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Analysis of Knowledge, Attitude, and Practice Towards Role of Diet in Poly Cystic Ovarian Syndrome in Young Females

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Abstract: Polycystic Ovarian Syndrome (PCOS) is one of the most common endocrine and metabolic disorders affecting women of reproductive age. It is characterized by hormonal imbalance, irregular menstruation, hyper-androgenism, and polycystic ovaries. Lifestyle factors such as unhealthy dietary habits, sedentary lifestyle, and obesity are considered major contributors to the development and progression of PCOS. Increasing awareness regarding the role of diet and lifestyle modification is essential for effective management of this condition.

The present study aims to analyze the knowledge, attitude, and practices (KAP) regarding the role of diet in the management of PCOS among young females. The study focuses on understanding how much young women know about PCOS, their perception towards dietary and lifestyle modifications, and the extent to which they implement these practices in their daily lives.

A structured KAP questionnaire was used as the primary tool for data collection. The questionnaire consisted of four sections including socio-demographic information, knowledge regarding PCOS, attitudes toward diet and lifestyle modification, and dietary practices followed by participants. The study was conducted among young females diagnosed with PCOS between the age group of 15–30 years attending a selected clinic. A total of 40 participants were selected randomly for the study.

The findings of the study are expected to highlight the gaps in knowledge, misconceptions about diet, and lifestyle practices among young females with PCOS. The results may help in designing effective educational interventions and awareness programs focusing on dietary modification and lifestyle management. Improving awareness regarding proper nutrition and healthy lifestyle practices can play a crucial role in reducing PCOS symptoms and preventing long-term complications associated with the disorder.

Keywords: Polycystic Ovarian Syndrome, Diet and Lifestyle Modification, Knowledge Attitude Practice (KAP), Young Females, Nutritional Management

Introduction

Polycystic Ovarian Syndrome (PCOS) is one of the most prevalent endocrine disorders affecting women of reproductive age worldwide. It is characterized by hormonal imbalance, excessive androgen production, irregular menstrual cycles,

and the presence of multiple cysts in the ovaries. The condition was first described by Stein and Leventhal in 1935, who identified the classic symptoms of amenorrhea, obesity, and hirsutism. Since then, PCOS has been recognized as a complex metabolic and reproductive disorder that significantly impacts women's health and quality of life. The prevalence of PCOS has increased considerably in recent years due to rapid lifestyle changes, unhealthy dietary habits, and reduced physical activity. In India, approximately 10% of women are affected by PCOS. The syndrome is often associated with insulin resistance, which leads to increased insulin levels and excessive androgen production. This hormonal imbalance contributes to symptoms such as irregular menstruation, infertility, acne, weight gain, and excessive hair growth. PCOS is also associated with several long-term health complications including type 2 diabetes mellitus, cardiovascular diseases, metabolic syndrome, and psychological disorders such as anxiety and depression. Obesity plays a significant role in the pathophysiology of PCOS, and nearly half of the affected women are overweight or obese. Excess body weight worsens insulin resistance and hormonal imbalance, thereby aggravating the symptoms of PCOS. Diet and lifestyle modification are considered the first line of treatment for managing PCOS. Studies have shown that a weight reduction of 5–10% of total body weight can significantly improve insulin sensitivity, restore ovulation, regulate menstrual cycles, and reduce androgen levels. Nutritional management plays a crucial role in controlling the symptoms of PCOS. Diets rich in fiber, vitamins, minerals, and healthy fats are recommended, while excessive consumption of refined carbohydrates, sugary beverages, and fried foods should be avoided. Healthy dietary patterns including consumption of monounsaturated fats, adequate calcium and vitamin D, magnesium, zinc, and chromium have been shown to improve metabolic health and insulin sensitivity in women with PCOS. In addition, regular physical activity and balanced eating habits help maintain healthy body weight and reduce metabolic complications. Despite the growing awareness about PCOS, many young women lack adequate knowledge about the condition and the role of diet in its management. Misconceptions regarding weight loss, dietary practices, and treatment options are common. Therefore, assessing the knowledge, attitudes, and practices of young females regarding dietary management of PCOS is essential. Understanding these factors will help identify knowledge gaps and provide opportunities to develop effective educational strategies. Such interventions can empower young women to adopt healthier lifestyle practices and improve the overall management of PCOS.

