

## Socio-Cultural Perspective On Polycystic Ovary Syndrome Patients: From Lived Experience To Treatment

Fareeha Sarwar<sup>1, Ψ</sup>, Nazia Rafiq<sup>1, Ψ, \*</sup>, Nayab Gull<sup>2</sup>, Huma Khalid<sup>2</sup>, Ahmed Ibrahim<sup>3</sup>, Abdul Hanan<sup>4</sup>, Muhammad Usman<sup>2</sup>

### Abstract

*This study aims to narrate the socio-cultural factors surrounding Polycystic Ovary Syndrome (PCOS) among both unmarried and married women of reproductive age group. The study intends to explore personal, familial and societal trends related to PCOS patients. For the present study 20 In-depth interviews (10 from each married and unmarried women group), 06 case studies, and 03 patient's life histories were used to cover the qualitative part of the study to analyze detailed information on recurrent themes pertaining to the respondents' experiences with PCOS while the quantitative aspects of the study were covered by the socio-economic profiles of the patients. The data was collected from two public hospitals of Rawalpindi. Thematic analysis of the data showed a strong association with PCOS. A significant correlation was also found between PCOS and lifestyle of the patients furthermore, the study presents shows that a low socio-economic and lower position of the women is deeply connected with prevalence, effects and treatment of PCOS suggesting that financial difficulties make the problem worse. Majority of the PCOS patients mentioned that their marriages were strained, likewise unmarried women also faced challenges, discrimination and prejudice emphasizing the syndrome's wider social, economic and emotional ramifications. Additionally, married women's PCOS related health issues were made more difficult by the stress and social pressure they faced from their husbands, in-laws, and society at large, which increased their emotional burden. This study also only reveals the distressing experiences of the women with PCOS but it also demonstrates how the condition is intricately linked to general culture at the household and social levels. The study suggests future qualitative research to cover the mental health and wellbeing issues of women. Moreover, education and public awareness campaigns are direly needed at all levels to connect the home, community, and healthcare facility to lessen the problem of PCOS and its sensitization.*

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<sup>1</sup>Pir Mehr Ali Shah Arid Agriculture University, Rawalpindi, Pakistan

<sup>2</sup>Benazir Bhutto Hospital, Rawalpindi Medical University, Rawalpindi, Pakistan

<sup>3</sup>Rawalpindi Medical University, Rawalpindi, Pakistan

<sup>4</sup>Faisalabad Medical University, Faisalabad, Pakistan

\*Correspondence: Nazia Rafiq (Email: nazia Rafiq@uaar.edu.pk)

<sup>Ψ</sup>These authors contributed equally for first authorship.

Fareeha Sarwar: [fareehasarwar628@gmail.com](mailto:fareehasarwar628@gmail.com)

Nazia Rafiq: [naziarafiq@uaar.edu.pk](mailto:naziarafiq@uaar.edu.pk)

Nayab Gull: [nayab.gull.92@gmail.com](mailto:nayab.gull.92@gmail.com)

Huma Khalid: [humakhalid317@gmail.com](mailto:humakhalid317@gmail.com)

Ahmed Ibrahim: [ahmedibrahimdoc@gmail.com](mailto:ahmedibrahimdoc@gmail.com)

Abdul Hanan: [dr.abdulhanan005@gmail.com](mailto:dr.abdulhanan005@gmail.com)

Muhammad Usman: [usmanmuhammad312@gmail.com](mailto:usmanmuhammad312@gmail.com)

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## **Introduction**

The term 'socio-cultural' refers to the combined influence of social and cultural elements on individuals, groups, communities, and societies. It explains that human behavior, beliefs, norms, values, and practices are shaped not only by individual psychology but also by broader social structures and cultural contexts (Cherry, 2022). The theoretical concept of term socio-cultural is 'The mental abilities of the people in a society are shaped by their social interaction with each other and by the culture in which they live'. The term 'socio-cultural' encompasses the combined social and cultural factors that influence the behavior, beliefs, norms, values, and practices of individuals, groups, communities, and societies. It represents a continuum of societal and cultural influences that affect thoughts, emotions, and, indirectly, the health of individuals within a society (Cooney et al., 2017). Individuals learn and develop psychologically through societal interactions. The socio-cultural theory posits that societal interactions play a crucial role in an individual's psychological development. Learning is inherently a social process, and an individual's cognitive functions are shaped by these societal interactions (Cherry, 2022). In an anthropological perspective, the socio-cultural anthropology present that human societies spread in time and space in a way by considering the commonalities across them. For the approach of understanding contemporary challenges, the study applied a holistic strategy of connecting local and global, past and present (Robbins, 2016). The term "socio-cultural" encompasses a broad array of factors that aid in understanding its influence on society. Society regulates behaviors and interactions through various socio-cultural elements, including institutions, organizations, and systems such as family, education, lifestyle, and social class. Societal and cultural expectations are shaped by these socio-cultural factors, which include cultural norms, beliefs, values, customs, traditions, and ideologies. Understanding socio-cultural factors is crucial due to their significant impact on society (Di Fede et al., 2009). In anthropology, "socio-cultural" refers to the study of how diverse individuals adapt within their societies by examining their aspirations, struggles, and cultural interactions. Socio-cultural anthropologists investigate how natural, biological, and technological aspects of a society's culture influence individual lives and social relationships (Doda, 2005). These factors influence the behavior, beliefs, and identities of both individuals and societies. They offer social support in addressing various social challenges, including healthcare issues (Citron, 2022). Socio-cultural factors play a crucial role in the development and functioning of individuals within a society. While they frequently impact societal roles, they also contribute significantly to addressing healthcare problems through socio-cultural support. Additionally, factors such as stressors can have both positive and negative effects on the identification and treatment of illnesses (Di Fede et al., 2009).

