



UNDERSTANDING PCOS AND ITS IMPACT ON QUALITY OF LIFE: A COMPARATIVE ANALYSIS OF PRE-TEST AND POST-TEST KNOWLEDGE SCORES AMONG COLLEGE STUDENTS

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<https://doi.org/10.47211/idcij.2026.v13i03.010>

ABSTRACT

In recent years, Polycystic Ovary Syndrome (PCOS) has gained prominence for many reasons. Incidence and prevalence of PCOS are increasing internationally. Current figures indicate that around 1.55 million instances of PCOS were documented globally which indicates a 4.47% rise in instances over the last decade. In India, one in five teenage girls is consistently diagnosed with this illness. This is supplementary to the current instances in India, which average around 15.3%. It was also found in 2022 that the incidence of depression in PCOS population is increasing as compared to the general population which significantly alters the quality of life (QOL) of the affected women. Self-esteem was also found to be low in both depression and PCOS. The present study was conducted to compare the pre-test and post-test knowledge scores and also to determine the effectiveness of Self-Instructional Module on knowledge regarding impact of polycystic ovarian syndrome on quality of life among the students. A pre-experimental design was adopted for the study and 45 female students were selected by using simple random sampling technique. A Demographic proforma and structured questionnaire were prepared to assess Quality of life to identify impact of polycystic ovarian syndrome on 'quality of life among the students.' The data collected from subjects were edited, compiled and analysed by the researcher. The probability level of 0.05 was used as the level of significance. Data on background obtained from the samples were organised and summarised with the help of descriptive statistics (frequency, percentage) to assess the pre-test and post-test knowledge of the samples. Data on comparison of the pre-test and post-test knowledge score was assessed by using paired 't' test to identify the effectiveness of the Self-Instructional Module. Findings revealed that the mean post-test knowledge score, 24.33 (± 4.46) was higher than the mean pre-test knowledge score, 11.29 (± 6.03). The calculated paired 't' value ($t = 16.17$) was found to be statistically significant at $p < 0.05$ which indicates that the Self-Instructional Module was effective in improving the knowledge of participants regarding the impact of polycystic ovarian syndrome on quality of life.

Key Words: Polycystic ovary syndrome PCOS, Quality of life, College students.

INTRODUCTION

We are now experiencing an era of modernisation. Modernisation and technological advancement have a noticeable influence on everyday living. Our lifestyle has undergone significant variation where adolescents are being attracted to the current technological world and have greater impact on their life style in all aspects. So, they need more guidance and care. Specifically, adolescent girls need more awareness about their health because the current gynaecological problems are gradually increasing, further aggravating later through their motherhood. Polycystic ovarian syndrome is one of the most growing gynaecological and endocrinal problems, most common among adolescent girls. It adversely affects their life process leading them to infertility in later life, preventing them to enjoy their motherhood and causing more stress throughout their life (World Health Organization 2023 June 28).



Polycystic ovary syndrome (PCOS) is a common health problem which is increasing appallingly in teenage girls and young women during their early reproductive years. It is one of the most common endocrine disorders of women in reproductive age group (Salama, A.M., & Elbana H.M. 2019). The condition was first described in 1935 by American gynaecologists Irving F Stein Sr & Michael L. Leventhal, from whom its original name of Stein-Leventhal syndrome is derived (Swapnil G., & Mohini S. 2019). Polycystic Ovarian Syndrome (PCOS) is the most common endocrine disorder among women between the ages of 18-44. It affects about 2% to 20% of this age group. It is one of the leading endocrine diseases and affects 1 in 15 women all over the world (Shukla A., & Verma T. 2021). It is one of the common issues for women that affects one out of every five women of reproductive age, causing many disturbances like irregular menses, hirsutism, acne or pimples, alopecia, depression, mood swings, and even infertility, etc. Due to lack of knowledge and awareness, often girls cannot recognise the features of this syndrome and are thus left untreated, and later on, they even suffer more (World Health Organization 2023 June 28). The main risk factor for PCOS 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 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 and toxin effect are at risk for developing PCOS (Jabeen A. et al. 2022).

According to Benjamin J. J. Et al. (2023), in developing countries like India, women are mostly observed to neglect their health. Due to the absence of knowledge and ignorance, women used to suffer from many health issues. Some are preventable, some are curable if it is recognised at an early level, and some are not curable, if it is already late. Among those health problems, one of the major health issues is PCOS.⁵ According to the National Health Portal of India, the prevalence rate of PCOS in Maharashtra was noted to be 22.5%. Another previous report from South India, which included adolescents, showed an incidence of 9.13%.

