

ASSESSMENT OF QUALITY OF LIFE OF PATIENTS WITH POLYCYSTIC OVARIAN SYNDROME

¹*Antony Joy and ²Sheethal Kuriakose¹Department of Pharmacy Practice Acharya and BM Reddy College of Pharmacy, Soldevanahalli, Achit Nagar (Post), Hesaraghatta Main Road, Bengaluru – 560 107.²Assistant Professor Department of Pharmacy Practice, Department of Pharmacy Practice Acharya and BM Reddy College of Pharmacy, Soldevanahalli, Achit Nagar (Post), Hesaraghatta Main Road, Bengaluru – 560 107.***Corresponding Author: Antony Joy**

Department of Pharmacy Practice Acharya & BM Reddy College of Pharmacy, Soldevanahalli, Achit Nagar (Post), Hesaraghatta Main Road, Bengaluru - 560 107.

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ABSTRACT

Introduction: Ovarian diseases are conditions affecting young women which deteriorates their reproductive and general health. Polycystic ovarian syndrome (PCOS) is a heterogeneous endocrine disorder affecting about one in 15 women worldwide. Global PCOS prevalence is estimated to be between 6% and 26%. The prevalence of PCOS and its symptoms is increasing with age, thus emphasizing the need for more disciplinary action to catch the disease early. **Objectives:** The goal of the study is to assess the quality of life of patients with PCOS and also to assess treatment related complication. **Methodology:** An observational study was carried out among 77 samples in Soldevanahalli village of Bengaluru. The data was collected by administering an online questionnaire (SF-36) and responses were recorded. The collected data were entered in Microsoft Excel and appropriate descriptive and inferential statistical analysis was performed. **Results:** A total of 77 subjects were enrolled in the study based on the inclusion and exclusion criteria. The mean age of the study population was 25.08 ± 5.05 years. The HRQOL of the subjects was assessed using SF-36 which is a combined assessment of the physical component summary (PCS) and mental component summary (MCS). The average of PCS and MCS were found to be 61.34 and 55.80 respectively. The overall average of HRQOL was found to be 58.57 which represented low HRQOL in patients with PCOS. **Conclusion:** From this study it is evident that by imparting appropriate screening and proper patient counselling will results in early detection there by improving the overall quality of life.

KEYWORDS: PCOS, SF-36, HRQOL.**MATERIALS AND METHODS****Study Design:** This is an observational study.**Study Duration**

- Planning: 1 month
- Data Collection - 3 Months
- Data Interpretation: 1 month
- Thesis Writing: 1 month.

Study Centre: The study was conducted at Soldevanahalli village in Bengaluru District.**Sample Size:** A total of 85 subjects were collected out of which 77 subjects were selected for the study.**Inclusion Criteria**

- Individuals above age of 18 years.
- Patients diagnosed with polycystic ovarian disease.
- Individuals willing to participate in study.

Exclusion Criteria

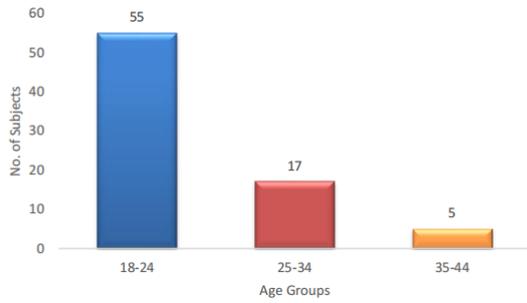
- Patients with any other hormonal abnormalities
- Women who attained menopause
- Patients with chronic comorbidities

RESULTS

This study included a total number of 77 subjects from Soldevanahalli village, Bengaluru rural. The study was conducted for 3 months.

