gave to womankind, to know that we are instruments in God's Creation, to know that we participated in God's purpose and plan. Motherhood is life, and hopes, and dreams; it is failures and disappointments, repentance and forgiveness [1]. Motherhood is a significant and important aspect of life for many women around the globe. For women in communities where motherhood is highly desired Polycystic ovary syndrome (PCOS) was first reported in modern medical literature by Stein and Leventhal who, in 1935, described seven women suffering from amenorrhea, hirsutism, and enlarged ovaries with multiple cysts. It is now recognized as a common, heterogeneous, heritable disorder affecting women throughout their lifetime [3]. Polycystic ovary syndrome (PCOS) is a widespread reproductive disorder that encompasses many associated health conditions and has an impact on various metabolic processes [4].

An increased frequency of reproductive disorders, including PCOS, has been reported in women with epilepsy. Type 1, Type 2, and gestational diabetes have been associated with an increased prevalence of PCOS [3]. There have been several studies observing the role of socio-economic status (SES) and unhealthy behavior, including smoking, poor diet, and lack of exercise.

The clinical presentation of PCOS varies widely. Women with PCOS often seek care for menstrual disturbances, clinical manifestations of hyperandrogenism, and infertility. Menstrual disturbances commonly observed in PCOS include oligomenorrhea, amenorrhea, and prolonged erratic menstrual bleeding. However, 30% of women with PCOS will have normal menses. Approximately 85%–90% of women with oligomenorrhea have PCOS while 30%–40%

of women with amenorrhea will have PCOS. More than 80% of women presenting with symptoms of androgen excess have PCOS.

Approximately 90%–95% of an ovulatory women presenting to infertility clinics have PCOS [3]. PCOS is associated with cardiovascular problems, neurological and psychological effects on quality of life (including anxiety and depression), and breast and endometrial cancers. As many as 20% of women with infertility problems (including fecund ability and early pregnancy loss) have been diagnosed with PCOS. It is often called the most common cause of an ovulatory infertility in women [4].

The infertility rate with polycystic ovaries is very high. These women usually will have difficulty getting pregnant - and usually require treatment to improve chances for pregnancy. The good news is that the chance of getting pregnant with polycystic ovarian syndrome using fertility treatments is very good. The great majority of women with polycystic ovarian syndrome will be able to have a baby with fertility treatment [7]. So, the some of the fertility methods plays a greater role in increasing the fertility of a women with PCOS.

World Health Organization (WHO) estimates that it affected 116 million women worldwide in 2012 (3.4% of women). Globally, prevalence estimates of PCOS are highly variable, ranging from 2.2% to as high as 26.4%. In India, the prevalence is gradually increasing [9].

Systematic screening of women according to the National Institutes of Health (NIH) diagnostic criteria estimated that 4–10% of women of reproductive age suffer from PCOS. Although it was previously considered as a disorder of adult women, recent evidence suggests that PCOS is a lifelong syndrome, manifesting since prenatal age [10].

Polycystic ovarian syndrome condition in India nearly 40% of women was affected. Among them only 60% come to hospitals for treatment, when they recognize that they have got infertility. If treated during early adolescent period it could be easily cured. Clinically the treatment of polycystic ovary syndrome is challenging much more. It is common endocrine disorder affection nearly 15% of women of reproductive age group

The investigator in her experience found that there is lack of knowledge regarding polycystic ovarian syndrome and boosting fertility among PCOS women. Hence the researcher decided to undertake a study to assess the existing knowledge of PCOS women regarding boosting fertility among target population of PCOS women in a selected hospital, Anekal.

Objectives

1. To assess the existing knowledge regarding boosting fertility in women with polycystic ovarian syndrome in selected hospitals, Anekal.
2. To evaluate the effectiveness of structured teaching programme regarding boosting fertility in women with polycystic ovarian syndrome in selected hospitals, Anekal.
3. To find the association between pre-test knowledge scores and their selected demographic variables in women with polycystic ovarian syndrome.

