

Prevalence and Clinical Characteristics of Psychodermatoses among Patients Visiting Dermatology Outpatient Department in a Tertiary Level Hospital in Bangladesh

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Abstract

Psychodermatoses are dermatological diseases with a psycho-emotional background or under the influence of emotional stress. They are an important link between dermatological disorders and psychiatric comorbidities, which is often neglected in everyday clinical practice. A cross-sectional, observational study was carried out in the Department of Dermatology & Venereology of Community Based Medical College, Bangladesh (CBMC,B) Hospital, Mymensingh, Bangladesh, between April and August of 2025, to determine the prevalence and clinical profile of psychodermatoses among outdoor patients. A total of 87 patients of dermatological diseases with suspected psychogenic components were enrolled in this study. Structured questionnaire was used to collect data. Patients were categorized according to the International Classification of Diseases, 10th Revision (ICD-10) dermatological coding system. Then, they were screened for psychological disturbances using the Bangla version of Hospital Anxiety and Depression Scale (HADS). Those who scored above the threshold (≥ 8 on either subscale) underwent a more detailed psychiatric interview by an experienced psychiatrist using DSM-5 diagnostic criteria. The mean age of the patients was 31.8 ± 9.4 years; male-female ratio was 1:1.7. The total prevalence of psychodermatoses was observed 11.2% within the study period. Neurodermatitis (26.4%), trichotillomania (19.5%) and delusional parasitosis (14.9%) were the most common diagnoses. Anxiety (48.3%) and depression (35.6%) were the most frequent psychiatric comorbidities. A significant association was found between female gender, younger age (< 40 years), and psychosocial stressors with the presence of psychiatric comorbidity ($p < 0.05$). Psychodermatoses are relatively common in every day dermatology outpatient services of Bangladesh. Psychiatric screening should be a part of dermatology practice for holistic patient care.

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Introduction

Psychodermatoses are an interesting and complex interface of dermatology with psychiatry two fields that overlap commonly, but hardly come together in day-to-day clinical practice. The latter term denotes skin diseases caused by psychological abnormalities, or that are aggravated by mental stress, anxiety and psychiatric disturbance.¹ The connection between the mind and skin is intrinsic from embryology to function, as both come from similar embryonic origins (the ectoderm layer during fetal development) and are well-connected by neuroimmunological pathways. This close relationship forms the basis of how emotional stimuli can express as cutaneous symptoms and vice versa – chronic skin diseases trigger psychological emotion to create a vicious cycle.^{2,3} More recently, psychodermatology has arisen as an important interdisciplinary field investigating this relationship between the two

domains (psychological and dermatological areas).^{1,3,4} Psychodermatoses can be divided into primary psychiatric disorders, psychophysiological and secondary psychiatric disorders: (1) primary psychiatric disorders with dermatologic involvement including delusions of parasitosis and trichotillomania, (2) psychophysiological illnesses in which emotional tension modifies pre-existing skin disorder like psoriasis, urticaria or atopic dermatitis, and (3) secondary psychiatric conditions, chronic skin

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disease fosters depression, anxiety or low self-esteem.^{3,4} While these entities are now widely accepted, precise diagnosis is difficult because of overlapping features and patient resistance to acknowledging a psychogenic basis for their symptoms.⁶ The incidence of psychodermatoses in the world has been estimated between 10% and 30% of dermatological outpatients.^{7,8} Several studies have been done of epidemiology and clinical management of psychodermatoses across different regions of the world.⁹⁻¹³ In Bangladesh, although dermatological conditions are among the most frequent reasons for attendance at outpatient facility in the community-based hospitals, a comprehensive evidence-based database on psychodermatoses is yet to be developed. The absence of local literature on this topic has resulted into a major deficit in knowledge about how sociocultural, economic and environmental factors influence the psychosomatic responses of Bangladeshi patients. The psychosocial causes of the psychodermatoses are multiform. Life stress, marital discord, the loss of a job, academic pressure, economic difficulty, and social isolation are related to flare-ups or worsening of different inflammatory skin conditions, ultimately leading towards anxiety and depression.^{3,5} Moreover, in low- and middle income countries (LMICs) like Bangladesh, sociocultural beliefs incite a delay in diagnosis of psychodermatoses. There are many patients who prefer to attribute their symptoms to a physical disorder and resist psychiatric referral, not seeking such help as they feel guilty or ashamed, or simply are unaware.^{9,10}

However, due to lack of local data, we proposed this study to determine the frequency of psychiatric comorbidities and psychosocial factors with these disorders in our community-based hospital in Mymensingh region of the country.

