BRAIN. Broad Research in Artificial Intelligence and Neuroscience
ISSN: 2068-0473 | e-ISSN: 2067-3957
Covered in: Web of Science (WOS); PubMed.gov; IndexCopernicus; The Linguist List; Google Academic; Ulrichs; getCITED; Genamics JournalSeek; J-Gate; SHERPA/RoMEO; Dayang Journal System; Public Knowledge Project; BIUM; NewJour; ArticleReach Direct; Link+; CSB; CiteSeerX; Socolar; KVK; WorldCat; CrossRef; Ideas RePeC; Econpapers; Socionet.

2024, Volume 15, Issue 1, pages: 550-557 | https://doi.org/10.18662/brain/15.1/568

Study on the Impact of Depression on the Quality of Life of Patients with Psoriasis

Roxana-Cristina OLTENACU* [1]
Gabriela STOLERIU [2]
Lucreţia ANGHEL [3]
Iulia CHISCOP [4]
Anamaria, CIUBARA [5]

[1] Dunărea de Jos University of Galaţi, România, rcoltenacu@gmail.com
[2] Dunărea de Jos University of Galaţi, România
[3] Dunărea de Jos University of Galaţi, România
[4] Dunărea de Jos University of Galaţi, România
[5] Dunărea de Jos University of Galaţi, România

Abstract: ***Introduction:*** *Psoriasis, a persistent ailment, significantly influences the day-to-day existence of individuals, particularly in the context of their interpersonal relationships. The purpose of this study is to elucidate how depression affects the quality of life for individuals dealing with moderate psoriasis.* ***Methods:*** *A cross-sectional investigation was undertaken involving 16 psoriasis patients during the period spanning April to May 2023. Patients with psoriasis vulgaris completed self-administered questionnaires which included demographic characteristics, Hamilton Depression Rating Scale (HAM-D), and Dermatological Life Quality Index (DLQI). Data were collected both physically, during periodic checks, and online by email. Only 16 patients met the eligibility criteria for study entry. All patients included in the study had moderate psoriasis vulgaris. Exclusion criteria for participation in the study were current psychotropic medication use. severe comorbidities or chronic medical conditions and visual, auditory, linguistic, or cognitive impairments.* ***Results:*** *Upon completion of the Hamilton Depression Rating Scale (HAM-D), half of the participants (50%) exhibited a score below 8, signifying minimal depression, while the remaining half (50%) scored between 8-16, indicative of mild depression. Notably, 87.5% of the participants registered a Dermatological Life Quality Index (DLQI) score exceeding 10, highlighting severe impairment in their quality of life. The findings revealed a positive correlation between the DLQI and HAM-D, emphasizing a connection between dermatological and depressive factors. In conclusion, the study underscores the substantial impact of depressive symptoms on the quality of life among analyzed psoriasis patients. It advocates for a holistic, multidisciplinary approach in the treatment of psoriasis patients, recognizing the need to address not only the disease itself but also the overall well-being of the patient.*

Keywords: *Psoriasis, Depression, DLQI score, Hamilton depression scale.*

How to cite: Oltenacu, R. C., Stoleriu, G., Anghel, L., Chiscop, I., & Ciubara, A. (2024). Study on the impact of depression on the quality of life of patients with psoriasis. *BRAIN. Broad Research in Artificial Intelligence and Neuroscience, 15*(1), 550-557. https://doi.org/10.18662/brain/15.1/568

1. Introduction

The World Health Organization (WHO) defines quality of life as an individual's personal evaluation of their position in life, considering the cultural and value systems of their surroundings. This assessment takes into account their goals, expectations, standards, and concerns. This delineation underscores that quality of life is a subjective and multifaceted notion, shaped by diverse elements such as physical well-being, mental equilibrium, interpersonal connections, and individual aspirations (Whoqol Group, 1995).

The presence of depression can considerably affect the overall well-being of individuals dealing with psoriasis. Psoriasis, being more than just a physical ailment, encompasses psychological and emotional dimensions. Depression, when present, can intensify these challenges, exacerbating the multifaceted aspects of the condition in various ways.

