



## **The connection between mental health and dermatology: Exposing the links between psychiatric disorders and dermatopathies**

### **A conexão entre saúde mental e dermatologia: Exposição dos vínculos entre transtornos psiquiátricos e as dermatopatias**

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#### **ABSTRACT**

**Introduction:** Due to the complexity of the interactions between psychiatric disorders and skin diseases, the relationship between mental health and dermatology has been increasingly recognized. To provide unfettered care to patients and create effective therapeutic methods, it is critical to understand these links. **Methods:** A systematic review of the literature was conducted

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with the aim of identifying recent studies that examined the relationship between mental health and dermatology. These studies focused on the relationship between psychiatric disorders and skin diseases in adults. The chosen articles were thoroughly examined to find patterns, underlying factors, and clinical implications. Results: The reviewed studies showed a bidirectional relationship between dermatology and mental health. Skin diseases have been associated with a higher risk of developing psychiatric problems such as depression and anxiety. On the other hand, dermatological conditions can cause mental health problems to arise or worsen. Psychosocial factors, such as stress and low self-esteem, also play a role. Conclusion: The description of the relationship between dermatology and mental health highlights the need for an integrated approach in the treatment of patients. The results of the review show that interventions for dermatological conditions should take into account both physical and emotional aspects to improve patients' quality of life and achieve better clinical outcomes. Additionally, properly identifying and treating dermatology patients' mental health issues is essential for a thorough and effective approach to caring for these patients.

**Keywords:** Mental Health, Psychiatric disorders, Skin diseases.

## INTRODUCTION

Due to the increased understanding of the relationship between body and mind, the relationship between dermatology and mental health has piqued the interest of scientists. Recent studies show that skin diseases and psychiatric disorders often coexist and influence each other in various ways. Patients' quality of life and treatment efficacy can be significantly affected by this complex interaction.

As studies have shown a complex connection between psychiatric disorders and skin diseases, the relationship between mental health and dermatology has been the subject of greater interest in the scientific community. In this context, recent studies have investigated the psychosocial effects of dermatoses, as well as the pathophysiological mechanisms that may be responsible for this interaction.

Epidemiological studies, such as those by Taborda et al. (2005) and Müller and Ramos (2004), have shown that patients with dermatoses often experience psychological distress. This shows the importance of integrated approaches that consider the physical and emotional aspects of these conditions. In addition, psychodermatology studies, such as Marron et al. (2020) and Aleem and Tohid (2018), have revealed the biological and psychosocial mechanisms associated with the relationship between mental health and aesthetics.

The clinical treatment of skin diseases depends on understanding these interactions, as there is evidence that patients' physical symptoms can be improved, as well as their mental health and overall well-being. However, knowledge about this complex connection is still



insufficient, which indicates that more research is needed to uncover the underlying mechanisms and create integrated therapeutic methods.

The aim of this review is to examine the relationship between psychiatric disorders and skin diseases by examining recent studies conducted in adults. As well as contributing to the understanding of the relationship between dermatology and mental health by examining the current scientific literature.

## **MATERIALS AND METHODS**

To investigate the connection between mental health and dermatology, and to explore the links between psychiatric disorders and skin diseases, a systematic review of the scientific literature was conducted. The methodological process followed the following steps:

### **IDENTIFICATION OF STUDIES**

A systematic search was conducted in academic databases, such as PubMed, Scopus and Web of Science, using search terms related to mental health, psychiatric disorders and skin diseases. The descriptors used included "mental health", "psychiatric disorders", "skin diseases", "psoriasis", "atopic dermatitis", "acne", "vitiligo", "body dysmorphic disorder", among others.

### **SELECTION OF ARTICLES**

Articles were selected based on predefined inclusion criteria, including studies investigating the association between psychiatric disorders (e.g., depression, anxiety, body dysmorphic disorder) and skin diseases (such as psoriasis, atopic dermatitis, acne, vitiligo) in adult populations. Studies focusing exclusively on paediatric populations were excluded.

