



## DEPRESSION, ANXIETY AND SOCIAL PROBLEMS AMONG MARRIED WOMEN WITH POLYCYSTIC OVARIAN DISEASE

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### Abstract

**Background:** Polycystic ovarian syndrome (PCOS) is a widespread endocrine condition that affects women of reproductive age. It is distinguished by hormonal abnormalities, irregular menstrual periods, and the appearance of many cysts in the ovaries. Aside from its clinical symptoms, PCOS can have substantial psychological and social repercussions, especially among married women

**Objective:** To determine the prevalence of depression, anxiety and social problems among married women with polycystic ovarian disease.

**Material And Methods:** This descriptive cross-sectional study was conducted in (OPD) of Gynecology and Obstetrics at Taluka Hospital Kotri, during Six months. Married women aged 18-40 years having PCO disease diagnosed more than 1 year were included. Depression and anxiety were measured using (DASS-21) scale. Data was collected via study proforma and SPSS version 26 was used for the analysis.

**Results:** The most common age group among the patients was 24-26 years, accounting for 87.8% of the participants. The majority of the women (55.2%) had completed education ranging from primary to higher levels. In terms of depression levels among women with PCOS, half of the participants (52.0%) experienced mild depression, while 13.6% had severe depression and 2.7% had very severe depression. Regarding anxiety levels, 54.8% of the women had mild anxiety, whereas only 3.6% experienced very severe anxiety.

**Conclusion:** The study concludes that depression and anxiety were significantly more prevalent among women with polycystic ovarian syndrome (PCOS). Additionally, these women were found to encounter various social challenges.

**Key words:** PCO, anxiety, depression, social problems

## INTRODUCTION

The most common genetically complex hormonal disorder, polycystic ovarian syndrome (PCOS), is characterized by irregular menstruation, infertility, elevated levels of the masculinizing hormones, and metabolic syndrome.<sup>1</sup> In accordance to the World Health Organization (WHO), approximately 116 million women worldwide are affected by polycystic ovarian syndrome (PCOS). Globally, PCOS affects 5-10% of females of reproductive age. It is a significant factor contributing to female infertility.<sup>4,5</sup> PCOS is increasingly prevalent, affecting 6-9% of adolescent females in European nations and 4–10% globally.<sup>2</sup> In countries with lower socioeconomic status, such as Pakistan, the prevalence of PCOS is reported to be as high as 17.6%.<sup>6</sup> Recent studies have indicated that this syndrome is associated with psychological distress and has adverse effects on women's mental health and overall well-being.<sup>3</sup> Anxiety, depression, decreased sexual satisfaction, a decline in health-related quality of life, and other mental health issues have all been linked to PCOS. Specifically, women with PCOS have been found to have a higher likelihood of attempting suicide and experiencing social anxiety.<sup>8,9</sup> There are likely several other factors contributing to the higher prevalence of anxiety and depression in people with PCOS. According to several researchers, one possible cause of psychological distress in women with PCOS is the physical symptoms they experience.<sup>8</sup> The evidence is contradictory, however. While some studies have found a correlation between increased depressive symptoms and hirsutism, acne, and BMI in PCOS women, others have found no such association.<sup>10</sup> It's possible that a variety of factors contribute to the prevalence of anxiety and depression in women with PCOS.<sup>8</sup> PCOS is associated with serious short- and long-term health issues, including metabolic and cardiovascular problems, psychological issues and social challenges that affect women's identity and overall quality of life in terms of health.<sup>11</sup> It is strongly encouraged that patient assessments include an evaluation of metabolic and reproductive health, as well as health-related quality of life, because the specific characteristics of PCOS that significantly impact affected females are still unidentified.<sup>12,13</sup> PCOS has indeed been associated with numerous chronic conditions and comorbidities, highlighting the necessity for early diagnosis and treatment intervention in such cases.<sup>14</sup> This study focuses on evaluating the psychological impacts and social problems among married women affected by polycystic ovarian disease. To enhance these women's quality of life, this study investigates the latest available information on this aspect. Such insights may be helpful in developing management strategies aimed at reducing the burden of this morbidity.