- **Psychological Distress:** Patients with psoriasis often experience embarrassment, self-consciousness, and low self-esteem due to the visible nature of the condition.
- **Social Isolation:** Depression can lead to social withdrawal and isolation (Silistraru et al., 2021). Individuals with psoriasis may already feel reluctant to engage in social activities or form relationships because of their skin condition (Hawro et al., 2017).
- **Physical Symptoms:** Psoriasis can be itchy, painful, and uncomfortable. Depression can make individuals more sensitive to physical discomfort, leading to an increased perception of pain and itching associated with psoriasis, further reducing their quality of life.
- **Impact on Daily Functioning:** Depression can impair cognitive function, energy levels, and motivation.
- **Worsening of Psoriasis Symptoms:** Some studies suggest that depression can potentially exacerbate the physical symptoms of psoriasis
- **Reduced Self-Care:** Individuals with depression may engage in unhealthy behaviors such as poor diet, lack of exercise, and inadequate self-care.
- **Elevated Likelihood of Suicidal Thoughts**: The presence of depression is linked to an escalated susceptibility to suicidal ideation and behaviors (Kouris et al., 2017).

This paper centers on the psychosocial dimensions of psoriasis, aiming to elucidate how depression affects the quality of life for individuals

with moderate psoriasis and to illuminate the emotional burden associated with the condition.

2. Materials and methods

In April-May 2023, a cross-sectional investigation was carried out involving 16 participants with psoriasis from Braila County. The participants undertook self-administered questionnaires encompassing demographic details, the Hamilton Depression Rating Scale (HAM-D), and the Dermatological Life Quality Index (DLQI).

Exclusion criteria for participation in the study encompass the following conditions and circumstances:

- Current Use of Psychotropic Medications.
- Severe Comorbidities or Chronic Medical Conditions.
- Visual, Auditory, Linguistic, or Cognitive Impairments.

Included in this study were individuals aged 18 years and older who had not received a diagnosis of any cognitive impairment or mental illness.

The Hamilton Depression Rating Scale (HAM-D) serves as a frequently utilized clinical instrument to evaluate the extent of depressive symptoms in individuals experiencing mood disorders, specifically major depressive disorder. It was developed by Max Hamilton in 1960 and has since been revised several times. The HAM-D consists of a series of questions or items that assess various aspects of depression, including mood, feelings of guilt and hopelessness, sleep disturbances, appetite changes, and physical symptoms. Every item is assigned a score on a scale ranging from 0 to 4 or 0 to 2, with elevated scores denoting more pronounced severity of symptoms. The cumulative score is determined by summing up the scores for all items, with a potential range from 0 (indicating an absence of depression) to 52 (indicating severe depression) (Williams J.B., 1988).

The Dermatology Life Quality Index (DLQI) is a commonly used survey crafted to assess the impact of skin conditions on an individual's overall quality of life. Comprising ten questions encompassing various aspects of daily life and emotional well-being, each question on the DLQI is assigned a score on a scale from 0 to 3. Specifically, 0 signifies "not at all," 1 denotes "a little," 2 indicates "a lot," and 3 represents "very much." The total DLQI score is obtained by summing the scores from all ten questions, ranging from 0 (suggesting no influence on quality of life) to 30 (indicating the highest possible impact on quality of life), as outlined by Kivelevitch in 2017.

Data were collected both physically, during periodic checks, and online by e-mail.

3. Results

A group of 16 individuals were enrolled in this study, all experiencing moderate psoriasis. However, only 10 participants (62.5%) were currently receiving treatment for their condition. The assessment of psoriasis severity employed the Psoriasis Area and Severity Index (PASI), a tool introduced by Naldi and Gambini in 2007. The PASI score classifies the severity of psoriasis into:

- mild (with scores between 1 and 5),
- moderate (ranging from 6 to 12),
- severe (falling within the range of 13 to 20), or
- very severe (with scores exceeding 20).

3.1. Demographic caracteristics

Females constituted a larger proportion (9, 56.2%) than males (7, 43.8%) in the study sample. The majority of the patients hailed from urban locales (11, 68.8%), with a smaller percentage from rural areas (5, 31.2%). In terms of age distribution, most participants were in the 40-60 years age range (56.3%), with the 30-40 years age group representing the next largest segment (37.7%), and the 20-30 years age group being the smallest (6.2%).

3.2. Dermatology Life Quality Index (DLQI)

In total, 14 participants (87.5%) registered a DLQI score exceeding 10, signifying a substantial detriment to their quality of life. Among them, 7 individuals (43.8%) reported a moderately impactful effect of psoriasis on their quality of life, while another 7 (43.8%) indicated a significant impact, characterizing themselves as very largely affected by psoriasis.