Hypothesis

H1: There will be a significant difference between Pre-test and post-test knowledge scores on boosting fertility in women with polycystic ovarian syndrome.

H2: There will be a significant association between the Pre-test knowledge scores and their selected socio demographical variables in women with polycystic ovarian syndrome.

Variables

1. **Independent Variable:** Structure teaching programme
2. **Dependent variable:** Knowledge of polycystic ovarian syndrome women regarding boosting fertility.
3. **Demographical variables:** Age, education, monthly income, occupation, type of diet, type of family, religion, body built, age at menarche.

Methodology

Research Approach: Experimental Research approach

Research Design: One group pre-test post-test design

Population: PCOS women between the age group of 19-40 years

Setting: General hospital, Anekal, Bengaluru-562106

Sample size: 30 PCOS women between the age group of 19-40 years

Sampling Technique: Non-probability sampling technique

Inclusion criteria

- PCOS women between the age group of 19-40 years.
- PCOS women available at the time of data collection and are willing to participate.
- PCOS women are able to understand Kannada or English.

Exclusion criteria: The study excludes:

- PCOS women who are not willing to participate in the study.
- PCOS women less than 19 years and above 40 years of age.
- Women who are suffering from any other disease condition other than PCOS.

Description of the Tool

Part -I: consist of demographic characteristics of respondents seeking information such as age, religion, educational qualification, occupation, age at menarche, dietary pattern, body built, type of family, monthly income in rupees.

Part-II: consists of 28 items pertaining to knowledge regarding boosting fertility in women with polycystic ovarian syndrome.

Procedure of data collection

After obtaining permission from chief medical officer of General Hospital, Kanakapura, Ramanagara district, and consent from subjects the pre-test was conducted to 5 PCOS women by using structured interview schedule; approximately 25 minutes were spent for collecting data. The investigator gathered PCOS women in a comfortable room and conducted STP. After 7 days post-test was given with the same structured interview schedule. Each subject took about 25 minutes to complete the post test.

All the participants co-operated well with the investigator in both pre-test and posttest, the data collection process was terminated by thanking the subjects.

Results

Table 1: Description of socio demographic characteristics of PCOS women

Age(yrs.)	Number	Percentage (%)
20-25	06	20.0
26-30	17	56.7
31-35	07	23.3
Total	30	100

Classification of Respondents by Age. n=30

Table 1: shows that majority 56.7% of the respondents were at the age of 26-30 years, 23.3% of the respondents were at the age of 31-35 years and 20% of the respondents were at the age of 20-25 years

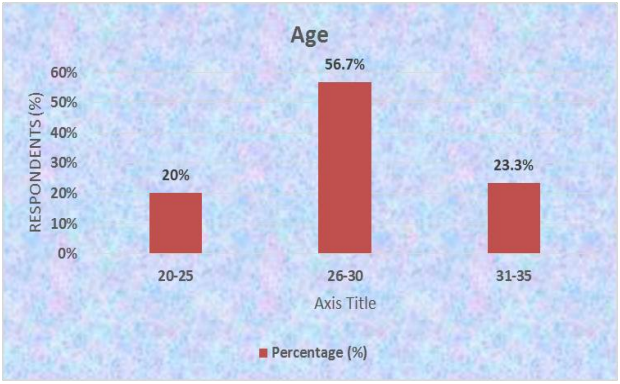

Fig 1: Classification of Respondents by Age.

Table 2: Classification of respondents by Educational Qualification

Education	Number	Percentage
No formal education	00	00
Primary school	07	23.3
Middle school	10	33.3
High school and above	13	43.4
Total	30	100.0

n=30

Table 2: shows that 43.4% of respondents were studied upto high school & above, 33.3% of respondents were studied up to middle school, 23.3% of respondents were studied up to primary school.

