



Fertility quality of life among women with polycystic ovary syndrome

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Abstract

Objective: To measure the fertility quality of life (QoL) in Saudis infertile women with Polycystic Ovary Syndrome (PCOS) using the FertiQoL questionnaire, and establish a reference level of QoL for clinical applications and future studies. **Materials and methods:** The FertiQoL tool, a self-report questionnaire, was completed by 86 women with PCOS in Jeddah, Saudi Arabia who were enrolled for a randomized clinical trial to study the effect of cinnamon for the treatment of PCOS. **Results:** A total of 86 copies of eligible FertiQoL questionnaires were collected at baseline. The mean total scaled FertiQoL score was 59.1 (SD=12.7). An average Core FertiQoL was 66.12 ±11.72, and Treatment FertiQoL was 63.40 ± 13.10. **Conclusion:** The results of this study provide a baseline QoL in infertile women with PCOS, and could potentially be used as a guide for clinical counseling and future works.

Introduction

Polycystic ovary syndrome (PCOS) is a common endocrinology disorder affecting 15–20% of women in reproductive age worldwide [1]. PCOS is characterized by a high level of insulin resistance which leads to the dysfunction of the hypothalamic-pituitary-ovary axis, resulting in anovulation and menstrual irregularity [2-6].

PCOS is the most widely recognized reason for anovulatory infertility. Around 90%–95% of anovulatory women visiting infertility clinics have PCOS [7].

According to prior psychosocial studies, it is known that both infertility and its treatment could lead to emotional and psychological stress [8-9], and thus threaten the quality of life (QoL) for infertile women. However, emotional distress has been taken as a factor contributing to infertility [10]. Owing to the intertwined relationship between infertility and QoL, integrating quality of life assessment in clinical practice for infertility problems should become a standard of care for infertile women.

In the past, various generic measurement tools were used for assessing QoL in infertile patients. Recently, a condition-specific QoL measurement tool, designed explicitly for infertile couples, has been developed and used internationally—the Fertility Quality of Life (FertiQoL) questionnaire [11]. This tool has been demonstrated to have good psychometric properties, and its usefulness has been validated in a Dutch study comparing the FertiQoL tool with generic QoL measurement instruments [12].

We studied 86 consecutive patients involved in a multicenter randomized, placebo-controlled, double-blinded study assessing the effectiveness of cinnamon supplement for the treatment of the PCOS.

To the best of our knowledge, there has been no published data regarding the fertility quality of life in women with PCOS in Saudi Arabia. Our goal of this study is to understand the level of QoL in infertile PCOS women in Saudi Arabia and serve as a reference for clinical QoL counseling and future studies.

Material and Methods

Patients

The patients participated in a randomized trial of Cinnamon supplement in PCOS in Jeddah. In brief, patients were eligible if they met the Rotterdam criteria for polycystic ovary syndrome [14]: oligomenorrhea or amenorrhea and either: (a) clinical or biochemical evidence of hyperandrogenism, or (b) ultrasound findings of polycystic ovaries.

This study was approved by the Unit of Biomedical Ethics at King Abdul-Aziz University, the Saudi Food and Drug Administration (SFDA), and registered at Clinicaltrial.gov website. All participants provided written informed consent.

Patients were randomized to receive either cinnamon or placebo at 2 g/d. All patients had not received any hormonal therapy for at least three months before the study. Patients, caregivers, and those assessing and recording outcomes were blind to allocation. Evaluations included data collected at baseline and after 12 weeks. Of these 86 completed the FertiQoL questionnaires at baseline upon study enrollment.

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Outcome Measure

FertiQoL questionnaire

The FertiQoL tool is a self-report questionnaire. It is designed explicitly for infertile patients to assess their QoL by experts from the European Society of Human Reproduction and Embryology (ESHRE) and the American Society of Reproductive Medicine (ASRM) [15]. FertiQoL (36 items) consists of 24 items derived from four subscales (mind-body, emotional, social, and relational), ten treatment-related items, and two overall life and physical wellness items. FertiQoL was produced in English and has been translated into 20 languages; the Arabic version is available at (<http://www.fertiql.org>).

