



The Relationship between Quality of Life and Psychological Distress (Depression, Anxiety, and Stress) among Women during Reproductive Age, With and Without PCOS

^{*1}Kiran Ruqgia -Email- kiranruqgia45@gmail.com

²Dr. Maham Imtiaz -Email- maham.6085@wum.edu.pk

³Amna Basheer -Email- Bashiramna229@gmail.com

^{*1}Department of Applied Psychology The Woman University, Multan

²Assistant Professor Department of Applied Psychology, The Woman University, Multan

³Department of Applied Psychology The Woman University, Multan

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Corresponding Authors*:

Kiran Ruqgia

Abstract

Polycystic Ovarian Syndrome (PCOS) is a prevalent health condition characterized by hormonal imbalances in women. This cross-sectional study investigates the impact of PCOS on Quality of Life (QOL) and psychological distress, among 200 women (100 with PCOS, 100 without PCOS), in reproductive age, 14-49 years, according to WHO guidelines. Polycystic Ovarian Syndrome Quality of Life Scale (Williams et al., 2018), and DASS21 item scale (Lovibond & Lovibond, 1995), were used along with a self-structured demographic sheet and informed consent form. Data were analyzed in SPSS (V 27). Results indicated significant differences in various domains between women with and without PCOS. The results revealed a significant negative correlation between psychological distress and quality of life in both women with PCOS ($r = -0.310$, $p < .01$) and women without PCOS ($r = -0.450$, $p < .01$). Linear regression analysis indicated that psychological distress significantly predicted quality of life, explaining 9.6% of the variance in women with PCOS ($B = -0.091$, $p = .002$) and 20.2% of the variance in women without PCOS ($B = -0.243$, $p < .001$). This research will benefit society by informing educators and psychologists about the comprehensive impacts of PCOS on women's lives.

Keywords: Polycystic Ovarian Syndrome, PCOS, Quality of Life, Mental Health, Psychological Distress.



Introduction

Polycystic Ovary Syndrome (PCOS) is recognized as the most common hormonal disorder among women of reproductive age, affecting approximately 5% to 20% globally (Aziz et al., 2016). It interferes with the hormonal axis involving the hypothalamus, pituitary gland, and ovaries, often leading to fertility issues (Teede et al., 2010). The widely accepted Rotterdam criteria, endorsed by the European Society of Human Reproduction and Embryology (ESHRE) and the American Society for Reproductive Medicine (ASRM) in 2004, require the presence of at least two of the following three features for diagnosis: ovulatory dysfunction, polycystic ovarian morphology, and clinical or biochemical signs of hyperandrogenism. Although symptoms like hirsutism, acne, increased BMI, psychological disturbances, insulin resistance, and subfertility are frequently observed, they are not part of the formal diagnostic criteria (Goodarzi et al., 2011). The multifaceted nature of PCOS leads to significant challenges in its diagnosis and management, often affecting both the physical health and emotional well-being of affected women. As a chronic and lifelong endocrine condition, PCOS requires personalized and long-term care strategies to support women throughout their reproductive years and beyond (Teede et al., 2010).

PCOS Effects on Quality of Life

Quality of life is a multifaceted concept encompassing mental, social, psychological, financial, and physical well-being, which contributes to positive relationships, personal growth, independence, and a sense of validation and acknowledgment as an individual. Abrams (2004) argues that an individual's contentment or dissatisfaction with various life elements directly influences their overall quality of life. Key factors affecting quality of life include physical and environmental variables, socio-environmental components, socioeconomic status, cultural influences, health concerns, personality traits, autonomous factors, and overall subjective well-being. Polycystic Ovary Syndrome (PCOS) affects approximately 5–10% of women of reproductive age globally (Franks, 1995). Women with PCOS are more likely to experience mood disorders and other mental health complications, as noted by Farrell and Antoni (2010). Studies have shown that PCOS negatively impacts both quality of life and overall health more significantly than other chronic conditions, such as cardiovascular disease and diabetes. This disparity is particularly pronounced even among women with similar body weight, as highlighted by Ching et al. (2007) and Jones et al. (2010).

