

# Quality of life assessment in chronic skin disorders

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**ABSTRACT** *Objective* To assess the impact of disease on quality of life of dermatological patients by using dermatology life quality index (DLQI).

*Methods* One hundred consecutive adult patients with any dermatological disease lasting more than six months were interviewed and filled DLQI questionnaire. DLQI is a broad, self-administered, dermatology specific questionnaire that measures the impact of skin diseases on health-related quality of life in patients. It covers six domains (symptoms, feelings, routine daily activities, sports activities, work and school, personal relationships, and treatment) during the preceding one week. In our study, both original English and validated Urdu versions of the instrument were used for patients in either language of ease.

*Results* There were 58 males and 42 females. Mean age was  $42 \pm 17$  years. A total of 26 dermatological diseases were found in our patients. Chronic eczema was the commonest diagnosis in 29% of patients, followed by melasma in 11%. The duration of illness varied from 6 months to 25 years whereas mean duration was  $10.48 \pm 5.9$  years. DLQI score varied from 0-20, mean score was  $10.02 \pm 4.09$ . Score was significantly associated with disease duration (p value 0.0001, student t test). The difference in DLQI scores between sexes was not significant (p value 0.32, student t test).

*Conclusion* Skin diseases, irrespective of the diagnosis, impair quality of life which is directly proportional to the duration of disease.

**Key words**

Skin diseases, dermatology life quality index, impact on quality of life.

## Introduction

Skin disorders are generally considered trivial and the patient distress and impact on quality of life is largely ignored.<sup>1</sup> It has now been determined that quality of life impact of certain skin disorders can be at a magnitude of several systemic disorders like diabetes mellitus and chronic renal disease.<sup>2</sup> The effect of

dermatological disease can vary from minor to severe handicap. The skin disorder may cause disturbances in occupation, recreation, self-image, discrimination, embarrassment, and depression.<sup>3,4</sup> Psychological and social impact of skin patients has been assessed to be more than cardiac patients and at par with hepatic and cancer patients.<sup>5</sup>

A few studies from Pakistan have assessed quality of life impairment in various skin disorders.<sup>6,7,8</sup> This gives a disease related insight into the dent in patients' life in a few diseases but lacks an overall assessment of duration of

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disease-based impairment of life quality in all dermatological patients. Since the premise behind quality of life impairment in dermatology patients is the visibility of skin condition, leading to psychological distress, we need an assessment of quality of life impact on all dermatological patients that we see in any busy dermatology outpatient.

To probe into the hypothesis that all chronic dermatological diseases impair the quality of life, we planned and carried out this study in our outpatient setting.

## **Methods**

A cross-sectional study was carried out at the Dermatology outpatient department of Combined Military Hospital, Pano Aqil, Pakistan, from January 2013 to December 2013. Institutional review board approved the study. All patients gave written informed consent before entering the study.

All patients of both sexes, more than 18 years of age, with any dermatological condition lasting more than 6 months were included in the study. Patients were required to fill in and complete the dermatology life quality index (DLQI) instrument for quality of life assessment in dermatology patients.<sup>9</sup>

DLQI is a broad, self-administered, dermatology specific questionnaire that measures the impact of skin diseases on health-related quality of life in patients. It covers six domains (symptoms, feelings, routine daily activities, sports activities, work and school, personal relationships, and treatment) during the preceding one week. The higher the score, the worse is the quality of life. DLQI scoring is based on 5 answer categories which are (1) "very much" (2) "a lot" (3) "a little" (4) "not at all" and (5) "not relevant". Options 1-3 are scored as 3, 2, and 1

respectively. Options 4 and 5 are scored with a zero. Overall score is calculated by summing the results from each question, which yield a result between 0 and 30, with higher scores representing a greater impact on quality of life.

In our study, both original English and validated Urdu versions of the instrument were used for patients in either language of ease. Paramedical staff assisted those having difficulty in filling in the questionnaire. Demographic data including age, sex, residence, marital status, education standard, and socio economic standard was added to the questionnaire. Results were expressed as mean  $\pm$ SD. Incomplete forms were processed as follows: if one or two questions were left unanswered it was assumed that the respondent considered that these questions were not relevant to them and, therefore, they were each scored 0 out of 3. If more than 2 questions were unanswered, the entire questionnaire was rejected.

