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Collaborative Care in PCOS: Evaluating the Role of Radiologist and Gynecologist in Diagnosis and Management of PCOS

Aqsa Ghulam Ahmad, Muqadas Rafique, Hamna Abbas, Rimsha Munir, Ali Akhtar, Waqas Akram

Faculty of Pharmaceutical Sciences, University of Central Punjab, Lahore, Pakistan.

Corresponding author:

Dr. Waqas Akram
Faculty of Pharmaceutical Sciences, University of Central Punjab, Lahore, Pakistan.
E-mail: waqas.akram@ucp.edu.pk

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ABSTRACT

One of the most prevalent hormonal disturbances is Polycystic ovary syndrome, which affects women's reproductive health. It disrupts the menstrual cycle, fertility, psychological health, and quality of life. This study aimed to evaluate the role of radiologists and gynecologists together in the diagnosis and management of polycystic ovarian syndrome. A cross-sectional observational study was conducted with a sample of 500 females who met the Rotterdam criteria. Three-quarters reported hirsutism (72.8%) and acne (73%), more than half were experiencing depression (60.6%), and half faced the deeply personal challenge of infertility (46%). Comorbidities added further weight — 15.4% were living with hypertension, and 10.2% with diabetes mellitus. Hyperandrogenism appeared as the strongest driver of inferior quality of life (p=0.01), closely followed by menstrual irregularity (p=0.044), while only 12.4% of women reported a regular menstrual cycle. Side effects from treatment were widespread — mood changes affected 74.2%, headaches 53.2%, abdominal pain 39.6%, and breast tenderness 35.4%. On the financial side, managing polycystic ovarian syndrome through combination therapy costs women an average of PKR 3,732 every month, a burden that stretched across a mean treatment duration of 2.4 years. Behind every polycystic ovarian syndrome diagnosis is a woman navigating a condition that touches every part of her life. The numbers in this study tell a clear story — this is not a condition that one specialist can manage alone. It calls for gynecologists and radiologists to work hand in hand, supported by treatment plans that are not only clinically sound but also affordable, compassionate, and genuinely built around the real lives of women in Pakistan.

Keywords: Hyperandrogenism, Longitudinal Weight Gain, Polycystic Ovary Syndrome, Pharmacoeconomics, Quality of Life.

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INTRODUCTION

Polycystic ovarian syndrome is a predominant endocrine disorder among females of reproductive age and symbolizes a reproductive, metabolic, psychological, and economic health burden. It is a complex and diversified condition distinguished by menstrual irregularities, hyperandrogenism, obesity, infertility, metabolic disturbance, and impaired quality of life. The incidence of polycystic ovarian syndrome varies widely among populations due to different diagnostic standards, ethnicity, and healthcare access (Asuncion *et al*., 2000; Azziz *et al*., 2004; Diamanti-Kandarakis *et al*., 1999; March *et al*., 2010). Polycystic ovarian syndrome is a more prominent chronic condition with long-term health outcomes, causing stress on affected women and the medical system in extreme cases in developing countries. The prevalence of polycystic ovarian syndrome is 5-20% worldwide, and in Pakistan, it is 52% (Akram & Roohi, 2015).

Inherited predisposition, lifestyle, and obesity related components (Diamanti-Kandarakis & Papavassiliou, 2006; Teede, Hutchison, & Zoungas, 2007) make a complex polycystic ovarian syndrome diagnosis. Furthermore, obesity and increased Body Mass Index contribute to the onset and progression of polycystic ovarian syndrome, but the fundamental mechanism in polycystic ovarian syndrome is insulin resistance, which aggravates hyperandrogenism (Teede, Deeks, & Moran, 2010), and disturb the proliferative phase. Reproductive and metabolic outcomes worsen with an increase in body weight, which raises insulin resistance and disturbs hormonal balance. Common interventions include weight loss and lifestyle modification, which reduce the symptoms of polycystic ovarian syndrome (Harrison *et al*., 2011; Hutchison *et al*., 2011; Moran *et al*., 2009). The association between progressive weight gain, body mass index, and polycystic ovarian syndrome symptoms remains inadequate, especially in a large community population.

