Original Article

# Impact of Hirsutism on Quality of Life of Patients Using Dermatology Life Quality Index

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## Abstract

**Objective:** To assess the effect of hirsutism on everyday life of patients using Dermatology Life Quality Index (DLQI) score

**Method:** This cross-sectional survey was conducted at Dermatology Outpatient Department of Services Hospital, Lahore for six months. 132 patients of hirsutism were enrolled. Demographic details of patients were noted and extent and severity of disease were assessed by physical examination. DLQI questionnaires in Urdu were filled in by the patients. Total scores were calculated and impact on everyday life was noted as No effect (0-1), Minimal effect (2-5), Modest effect (6-10), Very huge effect (11-20) and Extremely huge effect (21-30).

**Results:** Mean age of patients was 25.47±2.83 years. 65 patients (49.2%) were in 16-25 years age group, while 67(50.8%) were in 26-40 years age group. According to severity of disease, 52(39.4%) had mild, while 42(31.8%) and 38(28.8%) had moderate and severe disease respectively. Mean DLQI score among hirsutism patients was 10.78±5.99. According to stratification of DLQI score with respect to different variables, high DLQI score was significantly associated with higher education and severe disease. Impact of disease on everyday life was noted as: No effect on 1 patient (0.7%), Small effect on 34 patients (25.8%), Moderate effect on 33 patients (25%), Very large effect on 55 patients (42.4%) and Extremely large impact on everyday life of 8 patients (6.1%).

**Conclusion:** Hirsutism can significantly impair women's everyday life as most of the patients reported modest to massive impairment of daily life functionality. So, patients tolerating this infirmity should be treated with courtesy and civility.

**Keywords** : Hirsutism, Quality of life, Dermatology Life Quality Index (DLQI)

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## Introduction

Hirsutism refers to presence of excess terminal hair in women at sites where males have excess hair under the influence of male hormones including upper lips, beard, trunk, etc. It is not an uncommon disorder with a prevalence of around 10-20%. Polycystic ovarian syndrome (PCOS) is one of the commonest causes.[1] Other causes include Hypothyroidism, Congenital Adrenal Hyperplasia (CAH) and Hyperandrogenic Insulin Resistant Acanthosis Nigricans Syndrome (HAIR-AN). Idiopathic hirsutism accounts for 40% of cases.[2] The disease has an immense effect on psychological and social wellbeing of patients particularly when associated with PCOS probably because associated hyperandrogenic state and dysmetabolic syndrome. The longstanding course of the disease and unavail-

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ability of effective cure is frustrating for both sufferers and their families. This leads to significant psychosocial infirmity due to unsightly appearance of face and body and reduced confidence amongst hirsute women.[3]

Quality of life is a measurable tool which is multidimensional index of social, behavioural and cultural factors. The Dermatology Life Quality Index (DLQI) score was proposed by Finlay et al. in 1994 and is used to estimate the impact of disease on everyday life of sufferers.[4] This 10-item questionnaire was applied in many studies, its validity and reliability in cutaneous disorders is proven.[5,6] The psychosocial issues reported in hirsutism include aggression, jealousy, frustration, avoiding people, difficulty in socializing etc.[7] The inferiority complex faced by hirsute women is further aggravated by the cost of cosmetics and expensive treatments of hirsutism.[8] This survey was designed to analyse the impact of disease on daily life of hirsute women in our population and to assess the psychological impact on patient`s personal and social life. By knowing the magnitude of the problem, Dermatologists can have a significant role in reducing the anxiety and misery of patients and help them better cope with their appearance and psychosocial issues. This may eventually lead to better management of this psychosomatic disorder.

## Methods

After getting approval from Ethical Review Board, patient selection was done by non-probability consecutive sampling from the Outpatient Department of Dermatology, Services Hospital, Lahore from February 2021 to August 2021. Females of ages between 16 and 40 years, who were diagnosed cases of Hirsutism on basis of presence of terminal hair on androgen dependent areas of body for more than six months. Patients who were excluded from the study were; psychiatric patients who couldn't answer the questionnaire properly, patients taking psychoactive drugs and patients having any other co-existing chronic dermatological or medical illnesses such as diabetes mellitus, hypertension, peripheral vascular disease etc which may contribute to altered quality of life.

After taking written informed consent, 132 patients of hirsutism were enrolled. Their demographic data was registered on predesigned proformas. The severity and extent of disease was noted by physical examination using Modified Ferriman–Gallwey (mFG) score. An mFG score ≥ 8 constitute hirsutism. Then, severity of hirsutism was analysed as: one-area limited hirsutism (mFG score <8), mild (8-10), moderate (11-14) and severe (>15) hirsutism.9 DLQI questionnaires Urdu version was filled by the women, after explaining the purpose of research and method of filling the questionnaire. After collecting the questionnaires from patients scoring was done for each question and total score and impact on daily life of patients was noted.

