

## Evaluation of functional impairment in psoriasis

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### ABSTRACT

**Background:** Psoriasis is a chronic disease, the course of which is punctuated by exacerbations and remissions. The impact of a chronic, relapsing, and disfiguring disease such as psoriasis on occupational, social, and other areas of functioning is substantial and needs attention. **Aim:** The purpose of this study was to assess the level and nature of functional impairment in psoriasis. **Methods:** Forty-three consecutive patients attending the dermatology clinic of a rural hospital were studied for psychiatric comorbidity and the level of functioning, using a semistructured questionnaire. **Results:** Psoriasis affected social functioning of 48% patients, led to decreased work efficiency in 51.1%, and to subjective distress at work in 62.8% of patients. Stress in home environment and interpersonal relationships was reported by 69.8%. Social and occupational functioning worsened with increasing severity of psoriasis after 1-year duration of illness. Patients complaining of pruritis frequently had anxiety disorders. Psychiatric comorbidity was detected in 67.4% cases. **Conclusion:** Substantial proportion of patients suffered deterioration of functioning, especially with increasing duration of illness. Thus, timely attention by dermatologists is needed in order to limit the disability caused by psoriasis. To achieve this, liaison with psychiatrist would be crucial along with illness education and emotional support.

**Key Words:** Functional impairment, Psoriasis, Psychiatric comorbidity

### INTRODUCTION

The clinical impact of any medical illness is increasingly being assessed by the level of the patient's well being and functioning.<sup>[1]</sup> Dermatological illnesses such as psoriasis often cause disfigurement, which further increase the suffering of the patient. The embarrassment, stigma, and social anxiety caused by the illness often lead to relational conflicts, emotional distancing, isolation, and depression, affecting the quality of life of a person.

This study was undertaken to assess the level and nature of the functional impairment in psoriasis. The role of

stress in the exacerbation of psoriasis and triggering relapses has already been extensively studied. However, the functioning of patients in various spheres of life, such as physical and sexual functions, basic biological functions, social and occupational functions, and family relationships have been seldomly studied. Such assessment is likely to improve the insight of patients, which is also known to improve the prognosis in psoriasis.<sup>[2-5]</sup>

### METHODS

The objectives of the study were to assess the functioning of patients with psoriasis in various spheres

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of life and to diagnose comorbid psychiatric disorder. The sample consisted of consecutive patients suffering from psoriasis attending the dermatology clinic of a rural general hospital near Pune. The purpose of the study and questionnaire were explained to each patient and their verbal consent was obtained. Detailed dermatological examination and documentation of disease severity was done using psoriasis area severity index (PASI). Basic information about the illness, course, treatment details, family history, history of psychiatric problems, and impact of illness on various areas of occupational, familial, and relational functioning was recorded with the help of a semistructured questionnaire specially designed for the study by a dermatologist and a psychiatrist together. The questionnaire was prevalidated by the peer group.

This semi-structured questionnaire yielded a score of the functional level of these patients. Social and occupational functioning was assessed by social and occupational functioning assessment scale (SOFAS), whereas relational functioning was assessed by global assessment of relational functioning (GARF).<sup>[6]</sup> In these scales, functioning of an individual is considered on a continuum from excellent to grossly impaired functioning. It includes impairments owing to physical limitations, as well as owing to mental impairments. The GARF scale indicates the overall adjustment of a family or relationships on a hypothetical continuum ranging from competent optimal relational functioning to a disrupted, dysfunctional relationship within a range of 100–0.<sup>[7,8]</sup> Statistical tools such as mean and standard deviation were used to summarize data. Analysis was done using nonparametric tests such as  $\chi^2$ -test and indicators such as relative risk. Feedback regarding the nature of their illness and related problems was given to patients at the time of the interview, and the course and further plan of treatment was explained.

## RESULTS

In all, 43 patients were included in the study, 27 from semiurban areas and 16 from adjacent rural areas. The sample included 27 males and 16 females aged 13–66 years. Out of these, 21% were unmarried. The occupational background showed that 37% were

dependent, 12% were laborers, 16% had a small business, and 35% were in the service class. The educational background revealed 16.3% were illiterate, 34.9% were primary educated, 23.3% were secondary educated, 20.9% had completed a diploma, 2.3% were graduates, and 2.3% were postgraduates.

Their PASI scores ranged from 3.8 to 74 (mean =  $42.1 \pm 21$ ). The mean SOFAS score was  $66.6 \pm 13$  and the mean GARF score was  $61.5 \pm 13.7$ ; the range for both was 40–90.

Impact of psoriasis on various spheres of functioning:

1. Social functioning: As shown in Table 1, social functions such as visiting and talking to relatives and friends were decreased in 51.5% of patients.
2. Occupational functioning: Subjective distress at work was reported by 62.8% of patients, followed by decreased efficiency at work by half of them (Table 1).
3. Relational functioning: The relational functioning was maximally affected. The majority of patients (69.8%) mentioned that their house remained tense after the onset of the illness; 60.5% of patients also agreed that they were not feeling happy and comfortable at home and did not feel free to discuss their problems at home. Practical and emotional expectations from relatives also increased in half of the patients (Table 1).
4. Impact on subjective general health, sleep, and appetite according to the site of involvement: Though some patients had extensive psoriasis, the maximum impact on the sleep, general health, and appetite was seen in patients who had lesions on exposed parts of the body. The sleep was most affected—67.4% of patients complained of sleep disturbances. Patients who had lesions on palms and soles and/or on the scalp had the maximum impact (Table 2).
5. Impact on sexual functioning: Sexual dysfunction and/or effect on sexual life owing to psoriasis were reported by 9 out of 43 (20.9%) of the patients. None of these patients had lesions over the genitalia.
6. Pruritus and anxiety disorders: A statistically significant association was found between the presence of itching and the presence of anxiety and

