

## QUALITY OF LIFE USING DERMATOLOGY LIFE QUALITY INDEX IN FEMALE PATIENTS WITH HIRSUTISM

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**Abstract:** *Hirsutism affects a woman's social and quality of life in our society. The burden and magnitude of this effect vary from population to population. A local study was designed to determine the burden on our population. The Objective of this Cross-Sectional study was to determine the frequency of very large and extremely large effects on quality of life using Dermatology Life Quality Index (DLQI) in hirsute women presenting to Jinnah Hospital, Lahore. This study was conducted at the Outpatient Department of dermatology Jinnah hospital Lahore from 13th May 2014 to 12th November 2014. Females with hirsutism and age ranging from 18 to 49 years were included in the study. Hirsutism was labeled if the woman had Ferriman-Gallway (F-G) score  $\geq 8$  or one area score equal to 4, determined by clinical examination. Quality of life was determined using Dermatology Life Quality Index and was labeled as having a very large and extremely large effect if DLQI scores were 11-20 and 21-30, respectively. The marital and educational status will be used to stratify data and dig out effect modification. Two hundred twenty patients included in our study had a mean age of  $26.38 \pm 5.58$  years ranging from 12 to 42 years. The mean Ferriman-Gallway score was  $15.45 \pm 3.5$ , while the mean DLQI score was  $18 \pm 5.09$ . Diagnosis of included women was Hyperprolactinemia (4/220, 1.8%), Congenital Adrenal Hyperplasia (5/220, 2.3%), Ovarian Tumors (8/220, 3.6%), Polycystic Ovarian Disease (135/220, 61.4%) and others (68/220, 30.9%). 97% of the included patients had some formal education. 124 (56.4%) were Unmarried, 94 (42.7%) were married, while 2 (0.9%) were divorced. On DLQI, an Extremely Large Effect was present in 85 (38.6%), a Very Large effect in 115 (52.3%) while Small Effect was observed in 20 patients. There is no effect of cause or diagnosis, marital status, or educational status of the sampled population. It is concluded that the frequency of Extremely Large Effect and Very Large effect was observed in more than half of the study population with hirsutism. The high burden of Extremely Large Effect on quality of life necessitates emotional and psychological rehabilitation as well as pharmacological and cosmetic methods in treating these patients.*

**Keywords:** Hirsutism, Dermatology Life Quality Index, Quality of Life, Polycystic Ovarian Disease, Ferriman-Gallway Score

### Introduction

About 10% of women have hirsutism, which is described as excessive male pattern hair growth in females (Ehrmann, 2005). Genetic (ethnic) idiopathic, adrenal tumours, and medications such as androgens and corticosteroids are only a few of the reasons of hirsutism. The quality of life was significantly impacted by hirsutism in terms of interpersonal relationships, employment, and daily activities, according to a study carried out in Iran, and it affected (45.8 percent) of cases (Rahnama et al., 2013). Perception of hirsutism is, by definition, subjective, and women present with a wide range of severity. Racial, cultural, and socioeconomic factors

influence the degree of hirsutism acceptance as well as its severity (Burns et al., 2008). According to a study on women with excessive facial hair, it is a widespread issue that greatly lowers their general quality of life (QOL). Unwanted facial hair has been shown to negatively impact QOL, but this has improved after laser therapy (Maziar et al., 2010). Health-related QOL in PCOS patients revealed that worries about having too much hair contributed to the second worst QOL impairment (Bishop et al., 2009; Janssen et al., 2008; Teede et al., 2010). In Pakistan, hirsutism has been the subject of numerous research, but none of them examined the patients in

this group's quality of life (QOL). Over the past two decades, Pakistan's dermatology OPD has seen a sharp rise in the number of hirsute patients. Therefore, research on the impact of hirsutism on quality of life is necessary. These patients may also require emotional and psychological rehabilitation in addition to pharmacological and cosmetic treatments (Basra et al., 2008). This study aimed to determine the frequency of very large and extremely large effects on quality of life using Dermatology Life Quality Index (DLQI) in hirsute women presenting to Jinnah Hospital, Lahore.