DLQI questionnaire is comprised of ten queries, about various dominions of everyday activities, relations and emotions impacted upon by disease or its treatment. Each question is scored from zero to three depending on none to severe impact. The total DLQI score varies from zero to 30. Higher score reflects more impairment of everyday functionality and well-being. Overall impact on daily activities is classified as no effect at all (0 to1), minimal effect (2 to 5), modest effect 6 to 10), very large effect (11 to 20) and extremely huge effect (21 to 30).[10]

Data was entered and analysed using SPSS Vs 27. Descriptive statistics were calculated for all variables. Quantitative variables including age, duration of disease and DLQI scores were expressed as mean and standard deviation. Qualitative variables including education, occupation, socio-economic status, severity of disease and effect (No, Mild, Moderate, very large or Extremely large effect) on quality of life of patients were expressed as frequency and percentages. Data was stratified with respect to age, education, occupation, socio-economic status, severity and duration of disease. Post-stratification, results were analysed using student t-test. A p-value of ≤0.05 was considered statistically significant.

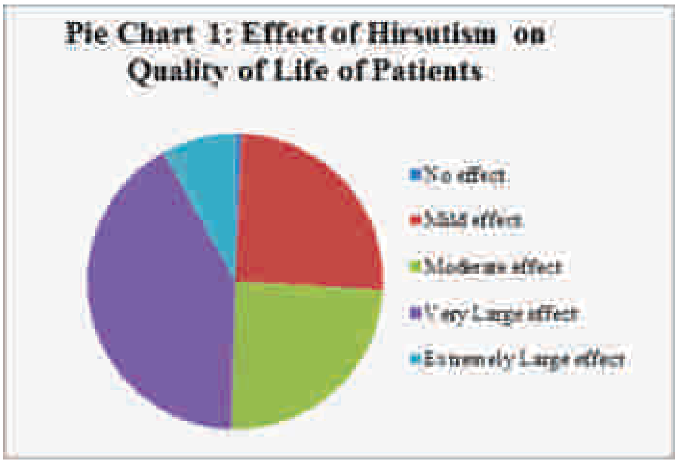
## Results

A total of 132 patients were included in the study during the study period of six months. Mean age of the patients was 25.47±2.83 years. Out of total, 65(49.2%) were in 16-25 years age group, while 67 (50.8%) were in 26-40 years age group. As far as socio-economic status was concerned, 43(32.6%) had low income, while 41(31.1%) and 48(36.3%) belonged to middle and upper class respectively.

40 patients (30.3%) were illiterate, while 90(68.2%) and 2(1.5%) had completed education till middle and matric or above respectively. Out of total, 48 (36.4%) patients were employed and 84 (63.6%) were unemployed. 43 patients (32.6%) had disease duration <1 year and 89 (67.4%) had disease for >1 year. 52 patients

**Table 1:** *Demographic Data of Patients*

| | | No. of Patients (*n* = 132) | |
|---|---|---|---|
| | | **n** | **%** |
| **Age** | 16-25 years | 65 | 49.2 |
| | 26-40 years | 67 | 50.8 |
| **Socio-economic status** | Low | 43 | 32.6 |
| | Middle | 41 | 31.1 |
| | High | 48 | 36.3 |
| **Educational status** | Illiterate | 40 | 30.3 |
| | Upto middle | 90 | 68.2 |
| | Matric or above | 2 | 1.5 |
| **Employment status** | Employed | 48 | 36.4 |
| | Unemployed | 84 | 63.6 |
| **Duration of disease** | <1 year | 43 | 32.6 |
| | >1 year | 89 | 67.4 |
| **Severity of disease** | Mild | 52 | 39.4 |
| | Moderate | 42 | 31.8 |
| | Severe | 38 | 28.8 |
| **Effect of disease** | No effect | 1 | 0.7 |
| | Mild effect | 34 | 25.8 |
| | Moderate effect | 33 | 25.0 |
| | Very Large effect | 56 | 42.4 |
| | Extremely Large effect | 8 | 6.1 |


**Pie Chart 1: Effect of Hirsutism on Quality of Life of Patients**

(39.4%) had mild disease, while 42(31.8%) and 38 (28.8%) had moderate and severe disease respectively (Table-1).

Mean DLQI score among hirsutism patients was 10.78 ± 5.99. Effect of disease on quality of life was noted as follows: No effect on 1 patient (0.7%), Small effect on 34 patients (25.8%), Moderate effect on 33 patients (25%), Very large effect on 55 patients (42.4%) and Extremely large effect on quality of life of 8 patients (6.1%) as seen in Pie chart 1. According to stratification of DLQI score with respect to different variables, high DLQI score was significantly associated with higher education, socioeconomic status and severe disease. No effect of age, employment status or duration of disease was noted.

