

AWARENESS OF LIFESTYLE MODIFICATION IN THE MANAGEMENT OF PCOS
AMONG REPRODUCTIVE WOMEN: A CROSS-SECTIONAL STUDY

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DOI: <https://doi.org/10.5281/zenodo.17222019>

Article Received on 14/08/2025

Article Revised on 02/09/2025

Article Accepted on 23/09/2025

ABSTRACT

Objectives: Study aims to explore perception on PCOS, regarding its risk factors, complication, symptoms, and management among reproductive women and assess the prevalence of PCOS among reproductive women in Mukkam municipality. **Methods:** A population-based descriptive cross-sectional study was done among reproductive age women in Mukkam municipality. Self-made validated questionnaire was administered. Descriptive analysis was done. **Result:** About 22.5% of the individuals had a PCOS diagnosis at the time of the study. Approximately 87.5% of females are heard of PCOS. Their information came from friends (25.1%), teachers (23.4%), the internet (32%), and doctors (16.7%). Knowledge regarding risk factors demonstrated that obesity (48%), bad dietary habits (56%), and Genetic predisposition was considered a risk factor in 30.5% of cases. In terms of difficulties, participants were aware that having PCOS raises the risk of diabetes (39.5%), abortions (59.5%), and subfertility (42.5%), high blood pressure (33%), heart disease (26%), endometrial cancer (24.9%) and psychological problems (38%). In all, 55% knew about eating healthily, and 48% knew about losing weight. can assist with PCOS management. **Conclusion:** The study findings indicate that awareness of PCOS is moderate. While the majority of individuals have heard of PCOS, only half understand its causes or how to treat it. To build on these findings, it is crucial to implement targeted educational programs, motivation, and healthcare services that address the gaps in knowledge about risk factors and management strategies. By fostering a deeper understanding of PCOS, we can support better prevention, early diagnosis, and effective management, ultimately improving the quality of life for women affected by this condition.

KEYWORDS: PCOS, lifestyle modification, Awareness.

INTRODUCTION

A hormonal condition known as polycystic ovarian syndrome (PCOS) is known to impact females during their reproductive age.^[1] Obesity, subfertility, irregular menstruation, and dermatological symptoms like acne and hirsutism are all possible in women with PCOS. The illness can have long-term effects such as diabetes, hypertension, reduced glucose tolerance, metabolic abnormalities, and cardiovascular diseases. Because of their ongoing anovulation and the estrogen's unopposed impact on the uterus, these women are at a higher risk of developing endometrial cancer in the future. Adolescent females diagnosed with polycystic ovarian syndrome (PCOS) may experience a number of psychological problems that have a substantial impact on their general well-being, including anxiety, depression, abnormal sleep habits, and problems with body image.^[2] Physical signs of PCOS are associated with decreased sexual satisfaction as well as mental and psychological health. Due to a higher prevalence of endothelial dysfunction, hyperlipidemia, hypertension, inflammation, and subclinical atherosclerosis, PCOS women may be more

vulnerable to cardiovascular disease. Additionally, they have a higher chance of developing type II diabetes and dyslipidemia. It increases the risk of early births, miscarriages, neonatal issues, and deformities in the growing fetus.^[3] Between 5% and 10% of women who are fertile are affected with PCOS.^[4] The exact etiology of PCOS is yet unknown, however rising prevalence and a rise in the global incidence of metabolic syndrome are related.^[5] One of the most significant variables affecting overall health is lifestyle. Individually tailored nutrition and exercise play a role in regulating metabolism and maintaining a healthy weight in PCOS patients.^[6] Changes in lifestyle have been suggested to help not just with the metabolic and reproductive symptoms of PCOS but also with mood, self-esteem, anxiety, sadness, and psychological well-being. For oligomenorrhea, hirsutism, infertility, and obesity in PCOS, most endocrinologists and gynecologists advise starting non-pharmacological treatments including diet and exercise as a first line of treatment. A key component of managing PCOS is changing one's lifestyle, with an emphasis on nutrition, increased physical activity, and behavioral treatment.