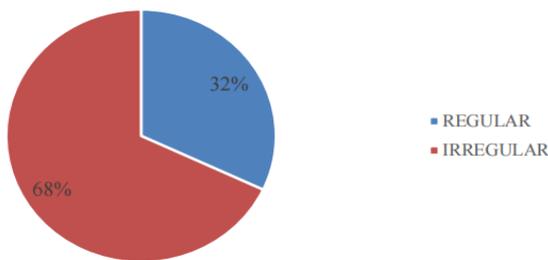
AGE DISTRIBUTION OF SUBJECTS

The mean age of the study population was found to be 25.08 ± 5.05 years. The subjects with an age of 22 years were in majority accounting for 19.42% of the total samples and the subjects with an age of 35 and above years were minimal in number i.e., 1.30% each as shown in Figure.



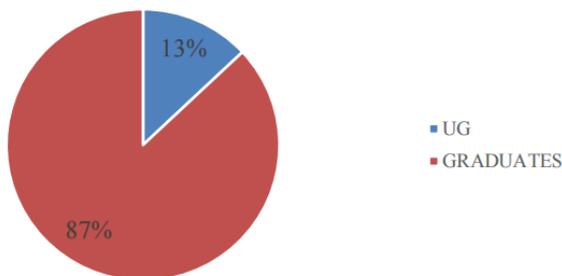
MENSTRUAL HISTORY

Out of 77 subjects, 32% of patients were having regular menstruation and 68% of patients were having irregular menstruation.



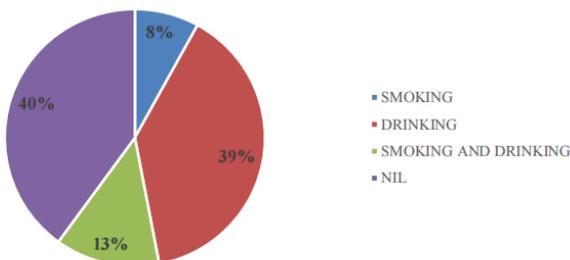
EDUCATIONAL STATUS

Out of 77 study subjects, 13% of patients were undergraduates and 87% of patients were graduates.



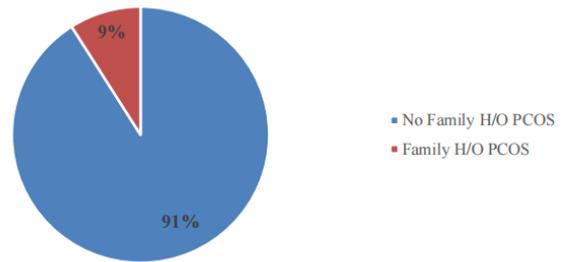
SOCIAL HISTORY

Out of 77 of PCOS patients, 8% were found to be smokers, 39% were drinking and 13% were found to be both smoking and alcoholic and 40% of patients were not indulge in any activity.



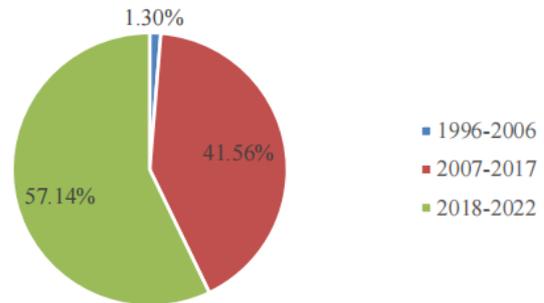
FAMILY HISTORY

Out of 77 patients, 9% patients are having a family history of PCOS.



