INDEX COPERNICUS INTERNATIONAL

E-ISSN - 2477-6521
Vol 9 (2) June 2024 (133-141)

**Jurnal Endurance : Kajian Ilmiah Problema Kesehatan**
*Available Online http://ejournal.kopertis10.or.id/index.php/endurance*

# THE DESCRIPTION OF QUALITY OF LIFE OF WOMEN WITH POLYCYSTIC OVARY SYNDROME: LITERATURE REVIEW

**Rugayya Balbeid[1*], Luh Made Karisma Sukmayanti Suarya[2]**
[1]Psychology Department, Faculty of Medicines, Udayana University
[*]Correspondence email: rugayya.balbeid@gmail.com
[2]Psychology Department, Faculty of Medicines, Udayana University
email: karismasukmayanti@unud.ac.id

**Submitted: 05-03-2024, Reviewed: 18-04-2024, Accepted: 14-05-2024**
**DOI:** http://doi.org/10.22216/jen.v9i2.2815

***ABSTRACT***

*Polycystic Ovary Syndrome (PCOS) is a significant public health issue and one of the most common hormonal disorders affecting women of reproductive age. Approximately 8-13% of women of reproductive age are affected by this condition, with up to 70% of cases going undiagnosed. The aim of the research is to see how the quality of life of women with PCOS is described. The inclusion criteria are studies conducted in English or Indonesian language that utilize variables related to PCOS and Quality of Life published during the last 10 years. The research employs a literature review method involving the search for journal articles on PubMed and Google Scholar using the keywords were Polycystic Ovary Syndrome and Quality of Life. According to the review, it can be seen how PCOS can have an impact on women's quality of life, especially in the domains of physical health, psychological well-being, social relationships, and relationships with the environment.*

***Keywords****: Infertility, PCOS; Quality of Life; Woman*

## INTRODUCTION

Infertility is a commonly occurring condition and can be caused by factors related to both men and women. Infertility can also occur without known causes, known as idiopathic infertility. The issue of infertility can have significant impacts on the couples experiencing it, not only affecting medical matters but also influencing economic and psychological issues. Couples facing infertility must undergo a lengthy process of evaluation and treatment, which can be a physical and psychological burden for them (Hendarto et al., 2019).

Up to the present time, infertility remains a significant health issue worldwide, with approximately 8%-10% or around 50-80 million couples of reproductive age experiencing infertility globally (Triwani, 2013). Indonesia, with a population of around 238 million, is estimated to have an infertility prevalence of approximately 2,647,697 (Hendarto et al., 2019).

Infertility in women can be caused by various disorders such as ovulation problems, fallopian tube disorders, uterine disorders, and so on. One common cause of ovulation disorders is Polycystic Ovary Syndrome (PCOS). PCOS is an endocrine disorder that affects approximately 13% of reproductive-age women. Women with PCOS will be characterized by symptoms such as hyperandrogenism, menstrual irregularities, anovulation, and infertility (Sari et al., 2023).

Seventy-five percent of the female population with anovulatory infertility is caused by PCOS, contributing to 8-10% of infertility cases in Indonesia. PCOS causes 5-10% of reproductive-age women to become infertile. According to (Wahyuni et al., 2015), 67 individuals (72.04%) out of 93 PCOS patients experienced infertility. (Wiweko & Ritonga, 2016) indicated that 61% of PCOS respondents experienced infertility.

Infertility is not only related to reproductive health issues but also closely intertwined with social and cultural aspects. Although infertility has been proven to occur in both men and women, women are often perceived as more responsible for infertility within marital relationships. Societal expectations for women to become mothers after marriage are a primary driver of this inequality. For women experiencing infertility, the inability to have children not only becomes a significant psychological burden but can also lead to stigmatization, decreased social status, and low self-perception, as motherhood is considered a crucial aspect of women's identity and existence (Greil, 1991).