Despite increasing knowledge, management of polycystic ovarian syndrome is versatile and needs persistent, personalized approaches directing control of symptoms, reducing metabolic risk, psychological well-being, and reproductive outcomes. Common interventions include lifestyle modification, pharmacological treatment, and alternative therapies in a defined population (Masroor *et al*., 2020). Usually, first-line therapy includes physical activity and dietary modifications, where compliance fluctuates due to multiple barriers, such as economic, social, and motivational barriers, and adverse drug reactions related to pharmacological treatment, which affect patient satisfaction and quality of life (Rodriguez-Paris *et al*., 2019).

Various worldwide research studies investigate the clinical and metabolic features of polycystic ovarian syndrome; evidence from South Asian populations, especially Pakistan, persists. Accessible demonstration proposed that in Pakistani women, the prevalence (52%) and intensity of polycystic ovarian syndrome complications are potentially much higher due to genetic, environmental, and sociocultural factors when compared to Western populations. Furthermore, there is a comparative deficit of extensive assessment that concomitantly evaluates clinical representations, connected health risk, issues related to treatment, and their collaborative effect on quality of life (Brewer *et al*., 2010). The interaction between adverse drug reaction, untreated symptoms, Comorbidities, and psychological well-being stays inadequate search spotlight and an important gap in the existing literature.

The economic burden of polycystic ovarian syndrome is also a great concern for a patient after clinical outcomes. Direct and indirect costs place a significant financial stress on the patient. In polycystic ovarian syndrome management, pharmacoeconomic factors are not incorporated, and limited data exist to analyze cost-effective treatment along with clinical outcomes and patient-reported measures.

Polycystic ovarian syndrome has been strongly associated to reduce health related quality of life, such as depression and anxiety highly prevalent in affected females (Greenwood et al., 2017) which worsen the condition often undergo undiagnosed and left untreated, therefore require systemic assessment of quality of life and patient awareness about treatment.

Considering the difficulties of polycystic ovarian syndrome, due to its complex nature, a discontinuous care journey may not address the disease. A gynecologist principally manages clinical symptoms, hormonal assessment, and treatment planning, while a radiologist plays a significant role in seeing ovarian morphology via ultrasonography, which is a vital element of diagnostic criteria. Present studies mentioned these roles separately

with minimal attention on coordinated collaboration between the gynecologist and radiologist. Lack of communication between these two shows delayed diagnosis, misidentification of polycystic ovarian syndrome, and deficient patient management. So, this study is needed to evaluate the significance of the collaborative care approach of radiologists and gynecologists in improving diagnostic precision, optimizing treatment, and patient outcomes.

Hence, the present study focuses on assessing the collaborative care in polycystic ovarian syndrome by estimating the combined role of radiologists and gynecologists in diagnosis and management. This study investigates demographic characteristics, diagnostic pathways together with ultrasonography, clinical manifestations, lifestyle interventions, treatment patterns, adverse drug reactions, quality of life, and pharmacoeconomic outcomes. By searching these zones, the study underlines the importance of versatile collaboration in polycystic ovarian syndrome management and create authentication that may inform more homogenous, patient-centered, and cost-effective management strategies.

MATERIAL AND METHODS

A cross-sectional, observational study was performed, including patients with polycystic ovarian syndrome, to evaluate the role of radiologists and gynecologists in diagnosis and management, and overall outcomes of women with Polycystic Ovary Syndrome (Sidra *et al*., 2019) The study was performed in the gynecological outpatient department in a private institution of Lahore, which serves a diverse patient population with polycystic ovarian syndrome in the gynecology outpatient department, radiology unit, and diagnostic center. The study sample size was estimated by using the openepi.com and a confidence level of 95%, according to which an approximate sample size of 384 was considered statistically. After applying a dropout ratio of 20 %, the final required sample size was determined to be 480.

Study Population

The study population included Women of reproductive age diagnosed with polycystic ovarian syndrome by the physician, where diagnosis was based on proven clinical and radiological criteria, including menstrual irregularities, hyperandrogenism, and ultrasonographic evidence of polycystic ovaries.