From a quality-of-life perspective, Coffey et al. (2006) noted that PCOS has a more detrimental impact on women than epilepsy, asthma, arthritis, and other chronic pain conditions. In a cross-sectional study, Iranian women reported heightened stress due to PCOS symptoms such as excessive hair growth and infertility, which led to negative self-perception, reduced social functioning, and strained family relationships (Nasiri-Amiri et al., 2016). However, since the sample lacked variety in terms of racial and ethnic representation, care must be used when interpreting these consequences. Williams et al. (2015) investigated the quality of life among women with PCOS using qualitative research that included semi-structured interviews. Members spoke about their everyday lives and strategies for dealing with sickness. Thematic analysis revealed four key themes: identity, comorbidity, support, and shifting life goals. Many participants reported altering life goals, particularly regarding family planning, due to PCOS. Several also suffered from physical conditions (e.g., migraines, irritable bowel syndrome, hypothyroidism) and psychological



issues (e.g., anxiety, depression). Many expressed dissatisfactions with the support from healthcare providers, leading them to seek online resources and support communities.

PCOS patients consistently report significantly lower quality of life scores compared to individuals without the condition (Jones et al., 2008; Dokras et al., 2018). Factors such as obesity, hyperandrogenism, comorbidities, and depression adversely impact quality of life, even when not routinely addressed (Sidra et al., 2019). A study by Cinar et al. (2012) found that oral contraceptives improved hirsutism and menstrual irregularities, thus enhancing patient well-being. However, the treatment did not significantly alleviate symptoms of depression or anxiety after six months. Karjula (2020) found that the negative impact of PCOS on quality of life persists into the later reproductive years. They recommended using the PCOSQ (Polycystic Ovary Syndrome Questionnaire) to evaluate quality of life in PCOS patients. This 26-item tool assesses weight concerns, menstrual irregularities, hirsutism, infertility, and psychosocial effects (Cronin et al., 1998).

Impact on Body Image

PCOS often impacts weight more than other aspects of physical appearance and health. It is associated with reduced perceived attractiveness in women (Deeks & Compans, 2011). Symptoms such as menstrual irregularities, acne, hirsutism, and obesity contribute to elevated anxiety and depression (Williams et al., 2015). In one study, six participants described how PCOS influenced their self-image as women, using picture analysis to reflect on changes in life goals and personal identity.

Impact on Lifestyle

Lima Nunes et al. (2019) investigated dietary habits, including vegetable consumption and physical activity, in newly diagnosed PCOS patients and noted behavioral changes. Lifestyle modification is the first-line non-pharmacological treatment for PCOS, particularly in cases involving overweight or obesity. PCOS disrupts women's lifestyles and decreases life satisfaction. While certain PCOS traits (e.g., ovulation rate, menstrual regularity) may improve with lifestyle changes, it remains challenging to demonstrate a substantial overall improvement in quality of life, despite guidance from global evidence-based PCOS management protocols.

Impact on Sexual Life and Contraceptive Use

Nunes et al. (2020) found that 14% of women with PCOS discontinued contraceptive use after diagnosis, compared to just 4% among women without PCOS. An Australian cohort study similarly observed lower contraceptive use in PCOS patients, even though oral contraceptive pills are a standard treatment for managing hyperandrogenism and menstrual irregularities (Teede et al., 2010). Tan et al. (2008) reported declining contraceptive use even among those not attempting to conceive.

Impact on Life Plans and Infertility

PCOS patients often experience concerns about fertility beginning at puberty (Trent, 2003; Kalhor, 2022; Veltman-Verhulst et al., 2012). A study that recruited 30 PCOS participants via Facebook advertisements highlighted issues such as infertility, lack of counseling for women planning pregnancy, and the need to expand information sources on PCOS and reproductive health. While many women worry about infertility, some studies found no significant difference in depression or quality of life between PCOS and non-PCOS individuals (Mansson et al., 2011).