Data were analyzed using SPSS 17.0 software (SPSS Inc., Chicago, IL, US). Quantitative variables were reported as mean  $\pm$  SD and qualitative variables as frequency and percentages. The Kolmogorov-Smirnov test was used for evaluation of normality of the DLQI scores. The Mann-Whitney U-test was used for the comparison of DLQI scores between the two groups, Kruskal-Wallis was applied for the comparison among multiple groups and the Mann-Whitney U-test with Bonferroni correction was used as a post hoc test. For all analyses,  $P < 0.05$  was considered statistically significant.

## **Results**

Hundred consecutive patients fulfilling the inclusion criteria were assessed and offered to fill in the questionnaire. For each rejected questionnaire, a new case was entered till 100

valid questionnaires were completed. There were 58 males and 42 females. Mean age was  $42 \pm 17$  years. A total of 26 dermatological diseases were found in our patients. Chronic eczema was the commonest diagnosis, found in 29% of patients, followed by melasma found in 11%. It may be noted that atopic dermatitis (3%), chronic actinic dermatitis (8%), asteatotic eczema (1%), hand eczema (8%), and seborrheic dermatitis (5%) were listed as separate diagnoses. The list of all the diagnoses is given in table 1. The duration of illness varied from 6 months to 25 years whereas mean duration was  $10.48 \pm 5.9$  years. DLQI score varied from 0-20, mean score was  $10.02 \pm 4.09$ . Score was significantly associated with disease duration ( $p$  value 0.0001, student t test). The difference in DLQI scores between sexes was not significant ( $p$  value 0.32, student t test).

## Discussion

Quality of life assessment is now an integral part of insight into the patient's diseased life and the change treatment has brought into it. For the knowledge to be precise, the questionnaire must be formulated keeping in mind education, social, cultural, and religious background of the patient. Unfortunately we do not have such home grown, made to order quality of life instruments for dermatology in Pakistan. Translated versions of international QoL instruments are the next best thing but leave much to be desired. We faced the same problem with DLQI Urdu version in our patients as some of the questions, especially pertaining to intimate life were uncomfortable for the patients and the response was not real. Otherwise patients were at ease with the rest of the instrument and we believe that most of the answers reflect the true state of patients' life.

**Table 1** Diagnoses and percentages in alphabetical order.

| <i>Diagnosis</i>                | <i>%</i> |
|---------------------------------|----------|
| Alopecia areata                 | 2.0      |
| Acne                            | 2.0      |
| Atopic dermatitis               | 3.0      |
| Asteatotic eczema               | 1.0      |
| Bullous pemphigoid              | 1.0      |
| Chronic eczema                  | 29.0     |
| Chronic paronychia              | 1.0      |
| Chronic urticaria               | 6.0      |
| Chronic actinic dermatitis      | 8.0      |
| Cutaneous T cell lymphoma       | 1.0      |
| Folliculitis decalvans          | 1.0      |
| Hand eczema                     | 8.0      |
| Ichthyosis                      | 1.0      |
| Keratoderma                     | 2.0      |
| Lichen amyloidosis              | 1.0      |
| Mixed connective tissue disease | 1.0      |
| Melasma                         | 11.0     |
| Onychomycosis                   | 1.0      |
| Prurigo nodularis               | 1.0      |
| Pemphigus vegetans              | 2.0      |
| Porphyria cutanea tarda         | 1.0      |
| Porokeratosis of Mibelli        | 1.0      |
| Psoriasis                       | 7.0      |
| Rosacea                         | 1.0      |
| Seborrheic dermatitis           | 5.0      |
| Vitiligo                        | 2.0      |

Since 1994 DLQI has been extensively researched around the world in multiple languages and in myriad of skin diseases.<sup>10</sup> Most of the research was disease specific. We have shown in our study that irrespective of disease intensity or complications *per se*, the stigma of skin disease itself causes an appreciable decline in the quality of life of patient, which is directly proportional and significantly associated with disease duration. Ghajarzadeh *et al.*<sup>11</sup> have done a comparative study on psoriasis, alopecia areata and vitiligo and found no deterioration in quality of life in relation to the duration of disease. We, on the other hand, have found a very positive correlation between the quality of life and the duration of disease.

Our study has shown that skin disease, irrespective of the type, impairs the quality of life of dermatology patients that is directly proportional to the duration of disease. An enhanced level of compassion needs to be shown to dermatology patients rather than taking skin diseases as some trivial rash which will go away. Unless we address the quality of life issues of our patients, we are unlikely to benefit them with any armamentarium of pharmacopeia.

### **Conclusion**

Skin diseases, irrespective of the diagnosis, impair quality of life, which is directly proportional to the duration of disease.

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