3.3. Hamilton Depression Rating Scale (HAM-D)

Following the administration of the Hamilton Depression Rating Scale (HAM-D), it was observed that half of the study participants, precisely 8 individuals (50%), attained a score below 8, signifying minimal depression. Concurrently, the remaining half, also comprising 8 individuals (50%), registered scores falling within the 8-16 range, indicative of mild depression.

To explore the linear relationship between HAM-D and DLQI scores, the study employed Pearson's correlation coefficients. The analysis

unveiled a positive correlation between HAM-D and DLQI, with a coefficient of $r = 0.893$ and a p-value <0.001.

Spearman's Rank Correlation revealed a negative correlation between HAM-D and psoriasis treatment (p-value 0.005).

4. Discussion

Extensive documentation in scientific literature has detailed the significant impact of psoriasis on the overall well-being of patients (Misery et al., 2008; Hong et al., 2008; DeKorte et al., 2005). Research studies indicate that approximately half of individuals dealing with psoriasis, particularly women, report a substantial decline in their quality of life (Kyriakou et al., 2014; Paduraru et al., 2019). A European consensus report underscores the under-treatment and insufficient support received by patients with psoriasis (Mrowietz et al., 2011). These findings highlight the substantial impact of psoriasis across various dimensions of patients' quality of life, exacerbated by limited access to psychological or psychiatric assistance.

As per Gupta et al., many patients often articulate that the most challenging aspect of dealing with psoriasis is the visible appearance of their skin, a sentiment in alignment with the findings from our survey (Gupta & Gupta, 2000; Schenker et al., 2022). Reviews of existing literature consistently point to heightened occurrences of concurrent mental disorders, particularly anxiety, and depression, along with an array of psychosocial hurdles like diminished self-worth, societal marginalization, exclusion, physical constraints, sexual dysfunction, and even contemplation of suicide (Kouris et al., 2015). Noteworthy is the finding that stigmatization emerges as the most potent predictor of impairment in quality of life (Hawro et al., 2017; Popazu et al., 2022).

While our study did not encompass patients undergoing biological therapy, other investigations have delineated distinctions among biologics, phototherapy, and topical therapy concerning changes in DLQI scores (Chirita et al., 2012). Specifically, those contending with moderate to severe chronic plaque psoriasis and undergoing biologic interventions exhibited the most significant reductions in their Dermatology Life Quality Index (DLQI) scores (Strober et al., 2018; Norris et al., 2017). Biologics, after one year of treatment, demonstrate a superior capacity to alleviate the subjective impact of the disease compared to traditional therapeutic approaches (Jungo et al., 2016; Oltenacu et al., 2021).

5. Conclusion

In summary, recognizing the intricate connection between depression and the quality of life among individuals with psoriasis becomes a crucial focal point in the healthcare domain. Effective management of both the physical and psychological aspects of psoriasis is essential to improving the overall well-being of individuals living with this chronic skin condition. An integrated and holistic approach that addresses the emotional toll of psoriasis can lead to better outcomes and an improved quality of life for patients.

References

Chiriță, R., Sacuiu, I., Burlea, A., & Chiriță, V. (2012, June). The role of nitric oxide inhibitors in treatment on symptom severity and cognitive deficits in schizophrenia. In *International Journal Of Neuropsychopharmacology, 15*, pp. 113-113

De Korte, J., Mombers, F. M., Bos, J. D., & Sprangers, M. A. (2004). Quality of life in patients with psoriasis: a systematic literature review. In *Journal of Investigative Dermatology Symposium Proceedings*, *9*(2) pp. 140-147 https://doi.org/10.1046/j.1087-0024.2003.09110.x

Gupta, M. A., & Gupta, A. K. (2000). Quality of life of psoriasis patients. *Journal of the European Academy of Dermatology and Venereology*, *14*(4), 241-242. https://doi.org/10.1046/j.1468-3083.2000.00134.x

Hawro, M., Maurer, M., Weller, K., Maleszka, R., Zalewska-Janowska, A., Kaszuba, A., ... & Hawro, T. (2017). Lesions on the back of hands and female gender predispose to stigmatization in patients with psoriasis. *Journal of the American Academy of Dermatology*, *76*(4), 648-654. https://doi.org/10.1016/j.jaad.2016.10.040

Hong, J., Koo, B., & Koo, J. (2008). The psychosocial and occupational impact of chronic skin disease. *Dermatologic therapy*, *21*(1), 54-59 https://doi.org/10.1111/j.1529-8019.2008.00170.x

