



# DLQI and PASI in patients of psoriasis attending tertiary care centre.

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## INTRODUCTION

Psoriasis is a common, chronic, immune mediated, inflammatory and proliferative cutaneous disorder characterized by well defined, erythematous, scaly, indurated plaques on extensor aspect of body and scalp, affecting approximately 1.5-2% of the world population.<sup>1</sup>

Psoriasis does not have much effect on patient's survival, but has got a very significant deleterious effect on the quality of life (QOL), which is comparable with other chronic diseases like diabetes mellitus, cancer and diseases of heart, lung, liver, kidney etc.<sup>2,3</sup> Psoriasis is a serious dermatological condition which strongly affects the way in which a person sees himself and compare with others. Due to altered external appearance; these patients are more likely to be vulnerable for social stigmatization. The patients might feel humiliated when they expose their bodies during intimate relationships, swimming, public gatherings, playing or even attending their duties or job that do not provide privacy.<sup>4</sup> This may lead to loss of self-confidence, discomfort, anger and psychological distress in these patients.

Chronicity and unpredictable nature of the disease with intermittent exacerbation and disfigurement may further increase the sufferings of the patients especially when the lesions are present over face, scalp and other exposed body parts.<sup>5,6,7,8</sup>

The severity of disease in psoriasis is assessed by measurement of body surface area; although there are other postulates which argue that, quality of life (QOL) would be a better method of assessing the severity of disease in psoriasis. Quality of life includes all the factors that have got a significant impact on the individual's life

and represents the extent to which the expectations of an individual are matched by actual experience.

Dermatology life quality index (DLQI) is an important component in medical decision making along with the effectiveness of the treatment in patients suffering from dermatological diseases.<sup>9</sup>

Work absence is commonly seen in these patients, which may leads to increased economic and financial burden.<sup>10,11</sup> These patients may commonly indulge in alcohol, smoking, substance abuse and other nonprescription drugs, which may further trigger the disease activity and reduce the effectiveness of treatment. Identification of such patients and incorporation of specific psychosocial interventions early in the treatment of psoriasis may improve overall outcome.<sup>12</sup>

There is a paucity of the literature regarding QOL assessment in psoriasis patients. Only few studies have been carried out in different regions of our country, but with different results, comparing different parameters. Hence there is a need to further refine the quality of life measures for the patients of psoriasis.

Considering all these aspects, the present study was carried out to understand the perceptions of the patients living with psoriasis in relation to their quality of life.

## **AIM AND OBJECTIVES**

### **AIM:**

- To assess DLQI in psoriasis patients of all age group, type, duration and severity of disease, and patient's response to the assessment.

**OBJECTIVES:** To evaluate the DLQI in patients suffering from all types of psoriasis.

## **MATERIAL AND METHODOLOGY**

The Cross-sectional study was conducted in the Department of Dermatology, Venereology and Leprology, National Institute of Medical Sciences & Research, Jaipur. The time period for this study was from January 2021 to June 2022. 122 patients of psoriasis irrespective of their age, type, duration, severity of the disease and response to the treatment were included in the study. The study was conducted based on the following inclusion and exclusion criteria.

### **INCLUSION CRITERIA:**

1. Patients with all types of psoriasis
2. Psoriasis patients of both sexes and all age group
3. Newly diagnosed cases, as well as old cases of psoriasis

**EXCLUSION CRITERIA:**

1. Unwilling patients
2. All psoriasis patients who are differently-abled or having other chronic debilitating diseases or other associated other chronic skin disorders

**METHODOLOGY:**

Patients were explained about the nature of study and written consent was obtained before including them in the study.

The Demographic data such as age and gender of the selected patients, history of stress and duration of the disease were taken. Patients were subjected to general and systemic examination. A thorough Dermatological examination was done. PASI was calculated for all patients. Quality of life was evaluated in all psoriasis patients by using DLQI structured questionnaire.

**STATISTICAL ANALYSIS:**

All the data were analysed by Graphpad Prism (version 9). For the multivariate analysis, ANOVA was used. Bonferroni correction method was used to compare the different pair of DLQI groups as well as PASI groups. Pearson's Correlation was used to assess the relationship between the different variables.