**Methodology**

The current cross-section study was conducted at the Outpatient Department of dermatology Jinnah hospital Lahore from 13th May 2014 to 12th November 2014. The sample size of 385 was calculated using a 95% confidence level and 5% margin of error with an expected percentage of effect on the quality of life in 45% of patients suffering from hirsutism (Rahnama et al., 2013). Only females gender aged 18 to 49 with F-G score ≥ 8 or one area score equal to 4 on clinical examination were included in the study through non-probability consecutive/ purposive sampling. Patient already suffering from any psychiatric illness or other dermatological disease, e.g., psoriasis, vitiligo determined by the history of comorbidities, e.g., cardiovascular disease, stroke, hemiplegia or paraplegias, diabetes, malignancies) likely to affect the quality of life determined by history and clinical examination were excluded from the study. Written consent was obtained. The severity of hirsutism was assessed visually in nine androgenic sensitive skin locations (upper lip, chin, chest, upper back, lower back, upper abdomen, upper abdomen, arm, and thigh) using the Ferriman-Gallway score, which has

since become the accepted grading system. Each area is scored from 0 to 4, and the F-G score is the total of the scores for all nine areas. Patients who met the study's eligibility criteria (F-G score 8 or one area score of 4) were included in the analysis. A reliable translated version of the Dermatology Life Quality Index (DLQI) was used to measure quality of life (QOL) (Basra et al., 2008). Ten questions from the DLQI are divided into six categories: symptoms and feelings, daily activities, leisure, job and school, personal connections, and treatment. The DLQI's overall score ranges from 0 to 30; the greater the score, the more QOL is compromised. A score of 0 indicates no influence at all, while 2, 5, 6, 10, 11, and 30 indicate variously minor, major, and extremely major affects on the patient's life. A structured questionnaire used by the researcher to gather data included background questions about age, marital status, educational attainment, F-G score, and our end variable, the DLQI score. Data were stratified and effect modification was uncovered using the marital and educational statuses. Collected data were analyzed using SPSS 20. Categorical variables like the marital and educational status presence of large and extremely large effect on the quality of life were described as frequency and percentage, while continuous variable like DLQI score was presented as mean and standard deviation. Post-stratification chi-square test was applied, and a p-value < 0.05 was considered significant.

**Results**

Two hundred twenty patients included in our study had a mean age of 26.38± 5.58 years ranging from 12 to 42 years. The Mean Ferriman-Gallway score was 15.45± 3.5, while the mean Dermatology Life Quality Index score was 18± 5.09. (Table I)

**Table 1 Mean age, Ferriman-Gallway score, and Dermatology Life Quality Index score**

	Minimum	Maximum	Mean	Std. Deviation
Age in Years	12	42	26.38	5.585
Ferriman-Gallway score	9	29	15.45	3.500
Dermatology Life Quality Index	0	27	18.00	5.009

Diagnosis of included women was (8/220, 3.6%), Polycystic Ovarian Disease (135/220, 61.4%) and others (68/220, 30.9%). (Figure I)

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### %age of diagnosed diseases in study population

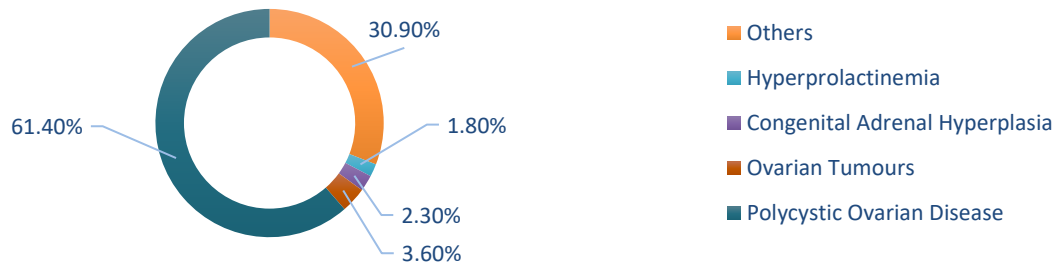


Figure 1 Distribution of diagnosed diseases in the study population

97% of the included patients had some formal education. The education status of the study population is shown in figure 2.