The condition of PCOS in women can have various clinical impacts, including reproductive issues, high levels of androgen hormones, metabolic problems such as insulin resistance, glucose intolerance, type 2 diabetes, and an increased risk of cardiovascular diseases. Psychological impacts also play a significant role, including increased anxiety and depression, ultimately affecting the quality of life of individuals experiencing it (Teede et al., 2010). According to the World Health Organization (WHO), PCOS has become a significant issue with an estimated number of women affected by PCOS reaching approximately 116 million or about 3.4% of the total female population worldwide.

Hyperandrogenism is a primary characteristic experienced by approximately 60% of women with PCOS, resulting in increased levels of male hormones in the body and physical manifestations such as excessive hair growth (hirsutism) in areas typically more common in males, baldness (alopecia), obesity, oily skin, acne, accumulation of fat in the abdomen, and deepening of the voice (Kitzinger & Willmott, 2002).

The physical changes resulting from PCOS symptoms often lead women with PCOS to feel dissatisfied with their body appearance, thus creating a negative body image that remains a global issue to this day. Negative perceptions of their bodies among PCOS patients can include feelings of dissatisfaction with their appearance, a sense of loss of femininity, and the emergence of feelings of being less attractive (Kitzinger & Willmott, 2002). Physical symptoms of PCOS, such as excessive hair growth (hirsutism) and acne, can make women with PCOS more focused on their appearance, feeling the need to constantly strive to improve their appearance, which ultimately can increase the risk of depression (Deeks et al., 2011).

Changes in physical appearance, irregular or even absent menstruation, and difficulties in pregnancy can affect the feminine identity of women with PCOS and may create psychological pressure that ultimately impacts their quality of life. Research conducted by (Brady et al., 2009) indicates that the physical health impacts and emotional aspects in women with PCOS are often overlooked, yet PCOS has serious implications on patients lives.

This literature review is conducted with the aim of providing an overview of how PCOS affects the quality of life of women. Hopefully readers of this literature review

can gain insight into PCOS and how it can impact the quality of life of those affected.

## METHOD

This article presents the results of a literature review study on the quality of life among women with PCOS. The method used in compiling this article is a literature review targeting both national and international journals to expand findings from various perspectives. Literature search was conducted through PubMed and Google Scholar using the keywords "Polycystic Ovary Syndrome" and "Quality of Life" within the last 10 years (2014 - 2023). Based on this search, a total of 1.510 articles discussing the topic of interest were found.

The selection of articles resulting from this literature review has undergone the inclusion stage, including 1) articles with variables correlating with the quality of life of women with PCOS; 2) articles written in either English or Indonesian language; 3) articles published within the range of 2014 - 2023, with the selection of this publication period made to ensure researchers obtain the most recent findings. Meanwhile, the exclusion criteria are 1) articles with variables not correlating with the quality of life of women with PCOS; 2) articles written in languages other than English or Indonesian.

## RESULTS AND DISCUSSION

According to the established inclusion criteria, 8 relevant articles were found. These articles are listed in the Table 1 below:

**Table 1. The Results of The Reviewed Article**

| No. | Author and Publication Year | Title of the Research | Sample | Result of the Research |
|---|---|---|---|---|
| 1. | RAMYA R et al., (2019) | Quality Of Life With Polycystic Ovarian Syndrome: Requisite Of Clinical Pharmacist Intervention | 173 | The average scores in the domains of physical health, psychological health, social relationships, and environment are lower in women with PCOS compared to the control group. The domain with the lowest scores is the psychological domain. Clinical factors such as obesity, acne, and hirsutism are associated with low quality of life scores in women with PCOS. |
| 2. | Tekin et al., (2018) | A Cross-sectional Investigation of Quality of Life in Patients with Polycystic Ovary Syndrome | 84 | There is a negative correlation between hirsutism scores and the domains of physical health (p=0.023), psychological health (p=0.007), social (p=0.020), and environment (p=0.033). Body Mass Index (BMI) has a negative correlation with the psychological domain (p=0.001). |
| 3. | Chaudhari et al., (2018) | Anxiety, Depression, and Quality of Life in Women with Polycystic Ovarian Syndrome | 70 | Women experiencing infertility have a 3.77 times higher likelihood of anxiety, while women experiencing alopecia have a 3.06 times higher likelihood of anxiety. Women with PCOS who experience hirsutism have |