There are some diseases in life which symptoms are so embarrassing for a patient or for the survivor of that disease. These symptoms do not allow a patient to survive from a socio-cultural perspective in society. For this reason, social stigma was made about the disease and patient. 'These social stigma causes psychological, physical and social health consequences (Anagnostis et al., 2018), like exclusion, discrimination and loss of opportunity in social health, shame, blame and humiliation in mental health and refraining from treatment all this can to a stressful life for a patient which causes disease aggravation (Akbari et al., 2023). The personality of women who have PCOS, get disturbed due to these socio-cultural factors. 'Through examination it is come to know that 16% of PCOS have major depression and 2%

have bipolar disorders. Depression and anxiety, found more in the PCOS women than that of general population (Basirat & Kheirkhan, 2020).

Living in a society with such disease like PCOS may depress the self-consciousness and lower self-esteem of patient. 'The cultural perception about the women role in a society is highly valued. As the reproductive inability, of women or infertility due to PCOS lead to feeling inadequacy and failure in society in which motherhood is highly valued (Dewailly et al., 2010). A PCOS patient also faces social stigma that had a great effect on the personality of patient in socio-cultural perspective. 'Some symptoms of PCOS like infertility, obesity, unwanted hair growth causes social stigma in patients and causes anxiety, depression, and a negative image of body (Cooney et al., 2017).

This all impart a negative effect between socio-cultural factors such family relationships, work, employment, and the patient (Hudson, 2008; Joham et al., 2022; Kaur et al., 2021). Socio-cultural factors, combined with socio-economic status, significantly impact individuals' lives. For example, a PCOS patient with a low socio-economic status may be unable to afford treatments for symptoms such as hirsutism, obesity, and infertility. These symptoms, exacerbated by social stigmas and cultural norms, can lead to body image issues and diminished self-esteem. Consequently, these factors indirectly affect women's ability to pursue higher education, secure high-paying jobs, and access other career opportunities (Di Fede et al., 2009). When managing a chronic disease, patients strive to improve their lifestyle and live contentedly with their condition. To achieve this, they employ various coping mechanisms to address social stigmas, cultural norms, and other social and medical challenges. These coping strategies include maintaining a healthy diet (Shahid et al., 2022), engaging in regular exercise and physical activities, practicing stress-relief meditation, minimizing unnecessary obligations, fostering positive social connections, seeking peer support, and avoiding negative coping methods such as alcohol and substance use (Wilder & Pype, 2021).

The symptoms of PCOS are conspicuous and often conflict with societal cultural norms for women. Exploring the socio-cultural perspective on the personality of individuals living with PCOS involves understanding the intricate interplay between cultural norms, societal expectations, and individual experiences (Pathak & Nichter, 2015). In various cultural contexts, femininity and womanhood are frequently associated with fertility, physical appearance, and overall health. For women with PCOS, symptoms such as irregular menstruation, hirsutism, and infertility can challenge these traditional ideals of femininity, potentially impacting their self-concept and social identity (Becker & Nachtigal, 2019).

These socio-cultural factors have contributed to the formation of social stigmas surrounding PCOS. The stigma associated with PCOS related symptoms, such as weight gain and acne, can lead to feelings of shame and social isolation, adversely affecting the psychosocial well-being of affected individuals. Additionally, cultural beliefs and gendered expectations shape the experiences of women with PCOS, influencing their self-esteem, body image, and interpersonal relationships (Simbar, 2014).

Within the context of socio-cultural factors, socio-economic status also influences the lives of PCOS patients. Socio-economic status encompasses factors such as income, education, occupation, and access to resources, all of which significantly impact the experiences and outcomes of individuals living with PCOS. Number of researches indicate that lower socio-economic status is associated with a higher prevalence and severity of PCOS. Individuals from

disadvantaged socio-economic backgrounds may encounter barriers to accessing healthcare services, diagnostic testing, and treatment options (Anagnostis et al., 2018; Sirmans, 2019).

Patients with low socio-economic status also experience significant stress due to the high costs associated with medication and treatment, particularly for infertility. This financial strain can exacerbate depression, anxiety, and mood swings. The total additional healthcare-related economic burden of PCOS, including pregnancy-related and long-term morbidities in the United States, was estimated to be \$4.3 billion annually in 2020 USD. Combined with previous analyses, the total economic burden of PCOS is estimated at \$8 billion annually in 2020 USD (Riestenberg & Jagasia, 2022).

Every society has its own culture and corresponding cultural norms. The symptoms of PCOS often conflict with these norms of beauty, fertility, and femininity, leading to stress and low self-esteem in affected individuals. Cultural norms surrounding femininity, fertility, and health intersect with the manifestations of PCOS, shaping the lived experiences and identities of those affected. Symptoms such as irregular menstruation, hirsutism, and infertility deviate from culturally idealized standards of womanhood, leading to feelings of shame, stigma, and social isolation among individuals with PCOS (Rashid & Kareem, 2022).

There is no specific treatment for PCOS, but it can be managed with certain medications and ethno-medicines. Due to societal pressures, patients may feel ashamed to consult a physician, and in some cultures, norms restrict patients from seeking medical treatment, leading to delayed consultations and increased complications. Research has shown that many chronic diseases cannot be permanently cured; however, their symptoms can be managed, and patients can improve their quality of life through healthy lifestyle changes. PCOS, being a lifelong disorder, can be managed with proper medical care. This includes symptom management through healthy lifestyle changes, cultural practices, and medications (Pal, 2014).

Many patients initially try to avoid medications and instead focus on healthy lifestyle changes as the first step in managing PCOS. To improve their lifestyle, PCOS patients are advised to increase daily physical activities, engage in regular moderate exercise, and prevent insulin resistance. An active routine can help maintain a healthy weight and reduce the risk of diabetes. This routine might include a daily 20–30-minute walk after meals (Shahid et al., 2022). PCOS is a hormonal disorder (Azziz, 2011). To regulate hormone levels and address related issues, some Ayurvedic treatments are also utilized. These treatments include herbal therapies and lifestyle changes. Ayurvedic herbs used for PCOS include Ashwagandha (also known as winter cherry), which helps regulate cortisol levels to reduce stress; Cinnamon, which aids in managing insulin resistance; and Turmeric, which acts as an anti-inflammatory agent. Ayurvedic therapies also incorporate yoga to alleviate anxiety. Recommended yoga poses, known as asanas, include Supta Baddha Konasana (butterfly pose), Bharadvajasana (twist), Chalanasana (mill churning pose), and Shavasana (corpse pose) (Forthingham, 2020).