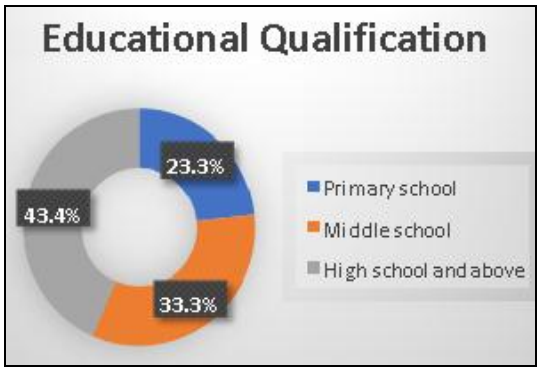

Fig 2: Classification of respondents by educational qualification

Table 3: Classification of respondents by occupation

Occupation	Number	Percentage (%)
Homemaker	15	50
Working	10	33.3
Student	5	16.7
total	30	100

n=30

Table 3: shows that majority 50% of respondents were Homemaker, 33.3% working, 16.7% were Student.

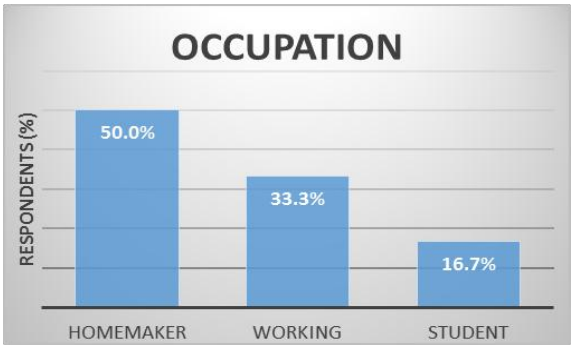

Fig 3: Classification of respondents by occupation

Table 4: Overall & aspect wise knowledge scores of respondents

Knowledge Level	Category	Respondents	
		Number	Percentage (%)
Inadequate	50% Score	19	63.3
Moderate	51-75% Score	11	36.7
Adequate	>75% Score	00	00
Total		30	100

n=30

Table 4: The above table shows that19 (63.3 %) of the respondents had inadequate knowledge (50%) & 11 (36.7%) of respondents had moderate knowledge (51-75%)

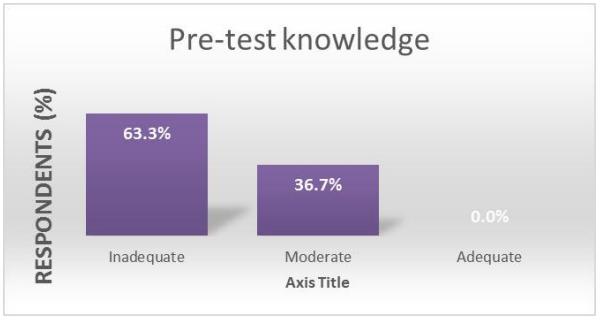

Fig 4: Classification of respondents on pre- test knowledge level on boosting fertility in PCOS

Table 5: Classification of respondents on post-test knowledge scores on boosting fertility in PCOS

Knowledge Level	Category	Respondents	
		Number	Percentage (%)
Inadequate	50% Score	00	00
Moderate	51-75% Score	10	33.3%
Adequate	>75% Score	20	66.7%
Total		30	100%

n=30

Table 5: The above Table shows that 66.7% of the respondents had adequate knowledge and 33.3% of the respondents had moderate knowledge regarding boosting fertility in PCOS.

