

ORIGINAL ARTICLE

QUALITY OF LIFE IN PATIENTS WITH PSORIASIS AT A TERTIARY CARE TEACHING HOSPITAL –A CROSS SECTIONAL STUDY

Preksha A Barot¹, Nirmal Y Brahmbhatt², Hemlata V Ninama³, Darshan B Kharadi⁴, Supriya D Malhotra⁵

Author's Affiliations: ¹Tutor, Dept of Pharmacology, GMERS medical college, Himmatnagar; ²Tutor, Dept of Community Medicine, GMERS medical college, Gandhinagar; ³Tutor, Dept of Pharmacology, GMERS medical college, Gandhinagar; ⁴Resident, Dept of Pharmacology, Smt. NHL Municipal Medical College, Ahmedabad; ⁵Professor and Head, Dept of Pharmacology, Smt. NHL Municipal Medical College, Ahmedabad.

Correspondence: Dr. Preksha A Barot, Email: drpreksha09@gmail.com

ABSTRACT

Background: Psoriasis is linked with social stigmatization, pain, discomfort, physical disability and psychological distress. It has a significant negative impact on quality of life. Since there is paucity of the data related to quality of life assessment in Indian psoriatic patients, this study was an earnest attempt in this direction. The aim of this study was to evaluate the impact of psoriasis on the quality of life in patients with psoriasis.

Materials and Methods: A cross sectional study was carried out in 60 patients at Dermatology outpatient department of a tertiary care teaching hospital. The quality of life assessment was done by DLQI questionnaire in patients above the age of 16 years.

Results: The Health related Quality of Life was assessed by DLQI questionnaire in 60 patients at Dermatology outpatient department. The M: F ratio was 2.16:1. The mean DLQI score was 8.95 ± 8.48 (Mean \pm SD) and 66.7% of the patients had moderate to extremely large impact on the quality of life. Highest DLQI Mean score 15.21 was noted in younger (20-29 yrs) age group.

Conclusion: Psoriasis is chronic recurring disease and has significant negative impact on patients' quality of life. These findings provide significant new insights into factors that affect the life quality of patients with psoriasis.

Key words: dermatology life quality index (DLQI), psoriasis, quality of life (QOL)

INTRODUCTION

Psoriasis is a chronic inflammatory disease of high prevalence. Psoriasis affects about 0.1 to 3% of the world's population.¹ In India the prevalence of psoriasis varies from 0.44% to 2.8%.² Psoriasis ravages the quality of life (QOL) of afflicted individuals.³ Psoriasis causes functional impairment, distress and embarrassment to patients. The impact of the disease can result in restrictions to social and recreational activities and productive life, in addition to possible harm to these patients' affective and sexual relationships.^{4,6} Absenteeism is a greater concern for people suffering from psoriasis than their coworkers without psoriasis with nearly 60% patients reporting missing an average of 26 days a year directly related to their psoriasis.⁷ Patients with psoriasis have a higher financial burden

due to absenteeism in addition to the cost of caring for their disease.^{8,9}

Medical treatments improve the quality of life for most patients by ameliorating lesions and decreasing itching, pain and discomfort. However, patients' psychosocial suffering due to psoriasis is often neglected. Discussing their skin condition, covering their lesions, and avoiding contact with people are significantly associated with negative impact on life.⁸⁻¹¹ Studies have indicated that talking to others regarding the non-contagious nature of psoriasis lessens the negative impact on the QOL and thereby reduces social discomfort.¹² When there are data to interpret the score, more accurate measurement of QOL might be helpful in guiding management decisions, e.g. where expensive or hazardous therapy is being started. The use

of simple QOL measures is usually welcomed by patients who wish to express their concerns. Methods of measuring extent and severity of psoriasis are based on assessment of signs and symptoms. This information does not necessarily correlate with QOL measures: a treatment for psoriasis might halve the sign score, but if the same visible area were still affected, the QOL score might be unchanged. QOL scores therefore provide an additional view of the overall effectiveness of therapy.¹³

The psoriasis area severity index (PASI), which is used for clinical evaluation, and the dermatology life quality index (DLQI), for quality of life assessment, are the most cited and most often used tools due to their high degree of reliability, applicability and reproducibility. DLQI is supposed to measure more subjective aspects and, for this reason, it is more dependent on distinct groups of people based on their socio-cultural profile. Considering the importance of treatment benefit to the patient it has been suggested that DLQI should be given more weight than PASI. The Dermatology Life Quality Index or DLQI, developed in 1994, was the first dermatology-specific Quality of Life instrument. It is a simple 10-question validated questionnaire that has been used in 33 different skin conditions in 32 countries and is available in 55 languages. Its use has been described in many publications including 27 multinational studies.¹⁴ The DLQI is the most frequently used instrument in studies of randomized controlled trials in dermatology. It can be used without specific training and is well suited to use in primary care.¹⁵

Due to its simplicity and widespread distribution DLQI seems an appropriate indicator of disease burden/quality of life. Especially as a great advantage it allows for simultaneous determination of burden of on the patient and thus indirectly reflects the aspects of practicability.¹⁶ Hence by undertaking the present study we sought to study the health related quality of life affected by psoriasis using DLQI questionnaire.

