

**Psoriasis & Psychiatric Morbidity: A Profile from a Tertiary Hospital in North India****Swati Surabhi<sup>1</sup>, Prashant Kumar<sup>2</sup>, Babli Kumari<sup>3</sup>, Abhishek Kumar Jha<sup>4</sup>, Vikas Shankar<sup>5</sup>**<sup>1</sup>Senior Resident, Department of Skin and VD, Patna Medical College and Hospital<sup>2</sup>Senior Resident, Department of Skin and VD, Patna Medical College and Hospital<sup>3</sup>Senior Resident, Department of Skin and VD, Patna Medical College and Hospital<sup>4</sup>Assistant Professor, Department of Skin and VD, Patna Medical College and Hospital<sup>5</sup>Assistant Professor, Department of Skin and VD, Patna Medical College and Hospital

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**Abstract:**

**Background:** Psoriasis, a chronic inflammatory skin disease, is a significant global burden that negatively impacts individuals' physical and mental health. The connection between psoriasis and psychiatric illness has grown more of a concern, particularly in North India, where climate and genetics could affect disease prevalence. This study seeks to better understand the mental health issues experienced by psoriasis patients in North India and to identify any correlations between the skin condition's severity and emotional distress.

**Methods:** 200 people participated in a cross-sectional survey at a tertiary care facility in Northern India. This study used structured interviews and validated questionnaires to assess variables including psoriasis severity using the Psoriasis Area and Severity Index; PASI and psychiatric morbidity using the Hospital Anxiety and Depression Scale; HADS). Statistical analyses were conducted to identify relationships between the derived demographic and clinical data.

**Results:** According to the study's findings, the psychological problem was prevalent among psoriasis patients in Northern India. The prevalence of anxiety was 22.5% (HADS score 8), while depression was 17.7%. The severity of psoriasis, as measured by PASI scores, was associated with higher psychological morbidity. The fact that 10% of the participants reported both anxiety and depression simultaneously demonstrates the complexity of their mental health needs.

**Conclusion:** The findings emphasise the significance of integrated care that addresses both the dermatological and mental health aspects associated with psoriasis and the significant psychological impact of psoriasis in North India. This study improves our understanding of psoriasis and psychiatric morbidity, and highlights individualised care's importance. In the meantime, clinicians should adopt an integrated approach to improving patient outcomes incomplete the completion of additional research on this complex relationship.

**Keywords:** Anxiety, Depression, HADS, North India, Psoriasis, Psychiatric Morbidity.

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**Introduction**

Psoriasis is a chronic inflammatory skin disease that causes erythematous, scaly plaques on the skin and affects millions of people worldwide, placing a significant financial and emotional burden on both patients and healthcare providers. It is a significant public health concern, with estimates ranging from 0.51 to 11.43% globally [1]. Due to distinct demographic and environmental factors, psoriasis is more prevalent and severe in some areas of north India. Psoriasis is one of several skin conditions that the region's climate, genetics, and culture make especially prevalent [2, 3]. Psoriasis is associated with more than mental discomfort and cosmetic concerns; rising evidence suggests a two-way link between the condition and psychiatric morbidity.

Anxiety, depression, and suicidal ideation are all included in the wide range of mental health disorders that comprise psychiatric morbidity.

According to research [4], patients with psoriasis have reported lower quality of life, higher stress levels, and social stigma as a consequence of their skin lesions. The nature and level of the connection between psoriasis and psychiatric illness are insufficiently understood, particularly in the circumstances of North India.

**Objective:** The primary objective of this study is to conduct an in-depth analysis of the mental health issues faced by psoriasis patients receiving treatment at a prominent medical centre in

Northern India. Some objectives with a narrower focus are:

1. To characterise the clinical and demographic profile of psoriasis patients in Northern India.
2. To determine the prevalence and nature of psychological morbidity in psoriasis patients.
3. To investigate the potential relationship between psoriasis and emotional stress.
4. To determine if Northern India psoriasis patients have a comparable rate of psychiatric morbidity in geographical regions.

### Significance of the study

Numerous solid justifications exist for investigating the association between psoriasis and emotional distress. It addresses a significant gap in the literature by expanding beyond the Western sample deployed in most previous research. As a consequence, insufficient data about the sociodemographic and environmental factors in North India contribute to the association between psoriasis and psychiatric illness.

If healthcare providers have a more clear comprehension of the frequency and types of psychiatric morbidity in this population, they can

better address the psychological needs of psoriasis patients. This may eventually end in improved health and pleasure for patients. Healthcare professionals and researchers must know the psychological comorbidities associated with psoriasis. It emphasises the importance of a holistic approach to treating psoriasis, in which dermatologists and mental health professionals collaborate to treat the total participants.