**Table 2:** *Stratification of DLQI Score with Respect to Effect Modifiers*

| | | **n** | **Mean DLQI** | **Std. Deviation** | **p-value** |
|---|---|---|---|---|---|
| **Age groups** | 16-25 years | 65 | 10.91 | 5.44 | 0.811 |
| | 26-40 years | 67 | 10.66 | 6.52 | |
| **Socio-economic status** | Low | 43 | 11.26 | 6.46 | 0.00002 |
| | Middle | 41 | 10.83 | 5.83 | |
| | High | 48 | 10.31 | 5.77 | |
| **Educational status** | Illiterate | 40 | 9.53 | 5.36 | 0.00001 |
| | Upto middle | 90 | 10.98 | 5.79 | |
| | Matric or above | 2 | 27.00 | 3.26 | |
| **Employment status** | Employed | 48 | 11.54 | 6.67 | 0.074 |
| | Not employed | 84 | 10.35 | 5.56 | |
| **Duration of disease** | <1 year | 43 | 10.60 | 5.63 | 0.777 |
| | >1 year | 89 | 10.87 | 6.19 | |
| **Severity of disease** | Mild | 52 | 6.56 | 3.06 | 0.00002 |
| | Moderate | 42 | 10.40 | 4.45 | |
| | Severe | 38 | 16.97 | 5.29 | |

## Discussion:

In our study, effect of disease on quality of life was noted as: No effect on one patient (0.7%), Small effect on 34 patients (25.8%), Moderate effect on 33 patients (25%), Very large effect on 55 patients (42.4%) and Extremely large effect on quality of life of 8 patients (6.1%). That means 65% patients had a DLQI score > 5 which indicates significant impact of the disease on quality of life. We found that mean DLQI score in our study population was 10.78±5.99. This was higher than that reported by Kutlu[3] who studied effect of hirsutism on quality of life of Turkish women. He reported no significant impact of severity of disease on quality of life which is contrary to our findings. This difference is probably because of smaller sample size and different ethnic background of their study population. Handjani et al[11] studied the impact of the disease on Iranian women and compared it before and after Laser hair removal. They reported a mean DLQI of 13.9 and significant reduction in this value after treatment.

Kiran et al.[12] reported a mean DLQI of 6.67±4.57 among Indian women suffering from hirsutism which is much lower than our observation. Furthermore, they didn't report any significant role of any effect modifier which is also contrary to our observations. In a Swedish study by Ekbäck et al.[13] mean DLQI was reported to be 11.8 ± 8.4 which indicates significant impact of disease on quality of life. They too reported higher impact on psychosocial wellbeing with severer disease as we did. Behboodi et al.[14] too reported significant impairment of quality of life associated with PCOS related conditions including hirsutism, infertility and menstrual irregularities among Iranian women. Significant deterioration of psychological wellbeing was also highlighted by Alizadeh et al.[15] who reported a mean DLQI score of 7.75 ±2.36 among 200 Iranian hirsute women. This impact was significantly reduced after Laser hair removal. Gaber et al.[16] also highlighted the debilitation of everyday happiness caused by hirsutism among Egyptian women.

This marked negative effect on personality, daily activities, and interpersonal relationships suffered by hirsute women around the world was also highlighted by Mody.[17] There is dearth of local studies evaluating the effect of hirsutism on life of patients. In 2014, Baig et al.[18] reported a mean DLQI of 17.9±5.78 at Mayo hospital. This is much higher than our results. Probably over the years, advancement in management strategies have led to an overall improvement in disease related quality of life of these patients. Sidra et al. studied the patients of PCOS and reported that 87% of patients had poor quality of life due to hirsutism, which is quite alarming.[19]

Hirsutism is a common skin disease with many associated diseases and an unpredictable course which leads to a particularly huge dilemma especially races like ours where beauty and complexion have conventional standards and enormous psychosocial impact. This leads to social isolation of the patients. Therefore, while treating these patients their psychological wellbeing must be considered. Involvement of a psychologist and even a psychiatrist in special cases is inevitable. Hirsutism support group should be available and all hirsutism patients should be encouraged to join these groups.

## Conclusion

Hirsutism has a significant impact on psychosocial life of patients as most patients reported moderate to extremely high negative impact on their lives. These effects can be markedly reversed by proper counselling, medical treatment, cosmetic measures and photo-epilation procedures. Therefore, clinicians must have an empathic attitude towards these patients and psychological aspects of disease should never be neglected.

**Conflict of interest:**

Authors declare no conflict of interest and no funding from any source.

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## Authors Contribution

**AS, SA:** Conceptualization of Project
**AS:** Data Collection
**AS:** Literature Search
**AS, SS:** Statistical Analysis
**SA, HT:** Drafting, Revision