### Education status of the population

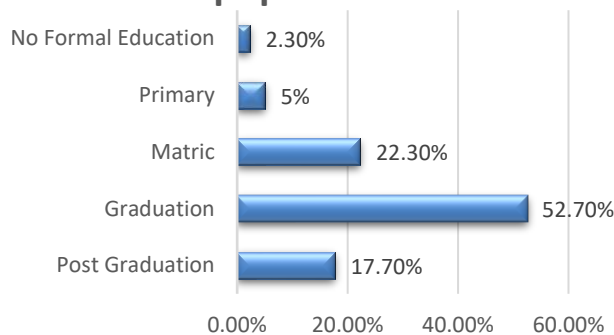


Figure 2 Education status of the study population

124 (56.4%) were Unmarried, 94 (42.7%) were married, while 2 (0.9%) were divorced. On Dermatology Life Quality Index Dermatology Life Quality Index, an Extremely Large Effect was present in 85 (38.6%), a Very Large effect in 115 (52.3%), and Small Effect was observed in 20 patients. (Table 2).

Table 2 Frequency distribution of the sampled population by DLQI Groups

	Frequency	Percent
Extremely Large Effect	85	38.6
Very Large effect	115	52.3
Small Effect	20	9.1
Total	220	100.0

When cross-tabulation between Diagnosis and DLQI Groups was carried out, there was a non-significant difference in the distribution of Very Large effect and Extremely Large Effect (Using Fisher's Exact Test, p-value =0.668). (Table 3) When cross-tabulation between Educational Status and DLQI Groups was carried out, there came out a non-significant difference in the distribution of Very Large effect and Extremely Large Effect (Using Fisher's Exact Test, p-value =0.75). (Table 4). Similarly, when cross-tabulation between Marital Status and DLQI Groups was carried out, there came out a non-significant difference in the distribution of Very Large effect and Extremely Large Effect (Using Fisher's Exact Test, p-value =0.25). (Table 5)

### Discussion

Women who experience hirsutism may experience severe emotional distress and social shame (Podfigurna-Stopa et al., 2015). Patients who were hirsute expressed fears about attending to parties, shopping, or socializing with coworkers or strangers (Chishti and Rafiq, 2019). Avoiding these uncomfortable or anxiety-inducing events is likely to result in more anxiety and discomfort. Such worries are diagnosed as social phobia in clinical psychiatry, which is a persistent fear of circumstances in which one is exposed to other people's attention (Ramshaw et al., 2010). The psychological and cosmetic effects of hirsutism may jeopardize the notion of femininity. In our study using Dermatology Life Quality Index, Extremely Large Effect was present in 85 (38.6%), Very Large effect was observed in 115 (52.3%) patients.

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**Table 3: Crosstab between Diagnosis & DLQI Groups**

Diagnosed diseases	DLQI Groups			Total
	Small Effect	Very Large effect	Extremely Large Effect	
Others	8	33	27	68
Hyperprolactinemia	0	1	3	4
Congenital Adrenal Hyperplasia	0	4	1	5
Ovarian Tumours	1	3	4	8
Polycystic Ovarian Disease	11	74	50	135
Using Fisher's Exact Test, p value =0.668 (Non-significant)				

**Table 4: Crosstab between Educational Status & DLQI Groups**

Education status	DLQI Groups			Total
	Small Effect	Very Large effect	Extremely Large Effect	
Post Graduation	6	22	11	39
Graduation	9	58	49	116
Matric	3	27	19	49
Primary	1	6	4	11
No Formal Education	1	2	2	5
Using Fisher's Exact Test, p value =0.75 (Non-significant)				

**Table 5: Crosstab between Marital Status & DLQI Groups**

Marital Status	DLQI Groups			Total
	Small Effect	Very Large effect	Extremely Large Effect	
Divorced	0	2	0	2
Married	10	54	30	94
Unmarried	10	59	55	124
Using Fisher's Exact Test, p-value =0.25 (Non-significant)				

