



The importance of social support in the occurrence of mental disorders in patients suffering from Psoriasis Vulgaris¹

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Abstract: Psoriasis represents a global issue affecting approximately 1% of the Caucasian population, contributing not only to aesthetic concerns but also to stigmatization, social isolation, and an overall decline in quality of life. The chronic inflammatory state in the patient's body predisposes them to a higher susceptibility to anxiety and depressive disorders. Novel treatment methods, particularly monoclonal antibodies, may serve as a bridge between physical and psychological benefits. The research addresses the issues of psychological disorders in patients with common psoriasis and explores the impact of various dimensions of social support on the course of the disease. Topics covered include the etiopathogenesis of psoriasis, the connection between this dermatosis and an increased frequency of psychological disorders, as well as the bidirectional relationship between both disease entities. Four studies, encompassing clinical, demographic, and psychosocial variables, underwent analysis. Each study description includes statistical analysis, operationalization of variables, and a section dedicated to drawing conclusions. In the discussion section, a strong correlation between social support and the psychological state of dermatological patients is demonstrated. An integrated approach to the therapeutic process and the benefits of a holistic approach to issues related to chronic inflammatory diseases are also discussed.

Keywords: psoriasis, depressive disorders, social support, adaptation model

Introduction

Psoriasis is a chronic inflammatory disease with an epidemiology ranging from 0.09% of the U.S. population (Sahi et al., 2020). According to Bulat et al. (2020), it may be one of the oldest known diseases, yet it remains fraught with uncertainties. Beyond its clinical manifestations, characterized by well-demarcated, erythematous, and scaly lesions, psoriasis is also associated with an increased susceptibility to other inflammatory conditions such as metabolic syndrome, inflammatory bowel diseases, cardiovascular diseases, and psoriatic arthritis (González-Parra & Daudén, 2019). The chronic nature of the disease, marked by periods of remission and relapse, along with its cutaneous manifestations and the stigma associated with the condition, predisposes patients to mood disturbances. Compared to the general healthy

population, individuals with plaque psoriasis exhibit a 40-90% higher incidence of psychiatric symptoms, including anxiety, depression, and suicidal ideation (Baka et al., 2021). Recent analyses have revealed a bidirectional relationship between the pathophysiology of depression and psoriasis, based on the interference of inflammatory cytokines with both the nervous and immune systems (Daudén & González-Parra, 2019; Koo et al., 2017). This association opens new therapeutic avenues, both pharmacological and those aimed at reducing the severity of skin lesions through the improvement of the patient's mental well-being (e.g., cognitive-behavioral therapy). It is hypothesized that various psychosocial interventions aimed at enhancing the mental health of individuals with psoriasis could have a beneficial impact on the course

1 Article in polish language: https://www.stowarzyszeniefidesetratio.pl/fer/59P_Wojt.pdf

of the disease. According to theoretical frameworks, multidimensional social support is a critical resource that can help patients better cope with the disease.

The mental health of dermatological patients is the subject of numerous scientific studies (Haduch et al., 2008; Hassani et al., 2021; Pollo et al., 2021; Yildirim et al., 2020). However, the limited access to health psychology specialists and the inconsistency in research findings regarding the relationship between the clinical severity of skin lesions and mental health indicators often present challenges in clinical inference. As noted by Łakuta et al. (2018), the negative impact of psoriasis on patients' daily functioning is well-recognized, yet psychological disorders remain underdiagnosed and are often not considered when selecting a treatment for the primary disease. The aim of this paper is to demonstrate the benefits of a holistic approach to managing patients with plaque psoriasis, emphasizing the positive impact of social support on the course of the disease

1. Theoretical introduction

1.1. Clinical characteristics of Psoriasis

Psoriasis is one of the most commonly diagnosed chronic diseases in dermatology. The latest meta-analysis has revealed an uneven geographical and epidemiological distribution of this condition (Parisi et al., 2020). The highest incidence has been observed in Italy, with 321 cases per 10,000 inhabitants annually. Higher prevalence rates are also noted in Western Europe (up to 3.46%), Central Europe (up to 5.32%), and North America (up to 3.6%). The region with the lowest incidence of psoriasis is East Asia, with rates up to 0.4%. According to WHO data, epidemiological statistics from Norway in 2008 reported a record number of cases – 10,302 – which constituted 11.43% of the population aged 20-79 years.