Table 6: Association between socio-demographic variables and pre-test knowledge level of respondents on knowledge regarding boosting fertility in PCOS

Demographic Variables	Category	Sa mpl e	Knowledge Level				χ 2 Value	P Value
			Inadequate		Moderate			
			N	%	N	%		
Age group (years)	20-25	6	5	83.3	1	16.7	4.06*	P<0.05 (5.991)
	26-30	17	12	70.6	5	29.4		
	31-35	7	2	28.6	5	71.4		
Educational qualification	Primary	7	6	85.7	1	14.3	6.17*	P<0.05 (5.991)
	Middle	10	8	80.0	2	20.0		
	High school & above	13	5	38.5	8	61.5		
Occupation	Home maker	15	8	53.3	7	46.7	1.44 NS	P>0.05 (5.991)
	Working	10	7	70.0	3	30.0		
	Student	5	4	80.0	1	20.0		
Age at menarche	11 year	4	4	100.0	0	0.0	8.89*	P<0.05 (5.991)
	12 years	12	10	83.3	2	16.7		
	13 years	14	5	35.7	9	64.3		
Dietary pattern	Vegetarian	4	2	50.0	2	50.0	0.35 NS	P>0.05 (3.841)
	Mixed	26	17	65.4	9	34.6		
Body built	Moderate	10	8	80.0	2	20.0	1.79 NS	P>0.05 (3.841)
	Obese	20	11	55.0	9	45.0		
Religion	Hindu	18	10	55.6	8	44.4	1.17 NS	P>0.05 (3.841)
	Muslim	12	9	75.0	3	25.0		
Type of family	Nuclear	19	15	78.9	4	21.1	5.44*	P<0.05 (3.841)
	Joint	11	4	36.4	7	63.6		
Monthly income	Rs.10001-20000	10	8	44.4	10	55.6	6.91*	P<0.05 (3.841)
	Above Rs.20,000	20	11	91.7	1	8.3		
Combined		30	19	63.3	11	36.7		

NS is not significant *Significant

The above table shows that the demographic variables like age (4.06*), educational qualification (6.17*), age at menarche (8.89*), type of family (5.44*), monthly income (6.91*) had obtained more than the table value. Hence the hypothesis stated there will be a significant association between pre-test knowledge level of women with PCOS regarding boosting fertility & selected demographic variables is partly accepted at 0.05 level.

The above table shows that the demographic variables like occupation (1.44), dietary pattern (0.35), body built (1.79), religion (1.17), had obtained values less than the table value. Hence the hypothesis stated there will be a significant association between pre-test knowledge level of women with PCOS regarding boosting fertility & selected demographic variables is partly rejected at 0.05 level.

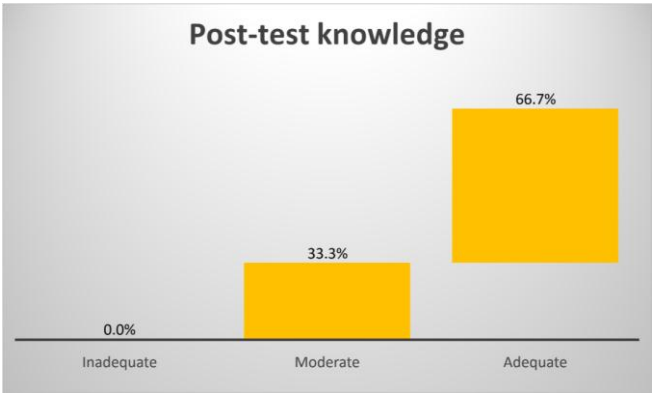

Fig 6: Classification of respondents on post-test knowledge scores on boosting fertility in PCOS

Major findings of the study

Socio-demographic characteristics

This section deals with the analysis of selected socio-demographic variables based on Frequency and percentage distribution of the samples. The major finding of the study was summarized as follows:

Age

The majority 56.7% of the respondents were at the age of 26-30years, 23.3% of the respondents were at the age of 31-35 years, 20.0% of the respondents were at the age of 20-25.

Religion

The majority 60.0% of respondents were Hindu, 40.0% of respondents were Muslim.

Educational qualification

The majority 43.4% of the respondents qualification is high school and above,33.3% of the respondents qualification is middle school,23.3% of the respondents qualification is primary school.

Occupation

The majority 50.0 % of respondent's were home maker, 33.3% were working, 16.7% are students.

