



Psychiatric Comorbidity Among Dermatology Patients: A Study at a Tertiary Care Hospital in Khammam, Telangana, South India

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Abstract

Background: The intersection between dermatology and psychiatry has gained increasing recognition due to the complex relationship between dermatological conditions and psychiatric comorbidities. Despite growing recognition, comprehensive studies exploring the prevalence, clinical characteristics, and management outcomes of dermatology patients with psychiatric comorbidities remain limited.

Methods: A total of 416 patients with various dermatological disorders participated in the study. Socio-demographic information and comprehensive dermatological evaluations were recorded, followed by screening for depression, anxiety, and stress disorders using the DASS-21 scale.

Results: The study revealed a notable prevalence of psychiatric disorders among dermatology patients, with approximately a quarter exhibiting symptoms of depression and around one-third reporting symptoms of anxiety. Stress was also prevalent among a significant subset of patients. Correlation analysis highlighted associations between psychiatric symptoms and demographic factors such as gender, socioeconomic status, and family type.

Conclusion: These findings underscore the necessity of adopting a biopsychosocial approach in the management of dermatological disorders, emphasizing the importance of routine screening for psychiatric comorbidities and integrated care models involving collaboration between dermatologists and mental health professionals.

INTRODUCTION

In recent years, the intersection between dermatology and psychiatry has garnered increasing attention within the medical community.¹ Dermatological conditions often extend beyond physical manifestations, frequently intertwining with psychological and psychiatric factors, thereby presenting unique challenges for both patients and clinicians.²

Historically, dermatological conditions have faced societal criticism, leading to stigmatization by self and others, which takes a toll on mental health.³ Patients with psychiatric conditions such as depression, schizophrenia, or catatonia often find it challenging to maintain self-care due to decreased energy, loss

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of interest, and lack of contact with reality.⁴ Consequently, they may develop various dermatological conditions. Additionally, psychotropic drugs may cause dermatological side effects such as acne and, in some cases, metabolic side effects, thus exposing patients to various dermatological disorders.⁵

The co-occurrence of dermatological and psychiatric conditions can manifest in various ways, ranging from the exacerbation of psychiatric symptoms due to skin disorders to the development of skin manifestations secondary to psychiatric conditions or their treatments. Furthermore, the psychosocial impact of dermatological conditions, such as acne, psoriasis, and eczema, often extends beyond the physical symptoms, leading to emotional distress, social stigma, and impaired quality of life.⁶

Despite the growing recognition of this intricate relationship, there remains a paucity of comprehensive studies exploring the prevalence, clinical characteristics, and management outcomes of dermatology patients with psychiatric comorbidities. Understanding the complex interplay between dermatological and psychiatric disorders is crucial for providing holistic care and improving treatment outcomes for these patients.

Therefore, this study aims to fill this gap in knowledge by conducting a thorough investigation into the demographics, clinical profiles, prevalence of psychiatric comorbidities, and their correlation with socio-demographic factors among dermatology patients presenting at a tertiary care hospital in Khammam, Telangana, South India. By shedding light on these aspects, we seek to enhance our understanding of the intricate relationship between dermatology and psychiatry, ultimately paving the way for more effective interdisciplinary approaches to patient care in the population.

The study was conducted to find a correlation between dermatological disorders and depression, anxiety, and stress disorders, specifically examining socio-demographic factors such as age, gender, socioeconomic status, family type, and residency.

METHODS

The research commenced in the dermatology outpatient department in collaboration with the psychiatry department of a tertiary care hospital. The

study adopted a cross-sectional design, recruiting patients through convenience sampling. Individuals diagnosed with any dermatological disorder, aged between 18 to 60 years, and with a minimum duration of 4 weeks were eligible for inclusion. Patients with serious or debilitating conditions, such as those with erythroderma, toxic epidermal necrolysis, and pemphigus, were excluded from the study. Specifically, 7 patients with these conditions were excluded. Participants were provided with detailed information about the study, and informed consent was obtained from those willing to participate. Data collection for this study included 423 patients with various dermatological complaints, and the recording of socio-demographic information for each patient was done. The study was conducted between December 2023 and May 2024. Subsequently, patients were referred to the psychiatry outpatient department for screening of depression, anxiety, and stress disorders using the DASS-21 scale.⁷ Prior to data collection, ethical approval was obtained from the Mamata Medical College Ethical Committee for Medical Research. Data analysis was conducted using SPSS version 27.

RESULTS

In Table 1, an analysis of the demographic details of the study population is shown. About 423 was the total sample size of the study and seven patients were excluded. The majority were females (57.7%), and the mean age of the sample was 52 (SD: 24.26) years. 56.73% belong to upper-middle socioeconomic status (Kuppuswamy classification) and 68.8% lived in a nuclear family. The majority were married (68.26%), and from rural areas.