The etiology of psoriasis is multifactorial and remains incompletely understood, involving both genetic and environmental factors (Koo et al., 2017). The manifestations of the disease are mediated by chronic inflammation, characterized by periods of

exacerbation and remission. Based on its course, psoriasis is classified into early-onset, with symptoms occurring before the age of 40, which is associated with a positive family history, extensive body involvement, and a strong association with the HLA-C*06 allele, and late-onset psoriasis, which is linked to metabolic disorders such as obesity, diabetes, hypertension, and dyslipidemia (Jing et al., 2021).

The initial lesion of this inflammatory dermatosis is a papule, which gradually expands into a plaque covered with a silvery scale. Fully developed lesions manifest as psoriatic plaques, which can affect various areas of the body. In clinical practice, several tools are used to assess the severity of the disease: the *Psoriasis Area and Severity Index* (PASI), *Body Surface Area* (BSA), and the *Dermatology Life Quality Index* (DLQI). The first two scales are completed by the physician and primarily assess the extent of skin involvement. The DLQI, developed by Andrew Y. Finlay and Gul Karim Khan in 1990, is a questionnaire designed to evaluate the impact of the disease on the patient's quality of life. The questions address issues related to daily activities, interactions with close ones, sexual relations, limitations in work, study, or sports. Patients also assess symptoms such as itching, pain, tingling, and burning caused by the skin lesions.

1.2. Psychosocial aspects of Psoriasis

The relatively high prevalence of psoriasis has prompted researchers to explore not only the dermatological aspects of this disease but also the emotional, social, and financial dimensions it entails. Jing et al. (2021) conducted a comparative study involving 1,571 healthy individuals and an equivalent number of psoriasis patients within the Chinese population. The study revealed significant disparities in education levels (with a higher prevalence of primary education over higher education among those with psoriasis), annual income (substantially lower income in the psoriasis group), and smoking rates (537 smokers in the psoriasis group compared to 238 in the healthy group). A correlational study on depression and anxiety in 174 psoriasis patients in Malaysia also demonstrated a consistent association between psoriasis, lower

education levels, and reduced income (Baka et al., 2021). Among 51 participants in the study by Bulata et al. (2020), 76% of psoriasis patients reported a significant deterioration in their financial situation since the onset of symptoms, and 59.3% reported absenteeism from work in the previous year due to their skin condition.

In addition to these measurable consequences, psoriasis patients often face social stigma. Skin diseases affecting visible areas of the body are particularly susceptible to negative reactions from others. Due to aesthetic reasons, psoriatic plaques covered with whitish scales often elicit disgust, emotional fear, and concerns about contagion (Grover et al., 2021). Numerous studies on the stigma associated with dermatological conditions have highlighted the significance of this issue. As Ghorbanibargani et al. (2016) noted, some analyses suggest that up to 90.2% of patients are affected by this aspect of the disease. One criterion presented by the researchers was the lack of social support, defined as feelings of loneliness, deprivation of natural rights, and the absence of both formal and informal support. Moreover, the phenomenon of stigma extends to caregivers of dermatology patients. Grover et al. (2021) conducted a study on 49 caregivers, evaluated using the CPMI (*Caregiver of People with Mental Illness*) scale, which includes tools such as the FBI (*Family Burden Interview*), PSS (*Multidimensional Scale of Perceived Social Support*), and CBAS (*Cognitive Behavioral Avoidance Scale*). The study found that these caregivers experience stigma at levels comparable to those caring for individuals with mental illness (Basińska et al., 2013).

The cutaneous manifestations of psoriasis vulgaris and the pervasive stigma associated with visible plaques can be a burdensome experience for patients. Difficulties in accepting their appearance, changes in social and private life, and the financial burden of the disease can become sources of chronic stress, potentially triggering various mental health disorders, including depression and anxiety. Hölsken et al. (2021) demonstrated that psoriasis symptoms often exacerbate under psychological stress and stressful events, further evidencing a connection between the somatic and psychological spheres.

