ISSN: 3067-2376
Research Article
Journal of Comparative Medicine Research Reviews and Reports

The Prevalence of Depressive Symptoms in Patients with Dermatologic Conditions

Genesis Vega-García MD*[1], Moron N. ABFM MD[2], Valle N. ABFM MD[2], Rivera N. ABFM MD[2]

[1]*Family Medicine Residency Program, Mayagüez Medical Center, Mayagüez, 00681, Puerto Rico*
[2] *Department of Family Medicine, Mayagüez Medical Center, Mayagüez, 00681, Puerto Rico*

***Corresponding author:** Genesis Vega, MD, M.D. PGY-3, Family Medicine Residency Program, Mayagüez Medical Center, 00681Puerto Rico.

Submitted: 21 January 2026 **Accepted:** 02 February 2026 **Published:** 09 February 2026

Citation: *Vega-García, G., Moron, N., Valle, N., Rivera, N. (2026). The Prevalence of Depressive Symptoms in Patients with Dermatologic Conditions. J of Comp Med Res Rev Rep, 3(1), 01-05.*

Abstract

Introduction: *The skin is a defining feature of our physical appearance and it plays critical role not only as physical protection but also in psychological well beingwellbeing. The bidirectional relationship between skin diseases and mental health has been increasingly recognized in clinical practice Primary care physicians serve as the first point of contact for many dermatologic complaints, placing them in a key position to recognize not only cutaneous pathology but also associated mental health concerns. However, data on the prevalence of depressive symptoms among dermatology patients in Puerto Rico remain limited. This study aimed to assess the prevalence of depressive symptoms in adults presenting to a dermatology clinic.*

Methods: *A descriptive cross-sectional study was conducted at a Dermatology clinic in Mayagüez, Puerto Rico from January 2024 to March 2024. 40 adult patients 21 years old and older presenting for dermatologic care completed an anonymous self-administered survey via QR code containing the Patient Health Questionnaire 8 (PHQ-8).).). Depressive symptoms were categorized using standard PHQ-8 cutoff scores. Descriptivescores. Descriptive statistics were used to analyze demographic characteristics and depression prevalence. This study was approved by the Ponce Health Science University IRB #2312177514. Results: 40 participants completed the survey. The sample was predominantly female (63%), with a mean age of 33.7 years (SD = 9.7). The majority of participants (83%) scored within the normal range on the PHQ-8. Mild depressive symptoms were identified in 15% of participants, and 3% met criteria for moderate depressive symptoms. No participants met criteria for severe depression. The mean PHQ-8 score was 2.7 (SD = 2.6). The estimated prevalence of clinically relevant depressive symptoms (mild or greater) was 17.5% (95% CI: 7.0%–36.1%).*

Conclusions: *Approximately one in six patients presenting with dermatologic conditions exhibited depressive symptoms, comparable to general population estimates in Puerto Rico (15%). While this finding did not demonstrate a statistically significant difference from the general population, it underscores the clinical importance of screening for mental health concerns in dermatology practice. The limited sample size may have restricted our ability to detect meaningful differences. These findings support the integration of mental health screening into routine dermatologic care, particularly given the established bidirectional relationship between dermatologic disease and psychological well-being.*

Keywords: Depression, Dermatologic Diseases, Mental Health, PHQ-8, Primary Care, Puerto Rico

Introduction

The skin serves as a defining feature of physical appearance and plays a critical role not only in physical protection but also in psychological well-being. The relationship between dermatologic disease and mental health is complex and bidirectional. Skin conditions can negatively impact quality of life, self-esteem, and

emotional health, potentially leading to depression and anxiety [1]1. Conversely, psychological stress can exacerbate certain dermatologic conditions, creating a self-perpetuating cycle that complicates treatment and recovery.recovery.

Studies have consistently demonstrated elevated rates of psychiatric comorbidity among dermatology patients compared to the general population [2]2. Conditions such as psoriasis, acne, atopic dermatitis, vitiligo, and chronic urticaria have been associated with higher prevalence rates of depression and anxiety [3]3. The relationship between skin disease and psychiatric illness is bidirectional: psychological stress may exacerbate dermatologic conditions through inflammatory and neuroendocrine pathways, while persistent skin disease may contribute to emotional distress, social withdrawal, and depressive symptomatology.

Primary care physicians and dermatologists serve as the first point of contact for many patients with skin complaints, placing them in a key position to recognize not only cutaneous pathology but also associated mental health concerns implement routine mental health screening using validated tools such as the PHQ-8 or PHQ-9 [4]4. Similarly, dermatologists, who frequently manage patients with chronic or relapsing skin conditions, are in a strategic position to recognize psychosocial distress and initiate screening, referral, or collaborative care.

