

## Effect of Lockdown Due to COVID-19 on Health and Lifestyle of Psoriasis Patients: A Web-Based Survey

### Abstract

**Background:** Chronic skin diseases like psoriasis affect a patient's physical, psychological, and social functioning as well as well-being, and the lockdown acted as a cofactor in further worsening the quality of life in psoriasis patients. **Objective:** The objective of the study is to assess the effect of lockdown on the health, lifestyle, and mental well-being of psoriasis patients. **Methods:** A cross-sectional study was done using an online questionnaire shared through messenger applications to the patients of chronic plaque psoriasis who registered in the psoriasis clinic between August 2020 and December 2020. Data regarding demographics, psoriasis, lifestyle changes, mental status, financial loss, and problems faced during lockdown were collected. **Results:** Our study included 181 completed questionnaires. The mean age was 37.7 (SD 13.9) years, and 124 (68.5%) were males. Sixty-five (35.9%) patients reported worsening of their psoriasis during the lockdown. Ordinal regression analysis revealed male sex had a higher proportion of worsening of psoriasis (OR 2.56, 95% CI 1.29–5.08,  $P < 0.007$ ). Duration of illness  $< 6$  months (OR 0.14, 95% CI 0.02–0.98,  $P < 0.04$ ) and feeling relaxed (OR 0.14, 95% CI 0.03–0.56,  $P < 0.005$ ) were negatively associated with disease worsening. **Conclusion:** The findings of our study reveal the impact of coronavirus disease 2019 (COVID-19) lockdown on the life of people with psoriasis. A substantial number of patients had a flare of psoriasis during the lockdown. A shorter duration of illness and relaxed mental status was negatively associated with disease worsening. Individuals with financial loss felt anxious or depressed.

**Keywords:** COVID-19, lifestyle changes, lockdown, psoriasis

### Introduction

Chronic skin disease like psoriasis affects approximately 2% of the population and contributes 1.76% to the total global burden of disease measured in DALYs (disability-adjusted life years).<sup>[1,2]</sup> It adversely affects patients' health-related quality of life (HRQoL) and may cause disability equivalent to other major diseases, such as heart failure, type 2 diabetes, or depression.<sup>[3,4]</sup>

Coronavirus disease 2019 (COVID-19) was declared as a pandemic by World Health Organization (WHO) on March 11, 2020.<sup>[5]</sup> The sudden lockdown led to the closing down of a considerable number of private hospitals, essential medical services, and pharmacies that had a significant impact on the different aspects of the life of people in India. The economy was at a standstill; people working in the informal sectors such as daily wagers, private jobs, or running

small shops were in severe jeopardy and unable to meet their basic needs.

Patients were unable to reach healthcare facilities or were returned from hospitals that were focusing on the management of COVID-19 cases. Consequently, patients tried self-medication, natural remedies, and alternative medicines. The treatment in some of the patients was interrupted for different reasons such as fear of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infections due to immune-suppressants, difficulty in seeking consultation on scheduled visits, delayed biologic or immune-suppressant initiation in new patients, which all contributed to worsening of psoriasis.<sup>[6,7]</sup> Tele dermatology consultations were started at many places to tackle these problems but it was a new concept for our population who are used to consulting physically.

The lockdown also had a negative impact on mood and psyche aspects, which may

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further act as a cofactor in worsening the natural course of chronic skin diseases like psoriasis.<sup>[8]</sup>

Hence, we conducted this study in psoriasis patients to identify the challenges faced and their impact on the skin condition so that necessary recommendations and actions can be taken regarding their management in such scenarios.

## Methods

An online questionnaire with open-ended and closed-ended questions was prepared after reviewing the literature and consulting experts from dermatology and psychiatry. Links of the questionnaires were shared through messenger applications to the patients of chronic plaque psoriasis who registered in the psoriasis clinic between August 2020 and December 2020. On receiving and clicking the link, the participants were automatically directed to the information about the study and informed consent.

After they accepted the survey, they filled up the details of demographics, socio-economics, difficulties faced during lockdown pertaining to treatment, lifestyle changes, disease status (worsened/improved/no change), mental health status, adherence to treatment, financial difficulties, and whether they were diagnosed with COVID-19. The data of COVID-19 positive patients was recorded from their medical records.

In the descriptive statistics, the mean, SD, median lowest and highest, frequency, and ratio values were used. The distribution of variables was measured with the Kolmogorov–Smirnov test. Logistic regression was used to estimate associations with adjustments for

potential confounders. *P* values <0.05 were considered statistically significant. The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement for cross-sectional studies was used as a basis for reporting. The IBM SPSS 26.0 program was used in the analyses.