In certain cultures, religious treatments are also employed to manage PCOS. Patients may visit Darbars, recite verses from the Quran, or seek the assistance of practitioners who provide taweez (amulets). Taweez, often inscribed with Quranic verses or prayers, is a cultural practice among some Muslims believed to offer protection or healing. However, Islamic scholars advise against relying exclusively on these practices and emphasize that they should complement, not replace, professional medical treatment. Consulting unqualified practitioners or quacks is generally discouraged, as it can lead to misinformation and potential harm (Kaur et al., 2021).

In medical anthropology, some biomedicines are also considered traditional medicines, as they are commonly used as initial treatments by physicians within a given society. For PCOS, traditional treatments include medications such as Metformin and oral contraceptive pills (birth control), as well as natural supplements like Berberine, Chromium, and Inositol, which aid in managing PCOS symptoms. Additionally, significant lifestyle changes, including weight loss and regular exercise, are crucial for symptom management and overall recovery (Andonian, 2023).

### **Theoretical Framework**

The present study aligns with various theories in anthropology and medical anthropology. From a socio-cultural perspective on PCOS, it relates to the theory of cultural relativism, proposed by Franz Boas the theory posits that cultural beliefs and practices should be understood within the context of the specific culture in which they occur, rather than through the lens of external absolutes (Kendra, 2023). The theory of cultural relativism can be applied to the socio-cultural context surrounding PCOS by examining how cultural beliefs, values, and practices shape the perception, experience, and management of the condition. For instance, in cultures where fertility is highly valued, symptoms of PCOS such as irregular menstrual cycles or infertility may have profound social and emotional consequences (Tzuriel & Tzuriel, 2021). Additionally, cultural attitudes toward body image, gender roles, and healthcare-seeking behaviors influence how individuals with PCOS are perceived and supported within their communities. Adopting a cultural relativist perspective allows researchers to understand the diverse global interpretations and responses to PCOS, leading to more culturally sensitive approaches in diagnosis, treatment, and support for affected individuals (Forthingham, 2020; Rashid et al., 2019).

The perspective discussed previously is rooted in anthropological theory; however, given that PCOS is a medical condition, it is also relevant to theories in medical anthropology. PCOS can be analyzed through both epidemiological and ecological approaches. These approaches examine the interplay between biological and cultural factors in health and disease. They focus on understanding how certain factors can influence the likelihood of developing a disease, including cultural practices that may either contribute to illness or compel individuals to adopt a sick role (Robbins, 2016).

For instance, studies on PCOS using these approaches explore how factors such as genetics, lifestyle, and environmental influences contribute to the condition's development and manifestation across different demographic groups. They also investigate how cultural beliefs, social norms, healthcare systems, and environmental conditions affect the prevalence, diagnosis, and management of PCOS (Sheehan, 2004). By integrating epidemiological and ecological perspectives, medical anthropologists can achieve a comprehensive understanding of PCOS, considering both individual and broader societal factors. This approach aids in developing more effective interventions and healthcare policies tailored to diverse populations (Rashid et al., 2019; Robbins, 2016; Scott & Palincsar, 2013).

### **Review of Literature**

Medical anthropology as a sub field of applied anthropology has interrelated the biological and cultural aspects of human health to explain the impact of culture on health and diseases. "Medical anthropology deals with the collective study of biological and cultural aspects about humans to explain the influence of culture on human health and disease. Cultural factors engage

symbols with biology in a minds-body dynamics manifested in traditional healing practices, psychosomatic illness and many other ways by which beliefs effect the health" (Winkelman, 2009).

The study of human beings first clicks to the study of health of human being. There are many aspects other than medicine to study humans. When culture and health behavior and social programs related to public health are involved with medicine then a new field evolves belongs to applied anthropology called medical anthropology. "Medical anthropology is the primary discipline addressing the interfaces of medicine, culture and health behavior and incorporating cultural perspectives into clinical settings and public health programs" (Doda, 2005).

The topic of the study is "Polycystic Ovary Syndrome (PCOS): An Anthro-po-medical study of women's reproductive health narratives in selected public hospitals of Rawalpindi". The topic briefly discusses the cause and effects of PCOS, it highlights the socio-cultural impact on PCOS patient and how they cope from these social stigmas, and it discusses about knowledge and treatment strategies adopted by women having PCOS. PCOS is an endocrine disorder. It can affect individual's assigned female at birth, typically during their reproductive years. It is characterized by a combination of symptoms, including irregular menstrual cycles, excess androgen levels (male hormones), and the presence of multiple cysts on the ovaries. This hormone release in females when females do not ovulate due to insufficient number of ovulatory hormones. Because of these ovaries develop small cysts. These cysts then secrete the androgen hormone. PCOS patients have high level of androgen hormone which create complication in menstrual cycle, and other symptoms of PCOS (Altman, 2023).

A follicle is a sac in which egg development occurs, 'PCOS ovary contains large number of follicles, and they are up to 8mm (approx. 0.3) in size. In PCOS follicles are unable to release egg that is why no ovulation take place. This is very common disease affecting 1 in 10 women in UK. PCOS often manifests with a range of symptoms, such as acne, excessive hair growth (hirsutism), weight gain, and infertility. The exact cause of PCOS is not fully understood, but it is believed to involve a combination of genetic, hormonal, and environmental factors. Insulin resistance, where the body's cells do not respond effectively to insulin, is also commonly associated with PCOS. This hormonal imbalance can disrupt the normal functioning of the reproductive system, leading to difficulties with ovulation and fertility (Altomara, 2021). PCOS patients suffer a lot psychologically and socially as well. PCOS not only affects physical health but can also have significant psychological, socio-cultural and emotional impacts, including depression, anxiety, social stigmas and body image concerns. Management of PCOS typically involves a combination of lifestyle modifications, such as dietary changes and exercise, along with medications to regulate menstrual cycles, manage symptoms like acne and excess hair growth, and improve fertility outcomes. Early diagnosis and comprehensive management are crucial in minimizing the long-term health risks associated with PCOS, including type 2 diabetes, cardiovascular disease, and endometrial cancer (Deanna & Sachdev 2023).