Age at menarche

The majority 46.7% of respondents attained menarche at the age of 13 years, 40.0% of respondents attained menarche at the age of 12 years, 13.3.% of respondents attained menarche at the age of 11 years.

Dietary pattern
The majority 86.7% of respondents followed mixed diet pattern, 13.3% of respondents were vegetarians.

Body built
The majority 66.7% of respondents were obese, 33.3% of respondents are moderately built.

Type of family
The majority 63.3% of respondents belongs to nuclear family, 36.7% of respondents belongs to joint family.

Monthly income
The majority 66.7% respondents were having income of above Rs. 20,000, 33.3% having income between Rs. 10,001-20000.

Assessment of Existing Knowledge of PCOS women regarding boosting fertility
The present study confirms that the overall mean knowledge in pre-test is 14.07% which is inadequate. This shows that there is inadequate information among PCOS women regarding boosting fertility.63.3% of the respondents had inadequate knowledge&36.7% had moderately adequate knowledge regarding boosting fertility in PCOS. Hence it is necessary to provide education in order to enhance knowledge of PCOS women regarding boosting fertility.
The study findings reveals that the mean posttest knowledge score (22.55± 3.57) was higher than that of mean pre-test mean knowledge score (11.13± 3.32) and the mean difference was11.42. The't' calculated value was 23.45 which is higher than the tabulated value of 1.98 (df 93 at p< 0.05). Therefore, research hypothesis was accepted. So, it can be interpreting that structured teaching programme is effective in improving the knowledge of adolescent girls. The study concludes that STP was effective in enhancing the knowledge of adolescent girls on PCOS. Hence the study concluded that structured teaching programme had a great potentiality to increase the awareness on PCOS [5, 3].

Association between Pre-Test Knowledge Scores with Selected Demographic Variables.
Among Socio-demographic variables analyzed in this study there was significant association between, age, educational qualification, age at menarche, type of family, monthly income and there was no significant association between occupation, dietary pattern, body built, religion

Conclusion
- The pre-test knowledge score among majority of PCOS women were found to be inadequate and post-test knowledge score is enhanced.
- There was significant enhancement in knowledge of PCOS women after conducting structured teaching programme on knowledge regarding boosting fertility in women with PCOS.
- There was significant association between pre-test knowledge scores and selected socio- demographic variables such as age, educational qualification, type of family, age at menarche, monthly income at 0.05 level.
- The findings of the study revealed that there was no significant association between pre-test knowledge score and few selected socio-demographic variables such as religion, occupation, dietary pattern, body built at 0.05 level.

Implications & Recommendation of the study
Nursing Practice
1. The study shows various degree of deficiency in the knowledge regarding boosting fertility in PCOS women, for this nurses need to have adequate knowledge regarding PCOS to enhance the knowledge of PCOS women.
2. By providing adequate knowledge to PCOS women the health care providers should motivate the mothers towards the ways of enhancing fertility.

Nursing Education
1. Nursing personnel should give education to the pregnant women attending the gynecology OPD regarding boosting fertility in PCOS.
2. As a nurse educator, there are abundant opportunities for nursing professionals to educate the student nurses who are in the clinical posting, and pregnant women attending gynecology OPD regarding boosting fertility in PCOS.
3. Nurse educators can use the findings of this study to upgrade their knowledge and find the other different strategies which are simple so that it will be easy to educate the student nurses as well as the PCOS mothers.
4. As a nurse educator, there are abundant opportunities for nursing professionals to educate the student nurses, as well as common lay persons regarding boosting fertility in PCOS.

Nursing Administration
1. The nurse administrator should evaluate the staffs who are working in the gynecology units. The nurse administrator should develop the in-service education program so as to make them aware of the recent changes in the aspects of PCOS. They should be motivated so as to participate in the continuing education program.
2. The nurse administrator should arrange induction program for staff nurses working in the Obstetrics and Gynecological unit. This will help the nurse administrator to prepare adequate learning materials for giving health education in the community as well as in the hospitals.
3. This will help the nurse administrator to emphasis and encourage the nurses to use different strategies to educate staff nurses, student nurses, ASHA workers, Anganvadi workers and PCOS women regarding boosting fertility.
4. Nursing personnel should be prepared to take leadership role in educating the student nurses, and the novice nurses regarding PCOS whereby they can educate the mothers in the clinical area or community when they encounter the PCOS women.