Integrating depression screening into dermatologic and primary care practice may facilitate timely identification of psychiatric comorbidities, promote interdisciplinary collaboration, and support a more holistic, patient-centered model of care. Routine mental health assessment in patients with dermatologic conditions has the potential to improve quality of life, enhance treatment adherence, and optimize overall clinical outcomes. These findings underscore the importance of viewing dermatologic disease not only as a cutaneous condition but also as a contributor to psychological and emotional health.In Puerto Rico, mental health challenges are compounded by unique socioeconomic and healthcare system factors. Recent data indicate that Puerto Rico has experienced higher rates of major depressive disorder (15%) compared to the mainland United States (8.3%), with additional burden from natural disasters, economic challenges, and healthcare infrastructure limitations [5]5. Despite these elevated rates, data on the prevalence of depressive symptoms specifically among dermatology patients in Puerto Rico remain limited. This study aimed to assess the prevalence of depressive symptoms in adults presenting to a dermatology clinic in Puerto Rico and to compare these findings with general population estimates.

Methods

Study Design and Setting

This descriptive cross-sectional study was conducted at a private dermatology office in Mayagüez, west Puerto Rico between January 2024 and March 2024. The study protocol was reviewed and approved by Ponce Health Science University IRB 2312177514. All participants provided implicit informed consent by completing the survey after reviewing the study information.

Participants

Eligible participants were adult patients aged 21 years and older presenting for dermatologic care during the study period. Patients were excluded from the study if they had a previously established diagnosis of depression or any other psychiatric disorder, including mood disorders, anxiety disorders, psychotic disorders, or bipolar disorder. Individuals currently receiving psychiatric treatment or taking psychotropic medications were also excluded. These criteria were applied to minimize confounding and to ensure that depressive symptoms identified through the PHQ-8 reflected previously unrecognized symptomatology rather than known psychiatric illness. The study population consisted of patients presenting with the most common dermatologic conditions encountered in outpatient dermatology practice. These included acne vulgaris, atopic dermatitis (eczema), psoriasis, contact dermatitis, and other inflammatory skin disorders. These conditions represent a broad spectrum of frequently diagnosed dermatologic diseases and reflect the typical patient population seen in routine clinical dermatology settings.

Data Collection

Data were collected through a self-administered anonymous survey distributed via QR code (Google Forms). The survey included demographic questions and the Patient Health Questionnaire-8 (PHQ-8) to assess depressive symptoms. The survey was administered in both in English and Spanish.The questionnaire contained an information sheet at the beginning describing the study purpose, procedures, risks, benefits, and voluntary nature of participation. Completion and submission of the questionnaire constituted implicit informed consent.

Depression Assessment

Depressive symptoms were assessed using the Patient Health Questionnaire-8 (PHQ-8), The Patient Health Questionnaire-8 (PHQ-8) was selected as the screening instrument for depressive symptoms in this study rather than the Patient Health Questionnaire-9 (PHQ-9) due to ethical and methodological considerations related to anonymity and participant safety. The PHQ-8 is identical to the PHQ-9 in structure and scoring, with the exception that it excludes the ninth item assessing suicidal ideation4. Because this study was conducted using a self-administered, strictly anonymous survey design, inclusion of a direct question regarding suicidal thoughts would have necessitated procedures to identify participants at risk and initiate immediate clinical intervention. Such procedures would require breaching participant anonymity and incorporating direct mental health evaluation by psychologists or psychiatrists, which was beyond the scope and design of the present study. The PHQ-8 assesses the frequency of depressive symptoms over the preceding two weeks, with response options ranging from 0 (not at all) to 3 (nearly every day) for each item, yielding total scores from 0 to 24.

The PHQ-8 has demonstrated strong psychometric properties with sensitivity and specificity of approximately 88% for major depressive disorder when using a cutoff score of 10 or higher [4]4. It has been validated for use in diverse populations and settings, including population-based epidemiological studies (reference).

Statistical Analysis

Collected data were analyzed using descriptive statistics. Continuous variables were described using means, standard deviations, medians, and ranges. Categorical variables were described using frequencies and percentages. The prevalence of depressive symptoms was calculated as the proportion of participants scor-

ing in each PHQ-8 category. The 95% confidence interval for clinically relevant depression (mild or greater) was calculated using normal approximation.

Results

A total of 40 participants completed the survey and were included in the analysis. The sample consisted predominantlyconsisted predominantly of female participants (63%) while male participants accounted for 38% (Figure 1). The mean age of participants was 33.7 years (SD = 9.7), with a median age of 33.5 years and an age range of 21 to 51 years. The largest proportion of participants fell within the 20–29 year29-year age group, followed by the 30–39 and 40–49 year49-year age groups. Fewer participants were 50 years and older (Figure 2).

