RESEARCH ARTICLE

The effect of health education on quality of life (QOL) among polycystic ovary syndrome (PCOS) females at Karachi, Pakistan

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Abstract

Objective: To evaluate the effect of nurses-led health education intervention on quality of life among polycystic ovary syndrome females.

Method: The quasi-experimental study was conducted from May to August 2022 at the Obstetrics and Gynaecology outpatient department of Dow University Hospital, Karachi, and comprised married females aged 18-45 years, who were diagnosed with polycystic ovary syndrome based on the Rotterdam criteria. Nurses-led health education intervention session was conducted for all the patients. Data was collected using the self-administered polycystic ovaries syndrome quality of life scale. Data was analysed using SPSS 26.

Results: Of the 50 females, 26(52%) were aged 26-35 years. There was a significance difference between baseline and post-intervention scores across all domains of quality of life ($p<0.05$). Also, baseline body mass index of the participants was 30.4±4.711 which went down post-intervention to 29.4±4.800 ($p<0.001$).

Conclusion: Nurses-led health education intervention improved the quality of life and body mass index of polycystic ovary syndrome patients.

Keywords: Health education, Quality of life, Polycystic ovary syndrome. (JPMA 74: 1982; 2024)

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Introduction

Polycystic ovary syndrome (PCOS) is a common endocrine disorder among females in the reproductive age group. It is clinically manifested by hyperandrogenism, anovulation, acne, hirsutism, alopecia, hyperpigmentation, obesity and infertility.[1] The World Health Organisation (WHO) reported that 116 million females (3.4%) are affected by PCOS globally and the varied range of PCOS prevalence was between 2.2% and 26%.[2] PCOS affects 4-8% of adolescent girls.[3] PCOS is the most commonly diagnosed condition in Pakistani females in the reproductive age group, with 52% prevalence rate.[4] PCOS associated with clinical complications, like insulin resistance (IR) and compensatory hyperinsulinaemia, ranges 65-95%. These conditions increase the risk of developing glycaemic abnormalities, such as prediabetes, type 2 diabetes mellitus (T2DM), premature mortality and metabolic syndrome. It also elevates the risk of cardiovascular diseases and psychological condition and comorbidities, such as anxiety, depression and altered eating behaviour, that affect the quality of life (QOL).[5] PCOS also leads to increased body mass index (BMI) and androgenic symptoms, such as hirsutism and irregular menstruation, which also affect QOL.[6]

A multidisciplinary approach is required to support women to achieve their lifestyle modification goals. PCOS management guidelines facilitate women in overcoming PCOS knowledge gaps. Moreover, there is a need for tailored and contextual health intervention for PCOS management in order to prevent health complications.[7]

Health education is one of the effective methods for PCOS subjects to have their quarries answered and to promote healthy lifestyle to prevent themselves from complications.[8]

Nurses can play an important role in promoting the health and wellbeing of PCOS subjects by providing patient-direct care in a variety of settings, like outpatient departments (OPDs), clinic, communities and families.[9]

The current study was planned to evaluate the effect of nurses-led health education intervention on QOL among PCOS subjects.

Patients and Methods

The quasi-experimental study was conducted from May to August 2022 at the Obstetrics and Gynaecology outpatient department of Dow University Hospital, Karachi. After approval from the ethics review board of the Dow University of Health Sciences (DUHS), Karachi, the sample

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size was calculated using the Power Analysis and Sample Size calculator In the light of literature[8] while keeping the confidence level at 95%, and power of the test at 80%. The sample size was inflated by 5% to account for possible dropouts.

The sample was raised using non-probability purposive sampling technique. Those included were married females aged 18-45 years, who were diagnosed with PCOS based on the Rotterdam criteria.[10] Those who had mental health disorders unrelated to PCOS, and those who had other endocrine disorders were excluded.

After taking written informed consent from the participants, data was collected using the self-administered polycystic ovaries syndrome quality of life scale (PCOSQOL) questionnaire with alpha coefficient (α) 0.95.[11] The PCOSQOL questionnaire consisted of 35 items spread across 4 domains; impact of PCOS 16 items, infertility 7 items, hirsutism 6 items, and mood 6 items. The participants had seven options to mark their answers, ranging from 1='usually' to 7='does not apply'. Data was collected in three phases; assessment, intervention and follow-up. In the assessment phase, socio-demographic data, including age, BMI, level of education and marital status, was collected. In the second phase, health educational intervention session was conducted, lasting 35-45 minutes. It was delivered through power point presentation, and entailed discussion and the distribution of awareness brochures. The intervention material was based on the international guideline for PCOS.[12] The follow-up assessment was done 3 months post-intervention using the same questionnaire that was used in the assessment phase.

Data was analysed using SPSS 26. Categorical variables were presented as frequencies and percentages, while continuous variables were reported as means±standard deviation. To compare the baseline and post-intervention results, a paired t-test was used. P<0.05 was considered statistically significant.