Methods

This cross-sectional, observational study was conducted in the Department of Dermatology & Venereology of Community Based Medical College, Bangladesh (CBMC,B) Hospital, Mymensingh Bangladesh, between April and August of 2025. This is a major referral center for dermatological cases in the area, serving a huge population from urban and rural areas of Mymensingh and near-by districts. The required sample size of 87 patients was calculated from the monthly rate of outpatient visits during the study period and consecutive sampling from those eligible who had met inclusion criteria.

Our inclusion criteria were: patients aged 15 years and above presenting to the dermatology outpatient department with skin lesions suspected to have a psychological or psychogenic component, exhibiting chronic or recurrent skin conditions where emotional stress, anxiety, or psychiatric symptoms appeared to aggravate dermatological manifestations and who were willing to undergo dermatological and psychiatric evaluation and provide informed consent. However, patients with primary infectious, autoimmune, or metabolic skin disorders without any identifiable psychological influence (e.g., bacterial infections, systemic lupus erythematosus), having serious medical comorbidities such as diabetes mellitus, thyroid dysfunction, or malignancy that could independently affect skin condition, and who were uncooperative, cognitively impaired, or unwilling to participate in the psychiatric interview or currently under psychiatric treatment for other disorders unrelated to dermatological symptoms were excluded.

All participants underwent a comprehensive clinical and psychological assessment. Data collection involved two structured components: i) dermatological

evaluation, and ii) psychiatric assessment.

A semi-structured data collection form was designed specifically for this study. It captured socio-demographic data (age, gender, marital status, occupation, education, socioeconomic class, and residence), clinical features (type, duration, and site of skin lesions), triggering and relieving factors, and associated stressors. Dermatological diagnoses were made by consultant dermatologists based on clinical examination and, where necessary, confirmed with supporting laboratory or histopathological investigations. Cases were categorized according to the International Classification of Diseases, 10th Revision (ICD-10) dermatological coding system.¹⁴ Following dermatological evaluation, patients were screened for psychological disturbances using the Bangla version of Hospital Anxiety and Depression Scale (HADS),¹⁵ which has already been used as a validated and reliable tool for assessing anxiety and depression among Bangladeshi people by several studies.¹⁶⁻¹⁸ Those who scored above the threshold (≥ 8 on either subscale) underwent a more detailed psychiatric interview by an experienced psychiatrist using DSM-5 diagnostic criteria.¹⁹ Each participant was further assessed for the presence of psychosocial stressors, including any family conflicts and interpersonal issues, job loss or workplace stress, academic pressure among students, financial constraints, bereavement or recent emotional trauma. Participants were also asked whether their skin condition worsened during stressful events, providing subjective evidence of psychophysiological linkage. The identified cases were subsequently grouped into three major diagnostic categories based on classical psychodermatology classification.³ Each case was reviewed weekly by both the dermatology and psychiatry consultants to ensure diagnostic consistency and accuracy.

Data was entered into a Microsoft Excel spreadsheet and subsequently analyzed using IBM SPSS Statistics for Windows, version 26 (IBM Corp., Armonk, NY, USA). Categorical variables were presented as frequency and percentage. Associations between categorical variables and psychodermatoses were examined using Pearson's Chi-square test. A p -value < 0.05 was considered statistically significant. This study was approved by the Ethical Review Committee of Community Based Medical College, Bangladesh (CBMC,B), Mymensingh Bangladesh.

Results

A total of 87 patients were included in the study from a total of 778 dermatology outpatients consulted in the Department of Dermatology & Venereology, Community Based Medical College, Bangladesh (CBMC,B) Hospital. Thus, the prevalence of psychodermatoses among dermatology outpatients was calculated to be 11.2%. Among the 87 patients, females constituted 63.2% ($n=55$) and males 36.8% ($n=32$); male-female ratio was 1:1.7. The mean age of the study population was 31.8 ± 9.4 years, with an age range between 16 and 58 years. The highest frequency was observed in the 21–40 years age group (61%). The majority of the patients (57.5%) belonged to the middle socioeconomic class, while 28.7% were from the lower class, and only 13.8% from higher-income families. Rural residents constituted 64.3% of the total participants. Married individuals represented 56.3%, while single or unmarried participants comprised 43.7% (Table-I). Neurodermatitis (26.4%) was the most prevalent, followed by trichotillomania (19.5%), delusional parasitosis (14.9%), lichen simplex chronicus (11.5%), and acne excoriée (10.3%). Fewer cases of psychogenic pruritus (8.0%), factitial dermatitis (6.9%), and others (2.5%) were observed (Table-II).