The term socio-cultural can be better explained by socio-cultural theory. 'Socio-cultural theory has both sociological and psychological dimensions and both of these dimensions deal with the importance of culture and society in the development and shaping of an individual in a society. It elaborates that how friends, parents and the society interact in the development of an individual's cognitive, learning and socio-cultural abilities' (Main, 2023).

Socio-cultural theory under the umbrella of anthropology underpins that “socio-cultural anthropology studies the social, symbolic, or nonmaterial and material lives of contemporary and historically recent human societies, taking the concept of culture central to its goal. It discusses the social and cultural aspect of an individual of a society, by describing and analyzing the lives of people and their traditions” (Doda, 2005). While discussing the socio-cultural perspective about the PCOS patient, it has been seen that ‘women that suffering from PCOS have high level of anxiety and depression, which impart a great effect on patient’s identity, mental health and quality of life. The disorders related to anxiety and depression in PCOS patients ranges from 28% to 39% for anxiety and 11% to 25% for depression (Dewani, 2023).

A patient with PCOS often faces additional challenges due to societal expectations. The societal and cultural pressures can exacerbate feelings of depression and frustration. Symptoms such as hirsutism, menstrual irregularities, and obesity can contribute to mental health issues. Of particular concern is infertility, especially in cultures where fertility is closely tied to notions of femininity. This can place significant emotional strain on married women, adversely affecting their quality of life and marital relationships (Arlt, 2022).

Research indicates that there is no definitive or permanent cure for PCOS in women. However, the symptoms can be managed through a combination of medical or ethno-medical treatments and lifestyle modifications. Studies have shown that lifestyle changes, including a healthy diet, regular exercise, and weight management, are prioritized in the treatment of PCOS (Dunne, 2006). These modifications help regulate hormone levels in both married and unmarried women. Additionally, medical practitioners typically initiate treatment with birth control pills to normalize menstrual cycles and may also prescribe medications for insulin resistance, such as those used to manage diabetes (Lucidi, 2023).

Traditional treatments for PCOS vary widely across cultures and regions of the world. These treatments often draw upon traditional medicine systems that have been practiced for centuries and are deeply rooted in local beliefs and customs. ‘Many traditional medicine systems, such as Traditional Chinese Medicine (TCM), Ayurveda, and Indigenous healing practices, utilize herbal remedies to address symptoms associated with PCOS. These herbs may include Fenugreek, Cinnamon, Licorice root, Saw Palmetto, Chaste Berry, and others, believed to regulate menstrual cycles, balance hormones, and improve fertility (Forthingham, 2020).

When seeking treatment, patients should consider the symptoms of irregular menstrual cycles, acne, hirsutism, weight gain, and, for married women, infertility. Addressing these symptoms often involves managing insulin resistance and regulating hormones. Initial steps should include dietary changes: avoiding processed or preserved foods, incorporating whole foods, and balancing carbohydrates and proteins. Additionally, the diet should include sources of healthy fats such as olive oil, fatty fish, and tree nuts. Ensuring adequate intake of iron, magnesium, and fiber is also crucial (Watson, 2023).

Besides all this there are some religious practices that are done for the treatment of some symptoms of PCOS. ‘It is guided by some religious Islamic scholars that recitation of Surah Al- Fatiha helps in the cure of menstrual cycle irregularity. Fasting in the month of Ramadan also lesson the stress and help in weight balance. The verses for the cure of infertility due to PCOS are the verses of Surah Al- Bakarah, the translation of that surah is in surah 21: 89–90, Allah says: “And (remember) Zakaria, when he cried to his Lord: “O my Lord! Leave me not without offspring, though Thou are the best of inheritors.” So we listened to him and granted

him Yahya (John). We cured his wife (barrenness) for him.” Similarly, the Prophet PBUH says: “Marry the kind and fertile women who will give birth to many children for I shall take pride in the great numbers of my ummah” (Nation) (Al-Bar et al., 2015; Altman, 2023; Deanna & Sachdev 2023; Forthingham, 2020; Society, 2008).

## **Materials and Methods**

The researcher utilized anthropological research methods, specifically employing a descriptive approach covering Case Studies, In-depth interviews, and life histories. The study has provided detailed descriptions of these tools to explore the research questions (Singh, 2023). Case studies and life histories made it possible to gather thorough and specific information from a variety of sources, including observations, interviews, and documents, to have a deeper comprehension of the instances that were being investigated (Shahzad et al., 2017). Furthermore, the case study method was especially helpful for examining complicated or unusual phenomena in the real-world settings surrounding PCOS, providing insights into behaviors, processes, and outcomes that might not be captured through other research methods and offering workable solutions to particular problems or challenges faced by women with PCOS (Rashid et al., 2019).

## **Materials and Methods**

For the present research, the research made use of purposeful sampling based on understanding of the study’s objectives. Firstly, female obstetric patients within a larger group of gynecology patients were identified. The focus was then narrowed to those diagnosed with Polycystic Ovary Syndrome (PCOS), as determined by their Luteinizing Hormone (LH) test and abdominal ultrasound results, reviewed by physicians. The study specifically targeted married women experiencing infertility who were in their reproductive age and unmarried women who had reached puberty and were 14 years old and above. Given the qualitative nature of the study, a large sample size was not required. A total of 20 in-depth interviews, 06 case studies & 03 life histories were conducted.

## **Results and Discussion**

### **Relationship between Occupation and Household Income**

The correlation analysis revealed a significant relationship between the two variables in the socio-economic survey: occupation and household income, as shown in Table 1. Socio-economic status has been linked to Polycystic Ovary Syndrome (PCOS). Specifically, women from lower socio-economic backgrounds were found at a higher risk of developing PCOS, which is often exacerbated by financial stress. Additionally, women who experienced low socio-economic status during childhood were also at increased risk (Azziz, 2011).