Table 2 shows the clinical characteristics of the dermatological illness. 69.2% have a duration of illness from 4 weeks to 6 months and the majority of participants have complaints of Itching.

As shown in Table 3, the mean scores for depression, anxiety, and stress are 5.74 (SD = 6.7), 6.17 (SD = 6.8), and 6.9 (SD = 6.8), respectively. Anxiety affected 30.76% of the study population, followed by depression (23.50%) and stress (13.95%). Among those affected, the majority exhibited mild depression (42.8%), moderate anxiety (34.37%), and moderate

Table 1: Socio-demographic profile

Variables	Frequency (%)
Age group(years)	
18–30	158 (38%)
31–40	132 (31.7%)
41–50	64 (15.4%)
51–60	62 (14.9%)
Mean age (SD)	52 years (24.26)
Gender	
Male	176 (42.3%)
Female	240 (57.7%)
Socio economic status	
Upper class	06 (1.44%)
Upper middle class	236 (56.73%)
Lower middle class	108 (25.96%)
Upper lower class	66 (15.86%)
Family type	
Nuclear	286 (68.8%)
Joint	130 (31.2%)
Marital status	
Married	284 (68.26%)
Unmarried	114 (27.44%)
Widower	18 (4.3%)
Residency	
Urban	104 (25%)
Rural	266 (63.9%)
Semi-urban	46 (11.1%)

Table 2: Clinical profile of patients

Variables	Frequency (%)
Duration of illness	
4 weeks – 6 months	288 (69.2%)
6 months to 1 year	84 (20.2%)
1 – 5 years	24 (5.8%)
>5 years	20 (4.8%)
Chief complaints	
Itching	250 (60.09%)
Discoloration	120 (28.84%)
Comedones	20 (4.8%)
Scales	38 (9.13%)
Rashes	88 (21.15%)
Loss of hair	28 (6.73%)
Papules	18 (4.32%)
Erosions	24 (5.76%)
Pustules	28 (6.73%)
Nodules	34 (8.17%)
Wheals	34 (8.17%)
Fluid-filled lesions	14 (3.36%)

stress (51.72%), highlighting significant prevalence rates across the study population.

Table 4 shows the correlation and comparison of various demographic and phenomenological

Table 3: Prevalence of depression, anxiety and stress (DASS-21)

Variables	Frequency (%)
Depression	
Yes	98 (23.5%)
No	318 (76.5%)
Mean score of depression (SD)	5.74 (6.7)
Depression	
Mild depression	42 (42.8%)
Moderate depression	34 (34.69%)
Severe depression	20 (20.4%)
Extreme depression	02 (2.04%)
Anxiety	
Yes	128 (30.76%)
No	288 (69.24%)
Mean score of anxiety (SD)	6.17 (6.8)
Anxiety	
Mild anxiety	34 (26.56%)
Moderate anxiety	44 (34.37%)
Severe anxiety	16 (12.5%)
Extreme anxiety	34 (26.56%)
Stress	
Yes	58 (13.95%)
No	358 (86.05%)
Mean score of stress (SD)	6.9 (6.8)
Stress	
Mild stress	18 (31.03%)
Moderate stress	30 (51.72%)
Severe stress	10 (17.24%)

factors with DASS-21 scores. Duration of illness had a statistically significant correlation with depression scores. Higher level of mean scores of anxiety and stress was found in females and these were statistically significant. Also, depression had a statistically significant correlation with the type of family and socioeconomic status, and anxiety had a significant correlation with the type of family. There was no statistically significant correlation with other socio-demographic factors.

The above Table 4 reveals a significant positive correlation between the duration of illness and depression ($r = 0.55, p = 0.008$), indicating that as the illness persists longer, the severity of depression tends to increase.

Gender demonstrates a positive correlation with mental health indicators: depression ($r = 0.317, p = 0.07$), anxiety ($r = 0.329, p = 0.04$), and stress ($r = 0.373, p = 0.01$).

Table 4: Correlation of Socio-demographic factors with scores of depression, anxiety and stress

	<i>Depression</i>	<i>Anxiety</i>	<i>Stress</i>
Age	0.382 (0.84)	0.43 (0.49)	0.5 (0.21)
Duration of illness	0.55 (0.008)*	0.34 (0.95)	0.49 (0.23)
Gender	0.317 (0.07)	0.329 (0.04)*	0.373 (0.01)*
Marital status	0.28 (0.99)	0.36 (0.89)	0.48 (0.34)
Socioeconomic status	0.142 (0.04)*	0.058 (0.221)	0.09 (0.196)
Residency	0.37 (0.32)	0.41 (0.09)	0.34 (0.72)
Type of family	0.34 (0.02)*	0.339 (0.03)*	0.17 (0.97)

**p*-value <0.05

Furthermore, there is a significant positive correlation between socioeconomic status and depression ($r = 0.142$, $p = 0.04$), suggesting that higher socioeconomic status correlates with elevated levels of depression.

