

THE ETIOPATHOGENETIC PATHWAYS CONNECTING PSORIASIS AND MENTAL HEALTH DISORDERS

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THE ETIOPATHOGENETIC PATHWAYS CONNECTING PSORIASIS AND MENTAL HEALTH DISORDERS (Abstract): Psoriasis is a chronic immune-mediated skin condition that goes beyond the cutaneous symptoms, often affecting patients' mental health and social interactions. Psychiatric comorbidities like depression, anxiety, and sleep disorders are prevalent and can be worsened by stigma and discrimination. The psychology of psoriasis is discussed in this article based on a 2023 study that used a questionnaire to investigate discrimination, treatment expectations, sleep, and perceived psychosocial effects of psoriasis. **Materials and methods:** A questionnaire of 101 questions was given to psoriasis patients via social media (n = 155). The responses were assessed descriptively and using multivariable regression. Correlations between discrimination, sleep disturbances, expectations, and side effects on family life, work, and relationships were the focus of the study. **Results:** Almost half of the participants (43.2%) had experienced discrimination or stigma. Discrimination was strongly related to self-reported negative effects on family life (52.3%), work performance (49.0%), and interpersonal relationships (54.2%), with a moderate effect size ($\chi^2 = 32.26$, $p < 0.001$). Sleep issues were less frequently reported (6.5%) and were not strongly related to discrimination. **Conclusions:** Psoriasis is inextricably linked with mental health, not just a cause of biological inflammation but also social stressors such as stigmatization. The results identify the fact that discrimination plays an underlying part in reducing quality of life, and problems with sleep may be less centrally involved. An integrated medical, psychological, and social treatment approach is needed for overall treatment. **Keywords:** PSORIASIS, PATHOLOGY, MENTAL DISORDERS, HEALTH.

INTRODUCTION

Psoriasis is more than a skin disease; it is an inflammatory condition with strong psychological and social consequences. Although scientific research has mainly targeted immune processes and treatment (1), mounting evidence illustrates the substantial

psychosocial burden, such as stigma and discrimination, and their adverse impact on mental health (2, 3). In a previous questionnaire-based study on psoriasis, the necessity of approaching this topic from a new perspective was brought up, linking psoriasis to different comorbidities, interrelationships

The Etiopathogenetic Pathways Connecting Psoriasis and Mental Health Disorders

and its multifactorial factors was taken more seriously (4). Patients must often contend with a double burden: visible lesions that garner unwanted attention and inner turmoil that is not observable, including shame and a changed self-image (5). Comorbid depression, anxiety, and sleep disorders are prevalent, which puts psoriasis in the realm of mind-body medicine, in which psychological and physical components cannot be separated (6, 7).

Stigma also plays a significant role in increasing emotional vulnerability through social rejection and internalization of negative beliefs that decrease self-worth and hope (2, 3). Discrimination, sleep disturbances, and expectations about treatment and their impact on everyday life and mental health are reviewed here, emphasizing the necessity for comprehensive care addressing physical as well as psychosocial domains. With the pioneering research of Wittkower in the 1940s connecting psoria-

sis with emotional stress (8), studies have explained complex bidirectional associations among psoriasis and psychiatric illness. Stress disrupts the hypothalamic–pituitary–adrenal axis and the sympathetic–adrenal–medullary system, resulting in chronic systemic inflammation (9).

Improved cytokine secretion by cytokines such as TNF- α and IL-6 plays a role in psoriatic skin lesions and also psychiatric illnesses such as depression, thereby providing a two-way link between inflammation and distress (10, 11). Other psychosocial elements such as stigma, inefficient coping mechanisms, alexithymia, and discrimination could augment the burden of disease regardless of lesion severity (2, 3).

Understanding these entangled biological and psychosocial processes presented in first figure is essential for the creation of multicomponent treatments that address both dermatological symptoms and mental health, along with social functioning.

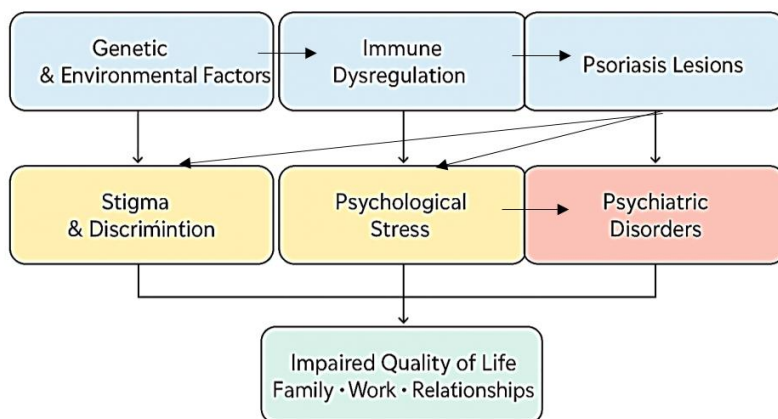


Fig. 1. Etiopathogenetic Pathways Connecting Psoriasis and Mental Health Disorders