**Table 1: Table showing Relationship between Occupation and Household Income**

Correlations

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	Occupation	Household Income
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Occupation	Pearson Correlation	1	.203* .015
	Sig. (2-tailed)		
	N	143	143
Household Income	Pearson Correlation	.203*	1
	Sig. (2-tailed)	.015	
	N	143	143

\*. Correlation is significant at the 0.05 level (2-tailed).

### PCOS Patient's: Family type and their interpersonal relationships

The correlation analysis of the socio-economic survey indicated a significant relationship between the variables of household members and family structure, as presented in Table 2. The study found that common family types were joint, nuclear experiencing childlessness associated with Polycystic Ovary Syndrome (PCOS). The type of family structure can influence the management of PCOS symptoms, either positively or negatively, depending on the support network and coping mechanisms available to the patients (Stephens, 2006).

**Table-2: Table showing Relationship between Members in Household and Family Type**

Correlations

		Members in Household	Family type
Members in Household	Pearson Correlation	1	-.223**
	Sig. (2-tailed)		.007
	N	143	143
Family type	Pearson Correlation	-.223**	1
	Sig. (2-tailed)	.007	
	N	143	143

\*\* . Correlation is significant at the 0.01 level (2-tailed).

### Relationship between Marital Status of PCOS Patients and Family Type

The correlation analysis revealed a significant relationship between marital status and family type, as illustrated in Table 3. This analysis indicated that married patients, particularly those living in joint family structures, experience higher levels of stress related to infertility compared to their unmarried counterparts. In cultures where fertility is highly valued as a marker of femininity, married women with PCOS face greater stress due to societal pressure and cultural expectations than unmarried women (Mumtaz & Salway, 2007).

**Table 3: Table showing Significant Relationship between Marital status and Family Type**

Correlations

		Marital status	Family Type
Marital status	Pearson	1	.216**
	Correlation		
	Sig. (2-tailed)		.010
	N	143	143
Family type	Pearson	.216**	1
	Correlation		
	Sig. (2-tailed)	.010	
	N	143	143

\*\* . Correlation is significant at the 0.01 level (2-tailed).

From a socio-cultural perspective, patients with PCOS, particularly those experiencing infertility, face significant challenges in societies where fertility is equated with femininity. PCOS patients encounter complex difficulties shaped by cultural attitudes, societal expectations, and gender norms. The condition often carries considerable stigma due to its association with infertility and irregular menstrual cycles. Women with PCOS may feel pressured to conform to traditional maternal roles, leading to feelings of inadequacy and social isolation. Additionally, cultural beliefs and misconceptions about PCOS can impact their willingness to seek treatment and adhere to medical recommendations. To enhance the well-being and quality of life for PCOS patients, it is essential to address these socio-cultural factors through education, awareness campaigns, and culturally sensitive healthcare practices (Dunaif, 2017).

### Qualitative Findings

Thematic categories were extracted from qualitative in-depth interview, case studies and life histories. Thematic analysis is presented in subsequent headings surrounding women with PCOS. Qualitative analysis of the 20 respondents revealed 05 main themes : 1) “Link between PCOS and Stress”; 2) “Stress of PCOS Associated with Previous Medical History”; 3) “Stress

Linked with Symptoms of PCOS and Societal Response” ; 4) “Straining Marital Relationship: PCOS, Painful Sexual Experiences”; and 5) “Reliance on Ethno-Medicinal Treatment and Spiritual Engagement”. The study found that existing literature on PCOS is more generalized and needs to be contextualized to have local insights into the problem. This study’s findings not only resonate with existing literature but also attempts to bridge the gap in capturing experiences of women of reproductive age group in accessing care in localized context. Nearly all participants connected “stress” with PCOS. Women with PCOS experienced barriers to care, structural violence, stigma and mental health, meaninglessness in life, historical experiences or traumas and negative societal trends of husbands, in-laws and overall society. It draws our attention to the dominance of traditionality and lack of information at multiple ends. In this context, there is a continued need for awareness and access to information and health facility to be addressed in reproductive health policy to lessen the burden of PCOS and associated mental and wellbeing issues among women of reproductive age group. Some of the socio-cultural perceptions faced by PCOS patients are presented in the subsequent sections.

### **Link between PCOS and Stress**

#### **Stress prior to having PCOS**

The theme brings together many challenging concerns related to PCOS among both married and unmarried women. Study found that excessive stress among such women led to significant hormonal disturbances. Studies found that chronic stress disrupts the delicate balance of hormones involved in ovarian function, such as cortisol and insulin, which are already dysregulated in PCOS. Stressors can range from psychological factors, such as work pressure or emotional strain, to physical factors, such as illness or inadequate sleep. These stressors can exacerbate insulin resistance a common characteristic of PCOS and further impair ovarian function, resulting in irregular menstrual cycles and ovarian cyst formation. Additionally, heightened stress may aggravate PCOS symptoms, including weight gain and acne (Chaudhuri, 2023; Dokras, 2011).

Majority of the participants reported experiencing considerable stress before the onset of PCOS symptoms. For instance, one respondent described significant familial stress, attributing it to difficulties in adjusting to her in-laws and mistreatment from the beginning of her marriage. Another respondent noted that a stressful home environment exacerbated her condition, stating that she only found relief when away from home. These observations suggest that individuals who face elevated stress levels or live in high-stress environments may be more prone to hormonal imbalances, which can contribute to chronic conditions such as PCOS.

#### **Stress of PCOS Associated with Previous Medical History**

Since many deliberations were about the relationship between the previous medical history of the respondents with PCOS. Many respondents reported an increase in negative mental health associated with their previous medical history that was perceived to have an impact on having PCOS, one respondent was of the view that stress of any previous chronic disease also cause hormonal imbalance. Similar findings were stated in a study that chronic diseases preceding PCOS can induce stress responses that exacerbate hormonal imbalances and contribute to the development or worsening of PCOS symptoms. The psychological burden of managing chronic diseases alongside PCOS can compound stress levels, impacting overall health and well-being (Huang, 2016). Related to PCOS, most of the participants spoke about it with the following expressions.