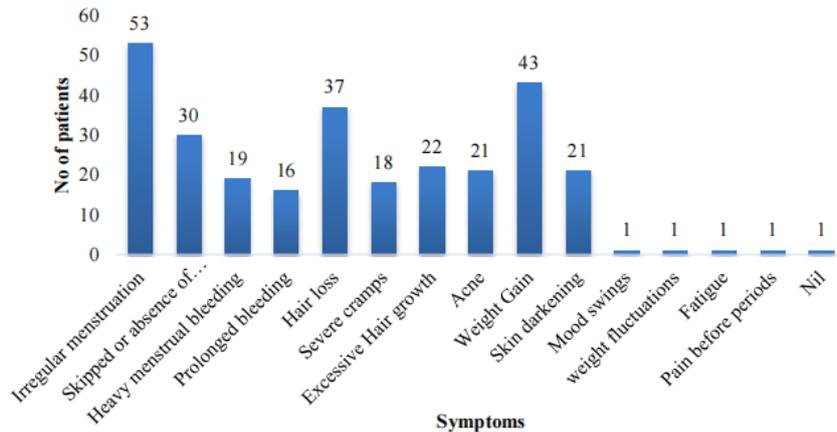
YEAR OF PCOS DIAGNOSED

In 57.14% patients had PCOS diagnosed in the year 2018-2022 and 41.56% patients had PCOS diagnosed in the year 2007-2017 and 1.30% patients diagnosed in the year 1996-2006.



SYMPTOMS DURING DIAGNOSIS

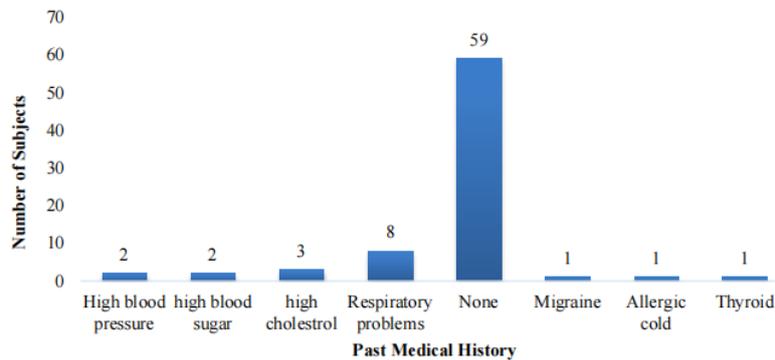
Most prevalent symptoms seen in 77 PCOS patients are Irregular menstruation (68.83%) followed by Weight gain (55.84%), Hair loss (48.05%), Skipped or absence of menstruation (38.96%), Excessive hair growth (28.57%).



PAST MEDICAL HISTORY

Out of 77 patients, 8 patients had respiratory problems (10.39%) and very few are having high blood sugar

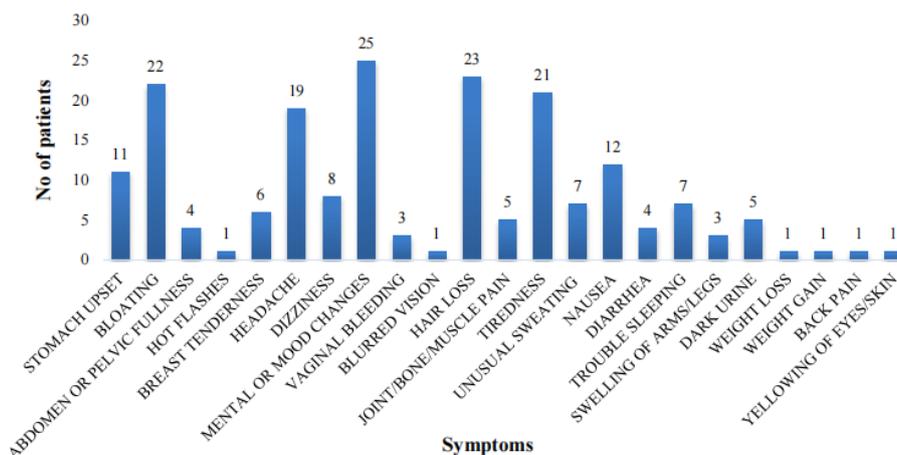
(2.60%) and high cholesterol (3.90%) and 59 subjects had no past medical condition (76.62 %).