1.3. The bidirectional relationship between depression and Psoriasis

The comorbidity of chronic inflammatory diseases, such as psoriasis, with psychological disorders is a complex and multifaceted relationship. Over the past decade, numerous studies have described the bidirectional nature of the connection between psoriasis and mental health disorders (Hölsken et al., 2021; Koo et al., 2017; Sahi et al., 2020). A systematic review from 2021, encompassing 56 studies, identified a neuro-dermatological link between psoriasis and depressive-anxiety disorders (Maqbool et al., 2021). The inflammatory process, with an immunological basis, was found to be closely associated with both conditions. Blood and cerebrospinal fluid analyses in individuals suffering from depression revealed elevated levels of inflammatory markers, such as CRP (C-reactive protein), IL-1, IL-6, and TNF α . Some studies have demonstrated a clear association between increased TNF α levels and heightened activity of the serotonin transporter (5HTT) – a key target for antidepressants, including SSRIs (selective serotonin reuptake inhibitors), SNRIs (serotonin-norepinephrine reuptake inhibitors), and TCAs (tricyclic antidepressants), which inhibit this activity. The chemokine CXCL10/IP10 (interferon γ -induced protein) also plays a significant role, with its levels observed to rise during episodes of severe depression (Krishnadas et al., 2016). This chemokine is linked to the increased influx of Th1 lymphocytes – a subset of immune cells contributing to the inflammatory response.

The immunological basis of psoriasis is characterized by the presence of numerous inflammatory cytokines, including TNF α , which promotes increased activity of antigen-presenting cells in the epidermis (dendritic cells, DCs). These dendritic cells, by releasing further inflammatory cytokines, facilitate the influx of other immune cells into the upper layers of the skin and epidermis. The IFN γ (interferon γ) produced by these cells also elevates the levels of the aforementioned chemokine CXCL10/IP10. A key factor in the etiology of both psoriasis and depression is the reduced level of BDNF (brain-derived neurotrophic factor) in the hippocampus, which diminishes neurogenesis.

As demonstrated above, the presence of chronic inflammation is a common feature of both psoriasis vulgaris and depression. Researchers studying the inflammatory theory that links these two conditions emphasize the importance of considering this phenomenon when selecting pharmacological therapies (Bell et al., 2021). Maqbool et al. (2021) note that dermatology patients with coexisting depressive disorders tend to exhibit a demotivated attitude towards treatment, and pharmacotherapy aimed solely at reducing localized skin symptoms is less effective compared to those without psychiatric comorbidities. Koo et al. (2017) suggest that therapies focusing on reducing inflammation by lowering IL-6 levels may prove to be effective. The bidirectional relationship between psoriasis and depression also underscores the potential for improving the mental health of patients undergoing systemic psoriasis treatment (Hölsken et al., 2021). Certain biologic therapies, such as adalimumab, etanercept, and ustekinumab, used in the treatment of psoriasis vulgaris, have shown statistically significant effects in reducing depressive symptoms. Patients treated with secukinumab or ixekizumab demonstrated lower scores on the DLQI questionnaire (González-Parra & Daudén, 2019). However, the latest guidelines for systemic treatment of psoriasis vulgaris recommend caution in the use of brodalumab and apremilast in patients with a history of depression and suicidal behavior (Lambert et al., 2020). The U.S. Food and Drug Administration (FDA) issued a “black box warning” following reports of six suicide incidents in four different clinical trials involving brodalumab. These current recommendations highlight the critical importance of considering both physical and mental health in patient care. Therefore, treatment decisions should not be made in isolation from the psychological condition of individuals suffering from psoriasis vulgaris

1.4. Mental disorders

The prevalence of mental disorders, particularly depressive and anxiety disorders, represents a global challenge, extending beyond populations with chronic illnesses. According to the World Health Organization (WHO, 2020), depression currently

accounts for 4.3% of the global disease burden. Anxiety disorders may coexist with depressive disorders or present independently. The latest edition of the American Psychiatric Association’s Diagnostic and Statistical Manual of Mental Disorders, DSM-5, identifies five types of depressive disorders: (1) Major Depressive Disorder, (2) Persistent Depressive Disorder, (3) Substance/Medication-Induced Depressive Disorder, (4) Depressive Disorder Due to Another Medical Condition, and (5) Premenstrual Dysphoric Disorder. This classification also, for the first time, delineates specific spectrums of anxiety disorders: (1) Generalized Anxiety Disorder, (2) Panic Disorder, (3) Agoraphobia, (4) Social Anxiety Disorder, (5) Separation Anxiety Disorder, and (6) Specific Phobias. A new category for mixed anxiety-depressive disorder has also been introduced, capturing the spectrum of both types of disorders. This novel approach to classifying anxiety-related disorders is grounded in the expanding knowledge of the neuronal pathways underlying stress, panic, obsessions, and compulsions (Crocq, 2015).