| No. | Author and Publication Year | Title of the Research | Sample | Result of the Research |
|---|---|---|---|---|
| | | | | lower scores in the psychological health domain of quality of life. PCOS women with anxiety and depression symptoms have significantly lower scores in three domains of quality of life, namely physical health, psychological health, and social and personal relationships. |
| 4. | Prathap et al., (2018) | A cross-sectional study on the proportion of anxiety and depression and determinants of quality of life in polycystic ovarian disease. | 64 | Women with PCOS exhibit lower quality of life, with the lowest scores found in the psychological domain. The severity of depression and anxiety correlates negatively with quality of life across all domains, but most significantly affects the social relationship domain. Additionally, the severity of hirsutism is also associated with quality of life in the psychological well-being domain. |
| 5. | Greenwood et al., (2018) | Association between depression, symptom experience, and quality of life in polycystic ovary syndrome | 732 | Women with PCOS who experience depression are reported to have more severe emotional disturbances, more troublesome hirsutism, more disruptive menstrual problems, and more significant infertility compared to women with PCOS without depression. These factors contribute to a decrease in the quality of life among women with PCOS. |
| 6. | Tabassum et al., (2021) | Impact of polycystic ovary syndrome on quality of life of women in correlation to age, basal metabolic index, education and marriage. | 300 | Women with PCOS experience a decrease in health-related quality of life, as evidenced by lower scores in physical health. Additionally, women with PCOS also encounter emotional issues and fatigue. |
| 7. | Rzońca et al., (2018) | Determinants of Quality of Life and Satisfaction with Life in Women with Polycystic Ovary Syndrome | 504 | Compared to women in the control group, women with PCOS have lower scores in quality of life in the domains of physical health, psychological well-being, social relationships, and environmental relationships. |
| 8. | Çoban et al., (2019) | Psychiatric Disorders, Self- | 59 | The diagnosis rate of psychiatric disorders is higher in the PCOS group compared to the |

| No. | Author and Publication Year | Title of the Research | Sample | Result of the Research |
|---|---|---|---|---|
| | | Esteem, and Quality of Life in Adolescents with Polycystic Ovary Syndrome | | control group, with 21% of patients receiving a diagnosis of depression. However, there is no significant difference in quality of life scores between the PCOS group and the control group. |

**Hirsutism and Quality of Life**

The research conducted by (Lipton et al., 2006) showed that women with PCOS possess high levels of stress regarding hirsutism, specifically facial hair growth. There were 80.7% of participants who said that they were bothered by the existence of facial hair and 63.6% of participants were also embarrassed as the consequences. In fact, 67% of participants almost all the time check their facial hair in front of the mirror in their daily lives. These hirsutism symptoms have caused women's concern of their physical appearance, even diminished their sense of femininity. Facial hair growth lowers self-confidence of and causes anxiety in women suffering from it of other people's negative reactions toward their condition, as such, hirsutism has a big impact on the quality of life of women with PCOS, especially in the domains of psychological well-being and social relationships. This is in line with the Research conducted by (Chaudhari et al., 2018) and the research conducted by (Prathap et al., 2018) stating that hirsutism was found to be the most-affecting symptom on the psychological well-being domain as proven by the existence of emotional problems, high levels of anxiety and having difficulties in social relationships.

The research conducted by (Tekin et al., 2018) showed a significant negative correlation between hirsutism scores and physical health (r= -0.247, p=0.023), psychological well-being (r= -0.29, p= 0.007), social relationship (r=-0.253, p=0.020) and relationship with the surroundings (r=-0.233, p=0.033) domains.