LIST OF SYMPTOMS DEVELOPED AFTER USING THE MEDICATIONS

Out of 77 patients, 25 patients had mental or mood changes (32.47%) followed by hair loss 23(29.87%),

bloating 22(28.57%), tiredness 21(27.27%), back pain 1(1.30%).



TYPE OF MEDICATIONS IN USE

Out of 77 patients, some of the patients were taking medications which includes metformin (12.9%), ayurveda medicines (10.3%), clomiphene citrate (6.4%), drospirenone and ethinylestradiol (6.4%), homeopathic

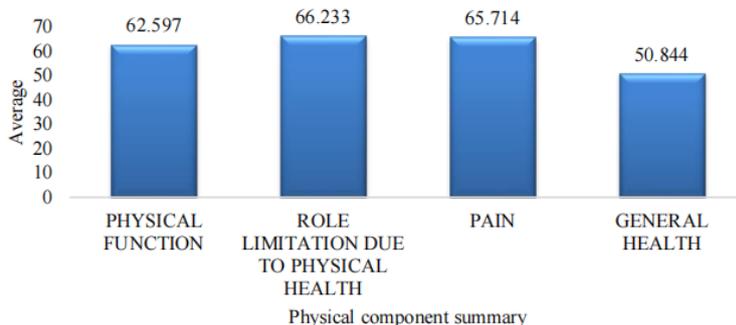
medicines (5.1%), norethisterone (3.9%), myo-inositol, D-chiro-inositol, chromium picolinate, Vitamin D (3.9%), medroxyprogesterone acetate (3.9%), letrozole (1.3%) and 54.5% of the patients were not taking any medications.

HEALTH RELATED QUALITY OF LIFE ASSESSMENT

Physical component summary (PCS)

Analysis of HRQOL in the study population using SF-36 revealed the average physical functioning (PF), role limitation due to physical health (RLPH), pain and

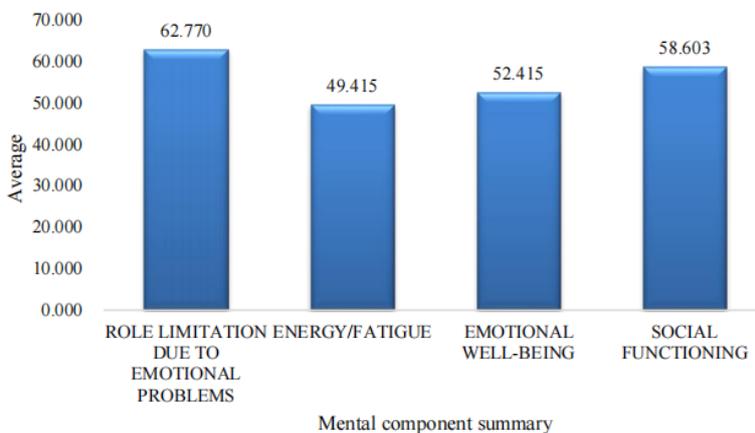
general health to be 62.59 ± 27.35 , 66.23 ± 35.99 , 65.71 ± 24.30 and 50.84 ± 15.90 respectively. Role limitation due to physical health dimension had better average and the least average was seen in the general health.



Mental component summary (MCS)

Analysis of mental component revealed the average of social functioning, role limitation due to Emotional problems (RLEP), energy and emotional well-being to be 58.60 ± 19.05 , 62.77 ± 37.45 , 49.41 ± 13.62 and

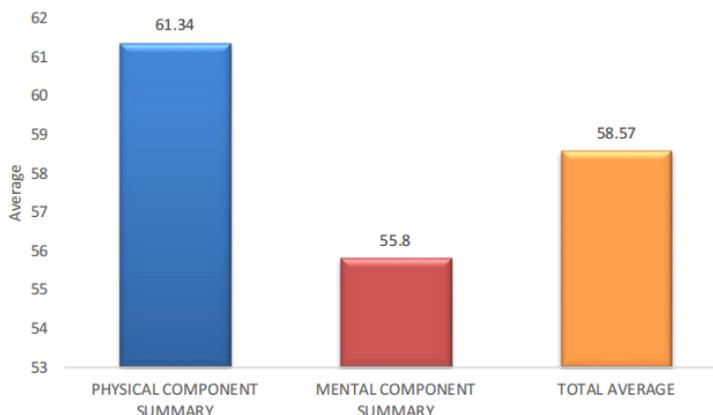
52.41 ± 16.37 respectively. Role limitation due to emotional problems (RLEP) had the highest average i.e. 62.77 and energy/fatigue had the least average i.e. 49.41, as depicted in figure.