Impact of Psychological distress among women with PCOS

PCOS and Anxiety

Anxiety is one of the most common psychological conditions associated with PCOS. Kerchner et al. (2009) found that 11.6% of 60 PCOS patients exhibited symptoms of anxiety. Benson et al. (2009) reported that 34% of women with PCOS had clinically significant anxiety. PCOS patients are more likely to experience anxiety compared to those without the condition (Hung et al., 2014). Deeks et al. (2011) found that PCOS contributes to elevated anxiety and poor body image. A study of 300 Iranian women diagnosed with PCOS found that 32% had high scores for anxiety and depression using the Hospital Anxiety and Depression Scale (Bazarganipour et al., 2013). In Australia, 39% of women with PCOS scored high on anxiety in a reproductive-age population sample.

PCOS and Depression

Depression is the second most frequent psychosocial issue among PCOS patients. Studies have consistently reported increased rates of depression in this group (Kerchner et al., 2009; Weiner et al., 2010). Kerchner et al. (2009) found that women with PCOS had a 40% greater likelihood of depression compared to non-PCOS women. In a cross-sectional survey, Teede et al. (2010) found that one-third of Australian women with PCOS had moderate to severe depression. A systematic review by Barry also confirmed higher rates of depression in women with PCOS.

Other PCOS-Related Mental Health Concerns

Research suggests that mental health challenges in PCOS are often rooted in its physical manifestations, particularly obesity (Sadeeqa et al., 2018). Women with higher BMIs are more prone to depression (Veltman-Verhulst et al., 2012). Obesity contributes significantly to emotional distress in PCOS (Bishop et al., 2009). Depression is more prevalent in obese women than in those with normal weight (Hollinrake et al., 2012).

Infertility

Infertility challenges female identity and contributes to elevated levels of anxiety and depression among PCOS patients (Deeks et al., 2010). Women with PCOS experience infertility more frequently, which worsens psychological health (Fido, 2004; Matsubayashi et al., 2001). Brassard et al. (2008) found that PCOS-affected women had 3.4 times higher infertility rates compared to healthy peers, significantly lowering life satisfaction (Trent et al., 2003). Elsenbruch et al. (2006) emphasized that infertility often causes emotional distress in PCOS patients.

Acne

PCOS increases acne prevalence, which heightens anxiety and depression (McCook et al., 2005; Elsenbruch et al., 2003). Acne negatively affects sexual identity, life satisfaction, self-esteem, and self-worth. Barnard et al. (2007) confirmed acne's detrimental impact on overall well-being, while Coffey and Mason (2003) identified it as one of the four main symptoms that reduce quality of life in PCOS patients.

Hirsutism

Facial hair growth associated with PCOS compromises feminine identity and mental well-being (Shulman et al., 1999; Hemsworth & Holmes, 2012). Adali et al. (2008) found that women with facial hair due to PCOS reported the highest levels of depressive symptoms. Hahn et al. (2005) also observed that PCOS patients with excessive hair growth experienced greater depressive symptoms. Teenage girls and young women with hirsutism due to PCOS are particularly vulnerable to depression (Barnard et al., 2007). According to Elsenbruch et



al. (2003), hirsutism is related to decreased levels of life happiness, sexual pleasure, and feminine identity.

Literature Review

Satyam et al. (2022) conducted intensive research and meta-analysis to study how PCOS affected women's mental health and quality of life. The outcomes demonstrated that women with PCOS are more vulnerable to mental health issues than healthy people. Especially, these women reported a generally worse quality of life and higher stages of hysteria, hopelessness, and emotional exhaustion in comparison to those without PCOS. The syndrome has additionally been connected to mental health issues such as depression, anxiety, bipolar disorder, sleeplessness, and body dissatisfaction. Weight problems and infertility may exacerbate the mental distress experienced by PCOS patients. Those results highlight the need to treat the physical and mental consequences of PCOS in women who are of reproductive age. Rodriguez-Paris et al. (2019) investigated the relationship among PCOS and some mental disorders, consisting of attention deficit hyperactivity disorder (ADHD), eating issues, depression, obsessive-compulsive disorder (OCD), generalized anxiety disorder (GAD), personality disorders, and social phobia. Those mental health conditions are frequently associated with elevated testosterone levels and physical symptoms, each of which decreases the great of life for women with PCOS.