METHODOLOGY

A cross sectional study was carried out in 60 patients over period of 2 months in the Dermatology outpatient department after obtaining written approval by Institutional Review Board and from head of Dermatology department. Patients attending the Dermatology outpatient department diagnosed with psoriasis by the Dermatologist were enrolled in the study after obtaining written informed consent. For Dermatology Life Quality

Index (DLQI) questionnaire patients above age of 16 years were included in study. The patients below the age of 16 years, and those with severe medical diseases that may affect their life quality including malignant disease, chronic obstructive pulmonary disease, heart failure, liver cirrhosis or end stage renal disease were excluded from the study. Patients with severe psychiatric disorders, mental disorders, seizures, organic brain disease, or other skin diseases (such as eczema, dermatophytoses, pityriasis rubra pilaris, mycosis fungoides, lichen simplex chronicus) were also excluded. Total 60 patients were assessed for health related quality of life by Dermatology Life Quality Index (DLQI) questionnaire. DLQI questionnaire was translated in vernacular language. DLQI questionnaire was self filled by patients. In case of illiterate patient, questions were asked orally to fill questionnaire. Confidentiality of all the patients' data was maintained.

The Dermatology Life Quality Index questionnaire is designed for use in adults, i.e. patients over the age of 16. It is self explanatory and can be simply handed to the patient who is asked to fill it in without the need for detailed explanation. It is usually completed in one to two minutes. In our study DLQI questionnaire was given to the patient following OPD consultation. Only patients who were willing to fill up the questionnaire were included in the study. The DLQI is a self-reported questionnaire to measure how much a skin problem has affected the life of the patient over the previous 7 days. It consists of 10 questions, 6 sections and 1 overall summary score. Each question has 4 alternative answers: "not at all", "a little", "a lot", or "very much", with scores of 0, 1, 2 and 3, respectively. The 6 sections cover symptoms and feelings (questions 1 and 2), daily activities (questions 3 and 4), leisure (questions 5 and 6), work/school (question 7), personal relationships (question 8 and 9) and treatment (question 10).

Meaning of DLQI score:

The DLQI was calculated by summing the score of each question resulting in a maximum of 30 and a minimum of 0. The higher the score, the more quality of life is impaired. The DLQI can also be expressed as a percentage of the maximum possible score of 30.

- 0-1 = no effect at all on patients life
- 2-5 = small effect on patients life
- 6-10 = moderate effect on patients life
- 11-20 = very large effect on patients life
- 21-30 = extremely large effect on patients life

Interpretation of incorrectly completed questionnaires:

1. If one question was left unanswered this was scored 0 and the scores were summed expressed as usual out of a maximum of 30.
2. If two or more questions were left unanswered the questionnaire was not scored.
3. If question 7 was answered ‘yes’ this was scored 3. If question 7 was answered ‘no’ or ‘not relevant’ but then either ‘a lot’ or ‘a little’ was ticked this was then scored 2 or 1.
4. If two or more response options were ticked, the response option with the highest score was recorded.
5. If there was a response between two tick boxes, the lower of the two score options was recorded.

The DLQI was analyzed by calculating the score for each of its six sub scales (see above).When using subscales, if the answer to one question in a subscale was missing, that sub scale was not scored.

Statistical analysis:

Data was entered in Microsoft word 2007®and analyzed by SPSS version 20.0. DLQI mean score in different age groups was analyzed using ANOVA test.

RESULTS

The Health related Quality of Life was assessed with the DLQI questionnaire in 60 patients at Dermatology outpatient department of a tertiary care teaching hospital. The M: F ratio was 2.16:1. The mean DLQI score was 8.95 ± 8.48 (Mean ± SD). About 21 (35%) patients had a moderate effect followed by very large effect 14 (23.4%), small effect 12 (20%) and extremely large effect 5 (8.3%) on quality of life (**Table 1**).

Table 1: Analysis of Dermatology life quality index (DLQI) questionnaire

Effect on patient's life	Score	Patients (%) (n=60)
No effect at all	0-1	8 (13.3)
Small effect	2-5	12 (20.0)
Moderate effect	6-10	21 (35.0)
Very large effect	11-20	14 (23.4)
Extremely large effect	21-30	5 (8.3)

Table 2: DLQI Mean score in different age group (n=60)

Age group	Patients	DLQI Mean score	F value	p value
20-29	14	15.21	10.13	<0.0001
30-39	20	9.8		
40-49	9	6.44		
50-59	13	4.75		
60-69	5	2.6		

Table 3: DLQI scores of patients with psoriasis (n = 60)