Average of PCS and MCS

The total average of four dimensions each under PCS and MCS was found to be 61.34 and 55.80, respectively

and the overall average of both PCS and MCS was 58.57, as shown in figure

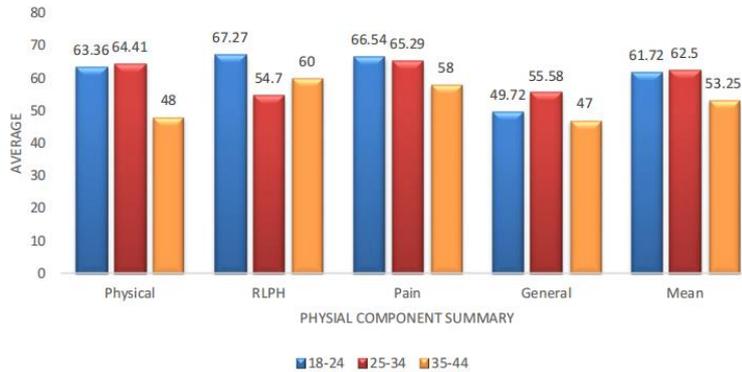


COMPARISON OF QUALITY OF LIFE IN PATIENTS OF DIFFERENT AGE GROUPS

Physical component summary (PCS)

On comparing the QOL scores in subjects of different age groups, it was found that the subjects belonging to

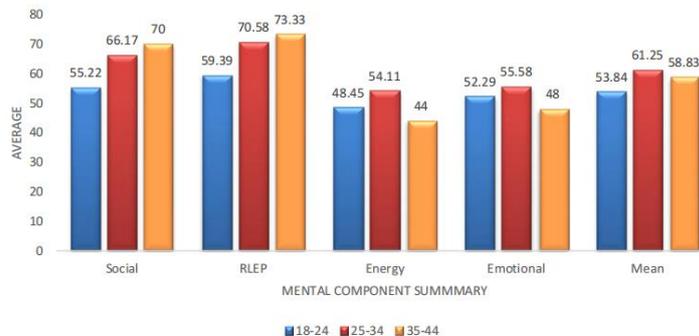
the age group 35-44 had lowest mean score for PCS i.e. 53.25, as shown in Table 7. Figure 14 represents the average QOL scores under each PCS domain i.e. Physical Functioning, Role limitation due to physical health, Pain and General health within different age groups.



Mental component summary (MCS)

On comparing the QOL scores in subjects of different age groups, it was found that the subjects belonging to the age group 18-24 had lowest mean score for MCS i.e. 53.84, as shown in Table 4. The average QOL scores

under each MCS domain i.e. Social Functioning, Role limitation due to emotional problems, energy and emotional well-being within different age groups has been represented in figure.