The increased prevalence of mental disorders in patients with chronic dermatological conditions is a phenomenon widely documented in the literature. The co-occurrence of depression has been estimated to affect 20-62% of these patients. Moreover, severe depression, accompanied by suicidal ideation and anxiety, affects 2.5% to 9.7% of patients (González-Parra & Daudén, 2019). A review of multiple studies has revealed that the rate of self-destructive behaviors among patients with severe depression associated with psoriasis is ten times higher than in the general population (Lamb et al., 2017). The risk of depressive symptoms also extends to patients with mild to moderate depression, where exacerbated depressive symptoms increase the sensation of pruritus, a common symptom in certain types of psoriasis.

The chronic nature of psoriasis vulgaris and the social challenges faced by patients are directly linked to an increased risk of certain mental disorders. Among 104 participants in the aforementioned study by Groover et al. (2020), 30% of patients had at least one psychiatric diagnosis, independent of residence, disease duration, seasonal exacerbations, and regressions, or BSA (Body Surface Area) assessment.

An additional stressor in the course of psoriasis can be the area of the body affected by psoriatic plaques. Łakuta et al. (2018) examined the correlation between the location of skin lesions and depression and social phobia. The analysis demonstrated that both disorders were strongly associated with the presence of skin lesions in exposed areas, such as the head and neck. A particularly strong correlation was observed between involvement of the genital area and the presence of depressive symptoms.

The emergence of mental disorders is a critical issue due to the consequences of neglecting their presence. Studies indicate that patients with psoriasis vulgaris diagnosed with depression are at greater risk for myocardial infarction, stroke, and cardiovascular-related death, particularly during an acute depressive episode. Numerous studies have shown that the prognosis for patients with mental disorders is worse due to less adherence to treatment compared to those without such disorders. Patients with a depression diagnosis are more likely to focus on the negative aspects of the disease. The specter of recurrent skin symptoms, despite ongoing treatment, discourages them from continuing therapy (Sahi et al., 2020).

1.5. Social support

Social support is one of the most extensively studied personal resources. In the 20th century, Dr. Sidney Cobb published an article in *Psychosomatic Medicine* (1976) defining social support as information that leads an individual to believe they are cared for, loved, esteemed, and a member of a network of mutual obligations. This definition became the foundation for the development of the social support model, and Cobb's work has been cited over fourteen thousand times by social researchers. Cobb (1976) introduced the concept of support as a determinant of health and stress levels in individuals. A meta-analysis of studies from the past century demonstrated that patients suffering from various chronic illnesses who receive social support tend to employ more adaptive coping mechanisms, such as problem-focused coping and cognitive restructuring – identifying and challenging maladaptive thoughts (Schreurs et al., 2003). Hypotheses regarding the mechanisms through

which this resource operates are contextualized by the circumstances under which it is utilized. The first hypothesis posits social support as a factor that generally benefits individuals, irrespective of stress levels. The second hypothesis suggests that social support acts as an intermediary variable between life events and their consequences. An individual taps into the mechanisms of the support network only in situations of heightened stress to mitigate its effects and survive the crisis, thus making social support a buffer rather than a factor that permanently conditions human well-being (Sęk & Cieślak, 1997).

From the perspective of measuring social support, two categories of variables are distinguished. *Received support* can be measured through observation or questionnaires. *Perceived support*, understood as satisfaction with received assistance, is subjectively evaluated by the individual and quantified using self-report questionnaires. In the literature, various dimensions of social support are delineated depending on what is conveyed to the individual. For the purposes of this work, the typology by Sęk and Cieślak has been used, which identifies: spiritual, instrumental, informational, emotional, and material support. *Spiritual support* involves actions by members of the support network that help imbue life's difficulties with deeper meaning. Any advice and indirect means that help the individual better cope with a stressor are defined as *instrumental support*. *Informational support* involves providing the individual with necessary information, particularly in the context of illness, such as details about health status, treatment options, or prognosis. This type of support can be provided not only by professionals but also by peer support groups. *Emotional support* includes expressions of care, empathy, and trust, as well as the opportunity for the patient to express emotions, which can bring relief and reduce stress related to the accumulation of negative feelings. *Material support* refers to financial resources and other tangible goods that constitute concrete assistance.