Results

Of the 50 females, 26(52%) were aged 26-35 years (Table 1). BMI of the participants was 30.4±4.711 at baseline which went down post-intervention to 29.4±4.800 (p<0.001) (Figure). The computed effect size indicated clinical significance with Cohens d=1.87.

There was a significance difference between baseline and post-intervention scores across all QOL domains of quality of life (p<0.05) (Table 2) The total score was 101.9±31.5 at baseline which rose to 135.2±22.3 post-intervention (p<0.001).

Table-1: Socio-demographic characteristics.

Variable	n (%)
Age (years)	
18-25	20 (40)
26-35	26 (52)
36-45	04 (08)
Level of Education	
Primary	10 (20)
Matriculation	23 (46)
Graduation	12 (24)
Post-Graduation	05 (10)

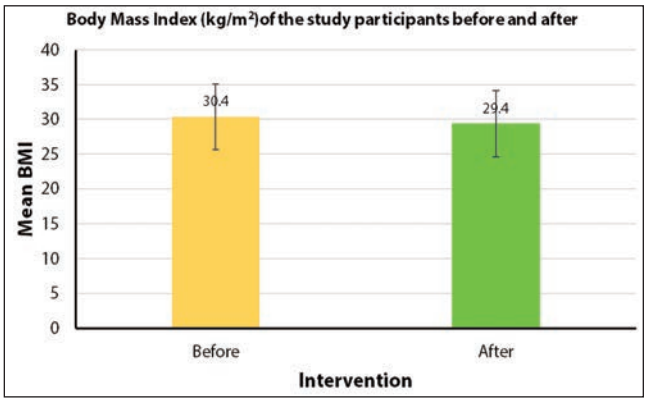

Figure: Baseline and post-intervention comparison of body mass index (BMI) of the participants.

Table-2: Comparison of baseline and post-intervention quality of life scores.

Clinical Characteristics	Pre Score Mean±SD	Post Score Mean±SD	*p*-value
Impact of PCOS	50.5±14.6	66.4±1.0	<0.001
Infertility Items	19.7±9.3	26.6±6.2	<0.001
Hirsutism Items	19.3±9.3	25.0±6.2	<0.001
Mood Items	12.1±5.4	21.2±4.1	<0.001

PCOS: Polycystic ovary syndrome, SD: Standard deviation.

Discussion

To the best of our knowledge, the current study is the first in Pakistan to assess the impact of nurses-led health education intervention among PCOS subjects. The findings showed that majority of the participants were young adults aged 26-35 years. The finding was in line with studies conducted in India[13] and Australia.[14] In contrast, a study[15] in Nepal showed that majority of the participants were aged 15-29 years.

In the current study, most participants had received education up to the 10th grade, which was similar to the studies conducted in China[16] and Sudan[17] but a study in Egypt[9] reported that the majority of participants were uneducated.

The significant lowering of BMI noted in the current study was in line with studies conducted in Egypt[18], The

Netherlands[19] and Australia.[20] A study in Saudi Arabia[21] found no difference in this regard.

The current study reported that most participants with PCOS had a poor QOL, which was also observed in study conducted in Spain[22], Denmark[23] and India.[24] A study in The Netherlands[25] however, reported contrasting findings.

An interventional study in Egypt found that the women's level of knowledge about PCOS improved from pre-intervention 8.84±5.72 to post-intervention 33.56±3.91, and the mean score of healthy practice increased from pre-intervention 11.41±4.56 to post-intervention 28.85±2.47 which improved women' QOL.[7]

Similarly, a study in the United Arab Emirates (UAE) reported that structured health education programme on PCOS among university students significantly improved PCOS knowledge from pre-intervention 7.59±2.64 to post-intervention 12.77±1.13[26] The current study also showed that the pre-intervention PCOS knowledge score of 101.9±31.5 increased to post-intervention 135.2±22.3. A study in Canada[27] reported similar results, but contradictory results were reported by a study in Iran.[28]

Health education intervention is one of the effective strategies for promoting health and contributing significantly to early detection and the avoidance of health complications.[9] PCOS guidelines for health education will increase women's awareness of their health status, and they can include the concerns raised by PCOS subjects.[12]

In the light of the findings, the health education programme is highly recommended for PCOS subjects to improve their QOL. Randomised control trials (RCTs) with large, multi-centre samples need to be conducted to validate the current findings.

Conclusion

Nurses-led health education intervention session about PCOS showed a significant improvement in all the four QOL domains, increasing the subjects' understanding of PCOS and its management.

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Author Contribution:
MS: Concept and editing.
AA: Guidance and review.
JAH: Review and clinical expertise.
WAF: Data analysed and interpretation.
RH: Data collection.
RQ: Results interpretation and compilation.