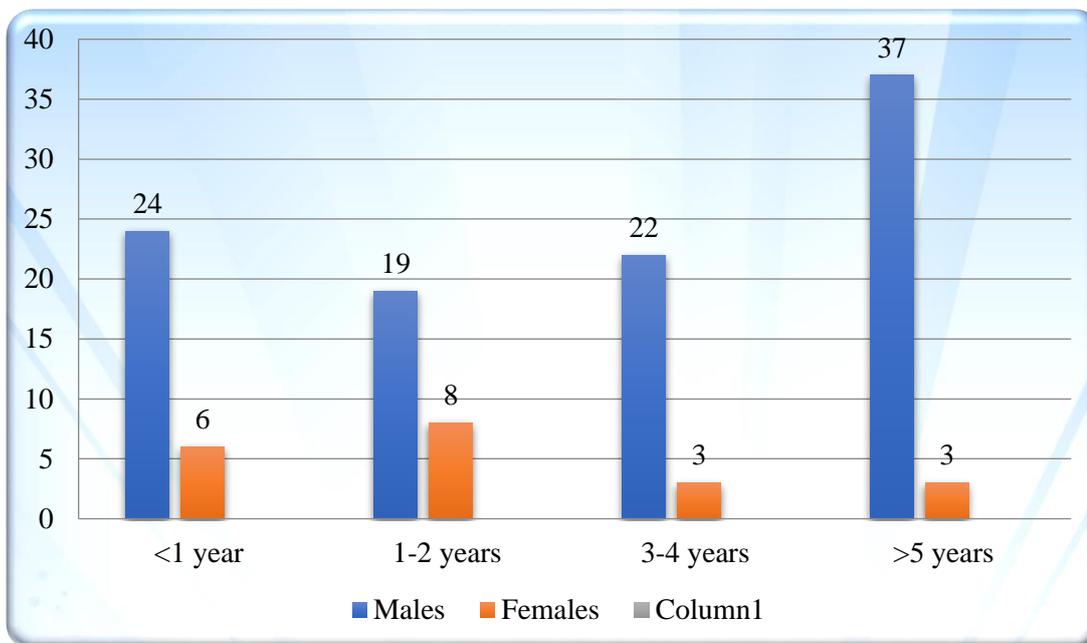
**OBSERVATIONS AND RESULTS**

In this study the following observations were made. Among the 122 patients, 102(83.60%) were male and 20(16.40%) were females with male to female ratio of 5.1:1

**Table 1: Comparison of Age in Males & Females**

Gender	Mean	Standard Deviation	P – Value
Male	42.9	16.58	0.1578
Female	37.2	15.41	

Mean age of onset in female ( $37.3 \pm 16.58$  years) was slightly lower than in male ( $42.9 \pm 15.41$  years). (Table 1)

**Figure 2: Distribution of patients according to Duration of disease**

$\chi^2 = 6.39$ ; p-value = 0.093

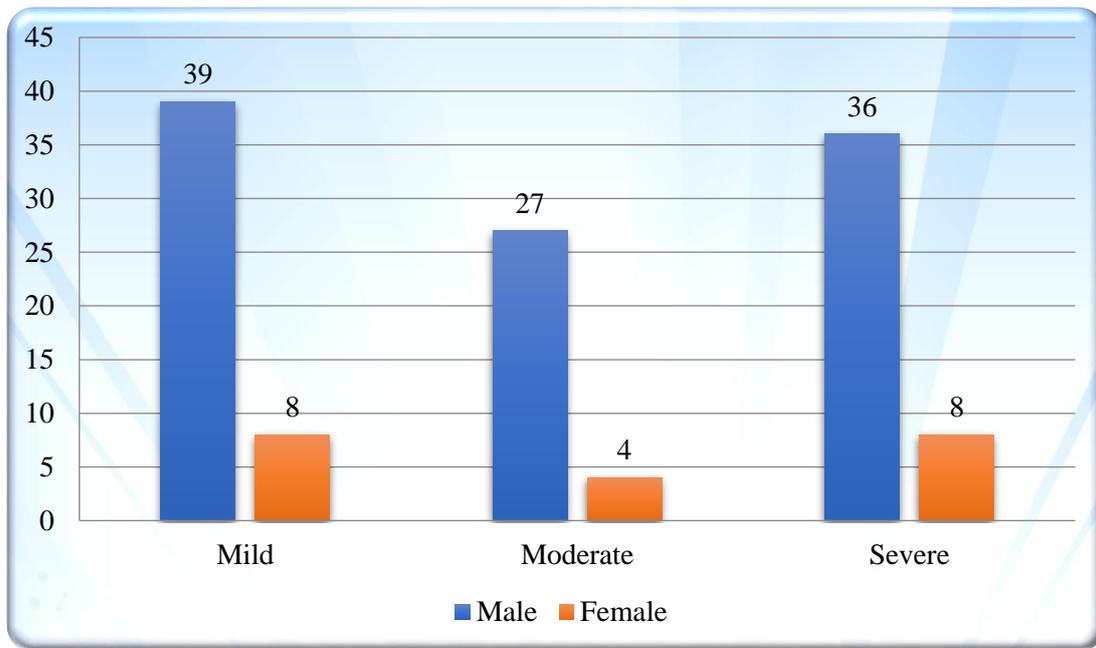
Among 122 patients in the study, majority 40(32.77%) had disease duration of 5 years or more followed by 30(24.63%) patients had duration of less than 1 year, 27(22.12%) patients had duration of 1-2 years and 25(20.48%) patients had duration of 3-4 years. **(Figure 2)**