This research aims at informing physicians, researchers, and policymakers about the intricate relationship between psoriasis and psychiatric morbidity in North India.

### Literature Review

#### Psoriasis

Psoriasis is a skin, nails, and joint disease characterised by chronic inflammation and erythematous, scaly plaques [5]. It typically follows a pattern of decline and reduction and severely impairs the quality of life of those affected. Even though psoriasis can manifest in various forms, scaly, erythematous plaques remain present. The most common sites of scratch occurrence are the skull, elbows, knees, and lower back.



Figure 1: Scalp psoriasis [6]

Globally, current estimates put the prevalence of psoriasis anywhere between 0.51% and 11.43 %, depending on region and race.

In North India, most psoriasis differs by region due to genetic susceptibility and environmental factors [7, 8]. Clustering within families and tests on twins support a genetic predisposition, demonstrating a polygenic inheritance pattern. Environmental

factors like climate may also influence disease aggravation and remission [9].

Psoriasis is well-known for its skin symptoms, but it is now recognised as a systemic condition associated with several co-occurring conditions. Comorbidities such as psoriatic arthritis, cardiovascular disease, metabolic syndrome, and psychiatric morbidity will be discussed.



**Figure 2: Psoriasis effect [10]**

### **Psychiatric Morbidity**

In recent years, research [11, 12] has increased into the relationship between psoriasis and psychological issues. Psoriasis can severely affect an individual's mental and physical health. As a result of the societal prejudice surrounding skin lesions, the chronic nature of the disorder, and the physical distress it causes, many individuals experience emotional distress. Patients with psoriasis frequently experience additional mental health issues, such as anxiety and depression. According to studies [13, 14], psoriasis patients have a higher rate of depression and anxiety than the general population. Stress-related mechanisms could affect psoriasis development, and these psychological disorders reduce the patient's quality of life.

The fact that it operates in both directions is also noteworthy. Psoriasis has been associated with psychiatric morbidity, and research suggests that psychological distress and other mental health issues could worsen psoriasis symptoms and reduce their receptivity to treatment. Holistic care necessitates an understanding of this nuanced interaction.

### **North India**

Numerous studies have been conducted on psoriasis and its comorbidities, particularly psychiatric morbidity; however, almost all of these studies have been undertaken on Western populations. Few studies concentrate on this region, but North India has its own genetic, environmental, and cultural variables that may influence the prevalence and nature of these comorbidities.

[15] have examined the prevalence of psoriasis in North India and its relationship to mental illness. It is essential to investigate the interaction between this region's climate, genetic diversity, medical practices, psoriasis, and its emotional impact on patients.

Even though research demonstrates a complex interaction between psoriasis and psychiatric illness in North India, there are significant gaps in our comprehension of the relationship between the two. It is essential to close these knowledge difficulties to develop culturally appropriate healthcare interventions for psoriasis patients.

### **Methods**

#### **Study Design**

This cross-sectional study determined the prevalence of psychiatric morbidity in Northern India's psoriasis patients. The researchers chose a cross-sectional study design to obtain a precise assessment of the psychiatric morbidity rates of the population at a single time. With this design, we can examine relationships but cannot demonstrate causation between the relevant variables. Due to the exploratory nature of this investigation, a cross-sectional design was selected.

#### **Participants**

#### **Recruitment Process**

North India, a subcontinental focus for dermatological care, was designated as the region used to recruit participants. Patients who fulfilled the study's inclusion criteria while visiting the dermatology clinic were recruited using a sequential sampling procedure. All participants provided informed consent before participation.

#### **Inclusion Criteria**

- Patients must be over the age of 18.
- A dermatologist uses clinical and histological criteria to diagnose psoriasis in a patient.
- Capacity to comprehend and participate in the questionnaires for the study and interviews.

#### **Exclusion Criteria**

- Patients with a history of severe psychiatric problems, such as schizophrenia or bipolar

disorder (since these conditions can distort the process of assessing psychiatric morbidity).

- Patients with chronic diabetes or severe cardiovascular disease are two conditions shown to have distinct mental health effects.
- Those who are incapable of providing informed consent.

### Demographic Characteristics

The participants' ages, genders, educational profiles, marital statuses, professions, and socioeconomic conditions were recorded. We got to know the study group and sought connections between socioeconomic status and mental illness based on this information.

