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Research Article

Anxiety, Depression, and Quality of Life in Patients with Psoriasis and Atopic Dermatitis: A Psychodermatology-Based Analytical Study

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Abstract

Psychological comorbidities are increasingly recognized as major contributors to disease burden among patients with chronic inflammatory skin disorders. Psoriasis and atopic dermatitis are associated with persistent symptoms, visible lesions, social stigma, and impaired psychosocial functioning. The objective of this study was to compare anxiety, depression, and quality of life among patients with psoriasis and atopic dermatitis and to evaluate their relationship with disease severity.

A hospital-based analytical cross-sectional study was conducted among 180 participants, including patients with psoriasis (n=60), atopic dermatitis (n=60), and healthy controls (n=60). Anxiety and depression were assessed using the Hospital Anxiety and Depression Scale (HADS), while quality of life was evaluated using the Dermatology Life Quality Index (DLQI). Disease severity was determined using the Psoriasis Area and Severity Index (PASI) and Eczema Area and Severity Index (EASI). Statistical analysis was performed using SPSS version 26.0.

Patients with psoriasis and atopic dermatitis demonstrated significantly higher anxiety and depression scores compared with controls ($p<0.001$). Mean anxiety scores were highest among atopic dermatitis patients, whereas depression scores were more pronounced among psoriasis patients. Quality of life impairment was significantly greater in both dermatological groups compared with controls ($p<0.001$). Strong

positive correlations were observed between disease severity and psychological distress, while quality of life scores showed significant deterioration with increasing disease severity.

These findings demonstrate that anxiety, depression, and quality of life impairment represent substantial yet underrecognized components of chronic dermatological diseases. The study highlights the importance of integrating psychological assessment into routine dermatological care and provides evidence supporting a psychodermatology-based multidisciplinary management approach.

Keywords: Psoriasis; Atopic dermatitis; Anxiety; Depression; Quality of life

Introduction

Psoriasis and atopic dermatitis are among the most prevalent chronic inflammatory skin disorders worldwide and are associated with considerable physical, psychological, and social burden. Although traditionally regarded as dermatological conditions, growing evidence suggests that their impact extends far beyond the skin. Chronic itching, recurrent flares, visible lesions, and prolonged treatment requirements significantly affect emotional well-being and social functioning. Consequently, increasing attention has been directed toward the psychological dimensions of dermatological diseases and the emerging field of psychodermatology [1-3].

Psychodermatology is an interdisciplinary field that explores the interaction between dermatological conditions and psychological health. The skin and nervous system share a common embryological origin, and complex neuroimmunological pathways contribute to bidirectional communication between psychological stress and cutaneous inflammation. Stress, anxiety, and depression may exacerbate inflammatory skin disorders, while visible skin lesions and chronic symptoms may further worsen psychological distress, creating a self-perpetuating cycle of disease activity and emotional impairment [2-4].

Psoriasis is a chronic immune-mediated inflammatory disorder characterized by erythematous, scaly plaques and systemic inflammatory involvement. The disease affects approximately 2–3% of the global population and is associated with multiple comorbidities including cardiovascular disease, metabolic syndrome, and psychiatric disorders. Visible lesions, stigmatization, altered body image, and social rejection frequently contribute to anxiety and depressive symptoms among affected individuals. Recent studies have reported

significantly higher prevalence rates of depression and suicidal ideation among psoriasis patients compared with the general population [3-5].

Similarly, atopic dermatitis is a chronic relapsing inflammatory skin disease characterized by intense pruritus, xerosis, and recurrent eczematous lesions. Persistent itching and sleep disturbances represent major contributors to psychological morbidity. The chronic and unpredictable nature of the disease often results in frustration, emotional distress, and impaired social interactions. Contemporary research has demonstrated strong associations between atopic dermatitis and anxiety disorders, particularly among patients experiencing severe itching and recurrent exacerbations [4-6].