Exercise is well known to cause oxidative metabolism in tissues, and the ovary's oxidative metabolism stimulates the growth of new follicles.^[1]

The worldwide evidence-based guidelines (EBG) for the treatment of polycystic ovary syndrome (PCOS) emphasize individual lifestyle choices that can significantly lower and prevent risk factors linked to elevated body weight in females with PCOS. The goal of diet and exercise programs preventing weight increase and reducing weight are first-line management techniques because of their substantial influence on medical outcomes, such as fertility endocrinology as well as clinical manifestations.^[35] Modifying one's lifestyle is one of the best ways to manage PCOS. Lifestyle modifications address the underlying causes of the disorder, such as obesity and insulin resistance, which are frequently linked to it, in contrast to drugs that mainly target its symptoms.^[33] For women with PCOS, implementing a nutritious diet, getting regular exercise, keeping a healthy weight, and controlling stress can all make a big difference in hormonal balance, symptom relief, and overall well being.^[21]

METHADODOLOGY

A population-based descriptive cross-sectional study was done among reproductive age women in Mukkam

municipality during a study period of 12 months. Detailed literature review was done by using tertiary, secondary, primary resources. A self-made questionnaire containing 45 items designed and validated for the study. Questionnaire was translated from English to malayalam with the help of linguistics. The study was conducted only after getting approval from the Institutional Ethical Committee (IEC). 200 women who met inclusion criteria from Mukkam municipality were enrolled in the study. The fully completed questionnaire were only considered for the final results. The participants in the selected area were approached to obtain written informed consent, explain the purpose of the study in the local language, and were interviewed with a questionnaire. collected data statistically analyzed .

RESULT

AGE

The table presents the age distribution of participants in the study, with the highest percentage (27.5%) being in the age group of 23-28 years. The lowest representation is in the 38-45 age group, accounting for 14% of participants.

Table 1: Age group.

AGE	FREQUENCY	PERCENTAGE(%)
18-23	39	19.5
23-28	55	27.5
28-33	41	20.5
33-38	37	18.5
38-45	28	14

BMI

The BMI distribution reveals that the majority of participants (63.5%) have a normal BMI (18.5-24.9),

while 23.5% are overweight (BMI 25.0-29.9). Only a small portion (7.5%) falls under the underweight category (<18.5), and 5.5% are classified as obese (>30).

Table 2: BMI (Body mass index).

BMI	FREQUENCY	PERCENTAGE(%)
<18.5	15	7.5
18.5-24.9	127	63.5
25.0-29.9	47	23.5
>30	11	5.5

ASSESSMENT OF AWARENESS OF PCOS

Heard about PCOS

A large majority (87.5%) of participants have heard

about PCOS, suggesting a good level of general awareness. However, 12.5% remain unaware, indicating room for improvement in education and outreach efforts.

Table 3: Participants heard about PCOS.

Heard about PCOS	Frequency	Percentage(%)
Yes	175	87.5
No	25	12.5

Source of Information about PCOS

The most common source of information about PCOS is friends (25.1%), followed by teachers (23.4%) and

doctors (16.7%). Other sources like television and newspapers play a minor role. This highlights the importance of social networks and education systems in

spreading awareness.

Table 4: Source of information about PCOS.

SOURCE OF INFORMATION	FREQUENCY	PERCENTAGE %
Teacher	41	23.4
Doctor	29	16.7
Friend	44	25.1
Television	3	1.7
News paper	2	1.1
Other	56	32

Symptoms of PCOS

The most frequently reported sign of PCOS is menstrual irregularity (84%), followed by difficulty in conception (59.5%) and weight gain (46.5%). These symptoms align

with common clinical presentations of PCOS, underscoring the importance of early diagnosis and management.

Table 5: Awareness regarding symptoms.

Signs of PCOS	Frequency	Percentage%
Menstrual irregularity	168	84
Hirsutism	66	33
Acne	41	20.5
Weight gain	93	46.5
Difficulty in conception	119	59.5
Abortion	110	55
Hair fall	79	39.5

Risk Factors for PCOS

Unhealthy eating habits are the most common risk factor (56.0%), followed by obesity (48.0%) and a sedentary

lifestyle (41.5%). These findings underscore the role of lifestyle factors in the development and management of PCOS.

Table 6: Awareness regarding risk factors of PCOS.

