

Quality of Life in Females with Pcos

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Abstract

The study aimed to assess the quality of life in females with Polycystic Ovarian Syndrome(PCOS) and identify the domains or health factor which most significantly impacted by this condition. This study involved 40 unmarried females diagnosed with PCOS. After completing demographic formalities, participants filled out the self-administered Polycystic ovarian syndrome quality of life (PCOSQOL) questionnaire, followed by the SF36 generic health quality of life measuring scale. The findings from the PCOSQOL questionnaire revealed that menstrual problems had the lowest mean score, while infertility issues had the highest mean score. Additionally, the SF36 results showed that emotional well-being and energy fatigue had the lowest scores, whereas role limitations in social and physical functioning had the highest scores. In conclusion, this study found that PCOS significantly diminishes the quality of life in affected females, particularly due to menstrual problems and emotional well-being.

Keywords: PCOS, Quality of life, Females

Introduction

WHO defines Quality of life as an individuals perception of their position in life in the context of culture and value systems in which they live and in relation to their goals, expectations, standards and concern It is subjective measure of happiness, satisfaction and gratification as experienced in different domain of life like physical health, social relation, financial situation etc^[11]. Standard indicators use to determine quality of life include wealth, employment status, environmental conditions, physical and mental health, educational attainment, leisure activities, social connections, religious beliefs, safety, security, and personal freedoms. This concept finds application in diverse fields such as international development, healthcare, politics, and employment^[10].

Health-related quality of life (HRQOL) involves assessing an individual's overall well-being in relation to their health and its determinants. The U.S. Food and Drug Administration (FDA) defines HRQOL as a multidimensional concept reflecting a patient's perception of how illness and treatment impact various aspects of their physical, psychological, and social functioning. The evaluation of health and health-related quality of life (HRQOL) is increasingly important for appraising the efficacy of healthcare interventions and programs. These assessments, along with patient satisfaction metrics, are gaining prominence as part of a shift toward patient-centered care^{[10][11]}.

Polycystic ovarian syndrome (PCOS) stands as the prevailing endocrine disorder among females within their reproductive years. This syndrome presents with symptoms such as amenorrhea, hirsutism, and obesity linked with enlarged polycystic ovaries. PCOS is a diverse disorder characterized by increased androgen production primarily from the ovaries and ovulatory dysfunction. It is believed to be a multifactorial and polygenic condition^{[5][15]}. Pathologically there are enlarged ovaries and stroma and

formation of cysts; cysts are maturing follicles at varying stages and atresia as fluid filled sacs. The pathophysiology is complex and influenced by various factors. It shows combination of reproductive issues and metabolic disturbances. The interaction between high levels of male hormones (hyperandrogenism) and difficulty processing insulin (insulin resistance) plays a significant role in the development of PCOS. Additionally, dysfunction in the hypothalamus-pituitary-ovarian axis contributes to the disorder. Manifestation PCOS has a strong genetic component, but environmental factors also play a crucial role. Exposure to specific environmental triggers can lead individuals with genetic predispositions to develop PCOS. Interestingly, environmental factors seem to have a more substantial impact than genetic factors in driving the pathophysiology of PCOS. These environmental influences may include conditions experienced in the womb (intrauterine environment) during pregnancy, the environment surrounding the ovarian follicles, and lifestyle factors after birth. Understanding these interactions is crucial for developing effective treatments and preventive measures for PCOS^{[5][15]}.

As PCOS stimulates diverse physiological and psychological changes which profoundly affect the physical and mental health of individuals affected^[4]. Moreover, they can disrupt essential daily activities and restrict engagement in recreational pursuits and sports, ultimately reducing overall well-being^[3]. Thus, it is crucial to recognize and evaluate these changes to adequately support and improve the quality of life for women diagnosed with PCOS^{[3][4]}.

Methodology

This is a cross-sectional study to measure quality of life in females with PCOS. All the participants participated voluntarily in the study. Data was collected by using Polycystic Ovarian Syndrome Quality of Life (PCOSQOL) and SF36 scales. The study was conducted following approval from all relevant ethical bodies.

Participants

The participants of the study were 40 females in the age group of 18-30 yrs of age living in and around Pune city. All these participants were selected on the basis of inclusion and exclusion criteria.

Outcome measures Self administered questionnaire PCOSQOL and SF36 scale.