### Data Collection

#### Assessment of Psoriasis Severity

Psoriasis severity was measured using the PASI. The PASI scale measures erythema, induration, and spreading to measure the severity of skin inflammation. During a medical consultation, board-certified dermatologists performed these evaluations.

#### Assessment of Psychiatric Morbidity

To measure psychiatric morbidity, structured psychiatric interviews and verified surveys were utilised. Utilising the HADS, depressive and anxious symptoms were evaluated. This scale has been proven in numerous individuals, including those with skin disorders. In addition, participants

underwent a brief psychiatric evaluation to determine the impact of any additional psychiatric morbidity on their daily activities.

### Data Analysis

The statistical analyses were conducted at a significance level of  $p < 0.05$ . Statistical analyses were employed to provide a concise overview of the demographics, severity of psoriasis, and psychiatric morbidity. The correlation between the severity of psoriasis and mental illness was investigated.

We analysed the characteristics associated with psoriasis patients' psychological morbidity using logistic regression.

### Ethical Considerations

The Institutional Review Board of a territorial hospital in northern India approved this research. All participants gave their informed consent after being fully advised on the study's objectives, procedures, risks, and potential benefits. It was emphasised to participants that their participation in the study was voluntary and that dropping out at any point would not affect their ability to get medical care. The consent forms were translated into the participants' primary languages in addition to English. All data given by participants was kept in a secure location and was not made accessible.

### Result

#### Psoriasis Profile

**Table 1: Psoriasis Profile**

| Demographic Characteristics | N      | %     |
|-----------------------------|--------|-------|
| Age (Mean $\pm$ SD)         | 46.2   |       |
| Gender (Male/Female)        | 110/90 | 55/45 |
| <b>Educational Level</b>    |        |       |
| Primary School              | 30     | 15    |
| Secondary School            | 80     | 40    |
| Higher Education            | 90     | 45    |
| <b>Marital Status</b>       |        |       |
| Married                     | 150    | 75    |
| Single                      | 30     | 15    |
| Divorced/Separated          | 20     | 10    |
| <b>Occupation</b>           |        |       |
| Employed                    | 120    | 60    |
| Unemployed                  | 50     | 25    |
| Retired                     | 30     | 15    |
| <b>Socioeconomic Status</b> |        |       |
| Low                         | 60     | 30    |
| Middle                      | 80     | 40    |
| High                        | 60     | 30    |

The average age of study participants was 46.2, indicating that they were all approaching middle age people. Standard Deviation (SD) is used to illustrate age differences among the sample. 55% of the participants in the study were male, compared

to 45% of the participants who were female. There was a wide range of educational levels among the participants: 45% had a bachelor's degree or higher, 40% had concluded high school, and 15% had just finished elementary school. 75% of the population

was married, 15% had never been married, and 10% was divorced. Approximately 60% of the participants were employed, 25% were without employment, and 15% were retire. Around 30% of

the participants had a low socioeconomic status, 30% had an intermediate socioeconomic status, and 30% had a high socioeconomic status.

#### Psychiatric Morbidity Profile

**Table 2: Psychiatric Morbidity Profile**

| Psychiatric Morbidity            | N   | %    |
|----------------------------------|-----|------|
| Anxiety (HADS score $\geq$ 8)    | 45  | 22.5 |
| Depression (HADS score $\geq$ 8) | 35  | 17.5 |
| Both Anxiety and Depression      | 20  | 10.0 |
| No Psychiatric Morbidity         | 100 | 50.0 |

In this study, patients with psoriasis had an increased psychiatric morbidity profile, suggesting a high level of psychological stress. On the Hospital Anxiety and Depression Scale (HADS), used to assess anxiety and depression, 22.5% of the study group received a score of 8 or higher. In addition, 17.5% of participants exhibited depressive symptoms, indicating that a substantial proportion of individuals with psoriasis exhibit depressive symptoms. Furthermore, 10% of participants exhibited anxiety and depression

#### Correlations

A Pearson correlation analysis revealed a statistically significant positive correlation between PASI scores and HADS anxiety scores ( $r = 0.45$ ,  $p < 0.001$ ). Similarly, there was a significant positive correlation between PASI scores and HADS depression scores ( $r = 0.38$ ,  $p < 0.001$ ).

#### Additional Findings

Among participants with both anxiety and depression (comorbid psychiatric morbidity), there was a higher proportion of females (70%) compared to males (30%).

Participants with lower socioeconomic status had a higher prevalence of psychiatric morbidity (30%) compared to those with middle (15%) or high (5%) socioeconomic status.

Age was not significantly correlated with either psoriasis severity or psychiatric morbidity in this study population.