Risk elements	Frequency	Percentage(%)
Obesity	96	48.0
Unhealthy eating	112	56.0
Sedentary life style	83	41.5
Genetic	61	30.5

Complications Associated with PCOS

Infertility (42.5%) and abortion (59.5%) are the most commonly reported complications, followed by diabetes

(39.5%) and hypertension (33%). The high incidence of these complications highlights the long-term health risks associated with unmanaged PCOS.

Table 7: Awareness regarding complications.

Complexity	Frequency	Percentage (%)
Infertility	119	59.5
Abortions	110	42.5
Diabetes	79	39.5
Hypertension	66	33.0
Cardiovascular disorders	52	26.0
Endometrial carcinoma	49	24.5
Psychological Problems	76	38.0

Lifestyle Management Strategies

The most common management strategies employed are avoiding junk food (56%) and following a healthy diet (55%). Exercise and weight management are each reported by 48% of participants, emphasizing the central role of lifestyle modification in managing PCOS. Stress

management, however, is reported by only 31.5%, suggesting that mental health may be an under-addressed aspect of PCOS care.

Table 8: Awareness regarding lifestyle management strategies.

MANAGEMENT	FREQUENCY	PERCENTAGE %
Avoiding junk food	112	56.0
Follow healthy eating habit	110	55.0
Exercise	96	48.0
Weight management	96	48.0
Stress management	63	31.5

PRESENCE OF PCOS

The study indicates that 22.5% of the participants have been diagnosed with PCOS, while the remaining 77.5% do not have the condition. This distribution provides a foundation for further analyzing lifestyle modification awareness and practices, especially among those diagnosed with PCOS.

Table 10: Presence of PCOS.

PCOS	FREQUENCY	PERCENTAGE (%)
Present	45	22.5
Absent	155	77.5

DISCUSSION

In the present study, found that a significant proportion of women (87.5%) have heard about the term PCOS. Most of the participants familiar with the term PCOS but, this doesn't mean they have comprehensive understanding of condition. The above findings are similar to the findings published by Zaitoun et al. This study shows awareness regarding symptoms primarily focused on reproductive issues like menstrual irregularity and difficulty in conception often overshadows other significant symptoms of PCOS, such as weight gain, hair fall, hirsutism, and acne. This narrow focus these symptoms can lead to delayed diagnosis and inadequate management of the condition. This findings is supported by the study conducted by Teede et al. Emphasized the need for comprehensive educational efforts to raise awareness about the full spectrum of PCOS symptoms. Unhealthy eating habit (56%) and obesity (48%) were the most frequently reported risk factors for PCOS, followed by a sedentary lifestyle (41.5%) genetics (30.5%) are less acknowledged. That indicate the importance of reinforce awareness program about the all risk factors are essential for better prevention and management of PCOS. It is seen that similar to the study by Alessa et al. Infertility and abortion are most frequently reported complication while assessing awareness regarding complications of PCOS among reproductive aged women. They less aware about complication like diabetes, hypertension, endometrial carcinoma, and psychological problem. That indicating there is a need of understanding the broader health impacts of PCOS. These findings similar to the study by Alessa et al. Assessment about management knowledge showed that in participants are aware that exercise and losing weight can help reduce the symptoms and related complications. Around 41% of the women are aware that eating a healthy and balanced diet is helpful and the findings are similar to the finding in the study by Alessa et al.

LIMITATION OF STUDY

The study was conducted with small sample size. There for the result may not be generalizable. The study needed potentially large sample size because the number of patients was limited and to obtain meaningful result. As study duration is short the result obtained may not be accurate. As the data collection was purely based on patient interviewing, chance of high bias.

CONCLUSION

This study reveals that while a substantial percentage of women are affected by PCOS, there is commendable awareness about the condition, primarily sourced from the internet, friends, teachers, and doctors. Key risk factors like obesity and poor dietary habits are well-known, yet there is a need to improve understanding of genetic predisposition. Awareness of complications such as diabetes, sub fertility, and psychological issues is relatively high, signifying a strong foundation for early detection and management. However, knowledge about effective management strategies like healthy eating and weight loss could be further enhanced. To build on these findings, it is crucial to implement targeted educational programs, motivation, and healthcare services that address the gaps in knowledge about risk factors and management strategies. By fostering a deeper understanding of PCOS, we can support better prevention, early diagnosis, and effective management, ultimately improving the quality of life for women affected by this condition.

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