The effectiveness of social support in positive adaptation to illness has been demonstrated in numerous scientific studies. It has been shown that a high level of support from close individuals reduces the need for other forms of help, including religious

support, and steers the individual away from pathological adaptive mechanisms (Włodarczyk, 1999). Social support also serves as a positive predictor of reduced fatigue among caregivers of individuals with chronic illnesses (Brzezińska, 2013).

2. Objective of the study

The objective of this study is to review the available research on the impact of social support on the mental health of patients with chronic plaque psoriasis. Additionally, the study examines the benefits of a holistic approach to the therapeutic process in patients with chronic illness, with particular emphasis on multidisciplinary medical care

3. Literature review

3.1. Study 1

The first study that offers insight into the role of social support in the course of chronic plaque psoriasis is an analysis conducted on a population of dermatology patients at the La Sapienza University Clinic in Rome (Picardi et al., 2005). This study aimed to examine the role of four variables: social support, attachment, alexithymia, and stressful life events in exacerbations of chronic plaque psoriasis, the most common form of the condition. The study group consisted of 33 individuals aged 18-60, who had received a diagnosis of psoriasis confirmed by at least two dermatologists. Additional inclusion criteria included a *Body Surface Area* (BSA) greater than 10% and at least 8 years of formal education. All participants experienced a psoriasis exacerbation within three months preceding the study. The control group comprised 73 dermatology patients diagnosed with conditions not commonly associated with an increased risk of depressive symptoms. The most prevalent conditions included contact dermatitis, bacterial infections, skin cancers, and connective tissue diseases. Patients with chronic plaque psoriasis were, on average, older and less educated. No significant differences were found in terms of gender, marital status, or tobacco and alcohol use.

The variables in the study were assessed using questionnaires administered by specialists during interviews. Stressful life events were evaluated using the Italian-modified *Paykel's Interview for Recent Life Events*. Importantly, only events that occurred before the exacerbation episode were considered in the analysis. Social support was assessed using the *Multidimensional Scale of Perceived Social Support* (MSPSS), which includes 12 items covering support from friends, family, and others, each rated on a 7-point scale. The conceptualization of the attachment variable was based on tendencies related to the perception of others, self-perception, and preferred coping strategies in the face of threat. Attachment was assessed using the *Experiences in Close Relationships* (ECR) questionnaire, which examines two dimensions: anxiety and avoidance, contributing to adult attachment styles. The final variable, alexithymia – defined as the inability to understand, identify, and express emotions – was assessed using the *Toronto Alexithymia Scale* (TAS). In the statistical analysis, stressful events were categorized as either desirable or undesirable, controllable or uncontrollable, with a separate category for traumatic events such as bereavement. Scores from the attachment and social support questionnaires were summed separately for each variable. TAS scores below 52 points were considered non-alexithymic, scores between 52-60 as borderline, and scores above 60 as indicative of alexithymia. Chi-square and t-Student tests were used for the statistical analysis of categorical and continuous variables, respectively, along with regression models for dependent and independent variables.

The analysis revealed that individuals in the study group did not experience a higher number of stressful events compared to patients without psoriasis, but they did score lower on the MSPSS and lower on the avoidance dimension of the ECR. Additionally, TAS results indicated a higher level of alexithymic traits in the study group. No significant differences were observed in the anxiety dimension of the ECR.

As the author discusses, these results support the psychosomatic nature of psoriasis. Although there was no correlation between stressful events and exacerbations of chronic plaque psoriasis, the remaining variables underscore the importance of psychological

components in the induction and exacerbation of dermatological symptoms. Picardi et al. (2005) highlight the relationship between attachment style and social support. Individuals with a secure attachment style are more likely to seek support and believe in its efficacy in managing difficult situations, exhibiting higher levels of trust than those with an avoidant attachment style. In contrast, the avoidant attachment model may exacerbate perceived stress, affect the intensity and duration of the stress response, and result in ineffective help-seeking behavior. The lack of social support may activate alternative coping mechanisms, potentially generating additional stress