## Results

Approximately 729 patients aged 18 years and above suffering from chronic plaque psoriasis who registered in the clinic were approached; 206 responded. A total of 181 complete questionnaires were included in the final data analysis. Their mean age was  $37.7 \pm 13.9$  years, and 124 (68.5%) were males [Table 1]. Sixty-five (36%) patients had worsening of psoriasis either in the form of an increase in the number or size of the existing lesions during the lockdown.

One hundred sixty-four (90.6%) patients suffered from psoriasis for more than 1 year. The most common comorbidities were hypertension and diabetes, each present in 17 (9.4%) patients. Seventy-eight (43.1%) patients visited the outpatient department (OPD) every month. The problems they faced during the lockdown were primarily related to medicine procurement and getting the investigations done [Figure 1].

Ninety (49.7%) patients continued the medicine prescribed to them before lockdown, and 47 (26%) took treatment through teleconsultation. The rest of the patients stopped all the medicines or shifted to alternative therapies such as homeopathy (9, 5%), Ayurveda (11, 6.1%), or natural remedies (10, 5.5%). Out of 65 patients who had a flare

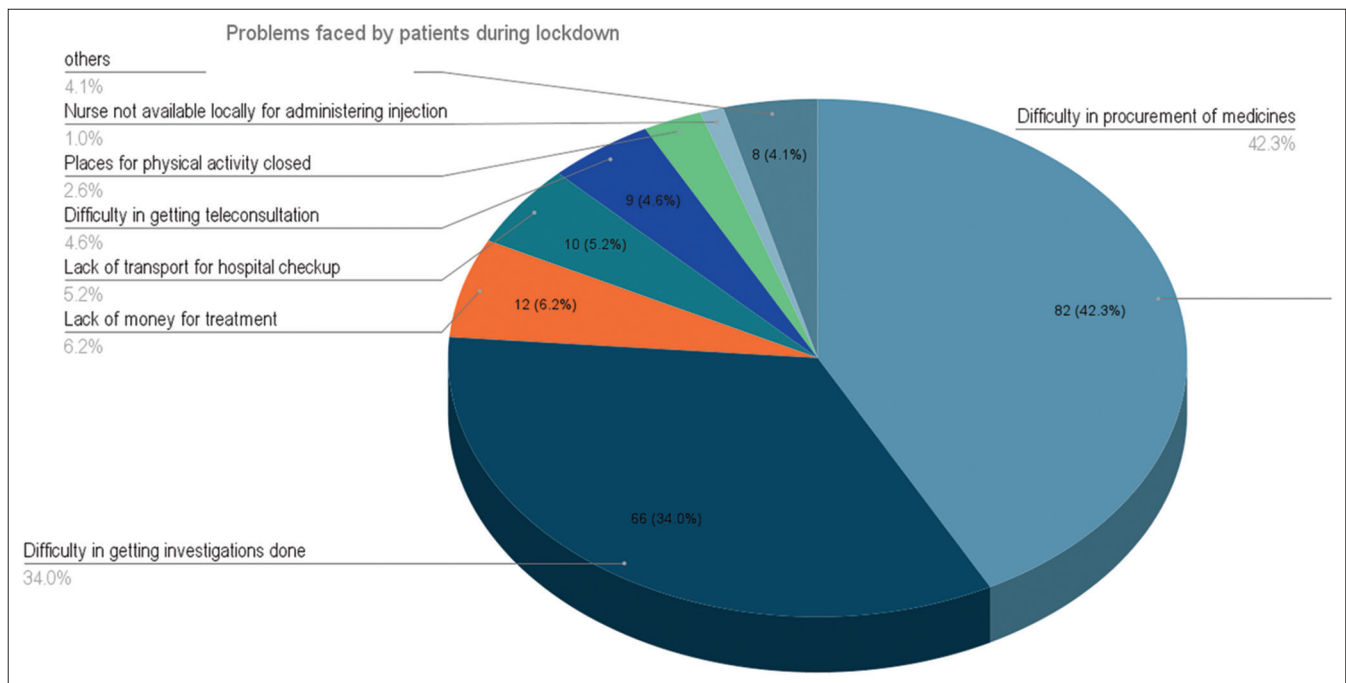


Figure 1: Problems faced by patients during lockdown

of disease during the lockdown, 38 (58%) had reduced or stopped all forms of physical activity. Among patients who smoked, 50% (7/14) reduced smoking, and 28.6% (4/14) stopped it completely. Similarly, with those who took alcohol, 7/39 (17.9%) reduced intake, 18/39 (46.1%) stopped it completely, and 4/39 (10.2%) took more than usual during the lockdown.