Methodology

Study Design

The present study adopted a descriptive cross-sectional study design using the Knowledge, Attitude, and Practice (KAP) approach. The KAP model helps in understanding the level of awareness, perception, and behavior related to a specific health condition. In this study, the KAP approach was used to assess the understanding of young females regarding the role of diet and lifestyle modification in the management of Polycystic Ovarian Syndrome (PCOS).

Study Area

The study was conducted at Shekhawat Clinic located in Jaipur, Rajasthan. The clinic regularly receives patients diagnosed with PCOS, making it an appropriate setting for collecting relevant data from the target population.

Study Population

The study population consisted of young females diagnosed with PCOS. Participants were selected from patients visiting Shekhawat Clinic for consultation or treatment. Only those females who met the inclusion criteria were considered eligible for the study.

Inclusion Criteria

- Females diagnosed with PCOS
- Age group between 15–30 years
- Willing to participate in the study
- Able to understand and respond to the questionnaire

Exclusion Criteria

- Females outside the age group of 15–30 years
- Individuals with other severe medical conditions
- Participants unwilling to provide consent

Sample Size

A total of 40 young females diagnosed with PCOS were selected for the study. The participants were chosen using a random sampling method from those attending the clinic during the study period.

Data Collection Tool

Data were collected using a self-structured Knowledge, Attitude, and Practice (KAP) questionnaire. The questionnaire was developed based on relevant literature and previous studies related to PCOS awareness and dietary practices.

The questionnaire consisted of four sections:

Section A: Socio-Demographic Characteristics

This section included questions related to age, religion, height, weight, educational qualification, occupation, residential area, and age at menarche. It also included questions regarding menstrual regularity and duration.

Section B: Knowledge about PCOS

This section assessed the participants' knowledge regarding PCOS, including awareness about the disease, causes, symptoms, and the role of diet in its management. Questions also evaluated knowledge about complications associated with PCOS and factors contributing to weight gain.

Section C: Attitude towards Diet and Lifestyle

This section evaluated the perception and beliefs of participants regarding dietary practices, weight management, and lifestyle changes. It included questions about the importance of balanced diet, avoiding unhealthy foods, and the effect of lifestyle on PCOS.

Section D: Practice of Dietary Habits

This section focused on the actual practices followed by the participants in their daily lives. It included questions related to breakfast habits, number of meals per day, exercise routines, fruit and vegetable consumption, intake of fried foods, and medical consultation for PCOS.

Data Collection Procedure

Participants were informed about the purpose and objectives of the study before data collection. Educational information regarding PCOS, its symptoms, and the importance of dietary management was explained using posters and PowerPoint presentations. After obtaining informed consent, the participants were asked to complete the KAP questionnaire.

Data Analysis

The collected data were organized and analyzed using descriptive statistical methods. The responses from the questionnaire were categorized and summarized using frequencies and percentages. The analysis helped identify the level of knowledge, attitude, and dietary practices among the participants regarding PCOS management.

Results

Socio-Demographic Characteristics

The study included 40 young females diagnosed with PCOS within the age group of 15–30 years. Most participants belonged to urban residential areas and had varying educational backgrounds. Body Mass Index (BMI) assessment indicated that a considerable proportion of participants were overweight or obese, which is commonly associated with PCOS.

Table 1: Socio-Demographic Characteristics of Study Participants (n = 40)

Variable	Category	Frequency (n)	Percentage (%)
Age Group (years)	15–20	12	30%
	21–25	18	45%
	26–30	10	25%
Education Level	School Level	8	20%
	Undergraduate	20	50%
	Postgraduate	12	30%
Residence	Urban	26	65%
	Rural	14	35%
BMI Category	Normal	14	35%
	Overweight	16	40%

	Obese	10	25%
Menstrual Regularity	Regular	15	37.5%
	Irregular	25	62.5%

Knowledge about PCOS

The majority of participants had heard about PCOS, mainly through doctors, media, or family members. Many participants were aware that PCOS is a hormonal disorder and that irregular menstruation, weight gain, acne, and excessive facial hair are common symptoms. However, some participants showed limited understanding of the metabolic complications associated with PCOS.

Attitude towards Diet and Lifestyle

Most respondents showed a positive attitude toward the role of diet and lifestyle modification in managing PCOS. Many participants agreed that balanced meals, reduced intake of fried foods, and avoiding sugary beverages could help control the symptoms of PCOS. Participants also acknowledged that lifestyle habits such as physical inactivity and unhealthy diet may contribute to the condition.