In a similar vein, women with PCOS had far greater incidence of eating problems, stress, anxiety, and depression, according to Dokras et al. (2018). This group was much more likely to have slight to intense tension and depression symptoms. Remarkably, there had been simple weak correlations among those emotional issues and infertility, obesity, and hyperandrogenism. Women with PCOS had worse HRQoL, which was commonly determined to be due to mental stress and inefficiency. Additionally, a few studies have shown that this demographic is more likely to engage in disordered ingesting behaviors. PCOS is frequently connected to scientific diagnoses of OCD, depression, tension, bipolar disorder, and other mental issues, according to Brutocao et al. (2022). These effects highlight the need for routine mental health evaluations for PCOS-afflicted women to ensure prompt intervention and appropriate care.

A cross-sectional study evaluating the mental fitness of women with PCOS to that of an ordinary group was completed by using Shakerardekani et al. (2011). Depression stages were distinctly higher in the PCOS group, indicating that to enhance emotional well-being, treatment tactics need to take mental variables into account. Chaudhari et al. (2018) evaluated the quality of life of women with PCOS by way of measuring their stress, anxiety, and depression symptoms. Gamma et al.'s findings that 38% of individuals had both anxiety and depression, with corresponding rates of 6% and 25.7%, support this. Infertility, hirsutism, alopecia, and acne were the various symptoms that led to psychological pain. Considerably, hirsutism-associated facial hair problems had seemed scary and had been closely linked to a worse quality of life. According to Mansson et al. (2022), women with PCOS had higher rates of anxiety, depression, and eating problems than those without the disorder. Increased body mass index (BMI) became specifically related to social tension and chronic depression. While illnesses like anorexia nervosa and alcoholism showed fewer connections, mental health issues, together with unhappiness and tension, have been regularly reported in women with PCOS. It is interesting to note that siblings of women with PCOS, particularly sisters, had higher rates of anxiety, depression, and schizophrenia spectrum problems, similar to higher rates of autistic spectrum features.



Greenwood et al. (2018) investigated the connection between PCOS women's quality of life of PCOS women and depression. Their effects showed that, as compared to women who were not sad, those who were depressed suggested far lower ratings on all QOL-PCOS categories. Regardless of variables like BMI, hirsutism, or reproductive reputation, these depressed signs and symptoms hurt quality of life. The authors emphasized how most women with PCOS can be impacted by using subjective perceptions of discomfort. The mental health and exceptional of life of women with PCOS were tested by Barnard et al. (2007). On quality-of-life measures, which include mental discomfort, body image issues, infertility, acne, abnormal menstruation, and hirsutism, the people said extensively lower ratings. Even without pharmacological treatment, body weight was observed to be the maximum essential aspect influencing reduced exceptional lifestyles. Finally, cross-sectional descriptive research was executed by Saei et al., (2020) to analyze the outcomes of pressure, anxiety, and depression on the quality of life of teenagers with PCOS. Teenagers who emotionally reacted to temper swings had a much worse quality of life, according to the studies. The effects underlined the need for more experimental research and therapeutic guidance to lessen the psychological toll that PCOS has on teenagers.

Significance of the Research

Women of reproductive age are vulnerable to polycystic ovary syndrome (PCOS), a hormonal condition that can cause psychological and physical problems, according to numerous studies. To get accurate information on the mental health issues, psychological distress, and high-quality of life among Pakistani women within reproductive age with and without PCOS, further study is needed. This study aimed to address the lack of research by examining the relationship between PCOS on women's quality of life and psychological distress (depression, anxiety, and stress) within the cultural and socioeconomic context of Pakistan. The study investigated the effects of hormonal abnormalities, visible indicators such as facial hair, weight gain, and acne, irregularities in ovulation, and the mental health consequences of PCOS, including major depressive disorder, anxiety, and stress, on the quality of life, mental health issues of Pakistani women of reproductive age. These are a few consequences derived from our current work, which are crucial for increasing awareness of PCOS among rural and urban areas or less educated populations. The objective of this study is to investigate the Relationship between Quality of Life and Psychological Distress (Depression, Anxiety, and Stress) Among Women during Reproductive Age, With and Without PCOS The research will be helpful to increase the awareness of gynecologists, educators, families, friends, and life partners in comprehending the challenges faced by Pakistani women with PCOS.

Objectives

- Determine the relationship between quality of life and psychological distress (depression, anxiety, and stress) among women during reproductive age with and without PCOS.
- The effect of psychological distress (depression, anxiety, and stress) on the quality of life among women during reproductive age.