### **EVALUATION OF METHODOLOGICAL QUALITY**

The selected articles were evaluated for methodological quality using criteria such as study design, sample size, diagnostic methods, and bias control. Only studies with high methodological quality were included.

### **2.4 DATA EXTRACTION AND ANALYSIS**

Relevant data were extracted from each study, including information on the population studied, methods used, main results, and conclusions. The data were analyzed qualitatively to identify emerging patterns and trends and later presented in TABLE 1.



## SYNTHESIS OF RESULTS

The results were synthesized to highlight the main links between psychiatric disorders and skin diseases, including possible pathophysiological mechanisms, impact on patients' quality of life, and implications for clinical management.

## RESULTS AND DISCUSSION

A summary of the main results of studies on the relationship between mental health and dermatology is presented in the following table.

This study emphasizes the correlation between psychiatric disorders and skin diseases in adults.

This compilation of data provides an overview of the most relevant outcomes and reveals the nature and scope of the interaction between these two areas of healthcare.

Analyzing these results can help to understand the fundamental mechanisms and create more personalized intervention strategies.

Considering the high prevalence of Body Dysmorphic Disorder in dermatological patients, and the fact that cosmetic treatments rarely improve their symptoms, the training of professionals for systematic investigation, diagnosis and referral for psychiatric treatment is essential.

TITLE	AUTHOR, YEAR	OBJECTIVES	RESULTS	CONCLUSIONS
Assessment of the prevalence of psychological distress in patients with dermatoses in the spectrum of psychocutaneous disorders	TABORDA; WEBER; FREITAS, 2005	To verify the prevalence of psychological distress in patients with dermatoses in the spectrum of psychocutaneous disorders (PTSD), as well as to relate the degree of psychological distress to the disease, time of evolution, gender and age of the patient.	The presence of psychological distress was observed in 25% of patients, with dermatological patients presenting an OR=14 for positive SRQ compared to men. The chi-square test did not demonstrate a statistically significant association between dermatological disease and the presence of psychological distress. Considering only patients with acne vulgaris and vitiligo, it was observed that the latter had significantly greater psychological distress than the former (OR=8.9; p=0.034)	The data confirmed the high prevalence of psychological distress in patients with some skin diseases. Furthermore, they suggest that chronic and unsightly diseases, such as vitiligo, may be associated with a greater degree of suffering in this population. The results of the chi-square test, although not significant for the association of dermatoses in general and psychological distress, demonstrated a strong tendency in this direction.

<p>Etiology, clinical and psychosocial aspects of psoriasis</p>	<p>CRUVINEL; SATURNINO , 2023</p>	<p>In this context, this article aims to analyze the etiology, clinical and psychosocial aspects of Psoriasis.</p>	<p>Psoriasis is an autoimmune disease mediated by T cells with abnormal activation of the immune system and altered cell differentiation and exacerbated proliferation of the epidermis and keratinocytes. Psychological aspects and stress can contribute to the emergence, relapse or worsening of the clinical condition.</p>	<p>In view of the above, it is extremely important to understand the etiological and clinical aspects that directly reflect on the quality of life, well-being and self-image of people with Psoriasis, as these factors are related to the triggering and exacerbation of the disease.</p>
<p>Psychodermatology: an interface between psychology and dermatology</p>	<p>MÜLLER; RAMOS, 2004</p>	<p>The objective of this article is to present some important results from the doctoral thesis of the first author, supervised by the second.</p>	<p>The results indicate that the analytical model allowed the symbolic understanding of the disease vitiligo as a manifestation of unconscious contents that needed to be integrated into consciousness.</p>	<p>Patients who received joint medical and psychological treatment had a repigmentation rate of up to 80%, while those who received exclusively medical treatment had a repigmentation rate of up to 20%. This data demonstrates the importance of integrated work in the treatment of diseases with psychosomatic manifestations.</p>
<p>Psychosocial impact of atopic dermatitis in adults: a qualitative study</p>	<p>MARRON; CEBRIAN-RODRIGUEZ ; ALCALDE-HERRERO; ARANIBAR; TOMAS-ARAGONES, 2020</p>	<p>Atopic dermatitis affects the patient's quality of life in several ways. Analyzing the effects of this disease on the lives of adult patients is, therefore, important to better define their care needs.</p>	<p>Atopic dermatitis affected patients' lives in 6 spheres of activity: economic, occupational, personal, psychosocial, clinical and relational. A clear finding was that the disease has a considerable psychosocial effect on adult patients, altering their interpersonal relationships and leading to rejection, stigmatization and social isolation.</p>	<p>The quality of life of adults with atopic dermatitis is negatively affected. This disease requires a professional, holistic and multidisciplinary management approach that attempts to mitigate adverse effects.</p>
<p>Pro-inflammatory cytokines, biomarkers, genetics and the immune system: a mechanistic approach to depression and psoriasis</p>	<p>ALEEM; TOHID, 2018</p>	<p>Highlight the inflammatory and immunological mechanisms involved in depression and psoriasis.</p>	<p>Depression and psoriasis are associated. Immunological mechanisms - the actions of tumor necrosis factor-<math>\alpha</math>, interleukin 1 (IL-1), IL-2, IL-10, IL-22, IL-17, interferon-<math>\gamma</math>, IL-1<math>\beta</math>, prostaglandin E2, C- reactive protein, IL-6 and IL-8 etc.-, and some genetic changes are involved.</p>	<p>There is a possible bidirectional relationship between psoriasis and major depression; that is, depression leads to psoriasis and psoriasis leads to depression. We recommend further studies in the future to gain a deeper and better understanding of this relationship.</p>