Among 122 patients enrolled in the study, 118(96.72%) patients complained of pruritus of which 58(47.54%) had moderate pruritus, 46(37.71%) had severe pruritus and 14(11.47%) had mild pruritus respectively.

There was no significance difference observed between males and females with respect to pruritus.( $p > 0.05$ )

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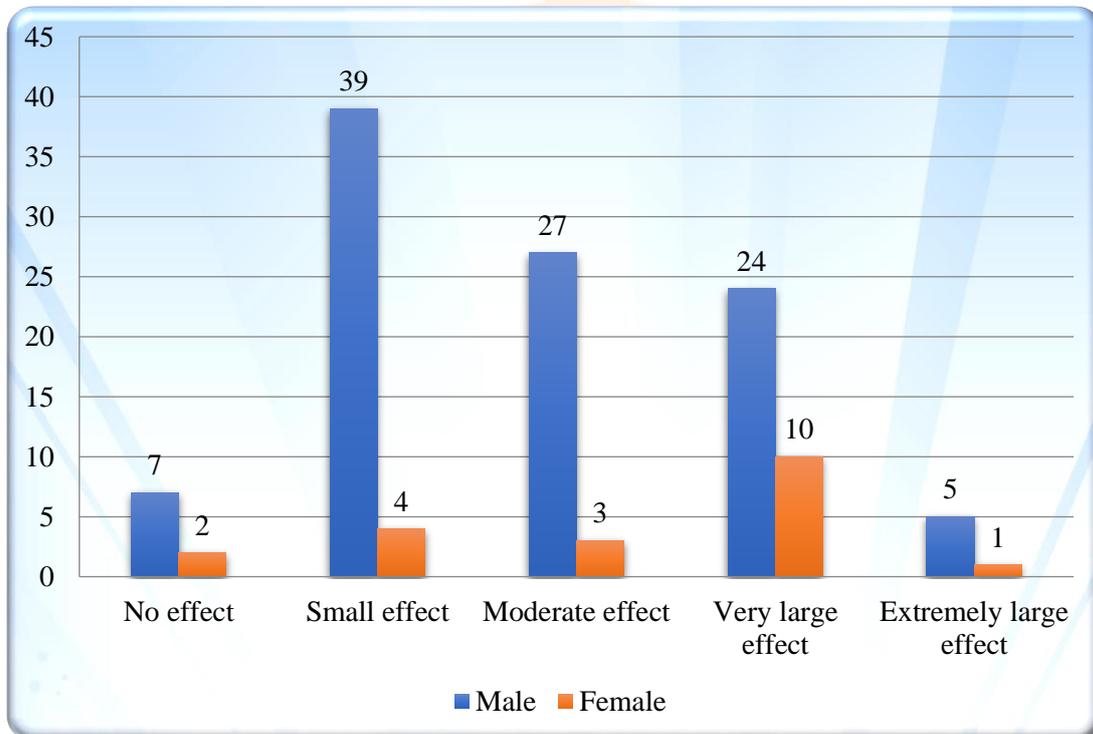
**Figure 4: Distribution of patients according to PASI Score & Gender**



$\chi^2 = 0.39$ ; p-value = 0.822

Out of 122 patients, 47(38.53%) had mild psoriasis, 31(25.41%) had moderate psoriasis and 44(36.06%) had severe psoriasis respectively. **(Figure 4)** There was no significant difference in PASI score of males and females. (p> 0.05)