**Infertility and Quality of Life**

The results of research conducted by (Angin et al., 2019) showed that women with PCOS experienced a significant reduction in quality of life. The lowest score of Quality of life measured by PCOSQ and SF-36 was a group of women with PCOS who were infertile. This is in line with the research conducted by (Tabassum et al., 2021) stating that the average age, age at marriage, number of children and cases of pregnancy were less experienced by women with PCOS compared to the controlled group. The infertility of women with PCOS in this research directly affects the quality of their life.

The research conducted by (Dilbaz et al., 2012) revealed that women with PCOS who were infertile had lower scores in the domains of physical health, spiritual, social relationships, and relationships with the surroundings compared to women who were infertile without any clear causes. In addition, the research found that infertility, hirsutism, and PCOS phenotype 1 (hyperandrogenemia and anovulation) related to lower quality of life scores. Meanwhile, the research conducted by (Greenwood et al., 2018) stated that women with PCOS who were not depressed had a significant relationship with infertility, while women with PCOS who were depressed had an insignificant relationship with infertility.

The research conducted by (Chaudhari et al., 2018) stated that women with PCOS

who were infertile had 3.77 times higher anxiety risk probability. Anxiety due to irregular menstruation is one of the main reasons for women with PCOS to seek medical assistance. Oligomenorrhea and amenorrhea are conditions associated with lack of ovulation. Research on adolescent girls with PCOS indicates that taking metformin for six months can improve menstrual regularity in at least 50% of patients (De Leo et al., 2016). Infertility also impacts societal stigma, according to research conducted by (Miall, 1994), women without children experience more stigma compared to women married to men experiencing infertility. A study by (Dyer et al., 2002) indicates that respondents feel pressure when gathering with family and are reminded of their status as women experiencing infertility, whether intentionally or unintentionally.

**Obesity and Quality of Life**

Obesity is a common condition in up to 80% of women with PCOS. Obesity is a major risk factor contributing to increased risk of metabolic complications such as dyslipidemia and type 2 diabetes (Zangeneh, 2017).

Higher Body Mass Index (BMI) in women with PCOS can also negatively impact self-esteem and body satisfaction (Patten et al., 2020). This is consistent with the research by (Tekin et al., 2018), which states that BMI correlates negatively with the quality of life of women with PCOS.

(Benetti-Pinto et al., 2015) stated that high BMI values in women with PCOS are associated with decreased quality of life in the domains of physical health and psychological well-being. This is consistent with the research by (Tekin et al., 2018), which shows a correlation between high BMI and psychological well-being domain. On the other hand, this study did not show a correlation between high BMI and physical health domain, as participants in the study by (Tekin et al., 2018) had relatively low average BMI values (26.72 ± 6.57 kg).

The research conducted by (Chaudhari et al., 2018) also states that obesity can impact other health problems, one of which is insulin resistance. Excessive fat accumulation can lead to obesity, which in turn can cause dysfunction of adipose tissue, ultimately resulting in changes in immunity and disrupting metabolism and endocrine balance (Coelho et al., 2013).

## CONCLUSION

Infertility in women is commonly attributed to ovulation disorders, uterine abnormalities, tubal issues, and other factors. Polycystic Ovary Syndrome (PCOS) stands out as one of the leading causes of ovulation disorders. Women with PCOS undergo various bodily changes, including hormonal imbalances, infertility, and physical manifestations such as hirsutism and obesity. These alterations can significantly influence their self-perception. Furthermore, PCOS can exert diverse impacts on women's quality of life, particularly affecting their physical health, psychological well-being, social relationships, and environmental interactions.

## ACKNOWLEDGMENT

Thank You to all lecturers in the publication and scientific writing course in the psychology department, Udayana University. Thank You to Mrs. Luh Made Karisma Sukmayanti Suarya, S.Psi., M.A for the guidance and direction during the writing process of this article.