Table-I: Sociodemographic characteristics of the study patients (N=87)

Variables	Category	Frequency	Percentage
Gender	Male	32	36.8
	Female	55	63.2
Age group (in years)	15–20	10	11.5
	21–30	28	32.2
	31–40	25	28.8
	41–50	15	17.2
	>50	9	10.3
Residence	Urban	31	35.7
	Rural	56	64.3
Socioeconomic status	Lower	25	28.7
	Middle	50	57.5
	Higher	12	13.8
Marital status	Married	49	56.3
	Unmarried	38	43.7

Table-II: Distribution of Diagnosed Psychodermatoses (n = 87)

Types of Psychodermatoses	Frequency	Percentage
Neurodermatitis	23	26.4
Trichotillomania	17	19.5
Delusional parasitosis	13	14.9
Lichen simplex chronicus	10	11.5
Acne excoriée	9	10.3
Psychogenic pruritus	7	8.0
Factitial dermatitis	6	6.9
Others (mixed/rare)	2	2.5

Associated psychiatric comorbidities were present in 78.2% (n=68). Anxiety disorders were the most common (48.3%), followed by depressive disorders (35.6%), somatoform disorders (10.3%), and obsessive-compulsive features (5.7%). Only 21.8% of participants did not meet criteria for any formal psychiatric diagnosis (Table-III). More than two-thirds of participants (70.1%) reported identifiable psychosocial stress preceding or aggravating their skin lesions. The most common stressor was family conflict (30%), followed by financial difficulties (22%), marital discord (11%), academic pressure (8%), bereavement (7%), and workplace stress (6%). About

16% of respondents could not pinpoint a specific stressor (Table-IV). Female gender ($p=0.03$) and younger age (<40 years; $p=0.02$) were significantly associated with primary psychiatric-type psychodermatoses. Similarly, stress-related triggers were more frequently observed in psychophysiological disorders ($p=0.01$) (Table-V).

Table-III: Psychiatric comorbidities associated with psychodermatoses (N=87)

Psychiatric disorder	Frequency	Percentage
Anxiety disorders	42	48.3
Depressive disorders	31	35.6
Somatoform disorder	9	10.3
Obsessive-compulsive traits	5	5.7
None	19	21.8

Table-IV: Common psychosocial stressors among the study patients (N=87)

Psychosocial stressor	Frequency	Percentage
Family conflict	26	30.0
Financial difficulties	19	21.8
Marital discord	10	11.5
Academic pressure	7	8.0
Bereavement	6	6.9
Workplace stress	5	5.7
Others / unspecified	14	16.1

Table-V: Association of demographic and clinical variables with psychiatric comorbidity

Variables	Category	Present Frequency (Percentage)	Absent Frequency (Percentage)	p-value
Gender	Male	22 (68.8)	10 (31.2)	0.03*
	Female	46 (83.6)	9 (16.4)	
Age group	<40 years	54 (79.4)	14 (20.6)	0.02*
	≥40 years	14 (63.6)	8 (36.4)	
Socio economic status	Lower	20 (80.0)	5 (20.0)	0.31
	Middle	38 (76.0)	12 (24.0)	
	Upper	10 (83.3)	2 (16.7)	
Stress reported	Yes	54 (88.5)	7 (11.5)	0.01*
	No	14 (58.3)	10 (41.7)	

Chi-square test was applied; *=Statistically significant

Discussion

The present study represents one of the few systematic attempts to investigate the prevalence, clinical patterns, and psychiatric correlates of psychodermatoses in Bangladesh. Our study found that 11.2% of dermatology outpatients exhibited psychogenic or psychosomatically influenced skin disorders. This prevalence lies within the reported global range of 8–18%, consistent with data from neighboring South Asian countries such as India, Sri Lanka, and Nepal.^{9,11,12} The finding supports the notion that psychodermatoses are a common yet underdiagnosed subset of dermatologic illnesses in LMICs, where psychological aspects of disease are often overlooked.^{9,10} In contrast, western studies have reported slightly higher rates, ranging from 15% to 20%, possibly reflecting greater awareness and diagnostic sophistication in psychodermatology clinics.²⁰⁻²² Such difference may also stem from sociocultural perceptions in Bangladesh and similar contexts, psychological distress is often somatized, leading to delayed psychiatric referral.¹⁰⁻¹² The current study demonstrated a clear female predominance (63.2%), consistent with prior literature.⁹⁻¹³ Females are known to be more vulnerable to stress-related and psychosomatic disorders due to complex hormonal influences, higher emotional sensitivity, and social roles that predispose them to interpersonal and familial stress. Cultural factors, such as gender-based restrictions and domestic responsibilities, further exacerbate such vulnerability.⁸ Moreover, the mean age of 31.8 years reflects the higher psychosocial burden during the productive years of life, when individuals face occupational, financial, and marital stressors in Bangladeshi context. Similar findings were observed in a Sri Lankan study, where the 20–40 years age group exhibited the highest incidence of