3.2. Study 2

Another study addressing the psychosomatic aspects of psoriasis is a multicenter study published in 2017 in *Health Psychology Report* (Sakson-Obada et al., 2017). Researchers from the Department of Psychology at Adam Mickiewicz University in Poznań, along with the Departments of Geriatrics and Dermatology at Poznań University of Medical Sciences, examined the relationships between disease acceptance and selected medical and psychosocial factors. The study involved 109 patients with chronic plaque psoriasis, including 54 men and 55 women, aged 18-89 years. Medical variables included the *Psoriasis Area and Severity Index* (PASI), age at diagnosis, and disease duration. Demographic variables included gender, relationship status, financial situation, and education level. The key variables of interest were social support, body image, and body experiences.

Disease acceptance, understood as the ability to adapt to and overcome difficulties related to the illness, was measured using the *Acceptance of Illness Scale* (AIS). This scale consists of 8 items, each rated on a five-point scale, where higher scores indicate greater disease acceptance. The study also utilized the *Body Self Questionnaire* (BSQ), which consists of sections addressing body experiences and body image. Body experiences were assessed in four categories: lowered sensory threshold, heightened sensory threshold (both scales related to disturbances in the perception of external stimuli), interpretation of emotions and physiological needs, and regulation

of emotions and physiological needs. Body image was assessed across three scales: satisfaction with appearance, satisfaction with physical activity, and acceptance of biological sex. Each category was rated on a five-point scale, with higher scores indicating greater disturbances in body experiences and poorer body image. Social support was evaluated using the *Berlin Social Support Scale* (BSSS), a self-report questionnaire divided into two parts: perceived support (emotional and instrumental) and received support (emotional, instrumental, and informational). Each dimension of support was rated on a four-point scale, with higher scores indicating more robust social support.

To explore the relationships between BSQ, PASI, age, disease duration, age at diagnosis, and AIS, Spearman's correlation coefficients were used. To link AIS with demographic variables, t-tests and Fisher's exact tests were employed. Predictors of psoriasis acceptance were identified using multiple linear regression analysis.

The results of these analyses revealed that both medical and demographic variables were unrelated to the level of disease acceptance, consistent with findings from other studies. It was found that individuals with higher levels of social support exhibited greater disease acceptance, with each dimension of support reaching statistical significance. This suggests a positive relationship between social support resources and coping with the disease, aligning with the findings of Study 1. A strong relationship between disease acceptance and all aspects of body experiences and body image was also observed. The strongest positive correlations were found for satisfaction with appearance and acceptance of biological sex.

In the discussion, the author emphasizes the role of social support and satisfaction with appearance in the course of the disease. A lower self-assessment of appearance and lack of support are significant risk factors for depression in the course of chronic plaque psoriasis. One component of this relationship is chronic stress, stemming from feelings of loneliness, inadequacy, and societal rejection. Based on the study's findings, it can be concluded that unimpaired perception of external stimuli, such as cold, touch, and vibrations, as well as the ability to

identify and discharge emotions and physiological needs, are crucial resources in the process of accepting a chronic disease. Conversely, a negative body image contributes to psychological disturbances, including eating disorders, self-destructive tendencies, and depression. The results also indicated that a longer duration of the disease was associated with perceptual and emotional regulation disturbances, as well as lower satisfaction with physical fitness, bridging the gap between medical factors and disease acceptance.

3.3. Study 3

Wojtyna et al. (2017) conducted a descriptive cross-sectional study involving a cohort of 219 patients aged 18 years and older (124 women and 95 men) who had been diagnosed with chronic plaque psoriasis at least one year prior to the study. Additionally, these patients did not have any severe psychiatric or cognitive disorders. The primary aim of the study was to answer the question, “What determines depressive symptoms and distress among patients with chronic plaque psoriasis?” The clinical and demographic characteristics of the study participants included age at diagnosis, disease duration, duration of psoriasis treatment, age, employment status, place of residence, and marital status. The researchers sought to identify factors that induce or exacerbate depressive symptoms among variables such as social support, subjective distress, beliefs about the significance and impact of appearance on the patient’s life, and the extent of body surface area affected by psoriatic lesions.

