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The effectiveness of awareness programme on knowledge regarding prevention of polycystic ovarian disease and it's complications among college girls in selected colleges of Daund city

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Abstract
Polycystic Ovarian Disease (PCOD) is a prevalent endocrine disorder among adolescent and young adult females, often associated with long-term reproductive and metabolic complications. Lack of knowledge regarding its prevention significantly contributes to delayed diagnosis and poor health outcomes.
Aim of the study: The study aims to assess the effectiveness of an awareness programme in improving knowledge of Polycystic Ovarian Disease (PCOD) prevention and its complications among college girls. It focuses on enhancing awareness to promote preventive practices and better health outcomes.
Methodology: The study adopted a quantitative approach with a quasi-experimental non-equivalent control group design. A total of 60 participants were selected using purposive sampling, with 30 each in the experimental and control groups. A structured knowledge questionnaire was used for pretest and posttest assessments. The awareness programme included sessions with audiovisual aids, pamphlets, and interactive discussions.
Result: Pretest scores indicated low to moderate knowledge in both groups. After the intervention, the experimental group showed a significant increase in posttest knowledge scores compared to the control group. The effectiveness was statistically validated using paired and unpaired t-tests ($p < 0.05$), confirming the impact of the awareness programme.
Conclusion: The study concludes that educational interventions are effective in enhancing awareness about PCOD among college girls. It emphasizes the importance of integrating reproductive health education into college curricula, with nursing professionals playing a key role in implementation.

Keywords: Polycystic Ovarian Disease (PCOD), awareness programme, reproductive health education, college girls, knowledge enhancement

Introduction
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 [1]. The term Polycystic Ovarian Disease was first described by Irving stein and Micheal Leventhal as a Triad of 'Amenorrhoea', '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 Anovulation' 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 disscruption. 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 [2].

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 [3].

Need for the study

Polycystic ovarian disease is associated with an increase in pulse frequency and amplitude of LH and normal or dampened frequency of FSH pulsatility. Studies in the daughters of Polycystic ovarian disease patients around the time of puberty have shown that hypothalamic-pituitary abnormalities are apparent this early in a Polycystic ovarian disease patient's life [4].

Instead of the usual increase in pulsatility of LH release seen overnight, there is an increase LH pulsatility from the late afternoon. Hence, it is apparent that the pulse generator is altered very early in the course of Polycystic ovarian disease. LH pulse frequency in Polycystic ovarian disease women does not exhibit the cyclic variation seen in women with ovulatory cycles. LH pulses are observed approximately hourly throughout the cycle. It is unclear whether the cause for this lies in the hypothalamus, pituitary or peripheral feedback mechanisms [5].

Polycystic ovarian disease (PCOD) is converted into oestrone and also into testosterone. The ovary also secretes androstenedione into the circulation, and this is partially converted in the peripheral tissues to testosterone. Increased concentrations of androstenedione, testosterone, oestrone and DHEA are seen in women with Polycystic ovarian disease [6].

In vitro experiments have found that hyperandrogenism accelerates the develop- ment of follicles from primordial follicles to small antral follicles. As a result, the density of pre-antral and small antral follicles in the polycystic ovary is six times that of the normal ovary. These follicles do not appear to undergo the expected pro- gression into ovulatory follicles and also undergo a reduced rate of apoptosis. This explains the typical appearance of the polycystic ovary [7].

Aim of the Study

The study aims to assess the effectiveness of an awareness programme in improving knowledge of Polycystic Ovarian Disease (PCOD) prevention and its complications among college girls. It focuses on enhancing awareness to promote preventive practices and better health outcomes.

Materials and Methods

The study utilized a quantitative approach with a quasi-experimental, non-equivalent control group design to evaluate the effectiveness of an awareness programme. A total of 60 participants were selected via purposive sampling, divided equally into experimental and control groups. Pretest and posttest assessments were conducted using a structured knowledge questionnaire to measure changes in participants' understanding. The awareness programme for the experimental group featured sessions with audiovisual aids, pamphlets, and interactive discussions, creating an engaging learning environment. This method ensured the effective dissemination of information, while the control group served as a baseline to compare the intervention's impact.