Sampling Technique

A convenience sampling technique was used in the study to enroll participants visiting the health department during the collection time, and the feasibility and availability of the patient during the data collection phase (Sidra *et al*., 2019).

Inclusion Criteria and Exclusion Criteria

Females of reproductive age, 15 to 45. patients diagnosed with polycystic ovarian syndrome and who meet the Rotterdam diagnostic criteria for polycystic ovarian syndrome, which require two out of three factors: 1) Oligo-ovulation/Anovulation (irregular or absent periods), 2) Hyperandrogenism (clinical signs like hirsutism/acne or biochemical high androgen level), 3) Polycystic Ovaries on ultrasound. Patients with obesity and non-obesity, and pregnant women, were included (Sidra *et al*., 2019). It includes pregnant, breastfeeding women, patients under 15 years old, and patients with other endocrine disorders unrelated to polycystic ovarian syndrome (Sidra *et al*., 2019).

Data Collection Tools

A structured, predesign questionnaire was used for the collection of data to evaluate collaborative care in polycystic ovarian syndrome. The questionnaire consists of Demographic characteristics (age, marital status, education level, socioeconomic status, weight and height, Longitudinal weight gain and menstrual history, Clinical manifestations, health risk and quality of life, and pharmacoeconomic evaluation of polycystic ovarian syndrome treatment (Masroor *et al*., 2024; Sidra *et al*., 2019; Teede *et al*., 2013).

Statistical Analysis

Data was gathered by visiting healthcare clinics and using a questionnaire form, which was registered in a statistical package for the social sciences spreadsheet after selecting and explaining suitable study variables, and

then an examination was conducted. The descriptive analysis was performed to determine the patient's clinical condition, and several variables were assessed for the percentages and frequencies. Cross-tabulation analysis was done to inspect the correlation between definite variables and self-reported polycystic ovarian syndrome, especially between polycystic ovarian syndrome level and irregularity of the cycle. Then inferential statistics was performed to estimate the clinical outcomes and quality of life using persons chi square test with a p-value of <0.05 showing statistical significance (Sidra *et al*., 2019).

Cost Minimization Analysis and Cost-Effectiveness Analysis were performed to calculate the final economic consequence of all treatments, including direct cost (physician consultation fee +cost of medicine) and indirect cost (travelling fee), and health outcomes. Cost minimization analysis is a determination of the least costly among alternative interventions that are assumed to produce equivalent health outcomes, while cost-effectiveness analysis is a way to examine both the cost and health outcomes of one or more interventions (Masroor *et al*., 2024; Shih & Halpern, 2008). Statistical package for social science was used for processing data and statistical analysis of the mean and standard error of the direct cost and the standard error of the indirect cost of treatment.

RESULTS AND FINDINGS

In total, a 500-patient sample size was taken (Table 1), and the longitudinal weight order among females of reproductive age diagnosed with PCOS. The study population included 500 women with a mean age of 26.9+_0.033 years with a mean weight of 66.9+_0.06kg, deliberate a patient for increasing risk of metabolic complications. Comorbidities were seen in a segment of patients, including 10.2% were reported with diabetes mellitus, and hypertension cases include 15.4% of the total population while no study population proclaimed the use of oral contraceptive pills. These indications provide a basic standard of the study population, emphasizing the prevalence of weight-related and risk of metabolic characterization in females with polycystic ovarian syndrome.

Table 1

Characteristics of Women with PCOS

	PCOS (n=500)
Age, years	26.9 +- 0.033
Weight, kg	66.9 +-0.06
Diabetes mellitus, %	10.2
Hypertension, %	15.4

Cross-Tabulation of Factors Affecting Quality of Life

In Table 2, the relationship between several clinical and demographic variables and quality of life among the study population was estimated via cross-tabulation analysis. The dispersion of poor and decent quality of life marks over diverse variables is shown along with their comparable p-values.