To assess these variables, several scales and self-report questionnaires were utilized. One of the primary tools used was the *Beck Depression Inventory* (BDI), a widely recognized instrument for diagnosing depression. Participants completed a 21-item questionnaire, assigning each distractor a score ranging from 0 to 3 points. Higher cumulative scores indicated more severe levels of depression. The extent of body surface area involvement was evaluated using the *Body Surface Area* (BSA) scale, one of the most frequently employed measures of psoriasis severity. Scores below 10% indicated mild psoriasis, while those above 10% were indicative of moderate to severe psoriasis.

Subjective distress was measured using the *Distress Thermometer* (DT), a visual-analog tool. Patients marked a vertical line on a 1-10 scale to indicate their level of distress, with scores above 4 considered a risk factor for developing anxiety and depressive disorders. The belief in the importance of appearance was assessed using the *Appearance Schemas Inventory – Revised* (ASI-R), a scale divided into two parts. One part focused on self-assessed importance (ASI-SES, 12 items), understood as the extent to which individuals define themselves and their self-worth through their appearance. The other part assessed motivational salience (ASI-MS, 8 items), understood as the attention paid to appearance and behaviors aimed at enhancing it. The *Berlin Social Support Scale* (BSSS) was used to assess social support in terms of perceived support (emotional and instrumental). Group comparisons were conducted using Student’s t-test, while multiple regression analyses were employed to identify variables associated with the presence of depressive symptoms separately for men and women, as well as combined. A multivariate logistic regression analysis was conducted to describe factors associated with the likelihood of depression.

The results of the BDI questionnaire revealed that nearly half of the participants fell within the range of probable depression, with 21% of respondents reporting suicidal thoughts. Approximately 70% of patients reported a distress level above 4 points. Depressive symptoms and distress were significantly more common among women, with the risk of depressive symptoms being twice as high in female patients compared to males. Additionally, the total scores on the ASI scales (both in the self-assessed importance and motivational salience subscales) were statistically higher in the female group.

The findings of the remaining analyses indicate that the most significant factors associated with the presence of depressive symptoms are social support (specifically the emotional dimension), subjective distress, ASI-SES (only in the female group), and BSA, with the latter showing the weakest correlation, a relationship observed only in the male group.

In the study’s concluding section, the author highlights the differing psychosomatic factors in chronic plaque psoriasis between men and women.

Female participants placed greater emphasis on their body image and perceived skin lesions as significantly impacting their self-evaluation, even though no direct correlation was found between the extent of body surface area affected by psoriatic plaques. The author attributes this relationship to the societal pressure on women regarding their physical appearance. The discrepancy between the culturally ingrained ideal of beauty and the patient's subjective body image is described as a dysfunctional schema exacerbating psychological disorders. The researcher also explains the more frequent occurrence of depressive disorders among patients with mild psoriasis and the less severe depressive symptoms in those with moderate or severe psoriasis. This phenomenon is attributed to a greater contrast between the culturally established body image and the self-perception of patients with more severe disease, as well as a sense of social exclusion, which is linked to lower societal expectations regarding the appearance of patients with more pronounced lesions. The author places emotional social support at the forefront of protective factors against mental disorders.

3.4. Study 4

Polish researchers conducted an analysis on a cohort of 104 patients at the Dermatology Clinic in Lublin (Janowski et al., 2012). The study aimed to assess the relationship between social support and adaptation to life with chronic plaque psoriasis in both women and men. The conceptualization of the variable "social support" was based on the multidimensional model described by Sęk and Cieślak (1997), which includes instrumental, informational, emotional, spiritual, and material support.

The study included 52 men and 52 women, aged between 15 and 73 years. Data collected from patients included age, gender, marital status, education level, employment status, and clinical data such as disease duration, presence of psoriatic lesions on exposed and covered areas, number of hospitalizations, comorbidities, living with family, and disease severity measured by the *Psoriasis Area and Severity Index* (PASI). Psychological tests were administered to

operationalize variables including adaptation to life with the disease, social support, quality of life, and depressive symptoms.

Adaptation to life with the disease was defined as the patient's ability to reconcile with their health status and maintain a relative level of life satisfaction despite the limitations imposed by the disease. This was assessed using the *Acceptance of Life with the Disease Scale* (ALDS), where patients responded to 20 items rated on a scale from 1 to 4, with higher scores indicating better adaptation. Social support was measured using the *Disease-Related Social Support Scale* (DRSSS), developed by the study authors.