Sixty (33%) people felt that they were prone to COVID-19 infection due to their psoriasis. Twenty-nine (16%) patients were tested for COVID-19, out of which four (13.8%) tested positive. Two of them were hospitalized as they developed generalized pustular psoriasis and erythroderma and succumbed to COVID-19 related complications.

Ordinal regression analysis revealed male sex had a higher proportion of worsening of psoriasis (OR 2.56, 95% CI 1.29–5.08,  $P < 0.007$ ). Sixty-five (36%) patients had a feeling of depression during the lockdown. Altered sleep patterns were noted in 69 (38.1%) patients. Duration of illness  $<6$  months (OR 0.14, 95% CI 0.02–0.98,  $P < 0.04$ ) and feeling relaxed (OR 0.14, 95% CI 0.03–0.56,  $P < 0.005$ ) were negatively associated with disease worsening [Table 2].

### Discussion

Our study demonstrates how deeply the COVID-19 induced lockdown affected the lives of people with psoriasis. About 65 (36%) patients reported worsening of their psoriasis; those with a flare felt depressed (49.2%) and stressed (20%). Similar findings were noted by Mahil *et al.*<sup>[8]</sup> and Beytout *et al.*<sup>[9]</sup> separately. This association may be further compounded by isolation and poor access to healthcare. Non-adherence to treatment was largely due to fear of severe COVID-19 infection owing to immunosuppressants, while a financial loss could have further enhanced it.<sup>[10]</sup>

Chronic diseases like psoriasis are known to cause depression. Almost 65 (36%) patients in our study had a

feeling of depression during the lockdown. Half of them had altered sleep patterns, and three-fourths had a financial loss, consistent with the findings of Li-yu Lin *et al.*<sup>[11]</sup> and Kuang *et al.*,<sup>[12]</sup> respectively. Problems were faced in their daily routine like eating habits, physical activity, sleep cycle, earnings, and commuting. Thirty-eight (58%) patients who experienced worsening of psoriasis had reduced or stopped all forms of physical activity, adding further to the flare of the disease.

### Limitations

Small sample size, chance that the patient’s self-assessment of the mental status and the disease flare could be inaccurate as the response of the patients were not cross-validated by a specialist, and no objective scoring system was used to assess the same. Usage of online Google forms for data collection hindered the participation

**Table 2: Ordinal regression analysis for association between selected factors and psoriasis disease worsening**

Variable	Odds ratio (95% CI)	Wald	Significance
Sex			
Female	Ref		
Male	2.56 (1.29 to 5.08)	7.26	<b>0.007</b>
Age	0.99 (0.97 to 1.01)	0.53	0.46
Education			
Can read and write	3.00 (0.94 to 9.54)	3.47	0.06
High school	1.32 (0.55 to 3.16)	0.40	0.52
Graduate	1.18 (0.50 to 2.74)	0.15	0.69
Postgraduate	Ref		
Duration of psoriasis			
$<6$ months	0.14 (.02 to 0.98)	3.91	<b>0.04</b>
6 months to 1 year	0.52 (0.14 to 1.89)	0.96	0.32
1–5 years	0.48 (0.22 to 1.06)	3.25	0.07
5 to 10 years	0.73 (0.33 to 1.60)	0.59	0.44
$>10$ years	Ref		
Felt during lockdown			
Relaxed	0.14 (0.03 to 0.56)	7.79	<b>0.005</b>
Same/no change	1.23 (0.38 to 3.93)	0.12	0.72
Stressed	2.41 (0.70 to 8.30)	1.96	0.16
Anxious/depressed	1.79 (0.57 to 5.62)	1.01	0.31
Frightened	Ref		
Financial loss			
No	0.84 (0.43 to 1.64)	0.23	0.64
Yes	Ref		
Physical activity			
Yes	0.84 (0.49 to 1.4)	0.36	0.54
No	Ref		
Stop medicine			
Yes	1.01 (0.51 to 2.02)	0.003	0.97
No	Ref		

CI, confidence interval; ref, reference category. Bold values are statistically significant ( $P < .05$ )