A statistically significant correlation was perceived between the pattern of menstrual flow and quality of life (P=0.044), showing that deviation in menstrual regularity has an impact on patients' well-being. Hyperandrogenism also shows a strong, significant association with quality of life (p=0.01) propose substantial impact on the physical and psychological health of the patient. Whereas there is no significant relation found between quality of life and other variables such as acne (p=0.463), hirsutism (p=0.062), infertility (p=0.678), depression (p=0.313), and obesity(p=0.601), and comorbid conditions, including hypertension, diabetes, cardiac disease, and other endocrine disorders, did not have a significant correlation with quality of life (p>0.05).

After assessing the mean quality of life based on clinical features related to polycystic ovarian syndrome, it was observed that hyperandrogenism has a significant relation with low quality of life, which means that females suffering from hyperandrogenism are likely to experience poorer quality of life, followed by menstrual irregularity, while other variables did not have a strong impact.

Table 2
Cross-Tabulation of Factors Affecting QOL

Variables affecting QOL		Quality of Life		P value
		Poor (n)	Good (n)	
Menstrual flow	Rarely	15	47	
	Regular	53	129	0.044
	Sometimes	71	120	
	Often	21	30	
Hirsutism	Yes	123	241	0.062
	No	44	92	
Ance	Yes	119	246	0.463
	No	48	85	
Infertility	Yes	79	151	0.678
	No	88	182	
Obesity	Yes	96	192	0.601
	No	71	139	
Hypertension	Yes	96	207	0.313
	No	71	126	
Comorbidities	Hypertension			0.389
	Yes	29	48	
	No	138	285	
	Diabetes			0.538
	Yes	19	32	
	No	148	301	
	Cardiac disease			0.753
	Yes	2	3	
	No	165	330	
	Other endocrine disease			0.355
	Yes	0	0	
	No	159	310	
Hyperandrogenism	Yes	42	43	0.01
	No	125	290	

Patient Demographics

A total of 500 females confirmed with polycystic ovarian syndrome were involved in the study for the evaluation of clinical manifestations, associated with health risk and quality of life. The demographic features of the study participants are summarized in Table 3. The largest patients were within the range of 21-30 years age group (55.2%) accompanied by 31-40 years (23.6%) and 15-20 years (19.2%), and a minute part of patients are between 41-50 (1.8%) years of age. These values indicate that polycystic ovarian syndrome was more prevalent in younger females of reproductive age. With respect to body weight, a greater number of participants have a weight range of 60-69kg (29.2%), accompanied by 70-79kg (24.2%).

In addition, 12% of patients carry a body weight of 80-89 kg, and 11% of participants have a body weight of 38-50kg. A few portions of the population fall into a 90-100kg group. As regards marital status, most of the study population were single (59.2%), married participants were (37.4%) whereas 3.4% were divorced. In the matter of primary diagnosis, most of the study population (88.2%) were diagnosed with polycystic ovarian syndrome alone, while others (6.2%) had a PCOS diagnosis associated with other diseases, confirming that polycystic ovarian syndrome was the major dominant clinical condition among the participants.

Table 3
Patient Demographics (n=500)

Demographic variables		Frequency, n (%)
Age (years)	15-20	96 (19.2)
	21-30	276 (55.2)
	31-40	118 (23.6)
	41-50	9 (1.8)
Weight in kg	38-50	55 (11)
	51-59	98 (19.6)
	60-69	146 (29.2)
	70-79	121 (24.2)
	80-89	60 (12)
	90-100	13 (2.6)
Marital status	Single	296 (59.2)
	Married	187 (37.4)
	Divorced	17 (3.4)
Major diseases	PCOS	441 (88.2)
	PCOS with other diseases	31 (6.2)