MATERIALS AND METHODS

A structured, 101-question survey was developed to collect sociodemographic information, clinical history, and psychosocial

results of the patients with psoriasis. The survey was sent in 2023 to a sample of individuals with psoriasis via social media ($n = 155$). Because the questionnaire was distrib-

uted primarily through psoriasis forums, the sample may be subject to selection bias, potentially overrepresenting individuals who are more engaged in online patient communities. Questions addressed areas like perceived discrimination, insomnia or sleep disruption, expectations from treatment, and family, occupational, and interpersonal relationship impacts of psoriasis.

Descriptive statistics were calculated for all responses. Discrimination and psychosocial variables' cross-tabulations were tested using Pearson's chi-square test and Cramer's V to establish the effect size. Multivariable logistic regression was performed with discrimination (yes/no) as the outcome variable, predictors such as age, sex, insomnia, and expectation categories.

The Declaration of Helsinki was followed in the conduct of the study. Each participant received information about their rights regarding data protection and how

their personal data was processed in accordance with Regulation (EU) 2016/679 (GDPR) and any applicable national laws. Each participant provided written informed permission attesting to their knowledge of data protection.

RESULTS

One hundred fifty-five questionnaires were completed and returned. Respondents' average age was 39 years, ranging from 18 to 73 years, 79% of them were female and 21% male.

Discrimination and Stigma. Almost half of the sample (43%) said they had been discriminated against or stigmatized due to their psoriasis, while 57% said they had never been treated this way (fig. 2). Those who had been discriminated against were slightly younger, with an average age of 31.47 years, than those who had not, with an average age of 50.04 years.

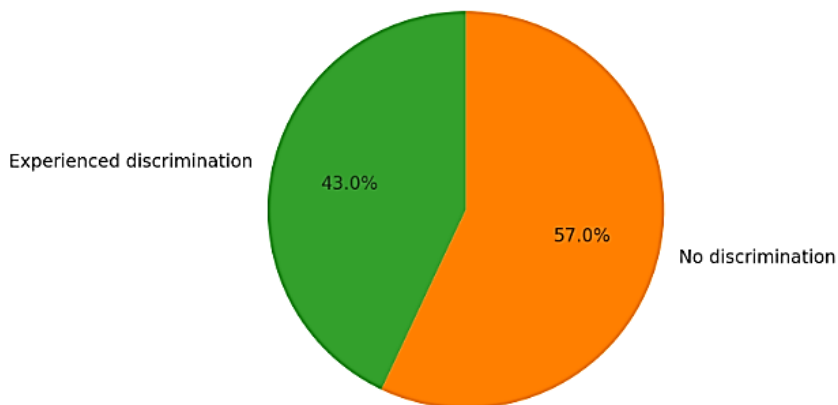


Fig. 2. Experience of discrimination or stigma due to psoriasis

Sleep Disturbances. Only 6.5% reported having insomnia or difficulty sleeping, while the majority (74%) did not have a sleeping problem (fig. 3).

Approximately 19% could not answer or were unsure of this question. No significant association was found between the experiences of discrimination and insomnia.

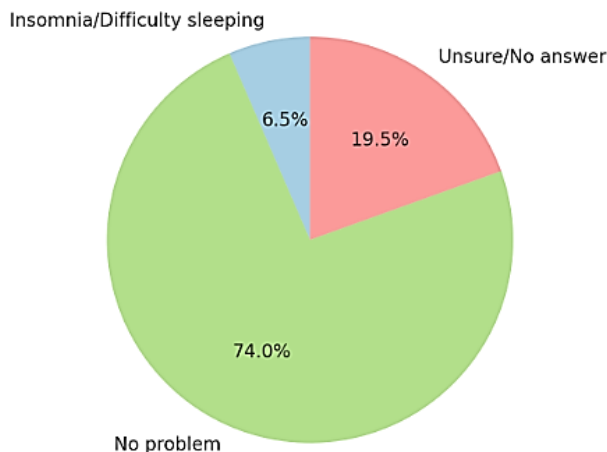


Fig. 3. Reported sleep disturbances among respondents

Expectations about Disease Course.