Data analysis

Statistical analysis was performed using the Statistical Package for the Social Sciences, version 25 (SPSS Inc. Chicago, IL, USA). Demographic and clinical characteristics were shown in mean \pm standard deviation for numerical variables and in number and percent for categorical variables. The statistical analyses included t-test for numerical outcomes and chi-square for categorical outcomes. Normality tests were assessed through Shapiro-Wilk tests carried out on each parameter before analysis. For the statistical analysis performed, a p-value of <0.05 was considered significant.

Results

Out of 86 patients who were enrolled in the clinical trial study, all completed the FertiQoL questionnaires. The data of 86 patients analyzed.

Characteristics	Mean \pm SD
Age (years)	33.53 \pm 3.45
Weight (Kg)	69.35 \pm 6.05
BMI(kg/m ²)	26.23 \pm 2.54

Note. PCOS = Polycystic Ovary Syndrome; SD = Standard Deviation; BMI = Body Mass Index.

Table 1. Characteristics of PCOS patients.

Domain	Mean	SD
Emotional	64.81	18.30
Mind/Body	58.58	21.19
Relational	64.80	12.10
Social	49.32	14.05
Environment	64.63	8.21
Burden	61.04	17.99
Core FertiQoL	66.12	11.72
Treatment FertiQoL	63.40	13.10

SD= standard Deviation, FertiQoL= Fertility Quality Of Life.

Table 2. FertiQoL scores, according to domains for all participants (n=86).

Baseline characteristics

Baseline characteristics of patients (age, weight, and BMI) are presented in Table 1. On entry, there were no significant differences between the two arms of the study regarding demographic and clinical parameters.

A total of 86 copies of eligible FertiQoL questionnaires were collected at baseline. The mean total scaled FertiQoL score was 59.1 (SD=12.7).

The overall FertiQoL total and subscale scores are shown in Table 2. An average Core FertiQoL was 66.12 \pm 11.72, and Treatment FertiQoL was 63.40 \pm 13.10.

Discussion

According to our extensive literature review, this study is the first study that investigates the fertility quality of life using the FertiQoL questionnaire in Saudi Arabia.

Being diagnosed with, and treated for, PCOS can have a profound effect on women's lives. This study reports the outcomes of a self-administered FertiQoL questionnaire completed by women diagnosed with PCOS. Our study reports overall low scores ranging from 49.32 \pm 14.05 (Social domain), and 64.81 \pm 18.30 (Emotional domain).

Comparing our results to other study's findings, a randomized controlled trial conducted in the United States in 2014 (16), 733 women with PCOS reported a total FertiQoL score of (72.3 \pm 14.8), which is higher than our result (59.1 \pm 12.7).

Mean (\pm SD) domain scores for the female cohort in that study ranged from 59.6 \pm 22.4 (Emotional domain) to 80.1 \pm 14.6 (Relational domain), which is also higher than the scores in our results. The only difference was observed in the Emotional domain, with women in our study scoring higher (64.81 \pm 18.30 vs. 59.6 \pm 22.4 in that study).

We hypothesized that the lower scores in our study are due to the supposable stronger cultural values manifested by a high total fertility rate, which might increase the psychosocial burdens of infertility.

Quality of life is becoming an outcome measure in the long-term management of chronic conditions that demand coping strategies. This is because the clinical results do not assess the emotional and social effects.

The small size of this study was a limitation. However, it serves to highlight some important trends. Future studies are needed to evaluate patients from different areas of Saudi Arabia.

Conclusion

FertiQoL is a useful tool for measuring the QoL of women with PCOS in Saudi Arabia. The results of this study indicate that the mean scores of FertiQoL in Saudi Arabia is 66.12 \pm 11.72 for women with PCOS. The large variance in the levels of different domains shows the need to explore this issue further in a larger cohort of patients. But overall, it can be concluded that a better understanding of the management of PCOS is needed and the psychological health of these patients must be evaluated and attended to regularly.

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