## REFERENCES

Angin, P., Yoldemir, T., & Atasayan, K. (2019). Quality of life among infertile PCOS patients. *Archives of Gynecology*

*and Obstetrics*, *300*(2), 461–467. https://doi.org/10.1007/s00404-019-05202-z

Benetti-Pinto, C. L., Ferreira, S. R., Antunes, A. J., & Yela, D. A. (2015). The influence of body weight on sexual function and quality of life in women with polycystic ovary syndrome. *Archives of Gynecology and Obstetrics*, *291*(2), 451–455. https://doi.org/10.1007/s00404-014-3423-1

Brady, C., Mousa, S. S., & Mousa, S. A. (2009). Polycystic ovary syndrome and its impact on women's quality of life: More than just an endocrine disorder. *Drug, Healthcare and Patient Safety*, *1*, 9–15. https://doi.org/10.2147/dhps.s4388

Chaudhari, A. P., Mazumdar, K., & Mehta, P. D. (2018). Anxiety, Depression, and Quality of Life in Women with Polycystic Ovarian Syndrome. *Indian Journal of Psychological Medicine*, *40*(3), 239–246. https://doi.org/10.4103/IJPSYM.IJPSYM_561_17

Çoban, Ö. G., Tulacı, Ö. D., Adanır, A. S., & Önder, A. (2019). Psychiatric Disorders, Self-Esteem, and Quality of Life in Adolescents with Polycystic Ovary Syndrome. *Journal of Pediatric and Adolescent Gynecology*, *32*(6), 600–604. https://doi.org/10.1016/j.jpag.2019.07.008

Coelho, M., Oliveira, T., & Fernandes, R. (2013). Biochemistry of adipose tissue: an endocrine organ. *Archives of Medical Science: AMS*, *9*(2), 191–200. https://doi.org/10.5114/aoms.2013.33181

De Leo, V., Musacchio, M. C., Cappelli, V., Massaro, M. G., Morgante, G., & Petraglia, F. (2016). Genetic, hormonal and metabolic aspects of PCOS: an update. *Reproductive Biology and Endocrinology: RB&E*, *14*(1), 38. https://doi.org/10.1186/s12958-016-0173-x

Deeks, A. A., Gibson-Helm, M. E., Paul, E., & Teede, H. J. (2011). Is having polycystic ovary syndrome a predictor of poor psychological function including anxiety and depression? *Human Reproduction (Oxford, England)*, *26*(6), 1399–1407. https://doi.org/10.1093/humrep/der071

Dilbaz, B., Cinar, M., Ozkaya, E., Tonyalı, N. V., & Dilbaz, S. (2012). Health related quality of life among different PCOS phenotypes of infertile women. *Journal of the Turkish German Gynecological Association*, *13 4*, 247–252.

Dyer, S. J., Abrahams, N., Hoffman, M., & van der Spuy, Z. M. (2002). "Men leave me as I cannot have children": women's experiences with involuntary childlessness. *Human Reproduction (Oxford, England)*, *17*(6), 1663–1668. https://doi.org/10.1093/humrep/17.6.1663

Greenwood, E. A., Pasch, L. A., Cedars, M. I., Legro, R. S., & Huddleston, H. G. (2018). Association among depression, symptom experience, and quality of life in polycystic ovary syndrome. *American Journal of Obstetrics and Gynecology*, *219*(3), 279.e1-279.e7. https://doi.org/10.1016/j.ajog.2018.06.017

Greil, A. L. (1991). Not yet pregnant: Infertile couples in contemporary America. In *Not yet pregnant: Infertile couples in contemporary America*. Rutgers University Press.

Hendarto, H., Wiweko, B., Prof, M. P. H., Santoso, B., & Harzif, A. K. (2019). *Konsensus Penanganan Interfilitas*.