The participants gave diverse responses when questioned about what they hoped for the psoriasis of their future (fig. 4). 42 out of 155 responders stated that they had no hope for the future of their disease. Though 29 participants wished to become totally well, 32 participants wished that they

would improve. Five of the small sample predicted that their illness would worsen, and five predicted that any treatment that they received would be only temporarily effective. 29 subjects had not given a clear answer or were not sure how to respond, and 12 subjects had responded differently or more elaborately before.

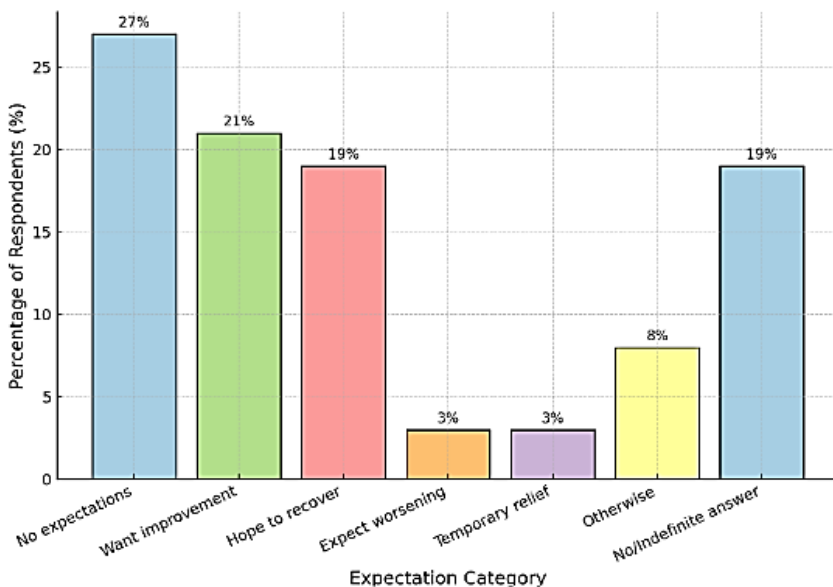


Fig. 4. Expectations about the future course of psoriasis

Impact on Family, Work, and Relationships.

When asked to describe how psoriasis had affected different parts of their lives, participants most often reported negative effects on a variety of important areas (fig. 5). Eighty-one reported that their families were affected negatively, and 76

reported that their performance at work was affected negatively as a result. Similarly, 84 reported that their dating relationships were affected negatively by their psoriasis. A little over 23 of the responses in these categories were either absent or too general to be categorized properly.

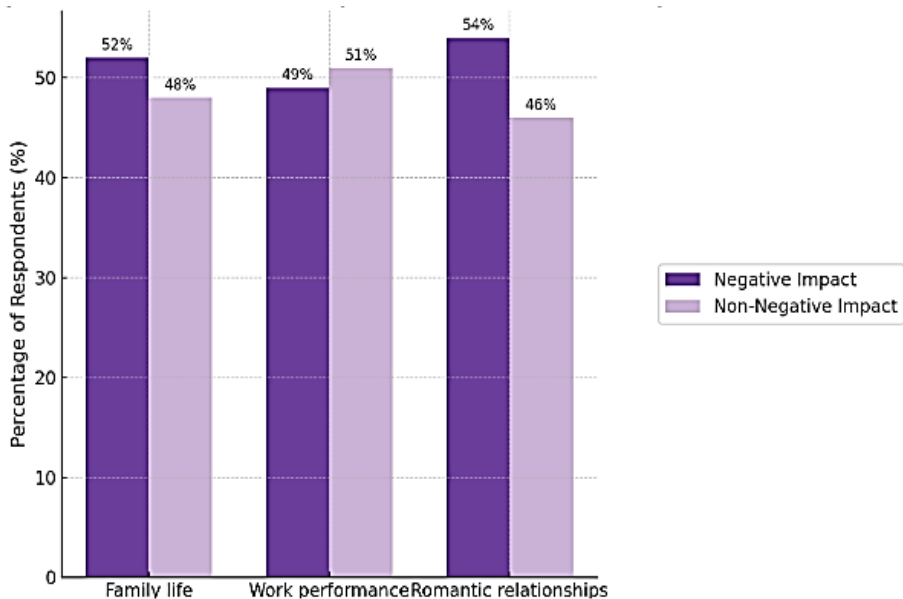


Fig. 5. Impact of psoriasis on family, work performance and romantic relationships

Psychosocial Correlations. There was a statistically significant and moderate relationship between discrimination reports and adverse effects on family, employment, and interpersonal relationships, suggesting that individuals reporting discrimination were more likely to report strain in these domains. Pearson's chi-square tests yielded $\chi^2 (9) = 32.26$, $p < 0.001$, with Cramer's $V = 0.388$, indicating a moderate effect size. Discrimination was not significantly related to insomnia, though.