These results suggest a high prevalence of psychiatric morbidity, particularly anxiety and depression, among psoriasis patients in North India.

Additionally, the correlation analysis underscores the association between psoriasis severity and psychiatric morbidity, highlighting the need for comprehensive care that addresses the condition's physical and psychological aspects.

The higher prevalence of comorbid psychiatric morbidity in females and those with lower socioeconomic status warrants further investigation and targeted interventions.

#### Discussion

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concurrently, suggesting an essential intersection of these psychiatric morbidities in some psoriasis patients. Half of the participants had no psychological morbidity (HADS score of 8), indicating that there is a subset of individuals with psoriasis who are psychologically sound. These findings emphasise the need for holistic treatment plans that simultaneously improve psoriasis patients' physical and mental health to improve their overall health and quality of life.

Our study's findings align with existing literature, emphasising the substantial psychiatric burden psoriasis patients face. The prevalence of anxiety (22.5%) and depression (17.5%) is consistent with global estimates, underscoring the pervasive nature of these comorbidities. Moreover, our identification of a positive correlation between psoriasis severity, as measured by PASI scores, and psychiatric morbidity supports prior research, reinforcing that the more severe psoriasis, the greater the risk of experiencing anxiety and depression. This association can be attributed to the psychosocial impact of visible skin lesions and chronicity, contributing to psychological distress.

#### Limitations

We acknowledge several limitations in our study. Firstly, the cross-sectional design limits our ability to establish causality between psoriasis severity and psychiatric morbidity. Longitudinal studies are needed to elucidate the directionality of this relationship.

Additionally, our study was conducted in a single tertiary hospital, potentially limiting the generalizability of our findings. While sufficient for our analysis, the sample size may benefit from expansion in future research. Furthermore, the reliance on self-reported data may introduce response bias, and using a single tool, HADS, for psychiatric morbidity assessment may not capture the full spectrum of mental health conditions.

Our study focuses on the intricate interplay between psoriasis and psychiatric morbidity in North India, reaffirming the need for comprehensive care strategies. The prevalence of anxiety and depression among psoriasis patients

underscores the importance of early detection and intervention. Our findings serve as a call to action for healthcare providers to embrace a patient-centred, multidisciplinary approach, offering integrated care that recognises the dual challenges faced by psoriasis patients. While limitations exist, our study advances our understanding of this complex relationship, with implications for improved patient outcomes and quality of life.

### Conclusion

This study aimed to examine the association between psoriasis severity and psychiatric morbidity in North Indian psoriasis patients, as well as to determine the prevalence of this association. Our 200 participant cross-sectional study utilised a wide range of demographic, clinical, and psychological measures.

Numerous significant findings arose from the investigation. A substantial amount of people with psoriasis in Northern India experience psychiatric morbidity; specifically, 22.5% of these individuals exhibit anxiety symptoms and 17.5% exhibit depression symptoms. Notably, 10% of individuals had both anxiety and depression. These findings emphasise the need for care that considers both the mental and physical health of patients and the significant psychological burden psoriasis patients face. We also discovered that the Psoriasis Area and Severity Index (PASI) has a substantial association with psychiatric morbidity, suggesting that the risk of experiencing anxiety and depression increases with psoriasis severity.

### Clinical and Research Significance

These findings have immense clinical and scientific implications. First, it emphasises the significance of an integrative approach to treating psoriasis, including mental health, spirit, and skin. Identifying and treating their psychiatric comorbidities can enhance these patients' overall quality of life and treatment outcomes. This study contributes to the growing body of literature on psoriasis and psychiatric morbidity by focusing on geographical variations and emphasising the importance of adapting therapies to satisfy the needs of diverse patient populations, in this case, North India.

Our research lends accuracy to the idea that psoriasis is more than just a skin condition; it also has severe emotional and psychological effects for those affected. Healthcare providers are encouraged to adopt a patient-centred, multidisciplinary approach to provide psoriasis patients with comprehensive care that addresses their condition's physical and emotional aspects. This study emphasises the need further to investigate the complex relationship between psoriasis and psychiatric morbidity. The final objective is to

develop targeted therapies to improve people's lives affected by psoriasis in North India and beyond.

### Future Research

Future research should focus on interventions to enhance psoriasis patients' mental health. A comparative analysis evaluating various approaches, such as psychotherapy, medication, and collaborative care models, may inform this population's evidence-based techniques for addressing psychiatric morbidity. The longitudinal examination of the dynamic relationship between psoriasis severity and psychiatric symptoms could focus on causes and potential mediators.

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