The burden of psychiatric comorbidity in dermatological diseases has become increasingly recognized as a public health concern. Anxiety disorders may arise from concerns regarding appearance, social acceptance, disease progression, and treatment outcomes. Depression may result from chronic suffering, reduced self-esteem, impaired interpersonal relationships, and occupational limitations. These psychological disturbances not only diminish quality of life but may also negatively affect treatment adherence and clinical outcomes [5-7].

Quality of life has emerged as an important patient-centered outcome measure in dermatology. Traditional clinical assessments primarily focus on lesion severity and disease extent; however, such measures may not fully capture the psychosocial consequences experienced by patients. Instruments such as the Dermatology Life Quality Index (DLQI) provide valuable insight into the effects of skin diseases on daily activities, social relationships, emotional well-being, and occupational performance. Recent investigations have shown that quality of life impairment may be disproportionately greater than expected based solely on clinical disease severity [6-8].

Several studies have explored psychiatric symptoms among patients with psoriasis and atopic dermatitis; however, direct comparisons between these conditions remain limited. Furthermore, variations in sociocultural factors, healthcare access, and disease perceptions may influence psychological outcomes. Understanding differences in anxiety, depression, and quality of life impairment between these two major inflammatory skin disorders may facilitate development of targeted

psychological interventions and improve holistic patient management [7-9].

Recent literature published between 2021 and 2024 has emphasized the importance of integrating mental health assessment into dermatological practice. Psychological distress has been associated with increased disease activity, reduced treatment response, poorer adherence, and higher healthcare utilization. Nevertheless, routine psychological screening remains uncommon in many dermatology clinics, particularly in developing healthcare settings. This gap highlights the need for further research evaluating mental health outcomes among patients with chronic skin diseases [8-10].

The present study was designed to compare anxiety, depression, and quality of life among patients with psoriasis and atopic dermatitis and to evaluate the relationship between psychological burden and disease severity. By examining these parameters simultaneously within a psychodermatological framework, the study aims to provide evidence supporting comprehensive patient-centered care strategies and multidisciplinary intervention approaches [9-10].

Methodology

A hospital-based analytical cross-sectional study was conducted at Ayub Medical College, Abbottabad. The study population comprised adult patients diagnosed with psoriasis or atopic dermatitis attending dermatology outpatient clinics during the study period. Healthy individuals without dermatological or psychiatric disorders were recruited as controls.

Sample size was calculated using OpenEpi version 3.01 with a confidence level of 95%, study power of 80%, expected prevalence of anxiety among chronic dermatological patients of 40%, and margin of error of 5%. The minimum sample size was calculated as 168 participants. To compensate for incomplete responses and potential dropouts, a total of 180 participants were enrolled.

The study population was divided into three groups: psoriasis patients (n=60), atopic dermatitis patients (n=60), and healthy controls (n=60). Participants were selected using consecutive sampling techniques.

Inclusion criteria comprised adults aged 18–65 years with clinically confirmed psoriasis or atopic dermatitis diagnosed by consultant dermatologists and willingness to participate in the study. Control participants included healthy volunteers with no history of chronic skin disease or psychiatric illness.

Exclusion criteria included severe psychiatric disorders, cognitive impairment, current antidepressant therapy, systemic

autoimmune diseases, malignancy, pregnancy, chronic renal failure, chronic liver disease, and inability to complete study questionnaires.

After explanation of study objectives and procedures, verbal informed consent was obtained from all participants. Ethical approval was obtained from the Institutional Ethical Review Committee prior to initiation of data collection. Confidentiality and anonymity of all participants were maintained throughout the study.

Sociodemographic variables including age, gender, educational status, marital status, disease duration, and family history were recorded using a structured questionnaire. Clinical severity of psoriasis was assessed using the Psoriasis Area and Severity Index (PASI), while severity of atopic dermatitis was evaluated using the Eczema Area and Severity Index (EASI).