One of the respondents shared that,

“I was experiencing constipation over the past 3-4 years, accompanied by severe abdominal pain, a sensation of stretching during bowel movements, and the presence of blood in the stool due to having PCOS” (IDI-UM3).

A carrier of minor thalassemia, indicated her problem in the following manner,

“I was having persistent anxiety about her condition led to hormonal imbalances, which contributed to the development of PCOS” (IDI-UM7).

A 20-year-old respondent narrated that,

“I was suffering from H. pylori infection, noting that the heavy medications required for treatment caused hormonal disruptions, which also resulted in PCOS” (IDI-UM10).

Majority of the respondents of the study mentioned hormonal disturbances due to their pre-existing conditions, which ultimately contributed to the onset of PCOS. In summary, this discussion underscores those various diseases, whether chronic or not, can cause significant hormonal disturbances. Furthermore, treatments for certain conditions can exacerbate these hormonal imbalances, potentially leading to the development of PCOS.

### **Stress Linked with Symptoms of PCOS and Societal Response**

The symptoms of PCOS such as obesity, hirsutism, hair loss, acne, irregular menstrual cycles, and infertility can significantly impact an individual's self-esteem and mental well-being. The societal pressures associated with beauty standards and fertility expectations can intensify these effects. As a result, PCOS patients often face heightened stress due to both the physical manifestations of the condition and the societal stigma and criticism they encounter. The societal expectations related to fertility and body image can further exacerbate feelings of inadequacy and isolation among affected individuals. The pressure to adhere to traditional feminine roles and the stigma surrounding reproductive health issues contribute to the emotional strain experienced by those with PCOS (Benson et al., 2009; Chaudhuri, 2023; Damone et al., 2019).

### **Body Image Distress due to PCOS**

The symptoms of PCOS including hirsutism, hair loss, and acne, and obesity can contribute to a sense of inferiority among affected individuals, leading to increased stress. These visible symptoms frequently clash with societal beauty standards, resulting in feelings of inadequacy and reduced self-esteem. The pressure to conform to traditional beauty ideals can intensify the psychological burden experienced by women with PCOS, often resulting in elevated levels of anxiety and depression.

Patients, whether married or unmarried, commonly experienced stress related to these visible symptoms. For example, one patient noted that her obesity and facial hair led to the rejection of her initial marriage proposal, exacerbating her concerns about her appearance and deepening her sense of inferiority. In summary, the visible manifestations of PCOS, such as hirsutism,

obesity, acne, and hair loss, often draw societal criticism and stigma. This external scrutiny can contribute to a pronounced inferiority complex regarding personal appearance, significantly increasing the stress experienced by those affected.

### **PCOS, Infertility, and Irregularity of Menstrual Cycle**

In cultures where fertility is highly valued as a marker of femininity, infertility becomes a significant issue, leading to the development of numerous social stigmas surrounding this condition. These stigmas contribute to the stress experienced by patients. The irregularity of menstrual cycles or severe menstrual cramps can heighten stress and anxiety related to the fear of infertility, often exacerbated by societal myths and expectations.

In such cultural contexts, the expectation for women to fulfill traditional maternal roles places additional pressure on those unable to conceive. This inability to achieve pregnancy can result in social stigma, criticism, and increased pressure from family and community members, further compounding the emotional distress experienced by women with PCOS. The societal demand for normative reproductive health intensifies stress related to irregular menstrual cycles and contributes to the overall negative impact on the mental health and well-being of affected individuals (Bai & Ding 2019).

The data gathered from the study reveals that nearly all married individuals with PCOS experience infertility, with only 1% reporting a diagnosis of PCOS after childbirth. Both married and unmarried patients frequently encounter challenges with irregular or painful menstrual cycles. For instance, one respondent, who had been married for six years, reported an inability to conceive due to PCOS, accompanied by painful periods and frequent watery discharge causing considerable discomfort. Another respondent experienced divorce after three years of marriage, attributing it to infertility. Additionally, a divorced respondent described a severe episode of menstrual pain following a four-month gap, which required an emergency hospital visit.

These observations indicate that irregular menstrual cycles, which can occur as often as twice a month or as infrequently as every four to six months, are a significant source of stress. Moreover, societal stigmas associated with infertility often lead to negative social consequences, such as divorce, which further exacerbates stress among affected women.

### **PCOS and Women Lifestyle**

Unhealthy lifestyle and bad routine habits lead to adverse changes in the body metabolism, causes hormonal disturbance which can lead to chronic diseases like PCOS. 'PCOS can be influenced by unhealthy lifestyle and routine habits, such as poor diet, lack of exercise, and irregular sleep patterns. These habits can contribute to obesity and insulin resistance, which are key factors in the development and exacerbation of PCOS symptoms. A diet high in processed foods and sugars can lead to weight gain and insulin spikes, aggravating hormonal imbalances. Sedentary lifestyles further worsen these effects, as physical inactivity is associated with higher insulin resistance. Irregular sleep patterns and chronic stress also disrupt hormonal regulation, exacerbating PCOS symptoms' (Marshall, 2020).

When discussing lifestyle changes appeared to be a relevant issue. When asked about its relevance some patients reported having PCOS due to their bad routine and bad eating habits, one respondent named Salma responded definitively, she said:

“I used to sleep at 4:00 am in the morning and wake up at 2:00 pm in the afternoon. In breakfast I use to have a cup of tea with some rusks and then I had meal at 9:00 pm at night. Later I was diagnosed with irregular periods and infertility” (IDI-UM2).

There was another respondent Misbah who described her PCOS issue in the following manner.

“I used to work online till late night for 10 hours with a habit of eating fast food. Later I was diagnosed with PCOS due to irregular periods and obesity” (IDI-UM6).

Likewise, there were many other patients from the study sample who were experiencing a disturbed routine coupled with bad eating habits ultimately leading to PCOS. Such findings endorsed that sedentary lifestyles, insomnia and bad food habits lead to worst metabolic and hormonal changes that causes PCOS.