These results imply that hirsutism is prevalent in our women, severely compromising their quality of life. Improving the quality of life in these patients requires a two-prong strategy, i.e., enabling the patient by treating the problem and educating the masses regarding the perception of the disease. Our results match those presented by the Iranian study (Rahnama et al., 2013). Two hundred twenty patients included in our study had a mean age of 26.38± 5.58 years ranging from 12 to 42 years. This implies that hirsutism is a disease of the young, as they are emotionally more unstable than others. The Mean Ferriman-Gallway score was 15.45± 3.5, while the mean Dermatology Life Quality Index score was 18± 5.09. Diagnosis of included women was Hyperprolactinemia (4/220, 1.8%), Congenital Adrenal Hyperplasia (5/220, 2.3%), Ovarian Tumors (8/220, 3.6%), Polycystic Ovarian Disease (135/220, 61.4%) and others (68/220, 30.9%). Polycystic Ovarian Disease is potentially treatable with lifestyle modification and weight loss. Prompt diagnosis and

urgent treatment may reduce the burden of disease (Palomba et al., 2009). 97% of the included patients had some formal education. This may be due to the health-seeking behavior of the educated community. 124 (56.4%) were Unmarried, 94 (42.7%) were married, while 2 (0.9%) were divorced.

The Dermatology Life Quality Index score was not affected by diagnosis, marital status, or educational status of the sampled population in our study. Our study has limitations of single-center sampling.

**Conclusion**

It is concluded that the frequency of Extremely Large Effect and Very Large effect was observed in more than half of the study population with hirsutism. The high burden of Extremely Large Effect on quality of life necessitates emotional and psychological rehabilitation as well as pharmacological and cosmetic methods in treating these patients.

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**Conflict of interest**

The authors declared absence of conflict of interest.

and metabolic manifestations that impacts on health across the lifespan. *BMC medicine* **8**, 1-10.

**References**

- Basra, M., Fenech, R., Gatt, R., Salek, M., and Finlay, A. Y. (2008). The Dermatology Life Quality Index 1994–2007: a comprehensive review of validation data and clinical results. *British Journal of Dermatology* **159**, 997-1035.
- Bishop, S. C., Basch, S., and Futterweit, W. (2009). Polycystic ovary syndrome, depression, and affective disorders. *Endocrine Practice* **15**, 475-482.
- Burns, T., Breathnach, S. M., Cox, N., and Griffiths, C. (2008). "Rook's textbook of dermatology," John Wiley & Sons.
- Chishti, S. H., and Rafiq, M. (2019). Psychosocial Issues, coping strategies and psychological symptoms of hirsute women. *Pakistan Journal of Medical Research* **58**, 141-148.
- Ehrmann, D. A. (2005). Hirsutism and virilization. *HARRISONS PRINCIPLES OF INTERNAL MEDICINE* **16**, 275.
- Janssen, O. E., Hahn, S., Tan, S., Benson, S., and Elsenbruch, S. (2008). Mood and sexual function in polycystic ovary syndrome. In "Seminars in reproductive medicine", Vol. 26, pp. 045-052. © Thieme Medical Publishers.
- Maziar, A., Farsi, N., Mandegarfar, M., Babakoohi, S., Gorouhi, F., Dowlati, Y., and Firooz, A. (2010). Unwanted facial hair removal with laser treatment improves quality of life of patients. *Journal of Cosmetic and Laser Therapy* **12**, 7-9.
- Palomba, S., Falbo, A., Zullo, F., and Orio Jr, F. (2009). Evidence-based and potential benefits of metformin in the polycystic ovary syndrome: a comprehensive review. *Endocrine reviews* **30**, 1-50.
- Podfigurna-Stopa, A., Luisi, S., Regini, C., Katulski, K., Centini, G., Meczekalski, B., and Petraglia, F. (2015). Mood disorders and quality of life in polycystic ovary syndrome. *Gynecological endocrinology* **31**, 431-434.
- Rahnama, Z., Sohbat, S., and Safizadeh, H. (2013). Effect of hirsutism on quality of life: a study in Iranian women. *Journal of Pakistan Association of Dermatologists* **23**, 28-33.
- Ramshaw, H., Chavira, D. A., and Stein, M. B. (2010). Phenomenology of social anxiety disorder. *Textbook of anxiety disorders*, 437-452.
- Teede, H., Deeks, A., and Moran, L. (2010). Polycystic ovary syndrome: a complex condition with psychological, reproductive



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