Hypothesis

- There would be a relationship between quality of life and psychological distress (depression, anxiety, and stress) among women during reproductive age with and without PCOS.



- There will be psychological distress (depression, anxiety, and stress) impacts on the quality of life among women during reproductive age.

Methods

Participants

The cross-sectional research design was used to investigate the Relationship between Quality of Life and Psychological Distress (Depression, Anxiety, and Stress) Among Women during Reproductive Age, with and without PCOS. The participants selected to collect data were visited in the gynecological clinics, colleges, and universities of Multan and Khanewal in Punjab. The sample consisted of 200 females (100 with PCOS and 100= who did not have PCOS). PCOS patients were registered based on the 2003 ESHRE/ASRM (Rotterdam criteria), which requires at least two of the following three features: PCOS denotes the occurrence of three criteria with oligo/anovulation, hyperandrogenism, and polycystic ovaries. Participants were chosen based on their availability and willingness to respond. A closed-ended questionnaire was used to gather data for this research.

Inclusion Criteria

In this research, respondents were females of the reproductive age range 14–49 years. The Rotterdam criteria for Polycystic Ovary Syndrome (PCOS) require the presence of at least two of the following: infrequent or absent ovulation, clear signs of excessive male hormone levels in both physical and laboratory tests, and the presence of polycystic ovaries evident by ultrasound imaging. A group of one hundred women between the ages of 14 and 49, who have regular menstrual cycles, no history of Polycystic Ovary Syndrome (PCOS), and normal ovarian morphology as determined by ultrasonography.

Exclusion Criteria

Individuals with cognitive or developmental impairments, such as intellectual disability, autism spectrum disorder, or Down syndrome, as well as those with chronic diseases like diabetes, heart disease, or cancer, saw a notable impact on women's quality of life, mental health, and psychological well-being. Individuals with severe psychiatric conditions requiring hospitalization or ongoing care, as well as those who are using hormonal or mental health medications, are not included.

Procedure

The data were collected through questionnaires and from different gynecology hospitals and universities in Multan and Khanewal. The official permissions were attained from the scale author, and the formal institutions' authorities were approached as well. Clear instructions were provided to participants for each scale to reduce the chance of confusion. The survey was given to the participants to complete. Participants have been protected from any privacy or confidentiality issues during the data collection process, and further helpers have been accessible to assist responders with any questions or clarifications about the records on the questionnaire. Informed permission, confidentiality, and withdrawal have been guaranteed by APA moral standards.

Equipment

Polycystic Ovarian Syndrome Quality of Life Scale (Williams et al., 2018)

PCOSQOL is a measure used to evaluate the quality of life for people with polycystic ovarian syndrome. The quality of life of women with polycystic ovary syndrome (PCOS) may be specifically impacted utilizing their wishes. The exam makes use of 35 gadgets on a 5-point Likert-type scale. The principle topics of conversation are feelings of depression, infertility, and considerable hair growth. The 5 domain names of the PCOSQ are: mental



well-being (eight items), weight issues (5 items), infertility troubles (4 items), and excessive body hair (5 items).

According to Lovibond et al. (1983), stress, anxiety, and depression 21-item measure In 1983. The Depression Anxiety Stress Scales (DASS-21) is a well-regarded and dependable self-report instrument used to evaluate levels of stress, anxiety, and depression. The questionnaire consists of a total of 21 questions, with 7 questions dedicated to each subject. A 4-point Likert scale is employed to assess the severity of symptoms.

Results

Table 1: Person Product Moment Correlation of Quality of Life, Psychological Distress (Depression, Anxiety, and Stress) among Women with PCOS during Reproductive Age (N= 100)

	Variables	M	SD	1	2
1	Quality of life	39.01	5.03	–	-0.310**
2	psychological distress (depression, anxiety, and stress)	88.79	17.09	-0.310**	–

*p<0.05, p**<0.01

The results showed the relationship between quality of life and psychological distress (including depression, anxiety, and stress) among women with PCOS during reproductive age (N = 100). Results indicated a statistically significant negative correlation between quality of life and psychological distress, $r = -.310$, $p < .01$. This suggests that higher psychological distress is associated with a lower quality of life in women diagnosed with PCOS. Although the relationship is moderate, it is meaningful and highlights the psychological burden that PCOS may impose on affected individuals.