**Table 1: Impact of psoriasis on various functional aspects**

Sr. No.	Question	Patients with significant impact (n = 43)	Percentage
<b>Impact on social functioning</b>			
1.	Is there any change in visiting and talking to relatives and friends?	23	53.5
2.	Is there any change in attending social functions?	20	46.5
3.	Is there any change in participating in or initiating social activities?	20	46.5
<b>Impact on occupational functioning</b>			
1.	Is there any increase in the number of leaves taken from work?	7	16.3
2.	Is there any decreased efficiency at work?	22	51.2
3.	Are there any interpersonal problems at work?	12	27.9
4.	Is there any loss or change of job?	9	20.9
5.	Is there any effect on job-related decision-making?	8	18.6
6.	Is there any subjective distress at work?	27	62.8
<b>Impact on relational functioning</b>			
1.	Are you feeling happy and comfortable at home?	26	60.5
2.	Are you feeling free to discuss problems at home?	26	60.5
3.	Are there increased practical and emotional expectations?	23	53.5
4.	Is there reduced satisfaction about roles and responsibilities?	18	41.9
5.	Do you feel decreased happiness from festivals and celebrations?	14	32.6
6.	Does the house remain tensed?	30	69.8
7.	Is there lack of freedom of decision-making at home?	5	11.6

**Table 2: Impact on subjective general health, sleep, and appetite according to site of involvement**

Site of involvement	Sleep disturbances	Appetite disturbances	Worsened general health
Upper limb (n = 32)	63.5	46.9	56.2
Lower limb (n = 31)	63.3	48.3	57.7
Scalp (n = 20)	80.0	47.4	75.0
Trunk (n = 20)	70.5	55.0	55.0
Palms and soles (n = 14)	71.4	57.2	71.4

Number of patients in each type of involvement of site is not mutually exclusive.

stress-related disorders. (Odd's ratio = 4.25,  $\chi^2 = 5.05$ ,  $p < 0.001$ .)

7. Psychiatric comorbidity in psoriasis: Other psychiatric disorders found were adjustment disorders (11 patients), conversion and somatoform disorders (2 patients), anxiety disorders (7 patients), depressive disorders (8 patients), and delusional disorder (1 patient).

Correlations of various sociodemographic factors, illness-related variables, and various factors related to psychopathology were studied. The age and sex of the patient had no statistically significant correlation with the psychiatric problems or the severity of the illness. With increasing PASI score, the score of GARF scale decreased for females, but not for males. This negative correlation was statistically significant ( $p < 0.05$ ). With an increase in the duration of illness, relational functioning decreased significantly as the PASI increased. It was statistically significant for males after 3-year duration of illness. A strongly negative correlation between PASI and SOFAS score was noted after 1-year

duration of illness. It increased with the duration of the illness. It was similar in males and females. The level of anxiety in these patients as measured by the Hamilton anxiety rating scale increased with the PASI score but only after 5 years of illness. Other sociodemographic factors did not correlate with the severity of illness or psychiatric problems.

## DISCUSSION

Psoriasis patients reacting to stress function less well in terms of mental health and experience more disabilities in everyday life.<sup>[9]</sup> Significant levels of anxiety and depression have been reported in patients with psoriasis in Indian as well as international studies.<sup>[10-11]</sup> In our study, 29 out of 43 patients suffered from such problems. But the impact on various spheres of functioning was greater. An increasing PASI score caused worsening of social and occupational functioning, especially when the duration of illness was more than 1 year. The relational functioning was affected more in females than in males with increasing PASI scores and duration of illness. This could be owing to greater emotional sensitivity and familial involvement in females, but needs to be studied further.

Sleep disturbance was found in 29 (67.4%) patients. This was consistent with the results of other studies.<sup>[12]</sup> Qualitative accounts given by the patients revealed that it was not only owing to dermatological or psychiatric illness, but stigma, shame, guilt, and various illness-

related fears were contributory. Although none of the patients had lesions over the genitalia, 9 out of 43 (20.9%) patients reported sexual dysfunction and/or an effect on their sexual life.

A statistically significant association was found between pruritus and anxiety. This finding appears to be clinically relevant in detecting anxious psoriasis patients (relative risk = 2.06). Pruritus is known to play an important role in exacerbating psoriasis.<sup>[11]</sup> The degree of pruritus has been correlated with depression in one study.<sup>[13]</sup> In a cross-sectional interview, psychiatric morbidity was detected in 29 patients. There is a need for timely identification and appropriate management of psychiatric disorders in everyday dermatology practice.<sup>[14]</sup>

Better understanding and communication between psoriasis patients and their physicians may help to improve clinical outcomes in psoriasis.<sup>[15]</sup> Helping the patient with psoriasis to learn to live with the condition is challenging but important for a dermatologist.<sup>[16]</sup>

In our study, up to two-thirds of patients with psoriasis suffered from functional impairment. It would be important to limit this impairment in order to help patients with this chronic illness. Clinical parameters such as the presence of pruritus, prolonged duration of illness, and a high PASI score should direct the clinician to detect functional impairment such as subjective distress experienced by the patient at work and at home, interpersonal difficulties, restrictions in social life, sleep and appetite disturbances, and deterioration of general health. The patient's functioning and his familial relationships are important and should be preserved throughout the course of illness. This would reduce the psychosocial difficulties faced by the patient and improve his compliance as well as satisfaction with the treatment. To achieve this, liaison with a psychiatrist would be crucial along with illness education and emotional support.

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