Results

Section I: Analysis of demographic data.

Findings shows that majority 80% of subject belonging to 18 years of age, 56.67% were belongs from 19 years of age, 46.67% belongs from 21 years of age and 16.67% belongs to 22 years of age. Majority 116.67% of the subject were male where as 83.33% of subject were female. Majority 116.67% were studying in first year, 70% were studying in second year and 13.33% studying in third year of their academics. Majority 70% of subjects were living in home, another 70% of subjects were living in PG and 60% were living in hostel. Majority 123.33% of samples were engaged in regular physical activity and 76.67% were physically inactive. Majority 126.67% of samples were not having any family history of PCOD and 73.33% of samples were having family history of PCOD. Majority 103.33% of samples were currently not taking any form of birth control or hormonal medication and 96.67% of samples were currently taking any form of birth control or hormonal medication. Majority 106.67% of samples were diagnosed with PCOD or related condition by healthcare professionals and 93.33% of samples were not diagnosed with PCOD or related condition by healthcare professionals. Majority 113.33% of samples were not aware about potential complications associated with PCOD and 86.67% of samples were aware about potential complications associated with PCOD. Majority 106.67% of samples were not following any specific dietary regimen or restrictions and 93.33% of samples were not following any specific dietary regimen or restrictions. Majority 106.67% of samples were visited occasionally by healthcare professionals for routine checkups and 83.33% of samples were visited regularly by healthcare professionals for routine checkups.

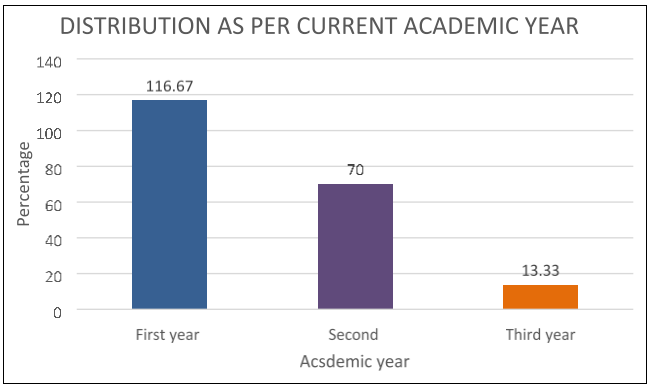

Fig: 1 Bar diagram shows that Majority 116.67% were studying in first year, 70% were studying in second year and 13.33% studying in third year of their academics.

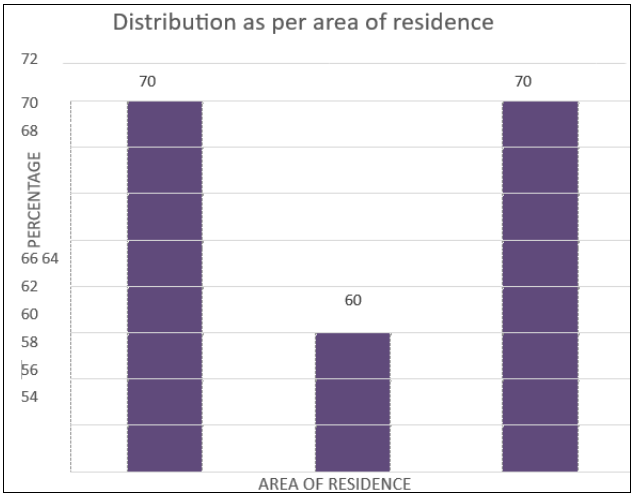

Fig 2: Bar diagram shows that Majority 70% of subjects were living in home, another 70% of subjects were living in PG and 60% were living in hostel.

Section II: Analysis of pre-test knowledge regarding prevention of PCOD and its complications in control and experimental group before intervention.