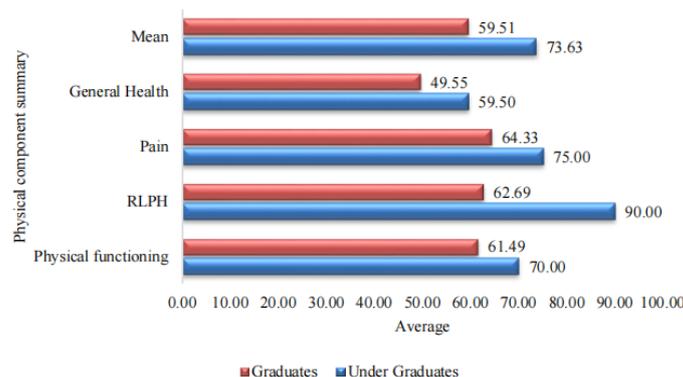


COMPARISON OF QUALITY OF LIFE IN PATIENTS WITH DIFFERENT EDUCATIONAL QUALIFICATION

Physical component summary (PCS)

Comparison of the PCS scores in subjects of different educational qualifications revealed that the subjects who

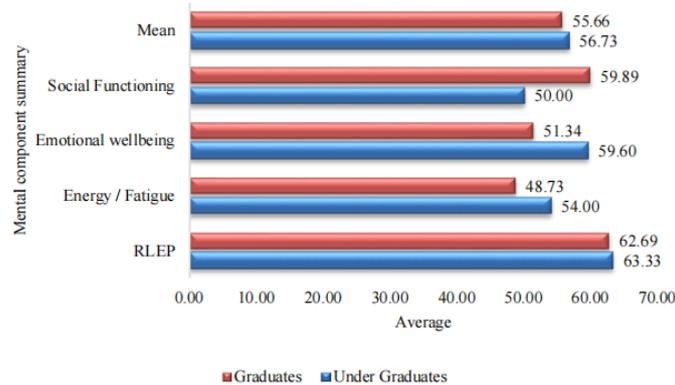
had received a low level of education had the highest mean i.e. 73.62. The lowest score was seen in the subjects who were graduates i.e. 59.51



Mental component summary (MCS)

Comparison of the MCS scores in subjects of different educational qualifications revealed that the subjects who

had received a low level of education had the highest mean i.e. 56.73. The lowest score was seen in the subjects who were graduates i.e. 55.66.

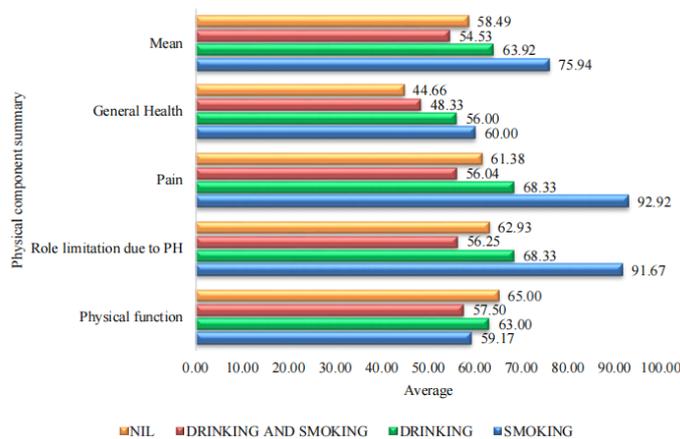


COMPARISON OF QUALITY OF LIFE IN PATIENTS WITH SOCIAL HABITS

Physical component summary (PCS)

Comparison of the PCS scores in subjects with different social habits revealed that the subjects who had no social

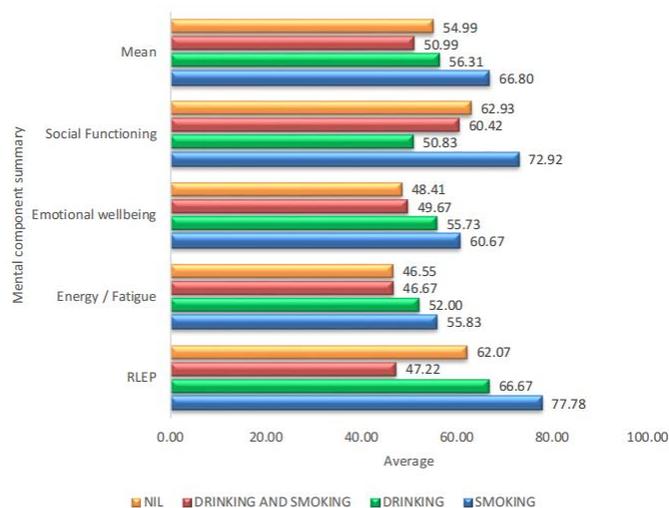
habits had the highest mean i.e. 75.94. The lowest score was seen in the subjects who were drinking and smoking i.e. 54.53.