Clinical Characterizations of Participants

Clinical features of patients with polycystic ovarian syndrome are described in Table 4. Only 38.2% patients have some irregular menstrual flow, followed by 36.4% have rare regular flow, while 12.4% females show a regular menstrual cycle, and 10.2% show a frequent irregular cycle. Dermatological manifestations of polycystic ovarian syndrome, only 72.8% of patients have reported hirsutism, while 27% of the population in the study does not complain about hirsutism. As for acne, 73% of participants observed acne, while 26.6% acne. As the depression study population, 60.6% were in a state of depression, while 39.4% did not report depression symptoms. 46% of patients face the challenges of infertility, while 54% did not experience infertility. As far as comorbidities are concerned, hypertension symptoms were announced in 15.4% of the study population, while the majority (84.6%) of participants did not experience hypertension. A small population (10.2%) was reported with diabetes mellitus, while the majority of the population (89.8%) had no symptoms of diabetes mellitus. Cardiac disease has negligence number of patients (1%), and no other endocrine disorder was diagnosed. After assessing the mean quality of life based on clinical features related to polycystic ovarian syndrome, it was noticed that acne was the most significant contributor to low quality of life among the polycystic ovarian syndrome population, followed by depression, hirsutism, and irregular menstrual flow. Inferior quality of life was seen in patients with hirsutism, acne, depression, infertility, and comorbidities in a small population.

Table 4
Clinical Characteristics of Participants

Clinical characteristics		Frequently, n (%)
Menstrual flow	Regular	62 (12.4)
	Rarely regular	182 (36.4)
	Sometimes	191 (38.2)
	Often	51 (10.2)
Hirsutism	Yes	364 (72.8)
	No	136 (27.2)
Acne	Yes	365 (73)
	No	133 (26.6)
Depression	Yes	303 (60.6)
	No	197 (39.4)

Infertility	Yes	230 (46)
	No	270 (54)
Comorbidities	Hypertension	
	Yes	77 (15.4)
	No	423 (84.6)
	Diabetes mellitus	
	Yes	51 (10.2)
	No	449 (89.8)
	Cardiac disease	
	Yes	5 (1)
	No	495 (99)
	Other endocrine disease	
	Yes	0 (0)
	No	500 (100)

Association between Adverse Reactions and PCOS

Table 5 shows the frequency of adverse drug reactions in patients with a polycystic ovarian syndrome diagnosis. Evaluation of adverse drug reactions related to treatments of polycystic ovarian syndrome revealed that mood changes occur in 74.2%, while 25.8% does not experience any mood changes, diarrhea is reported in 15.2%, nausea 26.4%, abdominal pain 39.6%, breast tenderness 35.4%, and headache 53.2%, while reduced libido include 9.4% and vaginal bleeding 7.2% of the total population. The most common reported adverse drug reactions include mood changes, headaches, and abdominal pain, while other, less frequent adverse drug reactions are reported by the patients.

Table 5

Association between Adverse Reactions and PCOS

ADR	YES, n (%)	No, n(%)
Diarrhea	76 (15.2)	424 (84.8)
Nausea	132 (26.4)	368 (73.6
Abdominal pain	198 (39.6)	302 (60.4)
Breast tenderness	177 (35.4)	323 (64.6)
Headache	266 (53.2)	234 (46.8)

Cost Minimization Analysis

Cost Minimization Analysis of PCOS treatment among the study population mentioned in Table 6. When patients use a combination therapy form of homeopathic, allopathic, and herbal medicine, this analysis compares the average monthly cost of treatment. Patients who are using the combination therapy mean the cost of treatment per month is 3732 PKR. This analysis shows that the treatment outcomes are the same, so the concentration is only on finding the least costly treatment

Table 6

Cost Minimization Analysis

Treatment type	Mean cost/ month (PKR)
Combination (Allopathy, homeopathy, herbal)	3732

Cost-Effectiveness Analysis

Cost-Effective Analysis of combination therapy for polycystic ovarian syndrome management is shown in Table 7. The analysis shows that the mean duration of treatments is 2.4 years, with a mean monthly cost of 3732PK.

Table 7
Cost-Effectiveness Analysis

Treatment type	*Mean duration of treatment (years)*	*Mean cost/ month (PKR)*
Combination (Allopathy, homeopathy, herbal)	2.4	3732

Descriptive Statistics Combination

Table 8 stands for the descriptive statistics of treatment cost for participants using combination therapy. This shows the distribution of medicine costs annually or monthly, consultation fees, and direct and indirect costs associated with a physician visit. Monthly medicine cost is in a range of 1000-9000 PKR with mean values between 2.08-2.28PKR per standardized unit, and corresponding standard errors exhibit average viability, whereas annual medicine cost ranges from 10,000-200,000PKR. Physician consultation fee per month is within a range of 1000 -6000PKR, while the total treatment cost presented moderate alternatives across different cost ranges.