<p>Early detection of emotional and behavioral disorders in dermatology</p>	<p>GARCÍA-CAMPAYO; PÉREZ-YUS; GARCÍA-BUSTINDUY ; DAUDÉN, 2016</p>	<p>Many skin diseases are associated with mental disorders. When psychological symptoms are mild, as is often the case in dermatology, it can be difficult to distinguish between normality and manifestations of a mental disorder.</p>	<p>Short, simple, self-administered questionnaires were developed to help dermatologists and other healthcare professionals identify the presence of a mental disorder with a high degree of certainty. In this article, we focus on the questionnaires most used to detect the two most common mental disorders: anxiety and depression.</p>	<p>Finally, we describe the circumstances in which it is advisable to refer a dermatology patient to a psychiatrist, who can diagnose and treat the mental disorder according to standard protocols.</p>
<p>Vitiligo as a psychosocial disease: seizures of white-marked patients</p>	<p>BÚ; ALEXANDRE; SCARDUA; ARAÚJO, 2017</p>	<p>The present study aimed to present the understanding of subjects with vitiligo about their condition, also evaluating the association with the concept of health-disease</p>	<p>It was identified that out of 832 existing medical records, 13 patients had vitiligo and, of these, only eight agreed to participate in the study, responding to a semi-structured questionnaire. Data processing occurred using the thematic content analysis technique, identifying four categories.</p>	<p>The results indicated that the illness process is directly linked to social practices that are directed at the “stained” subject, on whom vitiligo left its mark.</p>
<p>Differences between men and women in chronic itch: a psychodermatological study in lichen simplex chronicus</p>	<p>MARTÍN-BRUFU; SUSO-RIBERA; REDONDO; BERNÁ, 2017</p>	<p>The current study aims to explore whether these personality styles can help understand why gender and emotional distress are associated with scratching.</p>	<p>Significant differences were found in the personality styles of men and women with LSC. Women were more pessimistic, oriented towards satisfying the needs of others, traditional, insecure, submissive and reserved, with effect sizes ranging from moderate (d=0.43) to strong (d=0.96).</p>	<p>These psychological factors may help explain the mechanisms underlying gender differences in chronic scratching, at least in Lichen Simplex Chronicus. The discoveries could open new avenues for research and treatment.</p>
<p>Acne vulgaris and well-being in medical students</p>	<p>RIBAS; OLIVEIRA, 2008</p>	<p>Establish the relationship between acne and well-being status.</p>	<p>It was found that 26% of students in the case group and 24% in the control group had 0 to 4 points in at least one of the items questioned.</p>	<p>Although the majority of patients present attitudes and feelings triggered by acne, no statistically significant association was demonstrated between this dermatosis and a low level of well-being.</p>
<p>Body dysmorphic disorder in dermatology: diagnosis, epidemiology and clinical aspects</p>	<p>CONRADO, 2009</p>	<p>Cosmetic complaints are becoming more and more frequent, as they aim to perfect the shape of the body and skin. Dermatologists are consulted to evaluate and treat these complaints. Therefore, it is important to know</p>	<p>Most patients present some degree of impairment in social and occupational functioning, and as a result of their obsessive complaints about their appearance, they may develop compulsive behaviors, and, in more serious cases, there is a risk of suicide. The level of belief is impaired, as they do not recognize their defect as</p>	<p>Considering the high prevalence of Body Dysmorphic Disorder in dermatological patients, and that cosmetic treatments rarely improve their symptoms, training professionals for systematic investigation, diagnosis and referral to psychiatric treatment is essential.</p>