Mental component summary (MCS)

Comparison of the MCS scores in subjects with different social habits revealed that the subjects who had no social

habits had the highest mean i.e. 66.80. The lowest score was seen in the subjects who were drinking and smoking i.e. 50.99.

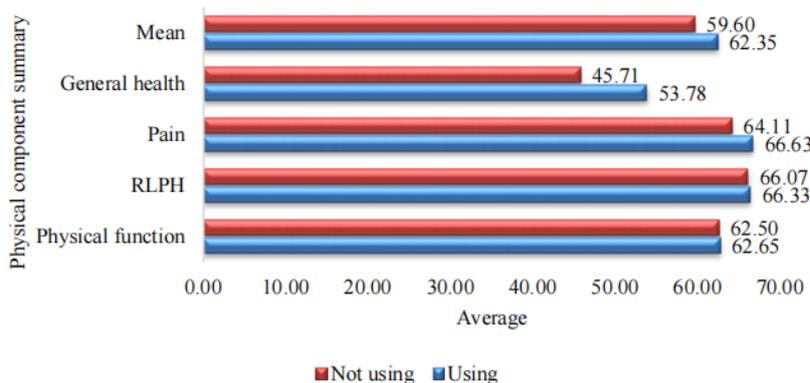


COMPARISON OF QUALITY OF LIFE IN PATIENTS WITH MEDICATION USE

Physical component summary (PCS)

Comparison of the PCS scores in subjects with medication use revealed that the subjects who are using

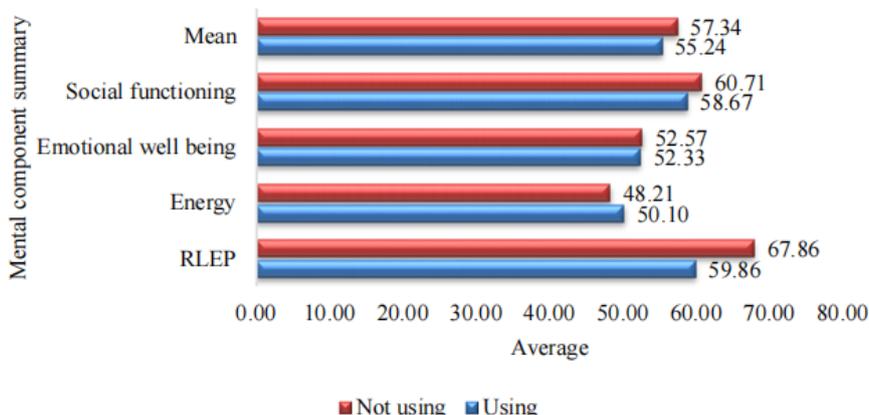
medication had the highest mean i.e. 62.35. The lowest score was seen in the subjects who were not using medication i.e. 59.60.



Mental component summary (MCS)

Comparison of the MCS scores in subjects with medication use revealed that the subjects who are not

using medication had the highest mean i.e. 57.34. The lowest score was seen in the subjects who were using medication i.e. 55.24.



DISCUSSION

This study was a 6-month long observational study conducted by administering online questionnaire in T. Dasarahalli, Bengaluru District. A total of 77 subjects were enrolled in the study based on inclusion and exclusion criteria.