psychodermatoses.¹¹ The most frequent psychodermatoses identified in this study were neurodermatitis (26.4%), trichotillomania (19.5%), and delusional parasitosis (14.9%), followed by lichen simplex chronicus (11.5%) and acne excoriée (10.3%). This pattern mirrors reports from India and Nepal.^{9,12,23} Nearly 70% of participants reported identifiable psychosocial stressors, the most common being family conflict (30%), financial problems (22%), and marital discord (11%). These findings reflect the socio-cultural realities of Bangladeshi life, where family interdependence and economic strain are central sources of emotional distress. Moreover, stigma surrounding mental illness (also true for Bangladesh) further delays psychiatric care, resulting in chronicity and repeated dermatology consultations.^{23,24} The study identified a statistically significant association between female gender ($p=0.03$) and presence of psychiatric comorbidity, supporting global evidence that women are more likely to internalize stress through somatic symptoms, including dermatological expressions.^{9-13,23} Furthermore, younger age (<40 years) was correlated with a higher prevalence of anxiety-linked psychodermatoses ($p=0.02$), possibly due to greater psychosocial pressures during early adulthood, such as education, career uncertainty, and family responsibilities.^{11,22}

The findings of the present study have profound implications for clinical practice and public health policy in Bangladesh. Such high prevalence of psychodermatoses underscores the need for interdisciplinary collaboration between dermatologists, psychiatrists, and clinical psychologists.²⁴ Integrating psychological screening tools e.g., the Hospital Anxiety and Depression Scale (HADS) in dermatology clinics could facilitate early

detection of comorbid psychiatric conditions. Besides, psychodermatology liaison clinics should be established at outpatient department (OPD) of tertiary hospitals to provide combined therapeutic interventions, improve patient satisfaction, reduce recurrence, and enhance treatment adherence.²⁵ Training dermatologists to recognize psychogenic patterns and offering brief counseling can reduce unnecessary pharmacotherapy and medical cost. Last but not the least, public health education campaigns should aim to reduce stigma surrounding mental health and encourage early psychiatric consultation for stress-related skin problems. Incorporating psychodermatology topics into medical education and training could strengthen awareness among future clinicians.²⁶

Although the present study provides valuable insights into the epidemiological and clinical characteristics of psychodermatoses in Bangladesh, several limitations must be acknowledged. Firstly, this was a single-center, hospital-based study conducted in a specific geographic area (Mymensingh district), which may not fully represent the diversity of dermatology patients across different regions of Bangladesh. Secondly, our small sample size, though adequate for preliminary estimation, may have constrained statistical power in detecting subtler associations between sociodemographic and psychiatric variables. Thirdly, the study relied on self-reported psychosocial stressors, which are inherently subject to recall bias and underreporting, particularly given the cultural stigma surrounding mental health in Bangladesh. Finally, as a cross-sectional design, the study could not establish causal relationships between psychological factors and dermatological manifestations. In future, larger multicentric, prospective and interventional studies are therefore

recommended to explore causality, treatment outcomes, and the efficacy of psychodermatology interventions in the Bangladeshi population context.

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Conclusion

Our study highlights that psychodermatoses are a prevalent and clinically significant problem among patients attending dermatology clinics in Bangladesh, with a recorded prevalence of 11.2% in the study population. This finding emphasizes that psychological and emotional factors are deeply intertwined with dermatological health. The predominance of neurodermatitis, trichotillomania, and delusional parasitosis underscores the diversity of psychogenic skin manifestations observed in daily clinical practice. A majority of affected individuals were young to middle-aged females, reflecting the psychosocial stress and gender dynamics that shape mental and physical well-being in South Asian societies. The study further demonstrated that psychiatric comorbidities, especially anxiety (48.3%) and depression (35.6%), were highly prevalent among psychodermatology patients, revealing the

profound mind–skin connection that drives symptom expression. More than two-thirds of patients reported identifiable psychosocial stressors, particularly family conflicts, financial strain, and marital discord indicating that social and environmental pressures play a crucial role in disease onset and progression. These results affirm that psychodermatoses are biopsychosocial disorders, not purely dermatological conditions, and that effective management must address emotional, behavioural, and social components alongside medical treatment.

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