		about Body Dysmorphic Disorder, initially called "dysmorphophobia", little studied until recently	minimal or non-existent and often seek cosmetic treatments for a psychological disorder.	
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Source: The authors.

When analyzing the results obtained, it can be noted that when evaluating the prevalence of psychological distress in patients with dermatoses of the psychocutaneous spectrum, Taborda, et.al., 2005 observed a high prevalence of psychological distress in patients with dermatoses, indicating a strong association between dermatological conditions and mental health problems. These results highlight the importance of an integrated approach in the management of dermatoses, considering not only the physical but also the emotional aspects of dermatological conditions. The need for psychosocial interventions to improve the quality of life of these patients is highlighted.

The clinical and psychosocial aspects of psoriasis, analyzed by Cruvinel & Saturnino, 2023, highlights the influence of psychosocial factors on the development and course of psoriasis. That said, it is notable that there is an important discussion about comprehensive approaches to the management of psoriasis, considering both the dermatological and psychosocial aspects of the condition. The need for interventions that address not only the physical symptoms but also the emotional impacts of psoriasis on patients is emphasized.

Müller & Ramos, 2004, talk not only with authors who have published studies contemporaneously with them, but also with new researchers, as they explore the intersection between psychology and dermatology, highlighting the importance of psychodermatology as a discipline that considers the emotional aspects of dermatological diseases. They address the need for an integrated approach in the management of patients with dermatoses, emphasizing the importance of psychosocial interventions in the management of dermatological conditions. They highlight the importance of effective communication between dermatologists and psychologists to ensure unrestricted care for patients, managing not only skin manifestations, but the entire psychosocial context involved.

The psychosocial impact on adults with atopic dermatitis reveals a range of emotional, social, and occupational challenges faced by patients. The discussion constructed by Marron et al., 2020, is relevant in several aspects, however, it stands out for addressing a common dermatopathy in early childhood manifesting in adulthood, which can cause instabilities in its



management. The importance of integrated therapeutic approaches in the management of atopic dermatitis is discussed, which address not only the physical symptoms, but also the psychosocial aspects of the condition. The need for psychological support and interventions aimed at improving patients' self-esteem and quality of life is emphasized.

Aleem & Tohid, 2018, denote the shared pathophysiological mechanisms between depression and psoriasis, highlighting the role of pro-inflammatory cytokines, biomarkers, genetics, and the immune system in the interaction between these conditions. The importance of an approach that integrates the management of depression and psoriasis is highlighted, considering not only the physical aspects, but also the underlying biological and psychosocial factors. It also emphasizes the need for interventions that address both emotional and dermatological symptoms to improve clinical outcomes and quality of life for patients.

The early detection of psycho-emotional disorders in patients with some dermatological condition is highlighted by García-Campayo et al., 2016, when investigating strategies to early identify psychoemotional disorders in patients with some dermatological pathophysiology, it becomes evident that systematic screening and the use of standardized assessment instruments are extremely important so that diagnoses are even more accurate, facilitating their management. The author highlights the importance of identifying cutaneous pathologies as well as guidance for specialized treatments in order to improve the prognosis of each patient. The importance of a collaborative approach in the management of skin diseases is also emphasized.