In recent years, PCOS has come into light for various reasons. Firstly, the incidence and prevalence of PCOS is on the rise globally. According to current statistics, around 1.55 million incident cases of PCOS were reported worldwide. This means there has been an increase of 4.47% cases during the past decade. In India, every 1 in 5 adolescent girls invariably gets diagnosed with this syndrome. This is in addition to the already existing cases in India which averages to around 15.3%. Secondly, apart from suffering the typical symptoms of amenorrhea, hirsutism, and multiple ovarian cysts, those diagnosed with PCOS eventually develop complications of insulin resistance, hypertension, cardiovascular disease, infertility and carcinomas of the reproductive organs. Thirdly, PCOS still remains incurable as we have not been able to find the root cause of the syndrome and treat accordingly. This seems disappointing as this confirms that the syndrome has become a yoke to the society. Hence studying and clarifying the aetiopathogenesis of this syndrome has become the need of the hour, for it is the only solution to tackle the mounting hitch (Liu J. et al. 2021).

A Global Burden of Disease Study shows that globally, women of reproductive age accounted for 1.55 million incident cases of PCOS. The global age-standardised PCOS incidence rate among women of reproductive age increased to 82.44 per 100000 populations in 2017, representing an increase of 1.45% from 2007 to 2017 (Sreepoorna Pramodh 2020).



REVIEW OF LITERATURE

In 2020, a study was conducted by Pramodh S. among 493 Emirati students to assess reproductive health (RH) knowledge and awareness of PCOS among female Emirati students and also to explore their lifestyle choices. The study revealed that, among the total sample, 13% self-reported being diagnosed with PCOS, with 3.5% also taking medication for the same, 6% reported having high androgen levels, 30.7% reported polymenorrhagia and 3.5% reported oligomenorrhea for frequency of menstrual cycle. Also 12.4% samples experienced abnormal bleeding (heavy/none) during menstruation and 24% reported excessive body hair. It was found that 4.3% of students were taking medication for hyperglycaemia and 75% reported a family history of diabetes. Students displayed low reproductive health knowledge and poor awareness of PCOS. Lifestyle preferences indicated low physical activity and high indulgence in fast food. The study concluded that there were major gaps in knowledge and awareness of RH and PCOS in Emirati women that need to be addressed by creating a culturally congruent healthcare policy with emphasis on education and health promotion.

Varma J., Bathani G. K. and Panchal V. B. conducted a study in 2025 to assess the level of awareness of PCOS and the disparities in health-related quality of life (HRQoL) between the control group and the treatment group of women aged 18-49 in Vadodara, India. The researchers included 140 patients, 110 of whom had PCOS and 30 of whom were healthy as the control group. According to the findings, a higher percentage of patients (33%) had knowledge of the symptoms, compared to the control group (10%). In both categories there was still a significant lack of understanding about the symptoms. The findings demonstrated that public requires greater education and information of PCOS. Patients with PCOS were better informed of their disease, though they still had some misunderstandings. The control group, which was less knowledgeable about PCOS, was indicative of general population. The researchers concluded that the findings emphasised the importance of raising awareness and public education programmes in increasing understanding, encouraging early detection and guaranteeing adequate PCOS treatment.

In their cross-sectional study to investigate knowledge, attitudes and practices toward obesity and polycystic ovary syndrome among women of childbearing age with overweight or obesity, Mu Y., Zou Y. and Chen C. (2023) found that among 740 samples, 51.08% were aged 18-30 years. Knowledge, attitude and practice scores were 13.55 ± 5.06 , 27.27 ± 2.19 and 50.14 ± 6.49 , respectively. Positive correlations were found between knowledge and attitude ($r = 0.313$, $P < 0.001$), knowledge and practice ($r = 0.454$, $P < 0.001$), attitude and practice ($r = 0.415$, $P < 0.001$). Structural Equation Modelling showed significant associations between knowledge and attitude ($\beta = 0.13$, $P < 0.001$), between knowledge and practice ($\beta = 0.46$, $P < 0.001$), and between attitude and practice ($\beta = 0.90$, $P < 0.001$). Knowledge was indirectly associated with practice through attitude ($\beta = 0.12$, $P < 0.001$). They concluded that women of childbearing age with overweight or obesity demonstrated insufficient knowledge, neutral attitudes and moderate practices concerning obesity and PCOS. Targeted educational interventions focusing on enhancing knowledge and fostering positive attitudes toward healthy lifestyles and PCOS management would be helpful to mitigate the risk and impact of PCOS in this population.

OBJECTIVES

- To assess the pre-test knowledge level regarding impact of polycystic ovary syndrome on quality of life among the students.
- To assess the post-test knowledge level regarding impact of polycystic ovarian syndrome on quality of life among the students.
- To determine the effectiveness of Self-Instructional Module on knowledge regarding impact of polycystic ovary syndrome on quality of life among the students.

METHODOLOGY

A pre-experimental design was adopted for the study. 45 female students were selected by using simple random sampling technique. A Demographic proforma and structured questionnaire were prepared to assess Quality of life to identify impact of polycystic ovarian syndrome on Quality of Life among the Students. The data collected from subjects were edited, compiled and analysed by the researcher. The probability level of 0.05 was used as the level of significance. Data on background obtained from the samples were organised and summarised with the help of descriptive statistics (frequency, percentage) to assess the pre-test and post-test knowledge of the samples. Data on comparison of the pre-test and post-test knowledge score was assessed by using paired 't' test to identify the effectiveness of the Self-Instructional Module.