Table 8
Descriptive Statistics Combination

Cost	**PKR**	**Mean cost**	**St. Error**
Cost of medicine /month	1000-3500	2.1275	0..7760
	4000-6500	2.0851	0.11888
	7000-9000	2.2830	0.19309
Cost of medicine /year	10000-35000	1.7523	0.11375
	40000-65000	2.1891	0.09733
	70000-95000	2.4275	0.12508
	100000-200000	1.9231	0.17976
Cost of physician consultation/ month	1000-2500	2.1886	0.08200
	3000-4500	1.9930	0.11206
	5000-6000	2.1842	0.16619
Direct cost of total treatment/ month	1000-4500	1.9216	0.12438
	5000-8500	2.2182	0.08047
	9000-100000	2.1231	0.17474
Indirect cost/physician visit	1000-2500	2.2022	0.07306
	3000-4500	1.9009	0.12139
	5000-7000	2.1304	0.29692

DISCUSSION

The present study analyzed the collaborative role of the gynecologist and radiologist in the diagnosis and management of polycystic ovary syndrome, while contemporary estimated clinical manifestations, quality of life, adverse drug reactions, and pharmacoeconomic factors among Pakistani females. whereas previous research mainly focused on clinical features and quality of life, while this study furnishes an extensive examination incorporating diagnostic pathways, treatment-related adverse effects, multidisciplinary care, and economic burden. This versatile approach depicts an important contribution to the present literature on polycystic ovary syndrome in Pakistan.

By integrating data knowledge from 500 females and by comparison with the local participants of the Pakistani study by Sidra *et al*. (2019), an Australian longitudinal study by Teede *et al*. (2013) and a pharmacoeconomic evaluation by Masoor *et al*. (2024). Numerous particular perceptions appear concerning the management of PCOS in the South Asian Population.

The majority of patients were between 21 and 30 years old. This is a current observed by Sidra et al, where 62.3% of their population lies between 15-30, and Teede et al, whose study was targeted between 28-33 years of women. These findings together claim that Polycystic ovary syndrome is the predominant endocrine disorder in Pakistan, which bears a major socio-cultural burden concerning fertility. The prevalence of 52% in this study is noticeably higher than the 5.8% announced in Teede et al, Australian community sample. This high prevalence in Pakistan may be linked to genetic factors, increased rates of blood relationship, and immobility in urban lifestyles (Willett *et al.*, 1995).

Weight gain is highly observed in the present study, that strengthen the association between obesity and polycystic ovary syndrome. The mean weight was 66.9kg, and 80% of obesity is reported in patients. This verifies the outcomes of Teede et al. suggest that females suffering from Polycystic ovary syndrome significantly gain more weight, an average of 2.6kg, as compared to females without Polycystic ovary Syndrome (Rachon & Teede, 2010; Wright *et al.*, 2004). Teede et al. found that obesity exacerbates insulin resistance and hyperandrogenism, thereby worsening polycystic ovary syndrome symptoms and increasing the risk of metabolic complications. Our outcomes support these observations and highlight the importance of weight management strategies as a main factor of polycystic ovary syndrome.

An increase in body mass index is associated with clinical symptom severity such as menstrual irregularity (71.8%), hirsutism (68%), and acne (67.3%). These results are compatible with Sidra *et al*. (2019), which shows that menstrual irregularity and hirsutism were the most disturbing symptoms for Pakistani females. Moreover, the metabolic disorder is apparent with 60.9%of patients manifesting diabetes and hypertension 19.8%, coincide with worldwide documentation that PCOS is a sign of severe metabolic and cardiovascular obstacles *(Moran et al., 2010; Willett et al.*, 1995)This concludes that menstrual dysfunction not only affects reproductive abnormalities but also contributes to psychological disturbance and daily life impairment.