Statistical analysis

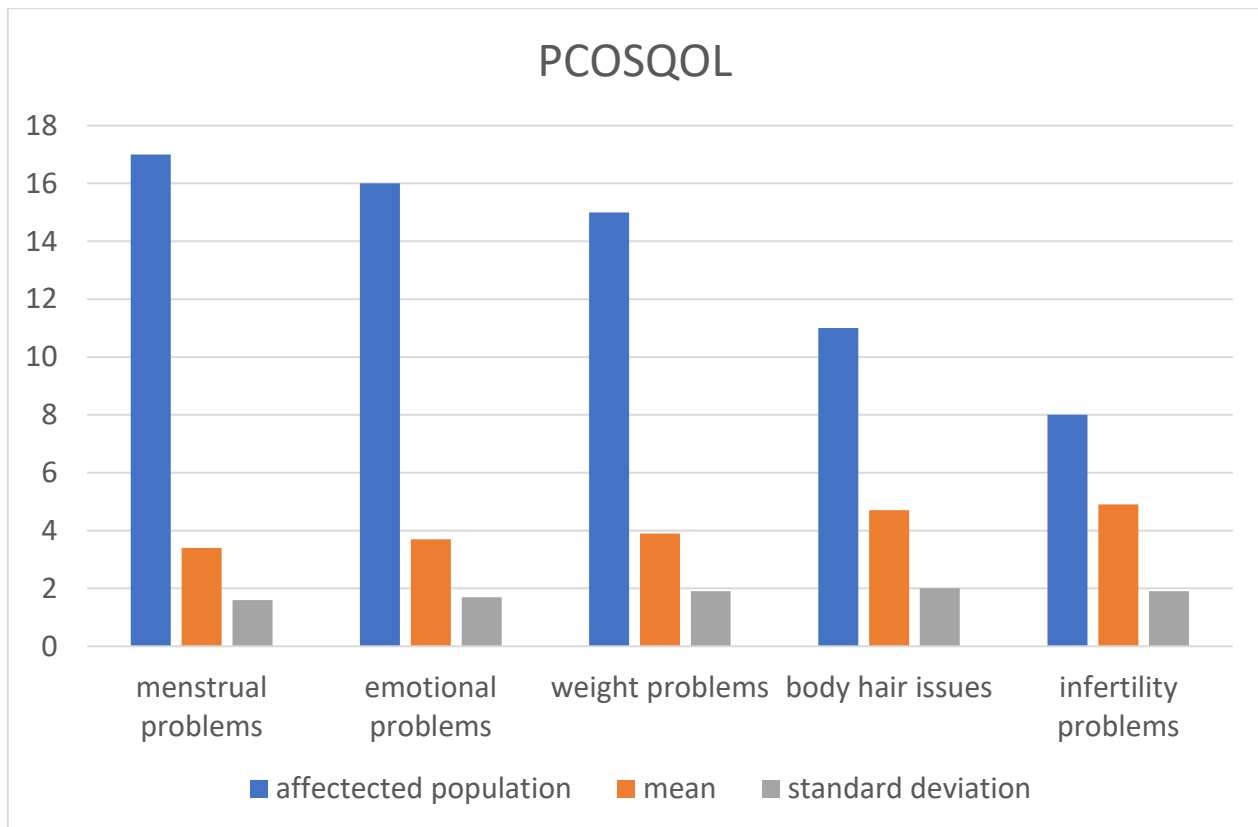
Mean and standard deviation is calculated for the collected data. Advanced excel is used to analyze the Quality of life in females with PCOS.

Results

Total 40 participants participated in the study. Out of which 31 were student and 9 were working womens. 8 of 40 has regular menstrual periods while others were with irregular menstrual cycle.

TABLE NO. 1 : Results of PCOSQOL

PCOSQOL	N	Mean	Std. Deviation	Frequency
Mean Menstrual Problems	40	3.4	1.6	17
Mean Emotions	40	3.7	1.7	16
Mean Weight	40	3.9	1.9	15
Mean Body hair	40	4.7	2.0	11
Mean Infertility Problems	40	4.9	1.9	8

