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Dermatology Life Quality Index scores among patients at free dermatology clinics: a cross-sectional study

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Short Report

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Abstract

Free clinics are a major healthcare access point for the underinsured patient population who face healthcare barriers that can exacerbate psychosocial burden. The Dermatology Life Quality Index (DLQI) survey is a commonly accepted and validated tool for measuring the impact of skin conditions on quality of life, however this impact remains largely unstudied in patients of dermatology free clinics. We conducted a cross-sectional survey of adults using the DLQI tool at two free dermatology clinics in San Antonio, Texas, between September 2024 and January 2026. The survey captured demographics, patient-reported clinical characteristics, and the 10-item DLQI. Responses with scorable DLQIs were analyzed. Fifty-three surveys were collected out of 547 patient encounters. Forty-two were analyzable. Participants averaged 39.0 years; 40.5% were female, 35.7% Hispanic, and 66.7% reported a high school education or less. Mean DLQI was 9.7 (SD 7.8; median 8.0). Sixty-four percent reported at least a moderate effect on quality of life and 33.3% a very large or extremely large effect. Embarrassment or self-consciousness was the most affected domain. Nearly one quarter did not know their diagnosis and 69.0% reported symptoms lasting one year or longer. Scores were higher among men, those with less education, and generalized disease. No comparison reached statistical significance. Dermatologic quality of life burden among free dermatology clinic patients appears high relative to reported general dermatology outpatient means, though contributing factors cannot be determined from this design. Limitations of this study include small sample size, self-reported diagnoses, and exclusion of Spanish responses. Further studies are needed to confirm these findings.

Introduction

Skin diseases can have a significant impact on quality of life (QOL). Chronic skin conditions, such as hidradenitis suppurativa, acne, atopic dermatitis, and psoriasis are associated with impaired QOL, including itch, pain, sleep disturbances, anxiety/depression, and stigmatization [3–5, 11]. The Dermatology Life Quality Index (DLQI) is a widely used, dermatology-specific tool for assessing QOL [2, 6].

Free clinics provide free healthcare and are a significant source of healthcare to uninsured and underserved patients [9]. Although limited, literature on QOL in the setting of free clinics has shown lower health-related quality of life, physical health, and mental health in free clinic patients [7–8]. While general health-related QOL has been studied in free clinic patients, dermatology-specific QOL measures have rarely been assessed in the free clinic population. Understanding the QOL of free clinic patients is important as many patients experience barriers to healthcare, including socioeconomic difficulties and lack of insurance, which exacerbate psychosocial burden [1, 14]. Uninsured patients with chronic conditions have poorer access to medical care, and uninsured patients often present with later stages of disease than insured patients [9, 13]. Truong et al. previously examined skin-associated QOL at a free dermatology clinic for patients experiencing homelessness [12]. Our study examines a more general population of underinsured patients at two free dermatology clinics. To our knowledge, DLQI has not

been studied in the broader underinsured free clinic population. This study aims to characterize dermatology-specific QOL in this group using the DLQI.

Methods

In this cross-sectional study, we distributed surveys to patients at two student-run clinics: Travis Park Dermatology Clinic and Haven for Hope Clinic, which provide free dermatology care in San Antonio, Texas. Clinic dates are held twice a month, where surveys were issued opportunistically from September 2024 to January 2026. Patients were asked to complete an anonymous, voluntary survey and no incentives were offered. Respondents were selected based on availability in the clinic and in the waiting room. Patients verbally consented to the survey and were explained that care would not be impacted based on survey participation. This study was reviewed and determined exempt by the University of Texas Health Science Center San Antonio Institutional Review Board. An institution medical librarian was consulted for literature search (see Supplementary Methods).

Patients were instructed to fill out a survey for each dermatologic condition they had and to complete the survey once (ie. do not repeat at follow-up). All responses were completed in English. A Spanish version of the survey was initially collected but excluded from analysis given the translation was not the official Spanish DLQI translation. Incomplete responses and respondents under the age of 18 were also excluded. Because the number of patients invited was not recorded and encounter counts included follow-up visits, a true response rate could not be calculated.

The survey assessed demographics, patient-reported clinical characteristics, and the DLQI, a validated 10-item questionnaire that assesses QOL across several domains over the prior 7-day period (Online Resource 1). Items were scored 0–3 for a total of 0–30, with higher scores indicating greater impairment. Hongbo's bands were used to interpret the degree of impact on QOL. Because DLQI scores were not normally distributed, Mann-Whitney U and Kruskal-Wallis statistical tests were used for group comparisons with significance determined at $p < 0.05$. Statistical analysis was performed through R (version 4.6.0).

Results

A total of 53 responses were collected over 17 months, with 547 total clinic encounters. Eleven were excluded for being completed in Spanish (n = 6), by a respondent under 18 years of age (n = 2, one response met both criteria), missing age (n = 1) or being incomplete (n = 3), leaving 42 responses included for analysis.

The mean age was 39.0 years (SD 13.2, range 18–64). Seventeen respondents (40.5%) were female with the highest race/ethnicity identification being white (n = 17; 40.5%). Two-thirds of respondents (n = 28) reported high school education or less. Twenty-nine (69.0%) patients reported symptom duration of one year or longer. Thirteen (31.0%) reported a generalized distribution.