Dietary and Lifestyle Practices

Despite having moderate knowledge and positive attitudes, the actual practices varied among participants. Some participants regularly consumed balanced meals and fruits, while others skipped breakfast or consumed fried foods frequently. A smaller proportion of participants reported performing regular physical exercise.

Table 2: Knowledge, Attitude and Practice (KAP) Towards Diet in PCOS (n = 40)

Parameter	Response	Frequency (n)	Percentage (%)
Awareness about PCOS	Yes	32	80%
	No	8	20%
Knowledge that PCOS is a Hormonal Disorder	Correct	28	70%
	Incorrect	12	30%
Awareness that Diet & Exercise is First-Line Treatment	Yes	30	75%
	No	10	25%
Belief that Lifestyle Affects PCOS	Agree	34	85%
	Disagree	6	15%
Regular Exercise Practice	Yes	16	40%
	No	24	60%
Following Balanced Diet	Yes	18	45%
	No	22	55%
Frequent Consumption of Fried Foods	Yes	20	50%
	No	20	50%

Healthcare Seeking Behavior

A majority of participants reported visiting a doctor for PCOS-related issues. However, only a few participants followed structured dietary plans or lifestyle programs recommended for managing the condition.

Discussion

The present study aimed to assess the knowledge, attitudes, and practices regarding the role of diet in the management of Polycystic Ovarian Syndrome among young females. The findings indicate that while a considerable number of participants were aware of PCOS, gaps in knowledge and inconsistent lifestyle practices still exist. The study revealed that most participants had heard about PCOS, mainly through healthcare professionals and media sources. This indicates that healthcare providers

play a crucial role in spreading awareness about the condition. However, despite having general awareness about PCOS symptoms such as irregular menstruation, acne, and weight gain, many participants lacked deeper knowledge regarding metabolic complications such as insulin resistance, type 2 diabetes, and cardiovascular risks. Participants generally demonstrated a positive attitude toward dietary modification and lifestyle management. Many agreed that balanced nutrition, reduced intake of fried foods, and avoiding sugary beverages could help manage PCOS symptoms. This positive perception indicates that young women are receptive to health education related to dietary management. However, the study also revealed a gap between knowledge and practice. Although participants were aware of the importance of healthy dietary habits, not all followed appropriate practices. Some participants reported skipping breakfast, consuming fried foods frequently, and engaging in limited physical activity. These behaviors may contribute to obesity and worsen PCOS symptoms. The results also highlight the importance of structured health education programs. Educational interventions focusing on nutrition, weight management, and physical activity can significantly improve lifestyle practices among young females with PCOS. Regular counselling by healthcare professionals may help motivate patients to adopt healthier habits. Similar findings have been reported in previous studies, which emphasize that lifestyle modification is a key component in the management of PCOS. Weight reduction through healthy diet and regular exercise has been shown to improve insulin sensitivity, regulate menstrual cycles, and reduce androgen levels. Therefore, improving awareness and encouraging healthy dietary practices are essential strategies for managing PCOS and preventing long-term complications.

Conclusion

Polycystic Ovarian Syndrome is a common endocrine disorder affecting young women and is strongly associated with lifestyle factors such as unhealthy dietary habits, physical inactivity, and obesity. The present study assessed the knowledge, attitudes, and practices related to the role of diet in managing PCOS among young females. The findings indicate that although many participants were aware of PCOS and its basic symptoms, there were still gaps in their understanding of the condition and its long-term health consequences. Most participants demonstrated a positive attitude toward dietary changes and lifestyle modification as important components of PCOS management. However, the study also revealed that healthy practices were not consistently followed by all participants. Irregular meal patterns, consumption of fried foods, and limited physical activity were common among some individuals. These behaviors may contribute to worsening of PCOS symptoms and increase the risk of metabolic complications. The results emphasize the need for effective health education programs focusing on nutrition awareness, balanced diet, and lifestyle modification for young females. Healthcare professionals should play an active role in providing counselling and guidance regarding dietary management and regular physical activity. Promoting awareness about the role of proper nutrition and healthy lifestyle habits can help young women manage PCOS more effectively and reduce the risk of associated complications. Early intervention through education and lifestyle modification can significantly improve reproductive health and overall quality of life for women affected by PCOS.

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