**Figure 5: Distribution of patients according to Dermatology Life Quality Index (DLQI) & Gender**



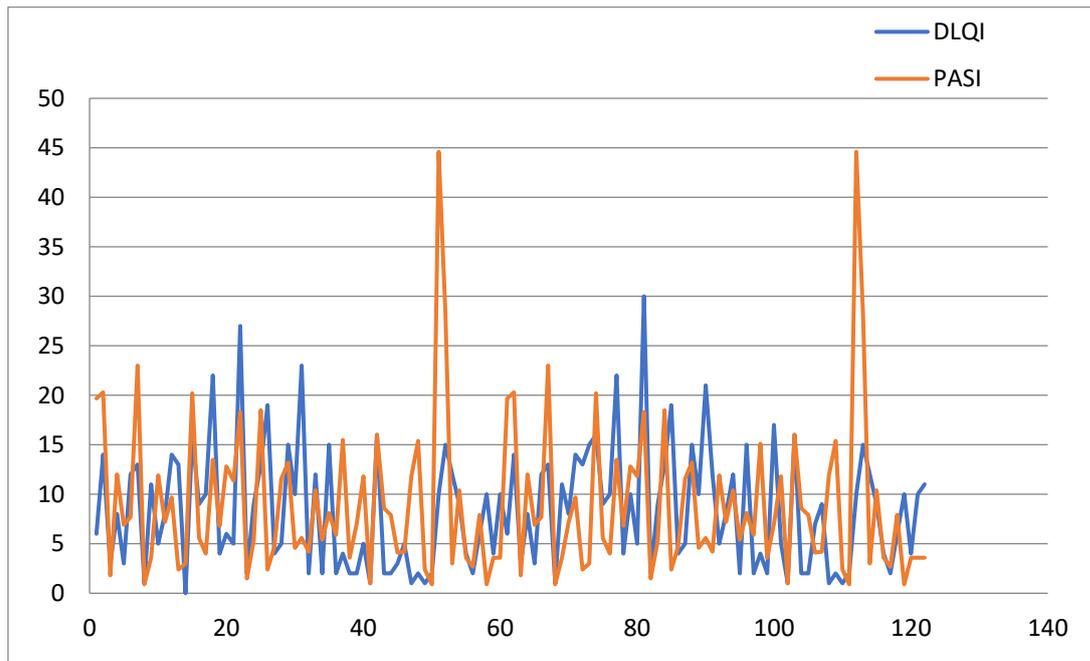
$\chi^2 = 6.89$ ; p-Value = 0.14

Out of 122 patients, psoriasis had small effect on quality of life in 43(35.25%) patients, moderate effect in 30(25.41%) patients, very large effect in 34(27.87%) patients and extremely large effect in 6(4.92%) patients respectively.

**(Figure 5)**

There was no significant difference in the DLQI score of males and females.( $p>0.05$ )

**Figure 6: Correlation between DLQI & PASI in study group.**



**Table 2: Correlation between DLQI & PASI in study group.**

Score	r (Correlation)	p-Value
DLQI & PASI	0.3279	<0.05(S)

Significant correlation was found between DLQI and PASI Sore in the study group. ( $r= 0.3279$ )

## DISCUSSION

Psoriasis is a common, chronic, immune mediated, inflammatory and proliferative cutaneous disorder characterized by recurrent remissions and relapses. It has got significant negative impact on patient’s quality of life which limits their daily routine, occupational, social and recreational activities. Psychological distress, Anxiety, Depression and at times suicidal ideation has been noticed in these patients.

Early identification and incorporation of specific psychosocial interventions in the treatment of these patients may improve overall outcome.

The present study was carried out to assess the quality of life, determine the psychological impact in patients of psoriasis so as to improve overall outcome in these patients by appropriate interventions.

### **Gender & Age Distribution:**

Among 122 patients included in the study, 102(83.60%) were males and 20 were female (16.40%) with male to female Ratio of 5.1:1 similar to the study done by Bedi et al.(1995)<sup>13</sup> revealed male to female ratio of 2.4:1..

### **Age of onset:**

The mean age of onset in female ( $37.2 \pm 15.41$  years) was slightly lower as compared to the men ( $42.9 \pm 16.58$  years). Similar finding were observed by Asokan et al.(2011)<sup>15</sup> in their study with mean age of onset in male was  $40.3 \pm 13.4$  years while in female it was  $34.7 \pm 16.4$  years.