Control Group

Table 1: Shows that in Control group majority 63.33% of samples were having average knowledge, 18.33% of samples were having good knowledge and another 18.33% were having poor knowledge.

Level of Pretest Control Knowledge	Frequency	Percentage
Poor Knowledge	11	18.33
Average Knowledge	38	63.33
Good Knowledge	11	18.33
Mean	16.00	
SD	5.79	

Mean score was 16 along with 5.79 SD.

Experimental Group

Table 2: Shows that in Experimental group majority 83.33% of samples were having average knowledge, 11.67% of samples were having poor knowledge and 5% of samples were having good knowledge

Level of Pretest Experimental Knowledge	Frequency	Percentage
Poor Knowledge	7	11.67
Average Knowledge	50	83.33
Good Knowledge	3	5.00
Mean	13.67	
SD	3.12	

Mean score was 13.67 along with 3.12 SD.

Section III: Analysis of post-test knowledge regarding prevention of PCOD and its complications in control and experimental group after intervention.

Control Group

Table 3: Shows that in Control group majority 68.33% of samples were having average knowledge, 20% of samples were having poor knowledge and 11.67% were having good knowledge

Level of Post test Control Knowledge	Frequency	Percentage
Poor Knowledge	12	20.00
Average Knowledge	41	68.33
Good Knowledge	7	11.67
Mean	15.27	
SD	4.93	

Mean score was 15.27 along with 4.93 SD.

Experimental Group

Table 4: Shows that in Experimental group majority 91.67% of samples were having good knowledge, 6.67% of samples were having average knowledge and 1.67% of samples were having poor knowledge.

Level of Post test Experimental Knowledge	Frequency	Percentage
Poor Knowledge	1	1.67
Average Knowledge	4	6.67
Good Knowledge	55	91.67
Mean	25.98	
SD	3.93	

Mean score was 25.98 along with 3.93 SD.

Section IV: Analysis of effectiveness of awareness program in experimental group.

Table 5: Shows that in post-test control group mean score was 15.27 along with SD 4.93 as compared with post-test experimental group in which mean score was 25.98 and SD 3.93. t value was 13.19 and p value was <.0001. it shows awareness program was effective in knowledge regarding prevention of polycystic ovarian disease and its complications.

Group	Mean	SD	T value	P value	Remark
Control	15.27	4.93	13.19	<.0001	S
Experimental	25.98	3.93			

Section V: Analysis of association between pre-test results and demographic variables.

Finding shows that there is no any significant corelation between knowledge and demographic variables in control and experimental group.

Discussion

This study demonstrates the effectiveness of an awareness program in enhancing knowledge about the prevention of Polycystic Ovarian Disease (PCOD) and its complications among college girls. The findings revealed significant improvement in the experimental group's post-test scores compared to their pre-test results, while the control group showed no such changes, confirming the impact of the intervention. By incorporating audiovisual aids, pamphlets, and interactive discussions, the program successfully engaged participants and addressed knowledge gaps. These results highlight the critical role of structured awareness initiatives in empowering young women to adopt preventive practices, promote early diagnosis, and reduce the long-term health implications of PCOD.

Conclusion

The study highlights the effectiveness of educational

interventions in improving awareness about Polycystic Ovarian Disease (PCOD) among college girls. It demonstrates that structured awareness programs significantly enhance understanding of PCOD, its prevention, and complications, empowering young women to adopt preventive measures and seek timely medical care. Integrating reproductive health education into college curricula is vital to address knowledge gaps and promote informed health decisions. Nursing professionals play a crucial role in implementing these programs through their expertise in engaging students and delivering impactful health education. This approach fosters better reproductive health outcomes and creates a supportive environment for health awareness within academic institutions**.**

Need for Broader Implementation: Given the success of the intervention, similar educational strategies should be integrated into routine training for healthcare workers to improve safety and health outcomes globally.

Conflict of Interest: The authors certify that they have no involvement in any organization or entity with any financial or non-financial interest in the subject matter or materials discussed in this paper.

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