

## ORIGINAL ARTICLE

## Quality of life impairment among patients with hair disorders attending a tertiary care centre in Goa

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### Abstract

**Background:** Hair disorders are frequently associated with psychosocial distress and impaired quality of life (QoL).

**Objectives:** To assess quality of life impairment using categorical DLQI severity bands among patients with hair disorders.

**Methods:** This three-month cross-sectional study included 96 patients with scarring and non-scarring hair disorders. Quality of life was assessed using categorical Dermatology Life Quality Index (DLQI) severity bands.

**Results:** Overall, 79.2% of patients experienced some degree of QoL impairment. Non-scarring hair disorders predominated, while scarring alopecia appeared to show greater quality-of-life impact; however, this should be interpreted with caution due to the very small sample size. No significant association was found between DLQI severity and age or gender.

**Conclusion:** Hair disorders significantly impair quality of life. Routine categorical DLQI assessment may aid holistic management in dermatology practice.

**Keywords:** hair disorders; alopecia; DLQI; quality of life

**Conflicts of Interest:** None declared

**Funding:** None

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Received: 04 January 2026

Revised: 08 April 2026

Accepted: 11 April 2026

How to cite this article: Kane RAT, Naik T. Quality of life impairment among patients with hair disorders attending a tertiary care centre in Goa. Sri Lanka J Dermatol. 2026;25(1):19-23. doi: <https://doi.org/10.4038/sljd.v25i1.148>

## Introduction

Hair disorders are common dermatological conditions that often result in considerable psychosocial burden. Hair loss and scalp disorders may adversely affect self-esteem, emotional well-being, and social interactions, even in the absence of physical morbidity. The Dermatology Life Quality Index (DLQI) is a validated tool widely used to assess dermatology-specific quality of life.<sup>1,2</sup> However, Indian data evaluating the categorical DLQI impact across different hair disorders remain limited. This study aimed to assess quality-of-life impairment among patients with scarring and non-scarring hair disorders attending a tertiary care centre.

## Methods

This three-month hospital-based cross-sectional study was conducted in the Department of Dermatology at a tertiary care centre in Goa. Ninety-six consecutive patients aged 16 years and above with scarring or non-scarring hair disorders were included after providing informed consent. A Google Forms-based questionnaire administered

with investigator assistance where required, to minimize information bias.

Quality of life was assessed using the Dermatology Life Quality Index (DLQI), categorized into standard severity bands. Duplicate responses were identified using timestamp and response similarity and were excluded. Ethical approval was obtained from the Institutional Ethics Committee. Statistical analysis was performed using appropriate descriptive statistics and inferential tests (Chi-square and Fisher's exact test). Given the exploratory nature of the study and limited sample size, multivariable analysis was not performed.

## Results

Of the 96 patients, 63 (65.6%) were females, and 33 (34.4%) were males. Non-scarring hair disorders accounted for 94 cases (97.9%), while scarring hair disorders were seen in 2 cases (2.1%). Overall, 79.2% of patients experienced some degree of quality-of-life impairment. The distribution of demographic characteristics, diagnoses, DLQI severity categories, and associations are summarized in Tables 1–4.

**Table 1. Baseline demographic and clinical characteristics (n = 96)**

| Variable                    | Number (%) |
|-----------------------------|------------|
| Male                        | 33 (34.4)  |
| Female                      | 63 (65.6)  |
| Scarring hair disorders     | 2 (2.1)    |
| Non-scarring hair disorders | 94 (97.9)  |

**Table 2. Distribution of hair disorders among study participants (n = 96)**

| Category     | Diagnosis                   | Number (%) |
|--------------|-----------------------------|------------|
| Scarring     | Discoid lupus erythematosus | 1 (1.0)    |
|              | Folliculitis decalvans      | 1 (1.0)    |
| Non-scarring | Female pattern hair loss    | 30 (31.3)  |
|              | Male pattern hair loss      | 20 (20.8)  |
|              | Alopecia areata             | 13 (13.5)  |
|              | Pityriasis capitis          | 14 (14.6)  |
|              | Telogen effluvium           | 12 (12.5)  |
|              | Pediculosis capitis         | 3 (3.1)    |
|              | Tinea capitis               | 1 (1.0)    |
|              | Canities                    | 1 (1.0)    |

**Table 3. Distribution of DLQI severity categories (n = 96)**

| DLQI severity          | Number (%) |
|------------------------|------------|
| No effect              | 20 (20.8)  |
| Small effect           | 39 (40.6)  |
| Moderate effect        | 23 (24.0)  |
| Very large effect      | 13 (13.5)  |
| Extremely large effect | 1 (1.0)    |

**Table 4. Association of demographic and clinical variables with DLQI severity (n = 96)**

| Variable                 | Statistical test | P-value |
|--------------------------|------------------|---------|
| Gender vs DLQI           | Chi-square       | 0.47    |
| Age group vs DLQI        | Chi-square       | 0.84    |
| Scarring vs non-scarring | Fisher's exact   | 0.14    |