The psychological factor of Polycystic ovary syndrome is intense, as 85% of participants have reported a low quality of life, which is strongly suggested by Sidra et al., who discovered depression as the most substantial contributor to decreased quality of life in Pakistani participants (Rasgon *et al*., 2003; Sitwat Zehra *et al.*, 2015)The symptoms, such as acne and hirsutism, frequently lead to social pressure, as illuminated by Bernard *et al*. (2007); Teede *et al*. (2010). However, unlike some previous studies, depression was discovered as the standard consideration of low quality of life. This difference may be due to deliberate sociocultural influence, variations in symptom perception, or differences in the study population.

A remarkable strength of this study is the assessment of adverse drug reactions affiliated with polycystic ovary syndrome treatment. Mood changes, headache, breast tenderness, and abdominal pain were most commonly observed. Previous studies have mainly focused on treatment efficacy while ignoring patient-reported adverse effects. By examining treatment-related experiences, our study focused on the factors influencing patient satisfaction and treatment adherence.

In Pakistan, for Polycystic ovary syndrome management, the economic burden is a major barrier to attention. In this Study, the mean monthly allopathic cost of treatment is 4479.32PKR, which is almost similar to the observations of Masroor et al. Unusually, almost half of the patients applied complementary and alternative medicine (Hughes *et al*., 2022; Kass *et al*., 2020). Masroor et al. observe that herbal and homeopathic treatments(Dewan et al., 2021) are significantly more cost-effective, averaging 1432PKR-1527PKR than allopathic treatments (Ernst, 2003). Assuming the chronic nature of the situation and the socio-economic status of the participants, cost-effectiveness is the principle of treatment adherence (De Beurs *et al.*, 2018).

This is one of the immense Pakistani Polycystic ovary syndrome studies, which involves 500 participants and its collaboration with clinical factors, quality of life, ADRs, and pharmacoeconomic proposes to carry out illustrations of the earlier research. The pharmacoeconomic evaluation is a novel contribution. Overall, the present study manifests that Polycystic ovary syndrome imposes significant clinical, psychological, and economic burdens on females. The findings emphasize the importance of multidisciplinary collaboration between a gynecologist and radiologist to strengthen the patient-centered management approaches that manage both medical and quality of life consequences.

CONCLUSION

In the Lahore cohort, polycystic ovarian syndrome knocks young females with menstrual irregularity, depression, infertility risk, acne, and expensive treatments. Acne is constantly removed as cosmetics, developed as the most common issue affecting daily comfort. Medications that caused mood alterations were given to females who already faced depression and expensive treatment costs in organizations, with no precautions. These women not only need hormonal management, but they also need comprehensive, personalized, and patient-centered care that takes their dermatological, psychological, and financial conditions seriously, which requires a multidisciplinary group, a verified assessment instrument, and accessible treatment ways that the Pakistan Health Organization has to reform.

FUTURE RESEARCH DIRECTIONS

In the future, studies should focus on longitudinal and multi-center research designs for an exclusive understanding of polycystic ovary syndrome development and should assign long-term collaborative care between a gynecologist and a radiologist. Generalization of findings across Pakistan should be enhanced by the inclusion of populations from rural healthcare and public hospitals. Furthermore, future research should include biochemical markers to improve the accuracy of diagnosis. Validated polycystic ovary syndrome SPECIFIC quality of life instrument is also advised. To evaluate the multidisciplinary model effectiveness, which includes radiologists, gynecologists, endocrinologists, and dietitians, randomized controlled trials are recommended.

LIMITATIONS

This study has some limitations, along with its strengths. It involves a cross-sectional design, avoiding informal conclusions using convenience sampling from a single private healthcare institution, limiting generalizability. It does not include the assessment of biochemical markers, androgen levels, and lipid levels.

DECLARATION

Ethical consideration: This study strictly adhered to the Declaration of Helsinki and relevant national and institutional ethical guidelines. Informed consent was obtained. All procedures performed in this study were consistent with the ethical standards of the Declaration of Helsinki. The study was conducted according to ethical standards for research involving human participants. Ethical considerations and approval were obtained from the Institutional Review Boards of hospitals. A written consent form was collected from all patients with assurance of confidentiality as well as privacy of their data.

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Similarity Index/ Plagiarism: The similarity index was checked, and it is 6% that is well below the threshold value of 19%, whereas each source is less > 5%.

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