The quality of life related to the disease was measured using the Skindex-29 questionnaire, which consists of three subscales assessing physical symptoms, functioning, and emotions where higher scores indicate poorer quality of life. The final variable, depressive symptoms, was assessed using the *Beck Depression Inventory* (BDI), as in Study 3. However, in this study, a score of 12 points was considered the threshold for clinically significant depressive symptoms.

The correlation between social support and other psychological indicators was evaluated using Spearman's rho correlation coefficient, separately for men and women, and for both groups combined. The relationship between specific dimensions of support and the adaptation process was further analyzed through regression analyses. Cluster analysis was employed to identify subgroups of patients homogeneous in terms of overall adaptation to the disease, followed by an analysis of variables that allowed for the comparison of average social support scores within these subgroups.

No statistically significant differences were found between men and women in terms of social support levels and adaptation to life with the disease. However, women scored higher on the BDI and on the emotional dimension of the Skindex-29 scale, indicating a higher prevalence of depressive symptoms and poorer emotional adaptation. Clinical data were unrelated to depressive symptoms and adaptation to life with the disease, except for a negative correlation between disease duration and instrumental social support.

Social support was strongly correlated with adaptation to the disease in both men and women, particularly in the form of material support. Moreover, material, emotional, and spiritual support were significantly more strongly associated with better adaptation among men. Differences were also noted in the relationship between social support and depressive symptoms in the two subgroups. Women who received higher levels of instrumental and informational support were less likely to experience anxiety disorders, which the authors attribute to an increased sense of control and reduced helplessness among these patients. This relationship did not hold for men, for whom emotional and material support were more critical in preventing depressive symptoms. Thus, the same forms of support that aided men's adaptation to life with the disease were also important in mitigating depressive symptoms. In contrast, male patients exhibited higher quality of life in the emotional domain compared to female patients.

4. Summary

A review of the available studies underscores the importance of social support as a mitigating factor for depression and anxiety symptoms in patients with psoriasis. The bidirectional relationship between psoriasis and depression offers new insights into the treatment process. The theory of an inflammatory basis for both conditions imposes new challenges for dermatologists, who are often the first healthcare providers to see these patients. Accurate assessment of a patient's mental state can facilitate the reduction of psoriasis symptoms through the timely initiation of psychiatric treatment. As demonstrated in the aforementioned studies, treatment that reduces inflammatory processes can lead to improvements in both dermatological and psychiatric symptoms (Koo et al., 2017; Maqbool et al., 2021). Additionally, awareness of the patient's psychological condition can help avoid errors in selecting biological treatments, such as opting against brodalumab in favor of other inflammatory cytokine inhibitors. Comprehensive patient care that includes psychological aspects is therefore critical to the therapeutic process.

Discussion

In the context of utilizing social support, it is essential to recognize gender differences in the type of support desired. Instrumental and informational support proved more effective in women, while men showed better adaptation to the disease when provided with emotional, spiritual, and material support. Studies 2 (Sakson-Obada et al., 2017) and 4 (Janowski et al., 2012) indicate that women are particularly at increased risk for depression and anxiety disorders. In these studies, female patients placed greater importance on their appearance, which had more significance for them than it did for men. This observation is crucial for psychologists working with female clients affected by chronic dermatoses with visible skin changes. Study 2 (Sakson-Obada et al., 2017) found that higher levels of support were positively correlated with a better body image and overall disease acceptance, whereas lower support levels were more frequently associated with poorer self-assessment of appearance.

The location of psoriatic lesions also seems significant in the context of body image. Although studies on the impact of this factor on the patient's psychological state are inconclusive, it is important to note that this is a highly individual matter. Dermatological scales commonly used, such as PASI or BSA, may not be the best tools for linking the severity of lesions to the patient's mental state. Extensive lesions in covered areas may have less harmful effects than smaller lesions on the face or genital areas. This indicates the need to develop tools that can be used by dermatologists, psychiatrists, and psychologists alike in patient assessment.

The importance of social support in improving the mental health of patients with chronic plaque psoriasis is a topic that requires further exploration. A significant limitation of this field is the small number of studies addressing this issue. The studies analyzed in this article are limited to a small number of patients and clinical centers. Additionally, the article does not propose a method for implementing different types of social support, focusing solely on the theoretical aspects of this issue.

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