### **Duration of disease:**

Majority of the patients had disease duration of 5 years or more. There was no significance difference observed between males and females with respect to duration of disease. ( $p > 0.05$ ) Sekaret et al.(2020)<sup>14</sup> did study on 40 patients of psoriasis; out of which 10(47.5%) had the disease duration of 1 to 5 years ,10(25%) had disease duration of 6 to 10 years and 9(22.5%) had disease duration of 11 to 20 years.

Prolonged duration of disease was associated with increased risk of developing complications and co-morbidities including psoriatic arthritis as well as metabolic syndrome association which further deteriorate the QOL of patients.

### **Stress as an aggravating factor:**

In the present study, 53.28% of patients gave history of aggravation of psoriasis due to various stresses. Emotional stress may influence the development and exacerbation of psoriasis in 37-78% of the cases as observed in study done by Sarkar et al.(2016)<sup>16</sup>.

Stress aggravates the psoriasis which leads to more severe itching. Itching in turn will lead to stress and this vicious cycle continues. Prolonged duration of stress was associated with various types of psychological co-morbidities including Anxiety and Depression.

**Pruritus in Psoriasis:**

96.72% of the patients had pruritus, out of which 47.54% had moderate pruritus whereas 37.71% had severe and 11.47% had mild pruritus.

There was an increased incidence of pruritus in the present study; which could not be correlated with other study.

The increased incidence of pruritus in the present study was strongly related to anxious and depressive psychopathology. Severe pruritus was associated with sleep disturbances which further led to behavioral and psychological disorders as well as reduction of QOL.

**Quality of life in Psoriasis:**

Mean DLQI score was  $8.27 \pm 6.10$  in our study group. Psoriasis had small effect on QOL in 35.25% patients, moderate effect in 25.41% patients, very large effect in 27.87% patients and extremely large effect in 4.92% patients.

In the survey done by the national psoriasis foundation, nearly 75% of patients had Moderate to Large negative impact on their quality of life, with alterations in their daily routine activities.<sup>19</sup>

Thus results of the present study correlate well with above mentioned studies.

Low quality of life was related to increased frequency of developing demoralization, low self worth, substance abuse disorders as well as various psychiatric co-morbidities including Anxiety and Depression and suicidal ideations.

**Correlation between PASI and DLQI scores:**

Mean PASI score was  $8.9 \pm 7.67$  and Mean DLQI score was  $8.27 \pm 6.10$  in the study group. There appears to be a significant correlation between the PASI score and DLQI. Higher PASI scores were associated with increased affection on the quality of life.

Nayak et al.(2018)<sup>17</sup> found similar results in their study on 102 patients of psoriasis.

Quality of life was severely impaired when the disease was severe and lesions were present especially over face, scalp and exposed body parts. It was also observed that improvement in the disease also led to improvement in QOL. Hence early and effective treatment of psoriasis may greatly help in improving the QOL.

## SUMMARY

- In the Cross-sectional study of 122 patients of psoriasis;
- Most common type of psoriasis was chronic plaque psoriasis (72.94%) followed by scalp psoriasis (9.02%), acute guttate psoriasis (6.56%), palmoplantar psoriasis (4.92%), flexural psoriasis (3.28%) and equal cases of pustular and erythrodermic psoriasis (1.64%).
- Mean PASI score was  $8.9 \pm 7.67$  in the study group and 38.53% patients had mild, 25.41% had moderate and 36.06% had severe psoriasis.
- History of aggravation of psoriasis was present by various types of stress in 53.28% of the patients.
- 96.72% of the patients complained of pruritus, out of which 37.71% had severe, 47.54% had moderate, and 11.47% had mild pruritus.
- Mean DLQI score was  $8.27 \pm 6.10$  in the study group, 35.25% had moderate effect, Psoriasis had small effect on QOL in 25.41%, very large effect in 27.87% and extremely large effect in 4.92% of the patients.
- There appears to be a significant correlation between the PASI score & DLQI in our study.

## CONCLUSION

This study concludes that, psoriasis has got a very significant negative impact on patient's quality of life and emphasizes that it is very important to evaluate all patients for the QOL in all patients for associated psychological distresses like Anxiety and Depression at the time of making any therapeutic decision.

Evaluation and effectiveness of psychological interventions can be of great help in the treatment of such cases.

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