Psychological assessment was performed using the Hospital Anxiety and Depression Scale (HADS), a validated instrument consisting of 14 items equally divided between anxiety and depression domains. Scores ranging from 0–7 were considered normal, 8–10 borderline abnormal, and ≥11 indicative of clinically significant anxiety or depression.

Quality of life was assessed using the Dermatology Life Quality Index (DLQI), which consists of 10 questions evaluating the impact of skin disease on daily activities, work, relationships, and emotional well-being. Higher scores indicated greater impairment in quality of life.

Data were analyzed using Statistical Package for Social Sciences (SPSS) version 26.0. Quantitative variables were expressed as mean ± standard deviation, while categorical variables were presented as frequencies and percentages. One-way ANOVA and independent t-tests were used to compare continuous variables among groups. Chi-square tests were applied for categorical variables. Pearson correlation analysis was used to evaluate associations between disease severity, anxiety, depression, and quality of life scores. A p-value less than 0.05 was considered statistically significant.

Results

A total of 180 participants were enrolled, including 60 patients with psoriasis, 60 patients with atopic dermatitis, and 60 healthy controls. The mean age of the study population was 38.7±11.5 years. No statistically significant differences were observed in age, gender distribution, marital status, or educational level among the study

groups (p>0.05). However, significant differences were identified in anxiety , depression, and quality of life scores between dermatological patients and healthy controls.

Table 1. Demographic and Clinical Characteristics of Study Participants

Variable	Psoriasis (n=60)	Atopic Dermatitis (n=60)	Controls (n=60)	p-value
Age (years)	40.2 ± 10.8	37.6 ± 11.9	38.4 ± 11.5	0.421
Male, n (%)	36 (60.0)	32 (53.3)	34 (56.7)	0.754
Female, n (%)	24 (40.0)	28 (46.7)	26 (43.3)	0.754
Disease Duration (years)	7.4 ± 4.2	6.9 ± 3.8	—	0.512
PASI Score	12.8 ± 4.6	—	—	—
EASI Score	—	15.4 ± 5.2	—	—
HADS-Anxiety Score	10.9 ± 3.5	12.8 ± 3.7	5.1 ± 2.2	<0.001
HADS-Depression Score	11.8 ± 3.8	10.2 ± 3.4	4.6 ± 1.9	<0.001
DLQI Score	14.6 ± 5.3	16.2 ± 5.7	1.8 ± 0.9	<0.001

Interpretation:

Patients with psoriasis and atopic dermatitis exhibited significantly higher anxiety, depression, and quality of life impairment compared with healthy controls. Atopic dermatitis patients demonstrated higher anxiety and DLQI scores, whereas depression scores were higher among psoriasis patients.

Table 2. Prevalence of Clinically Significant Anxiety and Depression

Psychological Variable	Psoriasis (n=60)	Atopic Dermatitis (n=60)	Controls (n=60)	p-value
Anxiety (HADS ≥11), n (%)	34 (56.7)	42 (70.0)	8 (13.3)	<0.001
Depression (HADS ≥11), n (%)	38 (63.3)	29 (48.3)	6 (10.0)	<0.001
Both Anxiety and Depression, n (%)	25 (41.7)	24 (40.0)	2 (3.3)	<0.001

Psychological Variable	Psoriasis (n=60)	Atopic Dermatitis (n=60)	Controls (n=60)	p-value
Severe DLQI Impairment (>10), n (%)	40 (66.7)	46 (76.7)	0 (0.0)	<0.001

Interpretation:

Clinically significant anxiety and depression were substantially more prevalent among dermatological patients than controls. Atopic dermatitis was associated with a greater prevalence of anxiety, whereas depression was more common among psoriasis patients.