Jungo, P., Maul, J. T., Djamei, V., von Felten, S., Kolios, A. G., Czernielewsk, J., ... & Häusermann, P. (2017). Superiority in quality of life improvement of biologics over conventional systemic drugs in a Swiss real-life psoriasis registry. *Dermatology*, *232*(6), 655-663. https://doi.org/10.1159/000455042

Kivelevitch, D., Michel, P., & Menter, A. (2017). Quality of life instruments in psoriasis clinical trials. *British Journal of Dermatology*, *176*(3), 563-563

Kyriakou, A., Patsatsi, A., & Sotiriadis, D. (2014). Quality of life and severity of skin and nail involvement in patients with plaque psoriasis. *European Journal of Dermatology*, *24*(5), 623-625. 10.1684/ejd.2014.2399

Kouris, A., Christodoulou, C., Stefanaki, C., Livaditis, M., Tsatovidou, R., Kouskoukis, C., ... & Kontochristopoulos, G. (2015). Quality of life and psychosocial aspects in Greek patients with psoriasis: a cross-sectional study. *Anais brasileiros de dermatologia*, *90*, 841-845. https://www.scielo.br/j/abd/a/kph9gmgnmTYSGvCmqwFncDQ/?lang=en

Kouris, A., Platsidaki, E., Kouskoukis, C., & Christodoulou, C. (2017). Psychological parameters of psoriasis. *Psychiatrike= Psychiatriki*, *28*(1), 54-59 https://doi.org/10.22365/jpsych.2017.281.54

Misery, L., Thomas, L., Jullien, D., Cambazard, F., Humbert, P., Dubertret, L., ... & Taieb, C. (2008). Comparative study of stress and quality of life in outpatients consulting for different dermatoses in 5 academic departments of dermatology. *European Journal of Dermatology*, *18*(4), 412-415. 10.1684/ejd.2008.0466

Mrowietz, U., Kragballe, K., Reich, K., Spuls, P., Griffiths, C. E. M., Nast, A., ... & Yawalkar, N. (2011). Definition of treatment goals for moderate to severe psoriasis: a European consensus. *Archives of dermatological research*, *303*, 1-10. https://doi.org/10.1007/s00403-010-1080-1

Naldi, L., & Gambini, D. (2007). The clinical spectrum of psoriasis. *Clinics in dermatology*, *25*(6), 510-518 https://doi.org/10.1016/j.clindermatol.2007.08.003

Norris, D., Photiou, L., Tacey, M., Dolianitis, C., Varigos, G., Foley, P., & Baker, C. (2017). Biologics and dermatology life quality index (DLQI) in the Australasian psoriasis population. *Journal of Dermatological Treatment*, *28*(8), 731-736 https://doi.org/10.1080/09546634.2017.1329501

Popazu, C., Voicu, D., Ciubara, A. B., Dorina, S. T. A. N., & Ciubara, A. (2022). The influence of the mental state on the emergency colostomized patients postoperative evolution. *BRAIN. Broad Research in Artificial Intelligence and Neuroscience*, *13*(1Sup1), 267-276

Schenker, R. A., Ciurea, M. E., Stovicek, P. O., Ciubara, A. ., Schenker, M. ., & Marinescu, I. . (2022). Depression and anxiety - Risk factors in the evolution of breast cancer in women. *BRAIN. Broad Research in Artificial Intelligence and Neuroscience*, *13*(1Sup1), 135-158

Silistraru, I., Ciureanu, A.I., Ciubara, A., Olariu, O., (2021). Prevalence of burnout in medical students in romania during covid-19 pandemic restrictions

(preliminary data). *Archiv Euromedica, 11*(5), 12-15, DOI: 10.35630/2199-885X/2021/11/5.3

Strober, B., Gooderham, M., de Jong, E. M., Kimball, A. B., Langley, R. G., Lakdawala, N., ... & Menter, A. (2018). Depressive symptoms, depression, and the effect of biologic therapy among patients in Psoriasis Longitudinal Assessment and Registry (PSOLAR). *Journal of the American Academy of Dermatology*, *78*(1), 70-80. https://doi.org/10.1016/j.jaad.2017.08.051

Williams, J.B. (1988). A structured interview guide for the Hamilton Depression Rating Scale. *Archives of General Psychiatry, 45*, 742–747.

Whoqol Group. (1995). The World Health Organization Quality of Life assessment (WHOQOL) position paper from the World Health Organization. *Social Science and Med*icine, *41*(10):1403–1409.