### **Low Socio-economic Status and PCOS**

PCOS patients with low Socio-economic status feel difficulty in getting treatment and having healthy diet due to financial crisis. Low socio-economic status (SES) is closely linked to the prevalence and severity of PCOS due to limited access to healthcare, nutritious food, and health education. Women from lower SES backgrounds often face barriers in obtaining timely and effective medical care, which can lead to delayed diagnosis and inadequate management of PCOS. Financial constraints may limit their ability to purchase healthy foods, leading to diets high in processed foods and low in essential nutrients, exacerbating insulin resistance and obesity associated with PCOS. Furthermore, stress related to financial instability and poor living conditions can worsen hormonal imbalances and PCOS symptoms (Marzullo, 2019).

There were approximately fifty to sixty percent patients from the sample who were from low socio-economic status making it very hard for them to get treatment, majority of them were married and had infertility issues.

One respondent named Sana 30 years of age reflected on the severity of the problem in the following way,

"My husband is the only one who makes money in our household, so it is very difficult for me to get treatment. Should we eat or should we get treatment in such inflation?" My in-laws "do not understand and always criticize me for infertility." (IDI-M13)

While another respondent Malika 32 years of age reported that,

“I had faced a low socio-economic position since childhood, and my family lived in constant stress owing to financial hardships. I also suffered from severe baldness and had last menstruation seven months ago” (IDI-UM5).

She claimed that it is very difficult for her to receive PCOS treatment owing to the financial crunch of the family and overall inflation. She was just receiving medication for PCOS related to hair loss since she was unmarried.

From these cases it can be safely concluded that low socio-economic status has a direct link with cure of PCOS. Having low status causes stress and it becomes difficult for the patients to get treatment, knowledge and healthy diet or supplements suggested by the physicians. Many participants spoke of having access to quality health and awareness surrounding the myths and stigma related to PCOS and increasing community-based knowledge around mental health and wellbeing issues is essentially important where women cannot openly talk about their health concern and do not have free access to health care facility. Medical facilitation needs to be provided at their doorsteps.

### **Straining Marital Relationship: PCOS, Painful Sexual Experiences**

Straining Marital Relationship: PCOS, Painful Sexual Experiences is a theme that was developed to reflect the underlying stress connections of a married women with their partners. Researchers have shown that in married women who are diagnosed of PCOS had to face painful intercourse and the is more than normal which make them mentally disturbed that they were not mentally ready for that but if they refuse, they had to face strain in their relationship. ‘PCOS patients often face criticism and strain in their marital relationships due to dyspareunia, or painful intercourse, which is a common symptom of the condition. This pain can be caused by hormonal imbalances, ovarian cysts, or vaginal dryness associated with PCOS. Such issues can lead to reduced sexual satisfaction and intimacy, causing frustration and misunderstanding between partners. Husbands may not fully understand the medical complexities of PCOS, leading to unwarranted criticism or feelings of rejection. This can exacerbate the emotional stress and mental health challenges faced by women with PCOS (Zhang, 2019).

There were some married women who participated in this study complained about having misunderstanding with their partner and mental disturbance due to painful sexual experiences.

One respondent Samra, 35 years of age reported that,

“My husband has threatened me of second marriage if I do not have a satisfying sex with him”. She further said that “my husband works in a public hospital for night duty, we only had a met up at weekends so, my husband gets angry that after a week I came and you are not ready and refusing me, for this reason we were having complexities in our relationship” (IDI-M14)

Such cases signify that PCOS causes misunderstanding and complexities in marital relationships due to painful sexual relationships. The patients do not feel mentally satisfied because of pain and it causes emotional distress and strain in their relationship.

### **Case Study 1: Women with PCOS facing Societal Pressure**

In this case, a 26-year-old patient Wajiha, who was married for six years, has struggled with infertility issues. Over a span of two to three years, she experienced a significant weight gain from 52-79 kgs, despite having a height of 5'6". Her infertility issues led to painful sexual experiences and considerable mental distress. Her husband threatened to give her divorce and going for a second marriage on this stance her in-laws offered no support. To manage her stress, she began working as a teacher at a school, with additional evening teaching at a coaching academy and taught Quran at a local center. Her busy schedule helped her to avoid dwelling on societal negativity. She acquired substantial information about PCOS through online

research, although she still experienced hidden stress related to infertility and obesity, she found ways to cope up.

This case underscores that PCOS not only leads to infertility but also significantly heightens stress due to societal pressures. The patient's experience illustrates how societal expectations surrounding fertility and parenting, which are often regarded as central to a woman's identity and social role, can intensify psychological distress. Such pressures from family, friends, and society can exacerbate the emotional difficulties associated with PCOS, affecting overall mental health and wellbeing (Helm, 2017).

### **Case Study 2: PCOS, Infertility, and Divorce**

Another 25 years patient Noureen 5'4" tall women experienced considerable weight gain of 72 kgs was diagnosed with PCOS four years ago. She was still struggling with this condition since she was 19 years old. Despite having PCOS before marriage, she did not disclose it to her fiancé, nor did she seek any kind of treatment initially. After three years of marriage, her husband remarried, leading to their divorce, which was attributed to infertility aimed PCOS. The patient experienced significant emotional trauma following the separation but later engaged in a nursing course at a local hospital as a means of coping.

Her diet predominantly consisted of fast food and soft drinks, and she frequently ruminated on her situation. She received medical treatment, including injections, and was advised to follow an exercise regimen and a structured routine, which she found challenging. The patient reported mood swings and irregular menstrual cycles. Through her nursing course and social media research, she gained extensive knowledge about PCOS.

This case study underscores that overcoming excessive worry and adhering to medical advice are crucial for managing PCOS. Effective management of PCOS requires the patient's commitment to following physician recommendations and maintaining a healthy lifestyle, including a balanced diet. Women with PCOS may face significant marital strain due to infertility, which can lead to divorce in many cultural contexts. Fertility is often highly valued and considered essential for marital stability and fulfillment. Infertility related to PCOS can result in not only personal distress but also substantial societal and familial pressure, exacerbating tensions and potentially leading to marital dissolution (Alnaeem, 2019).