## Discussion

This study demonstrates that hair disorders are associated with significant impairment in dermatology-specific quality of life, with nearly four-fifths of patients reporting some degree of impact. The predominance of non-scarring disorders such as female pattern hair loss, male pattern hair loss, and alopecia areata, along with the observed distribution of DLQI severity categories, is consistent with findings from several international studies using categorical DLQI bands. Studies by Zhang *et al.* and Abedini *et al.* have similarly reported that most patients with alopecia experience mild-to-moderate quality-of-life impairment, while a consistent minority experience severe or very large impact.<sup>3,4</sup>

Recent large series and reviews further support these observations. Ito *et al.* demonstrated a clear association between hair disorder severity and health-related quality-of-life impairment in alopecia areata and androgenetic alopecia cohorts, while the scoping review by Muntyanu *et al.* highlighted the broad psychosocial burden of alopecia across diverse populations.<sup>5,6</sup> Studies focusing on androgenetic alopecia and female pattern hair loss have also documented substantial quality-of-life impairment, particularly among patients with higher perceived hair loss and psychosocial distress.<sup>7,8</sup>

Although scarring alopecia constituted a small proportion of cases in the present study, they appeared

to have greater DLQI impairment; however, this finding should be interpreted with caution due to the very small sample size. This finding is in keeping with existing literature on cicatricial alopecia, where irreversible follicular destruction and permanent cosmetic disfigurement contribute to greater psychosocial distress. Porriño-Bustamante *et al.* and Chiang *et al.* have emphasized the unique quality-of-life challenges in scarring alopecias and the need for early intervention and targeted psychosocial support.<sup>9</sup>

With regard to demographic factors, no statistically significant association was observed between DLQI severity and age or gender in our cohort. Previous studies have reported heterogeneous results in this regard; while some suggest higher impairment among younger individuals, others indicate that disease visibility, chronicity, and subjective perception of hair loss are more important determinants of quality-of-life impairment than demographic variables alone.<sup>10,11</sup>

An important consideration highlighted by recent literature is that the standard DLQI may not fully capture hair-specific psychosocial domains such as identity, body image, and social stigma. Several authors have suggested that combining DLQI with hair- or disease-specific patient-reported outcome measures may improve sensitivity in detecting severe quality-of-life impairment in alopecia.<sup>12,13</sup> Nevertheless, categorical DLQI assessment

remains a pragmatic and time-efficient screening tool, particularly in routine outpatient and resource-limited settings.

The strengths of this study include its real-world outpatient setting, inclusion of a broad spectrum of hair disorders, and use of a validated quality-of-life instrument that allows comparison with international cohorts. Limitations include the cross-sectional design, reliance on categorical DLQI bands rather than numerical scores, and the small number of scarring alopecia cases, which limits subgroup analysis. As this was a hospital-based study using consecutive sampling, the possibility of selection bias cannot be excluded. Additionally, the use of categorical DLQI severity bands, while clinically pragmatic, may result in loss of granularity compared to continuous scoring. Cultural and healthcare-access differences may also influence DLQI responses and should be considered when interpreting comparisons across regions.

From a clinical perspective, routine quality-of-life screening using DLQI – even in categorical form – can help identify patients requiring holistic management, including psychosocial counselling. This is particularly relevant for patients with scarring alopecia or those falling into higher DLQI severity bands. Future studies should focus on multicentre, longitudinal designs incorporating both DLQI and hair-specific patient-reported outcome measures to better delineate predictors of severe quality-of-life impairment and treatment response.

## Conclusion

Hair disorders are associated with substantial impairment in quality of life, even when clinical severity appears mild. Routine assessment using categorical DLQI can help identify patients requiring holistic management and psychosocial support, particularly those with scarring alopecia. Incorporating quality of life assessment into routine care may improve patient-centered outcomes. While quality-of-life impairment in hair disorders has been previously reported, the present study highlights the practical applicability of categorical DLQI assessment in routine outpatient settings, particularly in resource-limited environments.

## Ethics statement

The study was approved by the Institutional Ethics Committee of Goa Medical College (Reg.No. ECR/83/Inst/GOA/2013/RR-20. Approval number: GMCIEC/2024/369). Written informed consent was obtained from all participants prior to inclusion in the study.

## Data Availability Statement

The data supporting the findings of this study are available from the corresponding author upon reasonable request. Patient confidentiality has been maintained, and no identifiable data has been shared.

## Authors' contributions

RATK was responsible for the conceptualization and study design, as well as data collection, data analysis, and the initial drafting of the manuscript. TN contributed to data collection and statistical analysis, while also assisting with the review and editing of the work. All authors have read and provided final approval of the manuscript for publication.

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