**Table 1: Socio-demographic details of the study cohort**

Demographics*			
Sex	Male n (%)	Female n (%)	Total n (%)
Number (n)	124 (68.5)	57 (31.5)	181
Mean age	36.11±13.9	41.2±14.02	37.71±13.7
Postgraduate	19 (15.3)	16 (28.1)	35 (19.3)
Graduate	47 (37.9)	16 (28.1)	63 (34.8)
Higher secondary	48 (26.5)	13 (22.8)	61 (33.7)
Can read and write	10 (8.1)	12 (21.1)	22 (12.1)
Unemployed	16 (12.9)	5 (8.7)	21 (11.6)
Student	18 (14.5)	8 (14.0)	26 (14.3)
Homemaker	2 (01.6)	31 (54.3)	33 (18.2)
Government job	24 (19.3)	6 (10.5)	30 (16.5)
Business	32 (17.6)	00	32 (17.6)
Private job	32 (17.6)	7 (12.2)	39 (21.5)

\*Categorical data are presented as number (%) and continuous data as indicated

of a large section of the population, such as those who do not have internet, smartphones, and the elderly population who are not familiar with using smartphones. The impact of home isolation and restrictions on physical movement may have affected the mental status of patients immensely, which could have affected the disease and their responses to questionnaires. The data may not be generalizable to all psoriasis patients, as nearly two-thirds of the contacted patients did not respond to the survey.

## Conclusion

The findings of our study reveal the impact of COVID-19 lockdown on the life of people with psoriasis. A substantial number of patients had a flare of psoriasis during the lockdown. A shorter duration of illness and relaxed mental status was negatively associated with disease worsening. Individuals with financial loss and those with flare felt anxious or depressed. A holistic approach ensuring the availability of medicine and laboratory investigation, psychological support, and addressing patient concerns would result in better management of disease during the pandemic.

## Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Nil.

## Conflicts of interest

There are no conflicts of interest.

## References

- Springate DA, Parisi R, Kontopantelis E, Reeves D, Griffiths CE, Ashcroft DM. Incidence, prevalence and mortality of patients with psoriasis: A UK population based cohort study. *Br J Dermatol* 2017;176:650-8.
- GBD 2017 DALYs and HALE Collaborators. Global, regional, and national disability-adjusted life-years (DALYs) for 359 diseases and injuries and healthy life expectancy (HALE) for 195 countries and territories, 1990-2017: A systematic analysis for the global burden of disease study 2017. *Lancet* 2018;392:1859-922.
- De Korte J, Mommers FM, Bos JD, Sprangers MA. Quality of life in patients with psoriasis: A systematic literature review. *J Invest Dermatol Symp Proc* 2004;9:140-7.
- Rapp SR, Feldman SR, Exum ML, Fleischer AB Jr, Reboussin DM. Psoriasis causes as much disability as other major medical diseases. *J Am Acad Dermatol* 1999;41:401-7.
- WHO Director-General's opening remarks at the media briefing on COVID-19 -March 2020.
- El-Komy MH, Abdelnaby A, El-Kalioby M. How does COVID-19 impact psoriasis practice, prescription patterns, and healthcare delivery for psoriasis patients? A cross-sectional survey study. *J Cosmet Dermatol* 2021;20:1573-9.
- Kwatra SG, Sweren RJ, Grossberg AL. Dermatology practices as vectors for COVID-19 transmission: A call for immediate cessation of nonemergent dermatology visits. *J Am Acad Dermatol* 2020;82:e179-80.
- Mahil SK, Yates M, Yiu ZZ, Langan SM, Tsakok T, Dand N, *et al.* Describing the burden of the COVID-19 pandemic in people with psoriasis: Findings from a global cross-sectional study. *J Eur Acad Dermatol Venereol* 2021;35:e636-40.
- Beytout Q, Pepiot J, Maruani A, Devulder D, Aubert R, Beylot-Barry M, *et al.* Impact of the COVID-19 pandemic on children with psoriasis. *Ann Dermatol Venereol* 2021;148:106-11.
- Pirro F, Caldarola G, Chiricozzi A, Tambone S, Mariani M, Calabrese L, *et al.* The impact of COVID-19 pandemic in a cohort of Italian psoriatic patients treated with biological therapies. *J Dermatolog Treat* 2020;1:1-5.
- Lin LY, Wang J, Ou-Yang XY, Miao Q, Chen R, Liang FX, *et al.* The immediate impact of the 2019 novel coronavirus (COVID-19) outbreak on subjective sleep status. *Sleep Med* 2021;77:348-54.
- Kuang Y, Shen M, Wang Q, Xiao Y, Lv C, Luo Y, *et al.* Association of outdoor activity restriction and income loss with patient-reported outcomes of psoriasis during the COVID-19 pandemic: A web-based survey. *J Am Acad Dermatol* 2020;83:670-2.