Table 3. Correlation of Disease Severity with Anxiety, Depression, and Quality of Life

Variable	Anxiety (r)	p-value	Depression (r)	p-value	DLQI (r)	p-value
PASI Score	0.61	<0.001	0.67	<0.001	0.72	<0.001
EASI Score	0.69	<0.001	0.58	<0.001	0.76	<0.001

Interpretation:

Disease severity demonstrated strong positive correlations with anxiety, depression, and quality of life impairment. Higher PASI and EASI scores were associated with worsening psychological distress and reduced quality of life.

Discussion

The present study demonstrated that patients with psoriasis and atopic dermatitis experience significantly greater psychological distress and poorer quality of life compared with healthy individuals. Anxiety and depression were highly prevalent in both disease groups, emphasizing the substantial psychosocial burden associated with chronic inflammatory skin disorders. These findings support the growing recognition that dermatological diseases should be viewed as multidimensional conditions with important psychological consequences rather than solely cutaneous disorders [11-12].

A major finding of the present study was the significantly elevated anxiety scores among patients with atopic dermatitis. Persistent pruritus, recurrent exacerbations, sleep disturbances, and uncertainty regarding disease progression likely contribute to increased emotional distress. The chronic itching characteristic of atopic dermatitis has been repeatedly identified as a major determinant of anxiety and impaired psychosocial functioning. Recent studies have reported similar observations,

highlighting the strong association between itch severity and anxiety symptoms [11-13].

Patients with psoriasis demonstrated significantly higher depression scores than those with atopic dermatitis. The visible nature of psoriatic lesions, social stigmatization, altered body image, and concerns regarding appearance may contribute substantially to depressive symptomatology. Furthermore, systemic inflammation associated with psoriasis has been implicated in neuropsychiatric pathways that may predispose individuals to depression. Contemporary evidence supports the hypothesis that inflammatory cytokines contribute to both dermatological disease activity and depressive symptoms [12-14].

The prevalence of clinically significant anxiety and depression observed in the present study is consistent with recent psychodermatology research. More than half of the patients with psoriasis and atopic dermatitis exhibited psychological symptoms warranting clinical attention. These findings suggest that psychiatric comorbidities remain underrecognized despite their substantial impact on patient outcomes. Failure to identify and manage these conditions may adversely affect treatment adherence, disease control, and overall quality of life [13-15].

Quality of life impairment was another prominent finding of this study. Both patient groups exhibited markedly elevated DLQI scores compared with healthy controls. The burden of chronic skin disease extends beyond physical symptoms and influences interpersonal relationships, occupational performance, leisure activities, and self-esteem. Atopic dermatitis patients demonstrated slightly greater quality of life impairment, potentially reflecting the disruptive effects of severe pruritus and sleep deprivation. Similar findings have been reported in recent investigations examining patient-reported outcomes in inflammatory skin diseases [14-16].

The strong positive correlations observed between disease severity indices and psychological outcomes further reinforce the relationship between physical and emotional health. Increasing PASI and EASI scores were associated with worsening anxiety, depression, and quality of life impairment. These findings suggest that disease severity may serve as an important predictor of psychological burden. Consequently, patients with severe dermatological disease should be considered at increased risk for mental health disorders and may benefit from routine psychological screening [15-18].

An important strength of the present study is the simultaneous evaluation of anxiety, depression, quality of life, and disease severity within a psychodermatological framework. The findings highlight the need for multidisciplinary care involving dermatologists, psychologists, and psychiatrists. Early identification of psychological distress may facilitate timely interventions that improve both mental health outcomes and dermatological disease control. Future prospective studies should evaluate the effectiveness of integrated psychodermatology services in reducing disease burden and enhancing patient well-being [18-20].

Conclusion

Patients with psoriasis and atopic dermatitis experience significantly higher levels of anxiety, depression, and quality of life impairment compared with healthy individuals. Disease severity is strongly associated with worsening psychological distress and reduced quality of life. These findings emphasize the importance of incorporating routine psychological assessment and multidisciplinary psychodermatological care into the management of chronic inflammatory skin diseases.

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