Questions	Mean(SD)
Symptoms and feelings	
1. Over the last week, how itchy, sore, painful or stinging has your skin been?	0.98 (2.12)
2. Over the last week, how embarrassed or self conscious have you been because of your skin?	0.97 (1.41)
Daily activities	
3. Over the last week, how much has your skin interfered with you going shopping or looking after your home or garden?	0.95 (0)
4. Over the last week, how much has your skin influenced the clothes you wear?	0.92 (0.71)
Leisure	
5. Over the last week, how much has your skin affected any social or leisure activities?	0.88 (0.71)
6. Over the last week, how much has your skin made it difficult for you to do any sport?	0.85 (0.71)
Work and school	
7. Over the last week, has your skin prevented you from working or studying? If “no”, over the last week how much has your skin been a problem at work or studying?	0.87 (1.41)
Personal relationships	
8. Over the last week, how much has your skin created problems with your partner or any of your close friends or relatives?	0.83 (0.71)
9. Over the last week, how much has your skin caused any sexual difficulties?	0.88 (0.71)
Treatment	
10. Over the last week, how much of a problem has the treatment for your skin been, for example by making your home messy, or by taking up time?	0.82 (0)
Total	8.95 (8.48)

Highest DLQI Mean score 15.21 was noted in 20-29 yrs of age group and lowest DLQI Mean score 2.6 was noted in 60-69 yrs of age group (**Table 2**). The mean score was apparently highest in 20-29 years of age group which was highly significant ($p < 0.0001$) by ANOVA test.

Table 3 summarizes Mean (SD) DLQI score of patients in various questions. Highest Mean (SD) DLQI score was observed in symptoms and feelings 0.98(2.12) and 0.97(1.41) respectively. Lowest Mean (SD) DLQI score was observed in treatment 0.82(0).

DISCUSSION

Psoriasis is a distressing, recurrent disease that significantly impairs quality of life and has no permanent cure. It represents a lifelong burden for affected patients. Depending on the severity and location of outbreaks, individuals may experience significant physical discomfort and some disability. The DLQI questionnaire may be used for routine clinical use by clinicians in order to assist the clinical consultation, evaluation and clinical decision making process. During the last 14 years there has been a gradual increase in the international use of the DLQI. The 10 questions are related to patients' perception of the impact of skin diseases on different aspects of their health related quality of life over the last week.

In our study M: F ratio was 2.16:1. The DLQI mean score was 8.95 ± 8.48 (Mean \pm SD) in our study which was comparable to study by Tung-Yi Lin et al where the DLQI mean score was 9.16 ± 6.3 .¹⁷ A study by Robert et al reported that DLQI mean score was 7.9.¹⁸

Out of 60 patients, psoriasis had small effect on quality of life in 20% of the patients, moderate effect on 35% of patients, very large effect on 23.4% of patients and extremely large effect on 8.3% of patients. So in our study 66.7% of the patients had moderate to extremely large impact on the quality of life. Our study findings were comparable to study by Tung-Yi Lin et al in which 67% of the patients reported moderate to extremely large impact on their quality of life (DLQI >6).¹⁷ A study by Martins et al reported that psoriasis affected the quality of life in 99% of patients with age varying from 20 to 70yrs¹⁹ compared to 86.7% in our study. In a survey by the national psoriasis foundation almost 75% of patients believed that psoriasis had moderate to large negative impact on their quality of life, with alterations in their daily activities.²⁰ Thus, mental and physical burdens of

patients affected by psoriasis as well as the impact on professional and private life caused by disease are greater than often presumed.¹⁶

Age is another important factor affecting the quality of life in patients with psoriasis. The DLQI mean score was 15.21 in 20-29 years of age group as compared to (2.6) in older age group (60-69 years) using ANOVA test which was clinically highly significant ($p < 0.0001$). This finding was consistent with study by Tung-Yi Lin et al where high DLQI mean score was noted in younger patients.¹⁷ The Lundberg study in Nordic countries reported elderly patients had less impairment in quality of life compared with younger patients.²¹ Physical health has a greater impact on psoriasis in older patients, but psychosocial aspects have a greater impact in younger ones.^{17, 20-22} However, another study in Italy showed that older patients with psoriasis had worse life quality.²³ This difference could mean that the impact of the age factor on the quality of life of patients with psoriasis may vary in different countries and further study is necessary to explain this diversity. The inverse association between DLQI scores and age suggests that the QOL of older patients is generally less affected by skin disease than the QOL of younger patients, an interpretation which seems intuitively reasonable, as older patients may be less interested in appearance and more confident in dealing with social relationships.¹⁸

In our study the DLQI questionnaire, showed higher scores for the section of symptoms (0.98) and feelings (0.97) which were also in agreement with previous research.¹⁷ Our study showed lower scores for treatment related problems. The observations reported in our study provide significant new insights into factors impacting the life quality of patients with psoriasis in India. Since there is paucity of the data related to quality of life assessment in Indian psoriatic patients, this study was an earnest attempt in this direction. Our study provided baseline data for further larger studies and has ascertained importance of quality of life in psoriasis patients among the population.

CONCLUSION

The present study provides compelling evidence that psoriasis affects the quality of life, and it highlights the importance of adopting a multidimensional assessment of psoriasis. The assessment of psoriasis severity requires a more holistic approach which encompasses both clinical and psychological measures and not merely the clinical severity as-

assessment in isolation. The QOL tools are important measure of patient satisfaction and treatment monitoring in the developing world.

LIMITATION

This study was cross sectional and single centered carried out at a tertiary care teaching hospital; therefore results of this study cannot be applied to general population.

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