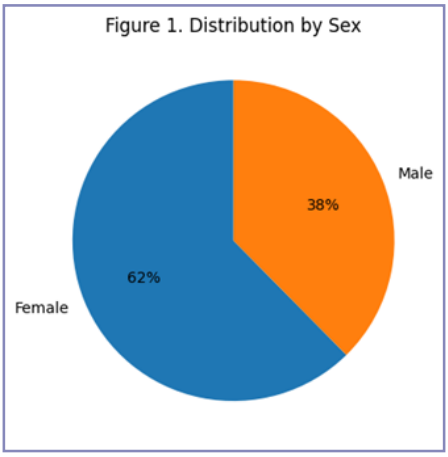

Figure 1: Sex distribution of study participants.

Female participants comprised the majority of the study population 63%, while males represented 38%.

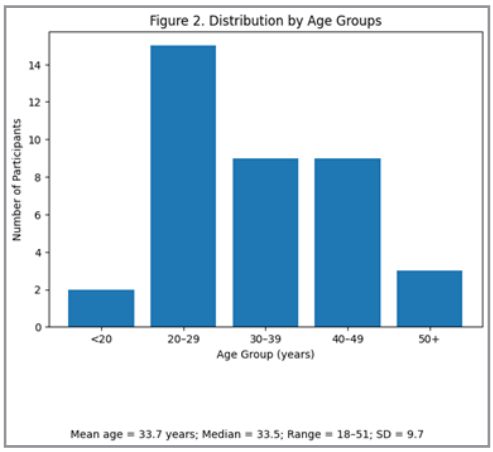

Figure 2: Age Distribution of Study Participants

Most participants were between 20–29 years of age, followed by those aged 30–39 and 40–49 years. Fewer participants were younger than 20 years or aged 50 years and older.

Prevalence of Depressive Symptoms

Assessment of depressive symptoms using the PHQ-8 revealed that the majority of participants (83%) scored within the normal range (score 0–4). Mild depressive symptoms (score 5–9) were identified in 15% of participants, while 3% met criteria for moderate depressive symptoms (score 10–14) (Figure 3). No participants met criteria for severe depression.

The mean PHQ-8 score was 2.7 (SD = 2.6), with a median score of 2.0 and a range of 0 to 14, indicating overall low levels of depressive symptomatology within the study population. The estimated prevalence of clinically relevant depressive symptoms was 17.5%. The corresponding 95% confidence interval ranged from 7.0% to 36.1%, reflecting variability related to sample size and distribution (Table 1).

Table 1: Prevalence of Depressive Symptoms and 95% Confidence Interval

Measure	Result
Prevalence of depressive symptoms	17.5%
95% Confidence interval	7.0% – 36.1%

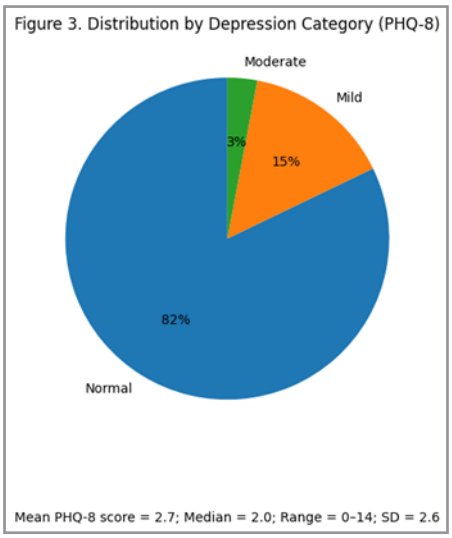

Figure 3: Distribution of Depressive Symptom Severity Based on PHQ-8

The majority of participants scored within the normal range (83%), while 15% exhibited mild depressive symptoms and 3% exhibited moderate depressive symptoms.

Discussion

This study assessed the prevalence of depressive symptoms among adult patients presenting to a dermatology clinic in Mayagüez, Puerto Rico. We found that 17.5% of patients presenting with dermatologic conditions exhibited clinically relevant depressive symptoms (mild or greater) as assessed by the PHQ-8. This prevalence is comparable to recent general population estimates in Puerto Rico, which indicate approximately 15% of adults experience depression or depressive symptoms [5,6]5,6. Notably, our findings reveal no significant differences between the two populations, as the 15% falls within our confidence interval. However, several contextual factors merit consideration when interpreting this finding. First, Puerto Rico faces unique mental health challenges stemming from ongoing socioeconomic difficulties, healthcare system constraints, and the cumulative impact of natural disasters including Hurricanes Irma and Maria (2017) and subsequent earthquakes. A 2019 epidemiological study found that island residents demonstrated a major depressive disorder prevalence of 9.7%, compared to 7.6% in the mainland United States. More recent data from the COVID-19 pandemic period (2020-2021) showed that 17% of adults aged 50 and older reported diagnosed depression, with younger age groups potentially experiencing even higher rates [7]7.