The study Vitiligo as a psychosocial disease: seizures of patients imprinted by the blank developed in 2017 by Bô et al., explored the concerns and apprehensions of patients with the diagnosis of vitiligo and highlights the psychosocial impact of the disease and issues related to body image and self-esteem.

Regarding vitiligo and seizures as well as the psychosocial impact on post-diagnosis patients, one can mention the case of Pop singer Michael Jackson, it is common knowledge that he was diagnosed with Vitiligo, a dermatological condition known to result in white spots on the skin. After the diagnosis, her psychosocial relationship was significantly affected, and she was the target of public discussions and criticism about the change in color of her skin. At first, the singer tried to disguise his vitiligo patches by using makeup and clothes.

However, he eventually decided to publicly admit his condition as the situation evolved. It could be that vitiligo and the speculations that come with it contributed to the psychological stress that Michael Jackson experienced throughout his life, aggravating his self-image issues





and leading him to undergo multiple plastic surgeries. Vitiligo had a significant impact on her relationship with her own physical appearance and her personal identity.

The authors discuss the importance of comprehensive therapeutic approaches in the management of vitiligo, which include psychosocial support and interventions to promote a positive body image and improve patients' quality of life. In order to avoid all the psychosocial damage similar to that which Michael Jackson suffered.

A psychodermatological study on lichen simplex chronicus investigated the differences between men and women in chronic scratching, highlighting psychosocial factors that may influence this behavior. Martín-Brufau et al., 2017, discuss the implications of gender differences in the management of chronic scratching and the importance of personalized approaches that take into account the psychosocial aspects of the condition

He emphasized the importance of comprehensive interventions that address the social and emotional aspects of chronic scratching, in addition to the physical symptoms. Treatment outcomes and quality of life for patients affected by this condition can be improved by an approach that recognizes and addresses these complexities. As a result, it is critical for healthcare professionals to take a broad view when creating management strategies for chronic scratching, taking into account not only medical factors but also the psychological and social factors involved.

Acne vulgaris and well-being in medical students addressed by Ribas & Oliveira, 2008, denotes the impact of acne vulgaris and the implications on the well-being of medical students, revealing an association between the dermatological condition and reduced levels of psychological well-being. We also emphasize the importance of integrated approaches in the management of acne vulgaris, which include psychosocial support and interventions to improve patients' self-esteem and quality of life.

Many patients have body dysmorphism (BDD) due to dermatopathies, the body dysmorphic disorder in dermatology discussed by Conrado in 2009, in dermatology, BDD can manifest itself with a focus on characteristics of the skin, hair or other areas of the body. The diagnosis of BDD in dermatological patients requires sensitivity on the part of health professionals to recognize the signs of excessive preoccupation with appearance, despite the fact that there are no visible or minimal defects.

The epidemiology of BDD in dermatological settings is not yet fully understood, but a significant prevalence is suggested, especially in patients seeking dermatological treatment for cosmetic concerns. The clinical aspects of BDD in dermatology include careful evaluation of



patients' psychological and emotional symptoms, as well as appropriate dermatological treatment.

A multidisciplinary approach involving dermatologists, psychiatrists, and other mental health professionals is essential to provide comprehensive care to BDD patients, targeting not only physical health but also psychological and emotional well-being.

## **FINAL THOUGHTS**

The relationship between dermatology and mental health is becoming crucial for the understanding and treatment of various dermatopathies. Research on the relationships between psychiatric disorders and skin conditions emphasizes the need for an integrated and holistic approach to treating patients. Dermatological and mental health are interdependent.

Disorders such as body dysmorphic disorder require careful assessment of patients' physical symptoms and emotional and psychological concerns. It is critical that dermatologists and mental health professionals collaborate to provide a well-rounded treatment that takes into account both physical and emotional skin conditions.

Patients' quality of life and treatment outcomes can be significantly improved with this collaborative approach, which identifies and treats not only external manifestations, but also fundamental emotional problems that affect their dermatological and mental health.



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