RESULTS

Figure:1 Distribution of Participants according to Pre-test Level of Knowledge (N = 45)

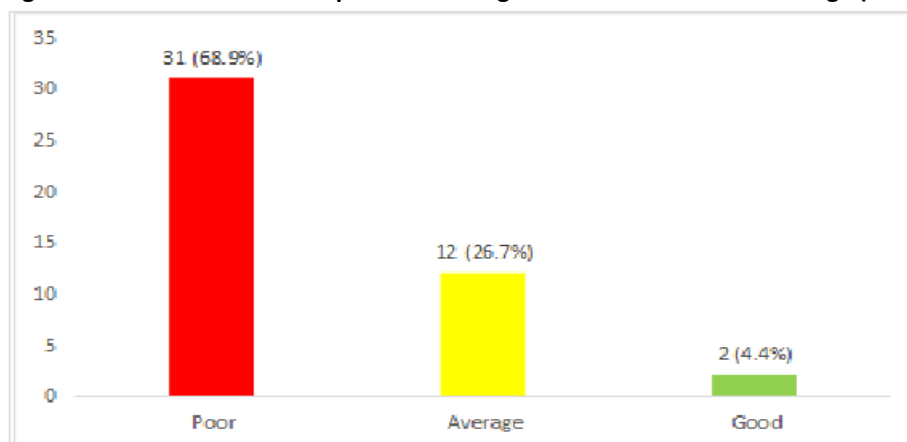


Figure 1 shows the pre-test level of knowledge among participants. Most of the participants, 31 (68.9%), had a poor level of knowledge, followed by 12 (26.7%) who had an average level of knowledge, and only 2 (4.4%) had a good level of knowledge.

Figure: 2 Distribution of Participants according to Post-test Level of Knowledge (N = 45)

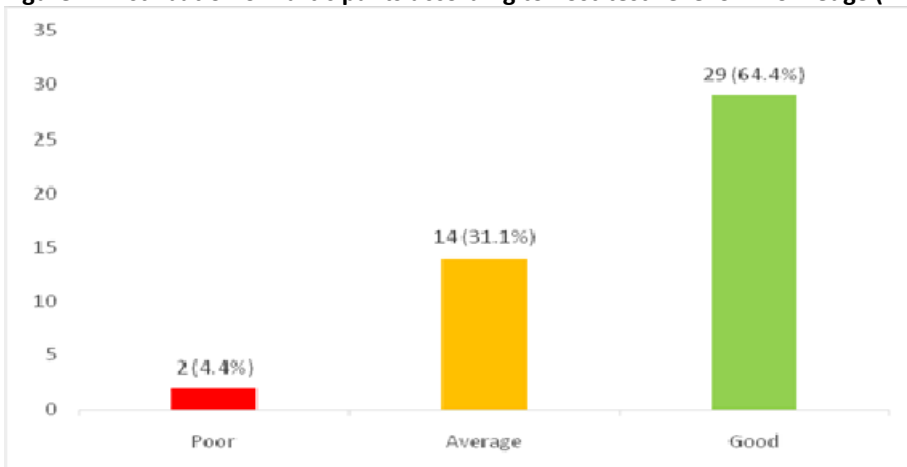




Figure 2 shows the post-test level of knowledge among participants. Most of the participants, 29 (64.4%), had a good level of knowledge, followed by 14 (31.1%) who had an average level of knowledge, and only 2 (4.4%) had a poor level of knowledge. This finding indicates that most participants demonstrated a good level of knowledge after the intervention.

Table 1: Comparison of Pre-test and Post-test Knowledge Scores (N = 45)

Test	Mean	Standard Deviation
Pre-test	11.29	6.03
Post-test	24.33	4.46
Mean Difference	13.04	

Table 1 depicts that the mean post-test knowledge score (24.33 ± 4.46) was higher than the mean pre-test knowledge score (11.29 ± 6.03), indicating a considerable improvement in knowledge following the administration of the Self-Instructional Module.

Table 2: Effectiveness of Self-Instructional Module on Knowledge Regarding Impact of PCOS on Quality of Life in the Pilot Study (N = 45)

Knowledge Score	Mean	Standard Deviation	Mean Difference	t-value	p-value
Pre-test	11.29	6.03	13.04	16.17	0.001
Post-test	24.33	4.46			

Table 2 shows that the mean post-test knowledge score $24.33 (\pm 4.46)$ was higher than the mean pre-test knowledge score $11.29 (\pm 6.03)$. The calculated paired 't' value ($t = 16.17$) was found to be statistically significant at $p < 0.05$. This indicates that the Self-Instructional Module was effective in improving the knowledge of participants regarding the impact of polycystic ovarian syndrome on quality of life.

CONCLUSIONS

The present study showed that the post-test knowledge scores were increased than the pre-test knowledge scores of the students, which indicated that the self-instructional module was found to be effective in improving knowledge regarding impact of PCOS on quality of life among students.

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