Additionally, family type shows a significant positive correlation with depression ($r = 0.34$, $p = 0.02$) and anxiety ($r = 0.339$, $p = 0.03$). This indicates that nuclear family structures may be associated with increased levels of depression and anxiety.

DISCUSSION

Our study revealed a notable prevalence of psychiatric disorders among dermatology patients, with a significant proportion experiencing symptoms of depression, anxiety, and stress. Approximately a quarter of the study population exhibited symptoms of depression, while around one-third reported symptoms of anxiety. Stress was also prevalent among a significant subset of patients. These findings corroborate previous research suggesting a high prevalence of psychiatric comorbidities in dermatological patients, emphasizing the need for routine screening and management of mental health issues in this population.^{8,9}

Our analysis further explored the correlation between psychiatric symptoms and various demographic and clinical factors. Interestingly, we found a significant correlation between the duration of illness and depression scores, indicating a potential association between prolonged dermatological conditions and psychological distress. Additionally, gender emerged as a significant factor, with

females exhibiting higher mean scores of anxiety and stress compared to males. Depression's complexity, influenced by genetic, environmental, and neurochemical factors, may not directly correlate with dermatological conditions as stress and anxiety do in females. This gender difference aligns with existing literature highlighting the differential psychological impact of dermatological conditions on men and women.¹⁰

Different clinical presentations of dermatological conditions, such as those affecting exposed areas like the face, leading to potential feelings of shame, recurrent conditions, and those with chronic prognosis, may increase the risk of developing depression, anxiety, or stress. Socioeconomic status, family type, and sociocultural factors also play significant roles in influencing mental health outcomes among dermatology patients, underscoring the importance of tailored interventions to address their psychosocial needs.¹¹

Our study underscores the necessity of adopting a biopsychosocial approach in the management of dermatological disorders, recognizing the intricate interplay between physical and psychological well-being. Dermatologists should be vigilant in assessing the mental health status of their patients, particularly those with chronic or severe skin conditions, and collaborate closely with mental health professionals to ensure comprehensive care.

Additionally, although patients with skin lesions lasting more than one year comprised 10.6% of the total patients, this subset still showed a notable association with increased depression scores. This indicates that even though the majority of patients

had relatively shorter durations of illness, those with longer-lasting conditions experienced more severe depressive symptoms. This correlation highlights the psychological impact of chronic dermatological disorders.

The present study sheds light on the complex interplay between dermatological disorders and psychiatric comorbidities among patients attending a tertiary care hospital in South India. Our findings underscore the significant burden of psychiatric conditions among individuals with dermatological issues, highlighting the importance of integrated care approaches in managing these patients effectively. Integrated care models that facilitate multidisciplinary collaboration between dermatologists, psychiatrists, and other healthcare providers are essential for optimizing treatment outcomes and improving the quality of life for patients with comorbid dermatological and psychiatric conditions.

LIMITATIONS AND FUTURE DIRECTIONS

In our study, convenience sampling was used to recruit participants from a dermatology outpatient department at a tertiary care hospital in South India, which may introduce biases limiting generalizability. Other limitations include the cross-sectional design and reliance on self-report measures for psychiatric assessment. Future research using longitudinal approaches and objective diagnostic criteria for psychiatric disorders would provide deeper insights into the dynamics between dermatology and psychiatry.

In future research, it would be beneficial to delve deeper into the psychosocial factors influencing dermatology patients with psychiatric comorbidities, explore the effectiveness of integrated care models involving dermatologists and psychiatrists, conduct longitudinal studies to track long-term psychiatric outcomes, develop culturally sensitive health education programs, implement advanced assessment tools for psychiatric disorders, and explore community-based interventions to enhance mental health support for these patients. These avenues would provide valuable insights into improving holistic care and treatment outcomes for dermatology patients with psychiatric conditions.

CONCLUSION

In conclusion, our study aimed to investigate the prevalence of psychiatric comorbidities among dermatology patients and to explore their correlation with socio-demographic factors. The findings underscore a significant burden of psychiatric disorders among these patients, with notable proportions experiencing symptoms of depression, anxiety, and stress. The study highlights the complex interplay between dermatological and psychiatric conditions, emphasizing the need for integrated biopsychosocial approaches in patient care.

Key correlations were identified between longer durations of dermatological illnesses and higher depression scores, as well as between female gender and elevated levels of anxiety and stress. Socioeconomic status and family type also showed significant associations with psychiatric symptoms, suggesting that these factors play crucial roles in influencing mental health outcomes among dermatology patients.

Overall, our findings support the implementation of routine screening for psychiatric comorbidities in dermatology practice, alongside collaborative efforts between dermatologists and mental health professionals. By addressing both the physical and psychological aspects of dermatological disorders, integrated care models can enhance treatment outcomes and improve the quality of life for patients.

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