Table 2: Person Product Moment Correlation of Quality of Life, Psychological Distress (Depression, Anxiety, and Stress) among Women without PCOS during Reproductive Age (N= 100).

	Variables	M	SD	1	2
1	Quality of life	124.58	14.64	-	-.450**
2	psychological distress (depression, anxiety, and stress)	64.78	27.11	-.450**	-

*p<0.05, p**<0.01

Pearson correlation analysis was conducted among women without PCOS (N = 100) to examine the relationship. The results also revealed a statistically significant negative correlation between quality of life and psychological distress, $r = -.450$, $p < .01$. This indicates that even in women without PCOS, greater psychological distress is related to a poorer quality of life. The strength of this relationship is stronger compared to women with PCOS, implying that distress significantly affects well-being even in the absence of chronic reproductive health conditions.

Table 3: Linear Regression Analysis Predicting Quality of Life from Psychological Distress (Depression, Anxiety, and Stress) Among Women PCOS During Reproductive Age (N = 100)

	Variable	B	SE	β	t	p	95%CI
1	Constant	47.113	2.555		18.441	.000	[42.043, 52.18]
2	Psychological distress (depression, anxiety, and stress)	-.091	.028	-.310	-3.229	.002	[-.147, -.035]



$R^2 = .096$; $F(1, 198) p < .002$

A simple linear regression showed that psychological distress (DASS-21) significantly predicted quality of life (PCOSQ) among women with PCOS, $F(1, 98) = 10.43$, $p = .002$. The model explained 9.6% of the variance in quality of life ($R^2 = .096$). Results indicated that higher psychological distress was associated with lower quality of life, as indicated by a significant negative regression coefficient ($B = -0.091$, $p = .002$).

Table 4: *Linear Regression Analysis Predicting Quality of Life from Psychological Distress (Depression, Anxiety, and Stress) Among Women Without PCOS During Reproductive Age (N = 100)*

Variable	B	SE	β	t	p	95%CI
1 Constant	140.322	3.419		41.047	.000	[133.53, 147.16]
2 Psychological distress (depression, anxiety, and stress)	-.243	.049	-.450	-4.988	.000	[-.340, -.146]

$R^2 = .202$; $F(1, 198) p < .001$

A simple linear regression was conducted to examine the effect of psychological distress (MH) on quality of life. The results showed that psychological distress significantly predicted quality of life, $F(1, 98) = 24.88$, $p < .001$, accounting for 20.2% of the variance ($R^2 = .202$, Adjusted $R^2 = .194$). These findings indicate that higher levels of psychological distress are associated with lower quality of life scores.

Discussion

The current study aimed to examine the Association among Quality of Life and Psychological Distress (Depression, Anxiety, and Stress) Among Women During Reproductive Age, with and without PCOS. It was assumed that the association between quality of life and psychological distress (depression, anxiety, and stress) between women during reproductive age, with and without PCOS. The results showed a substantial reverse association between psychological distress and quality of life among both women with and without PCOS. In women with PCOS, a modest inverse relationship was observed ($r = -.310$, $p < .01$), suggesting that greater psychological distress is related to lower quality of life. A stronger negative correlation was found in women without PCOS ($r = -.450$, $p < .01$), indicating that psychological distress adversely affects quality of life regardless of PCOS status. These findings align with prior research. Bazarganipour et al. (2013) found a significant association between PCOS symptoms and depression in adult Iranian women. Likewise, Barry et al. (2011), in a meta-analysis, reported elevated levels of depression and anxiety among women with PCOS compared to those without the condition. In the Australian Longitudinal study of women's health, Damone et al. (2019) also observed that women with PCOS had a greater occurrence of mental health problems. Those recurring trends across many companies highlight PCOS's mental susceptibility. Adolescence adds some other stage of complication in terms of development. Consistent with Spritzer and Motta (2015), PCOS symptoms might coexist with common pubertal changes, making it extra challenging to diagnose and evaluate the mental effects in younger populations. While Basirat et al. (2019) identified stress associated with infertility in adults as a primary psychological burden, Rahebi et al. (2015) also proposed that age itself is a predictor of depression in PCOS. These results demonstrate that the mental consequences of PCOS may change depending at the level of development, with new stresses appearing as women become older. The current studies looked at how psychological distress, which includes