Out of 77 subjects included in the study, most of them belonged to age group of 18-45 years. The average age of the study subjects was 25.08 which is similar to the mean age of participants as in the study of Aditi P Chaudhari *et al.*

In this study we found that a higher proportion of patients were having irregular menstrual cycle n= 52 (68%) which is similar to the study of Vishnubhotla DS *et al.*

The present study was conducted among graduates and under graduates and HRQOL score was higher in all

eight domain of SF-36 in under graduates than graduates, which is divergent to the study conducted by Tabassum F *et al.*

Irregular menstruation n=53(68.83%) and weight gain n=43(55.84%) were the most common symptoms reflected during diagnosis period which is related to the study conducted by Patnaik R *et al.*

A few subjects had past medical history of respiratory problems n=8 (10.39%), high cholesterol n=3 (3.90%) which is contrary to the study conducted by Ray RP *et al.*

Out of 77 subjects only a few of the subjects n=42 (45.45%) are under treatment. The current study had limitation in the time period and study sample owing to the restriction in assessing the treatment related complication of pcos. (58.6%), (62.77%), (49.41%), (52.41%), respectively. Mental health status was highly

affected in our study subjects which is in line with the study conducted by Ozcan Dag Z *et al.*

On comparing the QOL scores in subjects of different age groups, it was found that the subjects belonging to the age group 35-44 had lowest mean score for Physical component summary i.e. 53.25, while it was found that the subjects belonging to the age group 18-24 had lowest mean score for Mental component summary i.e. 53.84 which is alike to the study conducted by Banting L K *et al.*

Comparing the Physical component summary scores of topics with various levels of education showed that the subjects with the lowest degree of education had the highest mean i.e. 73.62 and the subjects with the lowest score, 59.51, were graduates which is similar to the study conducted by Merkin SS *et al.*

Comparing the Mental component summary scores of subjects with various educational backgrounds showed that the subjects with the lowest degree of schooling had the highest mean i.e. 56.73 and the subjects with the lowest scores i.e. 55.66, were graduates which is related to the study conducted by Merkin SS *et al.*

The participants who had no social habits had the highest mean i.e. 75.94, when the Physical component summary scores of subjects with various social habits were compared. The individuals who were drinking and smoking had the lowest score i.e. 54.53.

When the MCS scores of individuals with various social habits were compared, it became clear that the subjects with no social habits had the highest mean i.e. 66.80. The participants who were drinking and smoking had the lowest scores i.e. 50.99, which is resembling to the study conducted by Tao Y *et al.*, The HRQOL was assessed using SF-36 questionnaire, and according to the results of the study the scores for physical functioning, role limitation due to physical health, pain and general health of PCOS patients were (62.59%), (66.23%), (65.71%), (50.84%), and (66.2%), While scores of mental components including social functioning, role limitation due to emotional problems, energy and emotional wellbeing was found to be The participants who are taking medicine had the highest mean, i.e. 62.35, according to a comparison of the physical component summary scores in those subjects. The participants without medication had the lowest score, which was 59.60. This study shows MCS scores of patients who take medicine had lowest mean i.e. 55.24 and the patients who don't take medication had the highest mean, or 57.3.

CONCLUSION

Polycystic ovary syndrome (PCOS) is one of the most common endocrine disorders in women of reproductive age. The prevalence of PCOS and its symptoms is increasing with age, thus emphasizing the need for more disciplinary action to catch the disease early. The aim of

the study was to measure the quality of life in PCOS patients and to assess the treatment related complications. In the study it was evident that the most common symptoms during diagnosis were irregular menstruation and weight gain. As there is prevalence around 8.1% of PCOS in India, it is important that proper screening should be done and counselling should be provided so as to improve the quality of life. Health related quality of life (HRQOL) has gained importance as an outcome measure in recent years. The results of the current study indicate that quality of life of PCOS patients was significantly low and the most affected domain in majority of the patients was general health. The least QOL score was observed in patients belonging to the age group 34-44 which could be because of health decline associated with overall health status. In a nutshell, by imparting appropriate screening and proper patient counselling will result in early detection there by improving the overall quality of life.

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