DISCUSSION

The study unveils the complex overlap of psoriasis and mental health, where psychosocial issues, led by discrimination, are the root cause of impaired quality of life. The study also has a few limitations. Self-report data limitation is prone to in-built subjectivity and recall bias. Female over-sampling (79%) and relatively low sample size might limit generalizability.

Nevertheless, the results offer significant patient-centered evidence to empha-

The Etiopathogenetic Pathways Connecting Psoriasis and Mental Health Disorders

size imperatives of the integration of psychosocial issues into models of psoriasis clinical management.

Nearly half of the participants reported being stigmatized or discriminated against, consistent with earlier research placing psoriasis at the center of the most stigmatized dermatological disease (5). In 2021, Zhang *et al.* (12) mentioned that the lack of public understanding of these dermatological diseases would lead to people being stigmatized and treated with disgust and hostility. Also, stigma may lead to social rejection and internalization of negative self-beliefs, increasing emotional vulnerability and psychiatric comorbidity (3). Back in 2020, a similar survey was conducted by Wan *et al.* (13), in which they reported that 106 patients were stigmatized based on their psoriatic lesions. Two-thirds of the patients who completed this survey anticipated being stereotyped as contagious or unattractive, whereas about one-third of them thought that their lesions would elicit disgust from other people upon seeing them.

In contrast to studies with high levels of sleep disturbance among psoriasis patients, as often explained by pruritus, depression, and systemic inflammation (14, 15), the current sample had comparatively low levels of sleep complaint (6.5%), not correlated with a seeming association with insomnia and discrimination. This result may be explained by underreporting, the effect of non-psoriasis-related sleep disorder, or sample-specific characteristics. Lack of correlation indicates that stigma acts directly on psychosocial adjustment by means of relational stress and not by means of biological sleep disturbance. In a 2024 study guided by Guo *et al.* (16),

fifteen studies including 1274 patients with psoriasis and 775 controls were analyzed, and they concluded that psoriasis is associated with sleep disturbances, especially among young patients. They also mentioned that patients with psoriasis are more likely to experience insomnia.

Contrary to expected responses, the disease course differentiated subgroups with no expectations from those with expectations of complete remission. These subgroups also showed higher perceived discrimination, although not significantly. Such trends may signal higher psychological vulnerability, whereby reduced hopefulness or excessive optimism increases the distress of social rejection. This aligns with earlier evidence that coping styles, resilience, and perceptions of illness significantly influence the psychological burden of psoriasis (17). After treatment, 72% of patients expected 90%-100% clearance, whereas only 28% expected <90% clearance of psoriasis in a study conducted by Clemmesen *et al.* in 2023 (18). So, it would be possible to suggest that some patients still have hope for clearance despite the odds.

Particularly, discrimination experience was most closely associated with adverse impact on family relationships, work functioning, and interpersonal relationships, indicating that the psychosocial morbidity of psoriasis extends far beyond individual self-esteem to influence central relational and functional areas of daily living. This extends beyond self-esteem to relational and functional domains, supporting Grossschaedl *et al.* (19) study from 2024 on high emotional burden for partners and relatives

The multivariable analysis identified

patterns in discrimination predictors, but none were statistically significant. Males experienced discrimination less frequently than females, and greater age was associated with a lower likelihood, patterns that could reflect gendered social dynamics or cumulative coping resilience over time. There was no prognostic role for insomnia. Notably, individuals who had no expectations about their illness or hopes for a full recovery were more likely to experience discrimination than those who anticipated improvement. This suggests that despondency or false optimism may increase feelings of vulnerability and social rejection.

CONCLUSIONS

Psoriasis has to be visualized as a multidimensional disease well beyond the scope of dermatopathology. Stigma and discrimination are placed in the focus of this article as parts of the forces that influence the psychosocial existence of patients and significantly lower quality of life in family, occupational, and relational areas of life. Systemic inflammation biologically

links psoriasis with psychiatric disease, and social stressors raise disease burden and create a vicious circle of distress.

Effective management necessitates a careful, multidisciplinary strategy. Apart from biologic and systemic anti-inflammatory treatment, routine mental health screening, measurement of stigma experience, and availability for psychological and social support treatment are required. Cognitive-behavioral therapy, psychoeducation, and peer support interventions have the ability to empower patients to reconceptualize illness representations and become resilient. Integrative psychodermatology thus promises improved outcomes through management not just of overt cutaneous lesions but also of silent wounds of social discrimination.

CONFLICT OF INTEREST AND FUNDING

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The Etiopathogenetic Pathways Connecting Psoriasis and Mental Health Disorders

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