## MATERIAL AND METHODS

Descriptive cross-sectional study was conducted at out-Patient department (OPD) of Gynecology and Obstetrics at Taluka hospital Kotri. Study was completed within the Six months after approval of ERC LUMHS. The sample size has been calculated by using the software raosoft sample size calculator. Prevalence of PCOS is taken as 17.6%<sup>6</sup> with 95% confidence level and 5% chance of error the sample size of study was stand to be 221. All the married females aged 18 to 40 years old, having PCO disease diagnosed more than 1 years were included. Women who did not agreeing to participate in the study and women having depression unrelated to PCO were excluded. Non probable Convenience sampling technique was used. Written informed consent was obtained from each study participant after explaining the aims and objectives of the study. The permission was obtained from the Medical Superintendent of Taluka Hospital Kotri. Confidentiality of all information provided by respondents was ensured, with respondents remaining anonymous. For measuring anxiety and depression, psychological scales such as the (DASS-21) was utilized to assess the severity of depression and anxiety. The Patient Health Questionnaire-9 (PHQ-9) scale was employed to measure depression and its severity, with depression being assessed positively in terms of dysphoria, hopelessness, devaluation of life, self-deprecation, lack of interest or involvement, anhedonia, and inertia. Anxiety was evaluated positively based on autonomic arousal, skeletal muscle effects, situational anxiety, and subjective experience of anxious affect. Data were collected from all diagnosed women with polycystic ovaries through a pre-designed questionnaire based on previously published studies. The data was collected and properly coded in Microsoft

Excel before being transferred to SPSS version 26.00 for additional analysis. Frequency and percentage calculations were made for categorical data, and mean and standard deviation calculations were made for continuous variables. Chi-square test was used to compare the parameters, and a significance value of  $\leq 0.05$  was considered.

**RESULTS**

A total of 221 women of PCO were enrolled and assessed regarding psychological problems, the most common age groups of the patients were 24-26 years (87.8%) and 21-23 years (6.3%), followed by 30-32 years (2.3%), 27-29 years (1.8%), 33-35 years (0.9%) and 36-38 years (0.9%). majority of the women 55.2% had educational level primary to secondary level, and 39.4% women had matric to intermediate level, only 2.3% were graduate and 3.2% were illiterate. out of all 73.8% women belonged to the rural areas and 26.2% were from urban areas. Most of the study subjects 91.0% had disease duration from 2 to 5 years, followed by 5.0 had duration of disease >1year.

**Table. 1**

Regarding social problems reported by 221 patients diagnosed with polycystic ovarian syndrome (PCOS), all participants (100.0%) reported experiencing loneliness and indicated a decrease in social activities after being diagnosed with PCOS. **Table 2.**

Depression among women with PCOS was assessed using the DASS scale scores, revealing that 52.0% had mild depression, 25.8% had moderate depression, 13.6% had severe depression, and only 2.7% experienced very severe depression. Additionally, depression was not detected in 5.9% of the women. Regarding anxiety assessment among PCOS women, 54.8% had mild anxiety, 29.4% had moderate anxiety, 9.0% had severe anxiety, and only 3.6% experienced very severe anxiety. Anxiety was not found in 3.2% of the women. These findings are summarized in **Table 3.**

**Table.1** Demographic information of the patients n=221

Variables	Frequency	Percent	
Age groups	24-26years	222	94.1
	27-35years	11	5.0
	36-38years	2	0.9
Educational status	Illiterate	07	03.2
	Primary to secondary	122	55.2
	Matric to intermediate	87	39.4
	Graduate	05	02.3
Occupational status	House wife	210	95.0
	Govt employee	4	1.8
	Private job	7	3.2
Duration of disease	>1years	11	5.0
	2-5 years	201	91.0
	6-9 years	06	2.7
	10-13 years	02	0.9
	>13 years	01	0.5

**Table.2** Social problems of the patients n=221

Questions	Frequency	Percent	
Do you feel lonely after developing the PCO?	Yes	221	100.0%
	No	--	--
Do you decrease social activities after developing the PCO?	Yes	221	100.0%
	No	--	--

**Table. 3** Frequency and severity of depression in patients with PCO n=221

Variables		Frequency	Percent
Depression	No (DASS score 0-9)	13	5.9
	Mild (DASS score 10-13)	115	52.0
	Moderate (DASS score 14-20)	57	25.8
	Severe (DASS score 21-27)	30	13.6
	Extremely severe (DASS score $\geq 28$ )	06	02.7
Anxiety	No (DASS score 0-7)	7	3.2
	Mild (DASS score 8-9)	121	54.8
	Moderate (DASS score 10-14)	65	29.4
	Severe (DASS score 15-19)	20	9.0
	Extremely severe (DASS score $\geq 20$ )	8	3.6