### **Case Study 3: Stressful Environment, low Socio-economic Status and treatment of PCOS**

Another patient Amina, a 25-year-old woman was diagnosed with PCOS a year ago when she was preparing for marriage in a few months. She has faced significant socio-economic challenges throughout her life, which have contributed to her PCOS diagnosis. The stress associated with her financial difficulties and educational struggles has exacerbated her condition.

The patient reported an absence of menstruation from the previous eight months, with her periods now extending beyond two weeks. She also experienced severe hair loss and academic pressure, as she was currently pursuing a bachelor's degree. Additionally, she reported emotional distress related to her marriage and ongoing familial conflicts associated both with her studies and PCOS.



Despite applying various treatments, such as topical oils and natural remedies, her hair loss persisted. She has been prescribed supplements and medications to regulate her menstrual cycles but is facing financial strain in affording these treatments. The patient had adopted a healthier lifestyle, including improved dietary habits, and has sought information about PCOS from peers and social media.

This case highlights the impact of socio-economic status on the development and management of PCOS. Low socio-economic status (SES) is a significant stressor that can both contribute to and exacerbate PCOS. Women from lower SES backgrounds often experience chronic stress due to financial instability, limited healthcare access, inadequate nutrition, and poor living conditions. This case underscores the importance of addressing socio-economic factors and maintaining focus on personal health goals despite external challenges (Baghlaf, 2023).

### **Life History of A PCOS Patient**

Areeba, was diagnosed with PCOS one year ago. Currently she was 22 years old. She was born in a low socio-economic household. Despite financial constraints, her parents ensured that she and her two brothers received education from a local school and later from a college located in the city. Areeba got married at the age of 19 while pursuing her graduation. Her father, who had worked in Saudi Arabia for many years, had returned permanently to Pakistan by the time she got married. During her marriage, Areeba encountered several challenges. Her in-laws mistreated her and tried to keep her from her husband by causing controversies. Her husband did not show any support either. This led to a fight between the couple. Areeba contracted an H. pylori infection, which worsened due to lack of treatment. She told her in-laws and husband about these problems, but they did not believe her. On the basis of misunderstanding and noncooperation she often returned to her parents' house where she also endured terrible mistreatment, including an attempted suicide by her mentally sick sister-in-law.

Areeba's marriage lasted only three months, and she suffered from serious emotional stress. She experienced irregular menstrual periods and obesity, which resulted in a combined diagnosis of PCOS and H. pylori infection. After having divorce, she sought help from a psychologist later she is working at a local hospital. Over time, she has made significant progress in managing her stress related to PCOS. This case underscores that low socio-economic status is closely linked to PCOS. Additionally, severe traumatic experiences can lead to hormonal imbalances that contribute to chronic conditions such as PCOS. Trauma-induced stress can disrupt the hypothalamic-pituitary-adrenal (HPA) axis, leading to elevated cortisol and androgen levels, which are associated with PCOS. Furthermore, stress from trauma may lead to unhealthy behaviors, such as overeating or physical inactivity, which exacerbate conditions like obesity and insulin resistance that are commonly linked to PCOS (Cooney 2017).

### **Reliance on Ethno-Medicinal Treatment and Spiritual Engagement**

In anthropology ethno-medical treatment refers to treatments other than bio medical treatment. 'Ethno-medical treatments for PCOS encompass a range of traditional and cultural practices that communities utilize to manage symptoms and improve wellbeing. These practices often include herbal remedies, dietary modifications, and lifestyle adjustments that have been passed down through generations and rooted in cultural beliefs. For example, in some cultures, specific herbs or teas are believed to regulate menstrual cycles or alleviate symptoms like hirsutism.

Dietary changes may focus on avoiding certain foods or incorporating others believed to have therapeutic benefits' (Acharya, 2021),

The sample data indicates that many PCOS patients have utilized various home remedies in addition to conventional medical treatments. For instance, one respondent mentioned that her mother prepared fresh vegetable juices specifically for managing PCOS. Others reported using specialized herbal teas or drinking ample water, which they believe helps in reducing stress. Many patients have incorporated regular exercise and adopted healthier dietary practices to improve their condition. One participant noted using a mixture of besin (gram flour) and shahad (honey) as a topical treatment for acne.

Additionally, some patients integrate religious practices into their treatment regimen. For example, one individual recited Surah Al-Fatehah seven times over water and consumed it, believing it would aid in her recovery. Another patient mentioned reciting Surah Yaseen and Manzil, expressing her faith in Allah's ability to cure her. Delay in seeking treatment connects the patients with unqualified practitioners and Pirs (saints) who provide them amulets or special waters, often further complicating the management of PCOS.

These findings suggest that alongside medical treatments, ethno-medicinal approaches, including home remedies, exercise, balanced diet, and religious recitations, play a significant role in managing PCOS. Such integrative practices appear to complement conventional therapies and contribute positively to the overall treatment strategy for PCOS.

## **Conclusions**

Socio-culture encompasses the interplay of social and cultural factors that shape human behavior, beliefs, and interactions within a community. Present research focused on how cultural, social, influence health, illness, and healthcare practices surround women with PCOS by specifically addressing social stigmas associated with PCOS. Societal criticism contributes to heightened stress among patients, exacerbating their condition. Particularly, individuals with low socio-economic status and low education were severely affected by the problem. Moreover, these condition presents numerous societal challenges that affect both personal identity and relationships of women and their experiences remain untapped. Married women often face societal judgment regarding infertility, while unmarried women grapple with fears of future infertility and concerns about beauty standards related to PCOS. Patients with PCOS frequently feel ashamed to discuss their condition openly which delays their consultation with healthcare professionals and leads to more severe complications. Cultural practices, including reliance on home remedies and treatments from unqualified practitioners, such as those providing amulets or special waters, often further complicate the management of PCOS. To reduce the burden of PCOS and its sensitization, education and public awareness programs are direly needed at all levels.

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