The mean total DLQI score was 9.7 (SD 7.8, median 8.0, range 0–30) with the highest possible score being 30. Twenty-seven participants (64.3%) reported at least a moderate effect on quality of life (DLQI ≥ 6) and 14 (33.3%) a very large or extremely large effect (DLQI ≥ 11) (Table 1). By domain, embarrassment or self-consciousness had the highest mean (1.79 of 3) and was the only item no participant rated “not relevant”, followed by symptoms (1.19). The lowest scored items were shopping and home care (0.71), and sexual difficulties (0.62) (Supplementary Table 1).

Exploratory subgroup comparisons are shown in Table 2. Notably, observed mean DLQI was higher among men (11.3 vs 7.4; p = 0.06), patients with a high school education or less (10.9 vs 7.4; p = 0.07), and those with generalized disease (12.5 vs 8.0; p = 0.10). Patients reporting eczema or dermatitis had the highest mean score (17.6; n = 5). No comparison reached statistical significance.

Discussion

Mean DLQI was 9.7 which indicates a moderate effect bordering on a very large effect. Contrasted with a prior study in a general dermatology outpatient population whose mean DLQI score was 4.86 (n = 1993), these results suggest a potentially greater burden on QOL in the patients of free clinics [6]. Patients with more generalized conditions such as eczema or dermatitis had the highest mean DLQI score (17.6; n = 5) while those reporting skin cancer had the lowest score (5.0; n = 4), though skin cancer was excluded from formal comparison. This appears consistent with Finlay and Khan’s observation of greater DLQI scores in atopic dermatitis compared with basal cell carcinoma [2]. Though significance was not reached, our observations align with the idea that lesions which are generalized and noticeable carry greater QOL burden.

The DLQI can serve as a tool for dermatologists and volunteers to provide patient-centered care, especially in populations where burden may be higher, such as free clinic settings. Practical uses include informed treatment selection, assessing response to treatment, early diagnosis of a relapse or detecting worsening of a patient’s skin condition [10].

This study has several limitations, including small sample, self-reported diagnoses and clinical characteristics, and the exclusion of Spanish responses. Each of these introduces potential bias, including sampling and response bias. Two other notable limitations are an unknown response rate and patient insurance status. While it is assumed most patients of free clinics are of underinsured status, lack of this information makes it difficult to determine how representative this sample is of the population of interest.

Overall, the results of this study suggest greater QOL burden in patients of free clinics than has been reported in the general dermatology outpatient clinic, though contributing factors cannot be determined from this design. There remains a paucity of research in this population and further studies which address our limitations are needed to confirm these findings.

Declarations

Disclosure of potential conflicts of interest

The authors declare that they have no conflict of interest.

Ethics Approval

This study was determined exempt from review by the UT Health Science Center San Antonio Institutional Review Board.

Informed consent

Verbal consent was obtained prior to survey administration.

Competing Interests:

None

Author Contribution

T.S. conceived and designed the study and performed the data analysis. T.S., S.K., and J.H. contributed to survey distribution and data collection, and to writing the first draft of the manuscript. J.B. supervised the study and critically reviewed the manuscript. All authors contributed to data interpretation and critical revision of the manuscript, and all authors read and approved the final manuscript.

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Data Availability

All raw survey response data is available from the corresponding author upon reasonable request.

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Tables

Table 1
Distribution of DLQI survey bands.

DLQI band[a]	Interpretation	n (%)
0–1	No effect on patient's life	4 (9.5)
2–5	Small effect	11 (26.2)
6–10	Moderate effect	13 (31.0)
11–20	Very large effect	10 (23.8)
21–30	Extremely large effect	4 (9.5)

[a]Bands per Hongbo et al [6]. DLQI, Dermatology Life Quality Index.

Table 2
Exploratory subgroup comparisons of DLQI total score.

Subgroup	n	Mean DLQI (SD)	Median DLQI	p
Sex				
Male	25	11.3 (8.3)	10.0	0.06
Female	17	7.4 (6.6)	5.0	
Education				
High school or less	28	10.9 (7.6)	9.0	0.07
College or higher	14	7.4 (8.0)	5.0	
Lesion distribution				
Generalized distribution	13	12.5 (8.8)	10.0	0.10
Localized or scattered	25	8.0 (7.4)	7.0	
Unknown[a]	4	11.5 (5.1)	9.5	
Lesion duration				
Duration less than 1 year	13	11.2 (5.8)	10.0	0.14
Duration 1 year or longer	29	9.1 (8.6)	8.0	
Race/Ethnicity				
White	17	8.1 (6.5)	8.0	0.44
Hispanic	15	9.9 (6.8)	11.0	
Black or African American	8	13.6 (11.7)	9.5	
American Indian/Alaska Native or Asian[a]	2	6.0 (5.7)	6.0	
Diagnosis				
Eczema/dermatitis	5	17.6 (11.1)	19.0	0.20
Psoriasis[a]	4	9.0 (7.7)	9.0	
Skin cancer[a]	4	5.0 (2.9)	5.0	
Unknown to patient	10	7.2 (4.5)	8.5	
Other, patient-specified	19	10.1 (8.0)	8.0	

[a]These scores were excluded from their respective subgroup analysis due to n < 5. DLQI, Dermatology Life Quality Index.

Supplementary Files

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