The elevated baseline depression prevalence in Puerto Rico may partially explain why we did not observe a statistically significant difference between our dermatology sample and the general population. In regions where general population mental health burden is already high, the incremental impact of dermatologic disease on depression prevalence may be more difficult to detect without larger sample sizes or comparison with matched controls.

Our findings are consistent with broader patterns documented in the dermatologic literature. A 2024 systematic review and meta-analysis examining mental health in dermatology patients reported pooled depression prevalence rates of 33.7% globally, with significant variability across different dermatologic conditions. For instance, patients with psoriasis demonstrate depression prevalence ranging from 12% to 28% depending on disease severity and assessment method, while those with vitiligo, atopic dermatitis, and other chronic inflammatory conditions show similarly elevated rates.

The psychiatric morbidity among dermatological patients has been estimated at 25% to 43% in various studies, underscoring the significant psychological burden associated with skin disease. This burden is comparable to that observed in other chronic medical conditions such as diabetes, cardiovascular disease, and rheumatologic disorders. Notably, depression in dermatology patients is associated with reduced quality of life, decreased treatment adherence, and poorer clinical outcomes.

Despite the lack of statistical difference from general population rates, the clinical significance of our findings should not be minimized. Nearly one in six dermatology patients in our sample exhibited symptoms consistent with at least mild depression.. depression. Given the established bidirectional relationship between dermatologic disease and mental health, even mild depressive symptoms can negatively impact disease perception, treatment adherence, help-seeking behavior, and overall quality of life.

Strengths and Limitations

This study represents the first attempt to assess depressive symptoms among dermatology patients in Puerto Rico using a validated screening instrument. However, several limitations warrant consideration. The limited sample size reducing statistical power to detect meaningful differences from the general population. Recruitment from a single private dermatology practice in Mayagüez limits generalizability, as patients in private practice may differ systematically from those in public or hospital-based settings regarding socioeconomic status, disease severity, and mental health resource access. We did not collect detailed dermatologic diagnosis information precluding assessment of condition-specific associations with depression. The cross-sectional design prevents determination of temporal relationships or causality between skin disease and depressive symptoms. Finally,

the digital survey format may have introduced selection bias by excluding individuals with limited technological literacy or severe psychiatric symptoms. Future research should employ larger, multi-site samples to enable subgroup analyses by demographic factors, dermatologic diagnosis, and disease severity. Such studies may help clarify whether dermatologic conditions independently contribute to an increased risk of depression and support the integration of mental health screening into routine dermatologic and primary care practice.

Acknowledgments

We would like to thank our program coordinator, Cristina Morales for her continued support throughout the development of our research projects. We would also thank Dr. Ivan Iriarte for helping in our development of our project and Dr. Rogelio Mercado for letting us use his office for our data.

References

1. Gupta, M. A., & Gupta, A. K. (2003). Depression and dermatological disorders. Basic and Clinical Dermatology, 25, 233–250.
2. Jabeen, M., Mina, S., & Chander, R. (2019). Anxiety, depression, and suicidal ideations among patients with dermatological problems. International Journal of Health & Allied Sciences, 8(3), 168. https://doi.org/10.4103/ijhas.IJHAS_23_19 (add if required by journal)
3. Solgajová, A., Sollár, T., Vörösová, G., & Zrubcová, D. (2016). The incidence of anxiety, depression, and quality of life in patients with dermatological diseases. Central European Journal of Nursing and Midwifery, 7(3).
4. Kroenke, K., Strine, T. W., Spitzer, R. L., Williams, J. B. W., Berry, J. T., & Mokdad, A. H. (2009). The PHQ-8 as a measure of current depression in the general population. Journal of Affective Disorders, 114(1–3), 163–173. https://doi.org/10.1016/j.jad.2008.06.026
5. Puerto Rico Department of Health. (n.d.). Puerto Rico Behavioral Risk Surveillance System trends. https://www.salud.pr.gov/CMS/DOWNLOAD/8166
6. Canino, G., Shrout, P. E., Alegría, M., Guarnaccia, P. J., Ramírez, R., Torres, M., Huertas, S., Martínez, I., Bravo, M., & Rand, C. S. (2019). A comparison of the prevalence of psychiatric disorders in Puerto Rico with the United States and the Puerto Rican population of the United States. Social Psychiatry and Psychiatric Epidemiology, 54(4), 369–378. https://doi.org/10.1007/s00127-019-01663-x
7. Cameron-Maldonado, N., Algarin-Santiago, L. E., Almonte-Cruz, F. L., Merced-Nieves, Y., Maldonado-Hernández, E. E., García-Rivera, E. J., Nazario-Serrano, C. M., Robles-Pagán, S., & García-Rosado, M. L. (2023). Age-related differences in anxiety and depression diagnosis among adults in Puerto Rico during the COVID-19 pandemic. Healthcare, 11(12), 1690. https://doi.org/10.3390/healthcare11121690