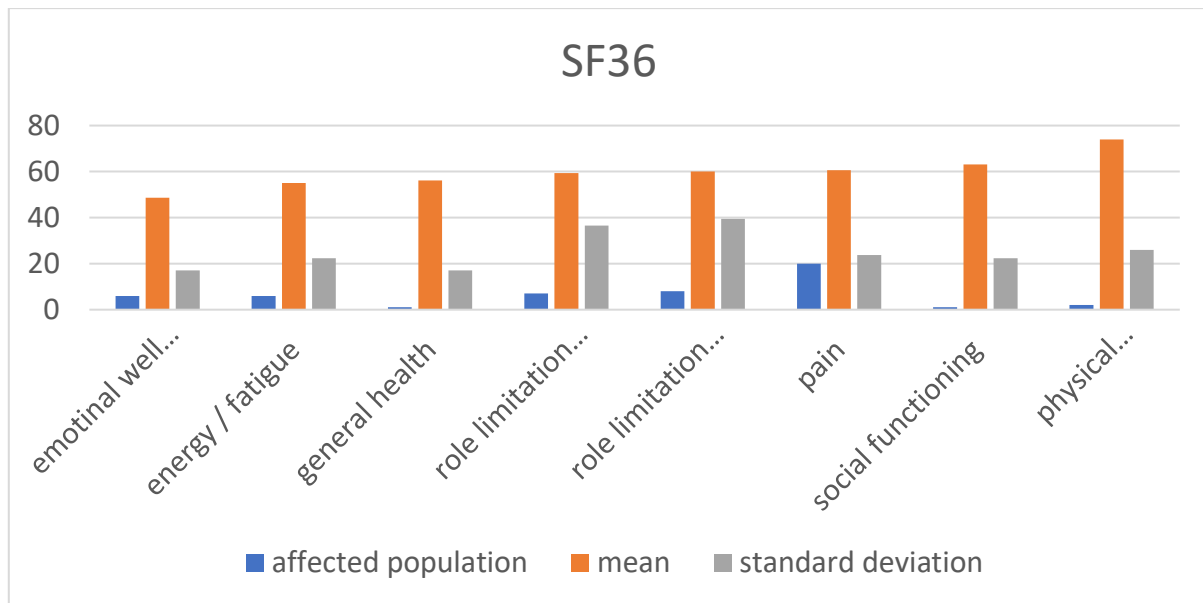


GRAPH NO. 1 Shows the result of PCOSQOL scale.

The menstrual and emotional problems are observed a good bit of the time and are highly affecting the quality of life in the females with PCOS. Infertility and body hair problems are little and only affecting some if time.

TABLE NO. 2 : Results of SF36

SF-36 Survey	N	Mean	Std. Deviation
Mean Energy/ Fatigue	40	48.6	17.0
Mean Emotional Well-being	40	55.0	22.3
Mean General Health	40	56.1	17.1
Mean Role limitations due to physical health	40	59.4	36.6
Mean Role limitations due to emotional problems	40	60.0	39.4
Mean Pain	40	60.6	23.7
Mean Social functioning	40	63.1	22.3
Mean Physical functioning	40	74.0	25.9



GRAPH NO. 2 shows the results of SF36 scale.

The poor emotional well-being and loss of energy / fatigue all the time is greatly affecting the quality of life in the females with PCOS. Moderate role limitations are observed due to physical and emotional problems. But social functioning and physical functioning are very slightly or rarely affected.

Discussion

The purpose of the study is to measure quality of life in females with PCOS and to evaluate most impacted health domain. PCOS is lifestyle disorder with obesity, menstrual irregular irregularities, and excess androgen secretion as predominant symptoms. Previous studies concluded that all this symptoms contribute in reduction of quality of life in PCOS females.

The study was done by using PCOSQOL and SF36 scale which addresses various aspects of physical, mental, emotional, social, and general health, including infertility, menstrual problems, body weight, body hair, emotional well-being, social functioning, role limitations, energy levels, fatigue, and pain. For the study 40 unmarried females with PCOS within age group of 18-30 were approached. Some studies discussed that perception of quality of life differs between married and unmarried females. Here by excluding married females helps to ensure unbiased results by focusing solely on the concerns of unmarried individuals with PCOS.

In results of PCOSQOL scale the lowest mean indicates poor function while highest suggest optimum function in respected area. According to this mean score of 3.4 indicates a significant impact on quality of life due to menstrual problems, it's may be because menstrual irregularity is a physical as well as mental health stressor and one of the predominant symptom in PCOS. Over to this emotional stress affects a significant portion of females, while weight-related issues and body hair problems also have notable impacts. However, infertility problems seem to be less concerning for unmarried females with PCOS as it scored highest mean of 4.9

The outcome of SF36 scale shows that energy levels of PCOS females are affected the most because it shows lowest mean of 48.6, suggests that more than half of the population experiences less than moderate energy levels, indicating that PCOS can lead to fatigue. Possible contributors include heavy menstrual bleeding, resulting weakness, and disrupted sleep cycles. Followed by this Emotional well-being is also

adversely affected by factors such as poor disease prognosis, symptom-related pain, and hormonal imbalances.

General health, role limitations due to physical health, and role limitations due to emotional problems have means of 56.1, 59.4, and 60.0 indicating moderate impairment in these domains. Pain experienced by females with PCOS, with a mean score of 60.6. Pain, characterized by irritating sensations, hinders participation in activities and relaxation. It may manifest as backaches, abdominal cramps, and lower limb pain.

social functioning of these women, revealing that only 1 out of 40 experiences poor social functioning, while the rest exhibit mild to moderate impairment. Women with regular menstruation and less pain may find it easier to participate socially. Physical functioning of these women, with only 2 out of 40 displaying poor physical function, 16 demonstrating very good function, and 8 showing excellent function. Women with fewer symptoms and a positive prognosis may experience optimal physical functioning.

Limitations

The study was unable to address specific factors that diminish quality of life in certain domains. Participation was limited to individuals who were educated or understood English, as both the PCOSQOL scale and SF36 were not available in the local language.

Conclusion

Based on these findings, it can be inferred that menstrual and emotional issues have the most detrimental effect on the quality of life for women with PCOS, affecting both their physical and mental health. Additionally, low energy levels also significantly diminish their quality of life.

Future scope

Future research can explore ways to enhance the quality of life for affected females through intervention-based studies. Studies could also investigate the prevalence and awareness of conditions like PCOS within the same population. Similarly, research could be conducted among married females with PCOS to further understand their experiences and needs.

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