stress, anxiety, and depression, affected the quality of life for women in their reproductive years who had or did not have PCOS. The results of the linear regression evaluation showed that both groups' excellent life become strongly expected by mental discomfort. It was proven that psychological distress turned into a significant negative predictor amongst women with PCOS, explaining 9.6% of the variation in quality-of-life ratings ($R^2 = .096$) ($F(1, 98) = 10.43, p = .002$). Higher levels of psychological distress were linked to a worse reported quality of life in this cohort, according to the negative regression coefficient ($B = -0.091$). Likewise, mental misery was shown to be a sizeable predictor of bad quality of life for women without PCOS ($F(1, 98) = 24.88, p < .001$), with a better percentage of variation explained ($R^2 = .202$). A greater significant impact was shown by means of the regression coefficient ($B = -0.243$), suggesting that psychological distress had an extra impact on quality of life in women without PCOS. Those results show the negative impact of mental distress on both groups' well-being and the need for mental health treatments regardless of whether a chronic reproductive problem is present. Teenagers provide another level of complication in terms of development. According to Spritzer and Motta (2015), PCOS symptoms might coexist with typical pubertal changes, making it more challenging to diagnose and compare the mental effects in younger populations. While Basirat et al. (2019) diagnosed stress related to infertility in adults as a main mental burden, Rahebi et al. (2015) additionally proposed that age itself is a predictor of depression in PCOS. These results exhibit that the psychological results of PCOS may also alternate depending at the level of improvement, with new stresses acting as women become older. As an instance, a pilot observe of 37 adolescents didn't exhibit a great correlation between tension and depressive symptoms among PCOS and non-PCOS groups, and Coban et al. (2019) determined no significant difference in quality-of-life scores between Turkish teenagers with and without PCOS. These disparities might be the result of variations in assessment instruments, sample sizes, cultural environment, or phases of psychological development. Given the considerable bad effects of psychological distress on high-quality of life, mainly for women without PCOS, focused mental health treatments and help networks must be visible as crucial parts of care for women throughout their reproductive years. According to martin et al. (2017), circle of relatives and therapeutic settings must prioritize emotional and social help, particularly for teens managing the mental effects of PCOS.

Conclusion

The Relationship between Quality of Life and Psychological Distress (Depression, Anxiety, and Stress) Among Women during Reproductive Age, with and without PCOS. The conclusions highlight that PCOS has substantial effects on the quality of life, mental health. Women identified with PCOS described lower quality of life scores, higher levels of mental health issues compared to those without PCOS. This study result will be supportive for increasing awareness about the severity of this condition and its effects on women's mental health and during their reproductive years. The findings highlight the importance of addressing mental health concerns in all women, regardless of PCOS status, and suggest that emotional and psychological support should be an essential part of women's healthcare across developmental stages.

Limitation/Suggestion

- There are limited participants in the studies, so it could not be representative of all women. A significant sample of women with and without PCOS can be collected for future studies.



- The cross-sectional study method of the study, which simply accumulated facts at one moment in time, couldn't thoroughly reflect the dynamic modifications in psychological distress and quality of life over the years.
- To provide a more thorough expertise of how these elements change, it needs to be carried out using a different alternative study method, such as a longitudinal study design.
- Only two Pakistani cities had been included within the studies, therefore, the consequences might not be common to PCOS-bothered women in other regions or nations. A more representative and varied pattern of women from different areas and cultural backgrounds must be included in future studies.

Implications

- Teach medical professionals on the value of screening PCOS-bothered women for intellectual health disorders.
- Draw interest to the want of complete treatment strategies that consider PCOS's mental, emotional, and physical components.
- Tell people with PCOS how the disorder may additionally affect their health and intellectual health.
- Promote further research into the advent of focused treatment plans and help plans for PCOS-affected women.
- Increase knowledge about PCOS and its effect on women's lives so that it will reduce stigma and foster compassion and information.

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