Nursing research
1. The study will motivate the beginning researchers to conduct same study with different variables on a large scale.
2. Nurses should come forward to take up unsolved questions in the field and nursing fraternity. The public and private agencies should also encourage researcher in the field through materials and funds.

References

1. https://gofishministries.wordpress.com
2. http://bmcpublichealth.biomedcentral.com/
3. Sirmans SM, Pate KA. Epidemiology, diagnosis, and management of polycystic ovary syndrome. ClinEpidemiol. 2013; 6(1):1-13.
4. Barthelmess EK, Naz RK. Polycystic ovary syndrome: current status and future perspective. Front Biosci (Elite Ed). 2014; 6:104-19.
5. Nicholson F, Rolland C, Broom J, Love J. Effectiveness of long-term (twelve months) nonsurgical weight loss interventions for obese women with polycystic ovary syndrome: A systematic review. International Journal of Women's Health. 2010; 2:393-9.
6. Homburg R. The management of infertility associated with polycystic ovary syndrome. ReprodBiolEndocrinol. 2003; 1:109.
7. https://www.shadygrovefertility.com/blog/diagnosing-infertility/pcos-onesize-doesnt-fit-all/
8. Serena H. Chen. Polycystic ovarian syndrome: A common cause of irregular periods and infertility. 2000. URL: http://www.infertilityeducation.org/pdf/pcos.(5)
9. Norman RJ, Dewaily D, Legro RS, Hickey TE. Polycystic ovary syndrome. Lancet 2007; 370(9588):685-97.
10. El Hayek S, Bitar L, Hamdar LH, Mirza FG, Daoud G. Poly Cystic Ovarian Syndrome: An Updated Overview. Front. Physiol. 2016; 7:124.
11. Fernandes AR, de Sá Rosa e Silva AC, Romão GS, Pata MC, dos Reis RM. Insulin resistance in adolescents with menstrual irregularities. 2005; 18(4):269-74.
12. Lavanya Rajashekar, Deepika Krishna, Madhuri Patil. Polycystic ovaries and infertility. Journal of human reproductive science. 2008; 1(2):65-72. URL: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2700664. (6)
13. Pothiraj Pitchai, Sreeraj SR, Parmar Reema Anil. Awareness of life style modification in females diagnosed with polycystic ovarian syndrome in india: explorative study.ijrcog. 2016; 5(2):470-476.
14. Azzizz, *et al*. The prevalence and features of PCOS in an unselected population. Journal of clinical endocrinology and metabolism. 2004; 89(6):2745.
15. Polit DF, Hungler BP. Nursing research principle and methods. 6th edition. Philadelphia. Lippincott company.1999.
16. Suresh K Sharma. Nursing research & statistics. First edition, Elsevier: 2012.
17. Polit DF, Beck CT. Nursing research: Generating & Assessing evidence for nursing practice. 9th edition. New Delhi: Lippincott; 2012. Pg 128.
18. Polit DF, Hungler BP. Nursing research principle and methods. 6th edition. Philadelphia. Lippincott company. 2005. Pg 88.
19. Vidya Bharathi R, Swetha S, Neerajaa J, Varsha Madhavica J, Janani DM, Rekha SN, *et al*. An epidemiological survey: Effect of predisposing factors for PCOS in Indian urban and rural population. Middle East FertilSoc J. 2017.
20. Ding T, Baio G, Hardiman PJ, Petersen I, Sammon C. Diagnosis and management of polycystic ovary syndrome in the UK (2004-2014): a retrospective cohort study. BMJ Open. 2016;