Kitzinger, C., & Willmott, J. (2002). "The thief of womanhood": women's experience of polycystic ovarian syndrome. *Social Science & Medicine (1982)*, *54*(3), 349–361. https://doi.org/10.1016/s0277-9536(01)00034-x

Lipton, M. G., Sherr, L., Elford, J., Rustin, M. H. A., & Clayton, W. J. (2006). Women living with facial hair: the psychological and behavioral burden. *Journal of Psychosomatic Research*, *61*(2), 161–168. https://doi.org/10.1016/j.jpsychores.2006.01.016

Miall, C. E. (1994). Community constructs of involuntary childlessness: Sympathy, stigma, and social support*. *Canadian Review of Sociology/Revue Canadienne de Sociologie*, *31*(4), 392–421. https://doi.org/https://doi.org/10.1111/j.1755-618X.1994.tb00828.x

Patten, R. K., Boyle, R. A., Moholdt, T., Kiel, I., Hopkins, W. G., Harrison, C. L., & Stepto, N. K. (2020). Exercise Interventions in Polycystic Ovary Syndrome: A Systematic Review and Meta-Analysis. In *Frontiers in physiology* (Vol. 11, p. 606). https://doi.org/10.3389/fphys.2020.00606

Prathap, A., Subhalakshmi, T. P., & Varghese, P. J. (2018). A Cross-sectional Study on the Proportion of Anxiety and Depression and Determinants of Quality of Life in Polycystic Ovarian Disease. *Indian Journal of Psychological Medicine*, *40*(3), 257–262. https://doi.org/10.4103/IJPSYM.IJPSYM_221_17

Ramya R, Sharon Ann Jose, Mamatha K, & Surya Narayana Km. (2019). Quality Of Life In Women With Polycystic Ovarian Syndrome: Requisite Of Clinical Pharmacist Intervention. *Asian Journal of Pharmaceutical and Clinical Research*, 100–105. https://doi.org/10.22159/ajpcr.2019.v12i11.34426

Rzońca, E., Bień, A., Wdowiak, A., Szymański, R., & Iwanowicz-Palus, G. (2018). Determinants of quality of life and satisfaction with life in women with polycystic ovary syndrome. *International Journal of Environmental Research and Public Health*, *15*(2). https://doi.org/10.3390/ijerph15020376

Sari, D. A., Kurniawati, E. Y., & Ashari, M. A. (2023). Skrining Dan Determinan Kejadian Sindrom Ovarium Polikistik (Sopk) Pada Remaja. *Jurnal Ilmu Kebidanan*, *9*(2), 102–106. https://doi.org/10.48092/jik.v9i2.211

Tabassum, F., Jyoti, C., Sinha, H. H., Dhar, K., & Akhtar, M. S. (2021). Impact of polycystic ovary syndrome on quality of life of women in correlation to age, basal metabolic index, education and marriage. *PloS One*, *16*(3), e0247486. https://doi.org/10.1371/journal.pone.0247486

Teede, H., Deeks, A., & Moran, L. (2010). Polycystic ovary syndrome: a complex condition with psychological, reproductive, and metabolic manifestations that impacts on health across the lifespan. *BMC Medicine*, *8*, 41. https://doi.org/10.1186/1741-7015-8-41

Tekin, A., Demiryürek, E., Çakmak, E., Temizkan, O., Özer, Ö. A., & Karamustafalıoğlu, O. (2018). A Cross-Sectional Investigation of Quality of Life in Patients with Polycystic Ovary Syndrome. *Sisli Etfal Hastanesi Tip Bulteni*, *52*(2), 109–113. https://doi.org/10.14744/SEMB.2018.38247

Triwani. (2013). Faktor Genetik Sebagai Salah Satu Penyebab Infertilitas Pria. *Jurnal Biologi Medik.*

Wahyuni, M., Decroli, E., & Lasmini, P. (2015). Hubungan Resistensi Insulin dengan Gambaran Klinis Sindrom Ovarium Polikistik. *Jurnal Kesehatan Andalas*, *4*. https://doi.org/10.25077/jka.v4i3.385

Wiweko, B., & Ritonga, M. (2016). Profil Resistensi Insulin pada Pasien Sindrom Ovarium Polikistik (SOPK) di RS Dr. Cipto Mangunkusumo Jakarta. *Majalah Obstetri Dan Ginekologi Indonesia*, *32*(2), 93.

Zangeneh, F. Z. (2017). Polycystic Ovary Syndrome and Sympathoexcitation: Management of Stress and Lifestyle. *Journal of Biology and Today`s World*, *6*, 146–154.