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# ASSESSMENT OF QUALITY OF LIFE IN ALOPECIA PATIENTS USING DLQI

Dermatology

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## ABSTRACT

**Background:** Alopecia, a prevalent condition causing hair loss, affects a significant portion of the population, imparting both physical and psychological distress. This study aimed to assess the impact of different types of alopecia on quality of life of people. **Methods:** This observational study was conducted at the Dermatology Outpatient Department of a tertiary care centre, involving a sample size of 96 patients diagnosed with different types of alopecia. The Dermatology Life Quality Index (DLQI) was utilized to evaluate the impact of alopecia on patients' quality of life. Statistical analysis was performed using SPSS, focusing on the correlation between severity of alopecia areata and quality of life scores. **Results:** The DLQI scores indicated a moderate to severe impact on quality of life, particularly in patients with more extensive alopecic areas. A significant correlation was found between the severity of alopecia in alopecia areata and Dermatology quality of life scores. **Conclusion:** The impact of alopecia on quality of life is considerable, underlining the need for dermatologists to consider both clinical findings and psychosocial aspects in the management of alopecia.

## KEYWORDS

Alopecia, Dermatology Life Quality Index, Quality of Life.

## INTRODUCTION

Hair loss (alopecia) is one of the common dermatological conditions which is often a major source of stress for people. [1] As the progression of hair loss occurs, the patient may experience psychological distress and inconvenience. Despite the fact that hair loss does not generally present a health hazard, it can still induce psychological and emotional anguish. [2]

Alopecia is classified into two main categories: scarring alopecia and non-scarring alopecia. [3] Traction alopecia,TTM, AGA, AA are all instances of non-scarring alopecic conditions whereas scarring alopecia include DLE,LPP, FFA etc.

It has become widely acknowledged in recent years that QoL is important for evaluating the therapy outcomes in individuals who are experiencing hair loss.[4] While patients prioritize their quality of life, doctors evaluate alopecia based on the severity of the disease's signs and symptoms.Various tools have been used to assess the severity of alopecia in patients. The Dermatology Life Quality Index (DLQI) questionnaire was created in 1994 by Finlay and Khan [5] to evaluate the quality of life (QoL) of patients with various skin conditions. It is extensively used in several nations to determine the severity of alopecia. DLQI is a brief questionnaire with 10 questions covering daily activities, leisure, work and school, treatment, personal connections, and symptoms and feelings.[5] Higher scores on the DLQI, which ranges from 0 to 30, indicate worse quality of life for the patients. By employing DLQI, this study aimed to quantify the psychological burden experienced by patients due to alopecia, shedding light on the subjective experiences that may otherwise be overlooked.

## MATERIALS AND METHODS

This was an observational study conducted on patients of alopecia who attended the Dermatology OPD from July 2022 to January 2024.The approval from the Institutional ethics committee was taken.

After informed written consent, patients of all age groups with different types of alopecia were enrolled in the study. Patients with hairloss due to any external injury**,** chemotherapy,drugs,systemic illnesses and hairshaft disorders were excluded. The patient's detailed history including demographic details, disease duration, sites of hair loss was recorded. Relevant clinical examination and investigations were done. The DLQI scores were calculated using DLQI questionnaire.[5] Statistical analysis was performed using SPSS software (SPSS Inc., Chicago, IL, USA) for the Windows program (26.0 version).

## RESULTS

The study included 96 patients with alopecia who attended the dermatology OPD. Out of the 96 patients enrolled in the study, 51 were male, constituting 53.13% of the total sample, while 45 were female, making up 46.88% of the participants. The majority of the subjects were concentrated in the younger age groups, with the 21-30 years age group containing the highest number of individuals, 42 subjects, accounting for 43.75% of the total.The age distribution of the patients is shown in **Table1**.

**Table 1: Age-wise distribution of enrolled patients.**

| AGE | NUMBER | PERCENTAGE |
|---|---|---|
| 01-10 YRS | 8 | 8.33% |
| 11-20 YRS | 9 | 9.38% |
| 21-30YRS | 42 | 43.75% |
| 31-40 YRS | 29 | 30.21% |
| 41-50 YRS | 5 | 5.21% |
| 51-60 YRS | 3 | 3.13% |

The occupational distribution among study participants highlights its prevalence across various demographics, with students (36.46%) and office workers (26.04%) being the most affected, indicating a significant impact on younger individuals and those in sedentary professions.

A significant urban prevalence, with 68.75% (66 participants) of the individuals residing in urban areas seen among the study participants.
The alopecia study's participant demographics revealed a diverse educational background, with the majority being high school graduates (37.50%, 36 participants), followed by those with a college or university degree (26.04%, 25 participants).

A significant portion of the patients, 31.25% (30 participants), had been experiencing alopecia for less than 1 year, indicating a considerable number of recent diagnoses.

Alopecia areata (AA) was diagnosed in 35.42% (34 participants), highlighting it as a common form involving patchy hair loss. **(Table 2)**

**Table 2: Distribution of the different type of alopecia among the enrolled patients.**

| DIFFERENT TYPES OF ALOPECIA | NUMBER | PERCENTAGE |
|---|---|---|
| AA(Alopecia Areata) | 34 | 35.42% |
| AGA(Androgenetic Alopecia) | 49 | 51.04% |
| TE(Telogen Effluvium) | 7 | 7.29% |
| LPP(Lichen Planopilaris) | 1 | 1.04% |
| DLE(Discoid Lupus Erythematosus) | 2 | 2.08% |
| TC(Tinea Capitis) | 2 | 2.08% |
| TTM(Trichotillomania) | 1 | 1.04% |