## DISCUSSION

A non-communicable condition of increasing concern is polycystic ovarian syndrome (PCOS), which affects female's health and quality of life and has long-term ramifications. In this study most common age groups of the patients were 24-26 years (87.8%) and 21-23 years (6.3%) and majority of the women 55.2% had educational level primary to secondary level, and 39.4% women had metric to intermediate level, only 2.3% were graduate and 3.2% were illiterate. In the comparison of this study the Kaur SP et al<sup>15</sup> reported that the mean age of the patients was  $4.99 \pm 6.17$  years and 90.0% women's educational level was up to metric. In another study conducted by Al-Naqeeb AA et al<sup>16</sup> reported that the most common age groups of the women were 18-24 years and 25-30 years, with mean age of  $24.67 \pm 7.63$  years, and in their study the most of the women 60% had formal educational level till metric and few women were graduate. In this study most of the women 95.0% were house wives according to occupational status, 73.8% women belonged to the rural areas, 67.4% women had middle socioeconomic status and 27.1% women were poor and majority of the women 98.2% were overweight (BMI 25 to 29.9kg/m<sup>2</sup>). These findings were almost similar to the studies of Al-Naqeeb AA et al<sup>16</sup> Akram M et al<sup>5</sup> and Zehra S et al<sup>17</sup>.

In this study according to the clinical presentation, out of all 91.0% study participants had menses problems and 52.5% patients had heavy bleeding, frequency discomfort during menses was 8.6%, backache was 97.3% of the cases, hair growth complaints were in 98.0% of the cases, acne problems were 38.0% of the women, skin discoloration was 14.5% of the women, weight gain was in 99.1% of the cases and infertility complaints were in 99.1% of the women. Consistently Kala K et al<sup>18</sup> reported that 72% of PCOS females experienced menstrual irregularities and (60%) had heavy bleeding. Balen et al<sup>19</sup> has observed similar findings, with 70% of women experiencing menstrual abnormalities and 50% experiencing oligomenorrhea. In the line of this study Sidra S et al<sup>13</sup> reported that the according to the clinical presentation of PCO women, 67.3% of the women had acne, 68% had hirsutism, 71.8% has irregularities of menses and 63.2% had hyperglycemia.

In this study 52.0% women had mild depression, 25.8% had moderate depression, 13.6% had severe depression and very severe depression was in 2.7% of the women. 54.8% had mild anxiety, 29.4% had moderate anxiety, 9.0% had sever anxiety and very sever anxiety was in only 3.6% of the women. Comparatively in the study of Wang Yet al<sup>20</sup> reported that the prevalence of depression was (42%) and anxiety (37%) among the participants with PCOS. On other hand in the study of Sidra S et al<sup>13</sup> reported that the 61.8% of the females having PCOs disease had depression. In the study of Accortt EE et al<sup>21</sup> compared to females in the general population, females having PCOS have a greater and more varied incidence of depressive disorder from 28 to 64%. A set of psychological illnesses known as depression and anxiety are defined by sensations of stress and paranoia, whereby anxiety is a response to recent events and nervousness is a concern about the future. Although Deeks A et al<sup>22</sup> reported that between 34 and 57% of the females having PCOS report having anxiety. Uncertainty exists on the causes of the greater development of anxiety and sadness in PCOS-positive females. Several experts claim that the physical signs and symptoms of PCOS are much more bothersome. Nevertheless, they are supported by contradictory data. Impacted

patients may experience severe emotional discomfort as a result of the aesthetic and psychosexual effects of PCOS. This spectrum of unfavorable symptoms not only has a significant influence on mental morbidity, however the variety of remedies available to alleviate them also significantly lowers the quality of life for women as a whole. There are several limitations of the current study like it was a cross-sectional design study, which prevented a longitudinal investigation of the long-term consequences of medications and other problems. The absence of sufficient funding to measure the levels of numerous important biochemical indicators is another drawback of this study.

## CONCLUSION

Based on the study findings, depression and anxiety were notably more prevalent among women with PCOS. These women encountered various social challenges, experiencing feelings of loneliness and reduced social engagement after developing PCOS. Sociodemographic factors such as childlessness and residing in rural areas with poor academic performance were associated with elevated anxiety levels. Low ego-resiliency and the adoption of passive stress-coping techniques were predictive of high levels of anxiety and sadness in women with PCOS.

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