A small number of participants, 20.83% (20 individuals), reported no effect on their quality of life (scores 0-1). A larger group, 32.29% (31 participants), experienced a small effect (scores 2-5), and 25.00% (24 participants) reported a moderate effect (scores 6-10). The condition had a large effect (scores 11-20) on the quality of life for 15.63% (15 participants), while a very large effect (scores over 20) was reported by 6.25% (6 participants). The mean DLQI score among participants was 8.76, with a standard deviation of 7.45, indicating a range from no to very large impact on the quality of life among individuals with alopecia. **(Figure 1)**

The data presents an analysis of DLQI scores among patients with various demographic and clinical characteristics. **(Table 3)**

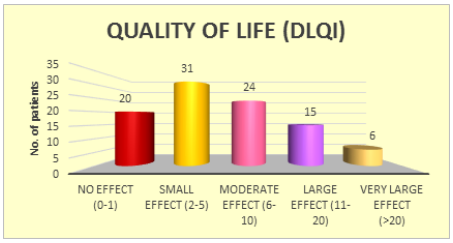


**Figure 1:** Graphical representation of quality of life (DLQI) scores among enrolled patients.

**Table 3: Association between clinic-demographical variables and DLQI scores of enrolled patients.**

| | Total number of patients | DLQI SCORE | p-value |
|---|---|---|---|
| **AGE** | | | |
| ≤30YRS | 60 | 7.94±6.84 | t=1.859 |
| >30 YRS | 36 | 5.47±5.27 | p=0.0661 |
| **GENDER** | | | |
| MALE | 51 | 5.47±5.12 | t=1.672 |
| FEMALE | 45 | 7.45±6.47 | p=0.0979 |
| **EDUCATION STATUS** | | | |
| Below High School | 20 | 5.47±4.84 | F=0.5927 |
| High School | 36 | 6.54±4.29 | p=0.6213 |
| Graduate | 25 | 7.04±5.07 | |
| Postgraduate | 15 | 7.41±5.21 | |
| **TOTAL DURATION OF ILLNESS** | | | |
| Less than 1 year | 30 | 4.78±4.81 | F=2.245 |
| 1-3 years | 25 | 5.98±5.14 | p=0.0702 |
| 3-5 years | 21 | 7.87±5.48 | |
| 5-7 years | 14 | 8.41±5.74 | |
| >7 years | 6 | 9.78±6.21 | |
| **DIAGNOSIS** | | | |
| AA | 34 | 10.47±6.84 | F=1.587 |
| AGA | 49 | 12.84±4.84 | p=0.1601 |
| TE | 7 | 7.48±4.17 | |
| LPP | 1 | 7.88±0.00 | |
| DLE | 2 | 9.87±5.47 | |
| TC | 2 | 7.28±4.31 | |
| TTM | 1 | 10.24±4.98 | |
| **SALT SCORE (SEVERITY)** | | | |
| A (0-20) | 18 | 7.51±1.24 | F=39.98 |
| B (21-49) | 13 | 9.84±1.84 | **p<0.0001*** |
| C (50-95) | 2 | 13.24±2.61 | |
| D (96-100) | 1 | 23.51±0.00 | |

A positive correlation between DLQI scores and SALT scores among the patients of alopecia areata was observed. This indicates that as the severity of alopecia areata increases, there is a corresponding increase in the impairment of QoL experienced by the patients.

## DISCUSSION

Although alopecia usually doesn't pose health risks, it can lead to considerable emotional pain. [2] In the present study, the mean DLQI score among participants was 8.76±7.45, indicating a little to a very large impact on the QoL among individuals with alopecia. Additionally, the age groups showed a trend towards higher DLQI scores in individuals aged 30 years or younger [7.94±6.84] compared to those over 30 [5.47±5.27]. Similarly, while females tended to have higher DLQI scores [7.45±6.47] than males [5.47±5.12]. Regarding the duration of illness, there was a notable increase in DLQI scores with longer illness duration. Those with the duration of >7 years had highest score [9.78±6.21] compare to those who had duration of less than a year [4.78±4.81].Notably, DLQI scores significantly increased with the severity of the condition (alopecia areata) based on SALT scores, with higher scores indicating greater impairment in quality of life. Similarly, Zhang and Zhang [6] observed that females had higher DLQI score [7.6415±6.9700] compared to the males [5.7760±5.8283], although, the difference was not significant. Further, they observed that patients with age <30 years had higher score [7.9839±6.9795] compared to the ≥30 years [5.54±5.35] and this difference was significant. It was found that the DLQI score of AA patients was markedly higher than that of AGA patients. Nevertheless, education level, marital status, gender, family history of alopecia, past history of alopecia, or severity of alopecia did not influence QoL.

The mean DLQI score of 6.3±6.3, reflecting a moderate limitation in quality of life. Williamson D et al. [7] reported a mean DLQI score of 8.3±5.6, comparable to patients with severe psoriasis. Cartwright T et al. [8] focused on severe alopecia areata patients, revealing a mean DLQI score of 13.5. Qi S et al. [9] explored AA patients and found a mean DLQI score of 5.8±5.6. These variations may stem from the diversity in alopecia types and severity levels among the studied patients. Our findings highlight that both AA and androgenetic alopecia (AGA) moderately influence quality of life, contributing to feelings of diminished self-confidence and low self-esteem. Stressful life events may exacerbate these effects, potentially trapping individuals in cycles of anxiety. Yucesoy S et al. [10] included paediatric patients where they found a robust positive correlation between the SALT score and the overall scores on The Children's Dermatology Life Quality Index (CDLQI), demonstrating a significant correlation ($p < 0.001$).

## CONCLUSION

Recognizing the impact on quality of life is crucial for holistic patient care, as it enables healthcare providers to address not only the physical manifestations but also the psychosocial implications of the condition.

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