

# The Evolution of Mental Health in Patients with Psoriasis during the COVID-19 Pandemic

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**Abstract:** *Introduction: The aim of this study was to assess the impact of the Covid-19 pandemic on mental health on a sample of 37 patients with psoriasis in Brăila County. Methods: A cross-sectional study on a sample of 37 patients with psoriasis was conducted by questionnaires e-mailed to patients. The study was conducted between November 20th, 2020 - January 15th, 2021. Mental health was measured using the Hamilton Anxiety Assessment Scale (HAS). Data collected on predictors included, but were not limited to, sex, age, background, marital status, level of education, smoking, alcohol consumption, comorbidities, period of self-isolation, severity of psoriasis, and type of treatment for psoriasis. Results: There were 37 participants included. Factors associated with poor mental health were: place of origin (54% from urban areas), sex (62.1% women), age (67.5% between 65 and 80 years old), period of self-isolation (81% in self-isolation for more than 14 days), comorbidities (75.6% with multiple comorbidities) and form of treatment for psoriasis (48.6% are systemically administered treatment for psoriasis). Conclusions: In this sample of patients with psoriasis from Brăila County who isolate or socially distance themselves, urban patients, women, elderly, those with comorbidities and those who are systemically administered treatment for psoriasis were associated with a high score on the Hamilton anxiety assessment scale. However, we have to admit that our research has some limitations. First, the number of participants included in the study was small. Secondly, we used an online way to conduct the study. Thirdly, we used a self-assessment scale to assess the anxiety symptoms of psoriasis patients, which might have some deviation from the outcome. Looking beyond the current situation, it is essential to evaluate and restructure the way we think about patient's care.*

**Keywords:** *anxiety, psoriasis, pandemic, COVID-19.*

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## 1. Introduction

Psoriasis is a major socio-medical problem that affects approximately 125 million people worldwide (Karam et al., 2017, Parisi et al., 2013). Most often, psoriasis is associated with anxiety, depression and sleep disorders (Fleming et al., 2017; Koo et al., 2017; Jensen et al., 2018; Ljosaa et al., 2010).

COVID-19 is an infectious disease caused by the recently discovered coronavirus SARS-CoV-2. The number of COVID -19 cases in Romania from the beginning of the pandemic until the end of March 2021 is 952,803 infected people (Worldometer, March, 2021).

The current situation has changed the approach regarding patients who require direct contact during the medical visit, including dermatological consultations. The health system was overwhelmed, and many hospitals could not cope with the large number of patients (Sandu & Damian 1018). Psoriasis patients having limited access to necessary medical services. Home isolation and quarantine orders issued by authorities to limit the spread of the infection were another reason why many patients avoided outpatient services.

The Covid-19 pandemic continues to affect millions of people worldwide (Sandu, 2020a; 2020b). While the immediate health consequences are the main goal, the indirect impact of the virus remains unseen (Sandu, 2020c; 2020d; Sandu & Nistor 2020).

## 2. Material and methods

This cross-sectional study was conducted between November 20, 2020 - January 15, 2021. The purpose of this study was to assess, at some point during the pandemic, the mental health of psoriasis patients in Brăila County. The inclusion criteria were: 1) age over 18 years; 2) cooperative; 3) under topical or systemic treatment for psoriasis; 4) with internet access; 5) agreed to participate in the study. The exclusion criteria were: 1) age under 18; 2) uncooperative; 3) no treatment for psoriasis; 4) no internet access; 5) did not agree with the inclusion in the study.

Finally, 37 patients with psoriasis were included in the study. Mental health was measured using the Hamilton Anxiety Assessment Scale (HAS) (Hamilton, 1959) sent by e-mail or telephone to patients.

Data collected on the variables included sex, age, background, level of education, alcohol consumption, comorbidities, period of self-isolation / quarantine, severity of psoriasis and type of treatment for psoriasis.

The score obtained after completing the Hamilton Anxiety Assessment Scale was the one that divided the patients into four categories: a total score between 0-4 ranks patients as normal patients, a total score between 5-10 ranks patients as being patients with mild anxiety, a total score between 11-16 rates patients as patients with moderate anxiety and a total score above 17 rates patients as patients with severe anxiety.

### **3. Results**

#### ***3.1. Gender of patients***

Of the 37 patients included in the study, 23 were female and 14 were male. Of the group of female patients, following the completion of the Hamilton Anxiety Assessment Scale, 12 are normal, 7 have mild anxiety, 3 have moderate anxiety and one patient has severe anxiety.

Of the male patients, 8 are normal, 4 have mild anxiety and 2 have moderate anxiety.

#### ***3.2. Age***

The patients were divided into three age categories: the age category under 45 years, the age category between 45 years and 65 years and the age category between 65 years and 80 years. In the age group under 45, which includes 4 patients, 3 patients are normal, and one patient has mild anxiety. In the age category 45 years - 65 years, which includes 8 patients, 4 are normal, 3 have mild anxiety and one patient has moderate anxiety. In the age category between 65 and 80 years, which includes 25 patients, 13 are normal, 7 have mild anxiety, 4 patients have moderate anxiety, and 1 patient has severe anxiety.

#### ***3.3. Marital status***

Of the 34 married patients included in the study, 17 are normal, 11 have mild anxiety, 5 have moderate anxiety and 1 patient has severe anxiety. All 3 unmarried patients are normal.

#### ***3.4. Background***

From the total of 20 urban patients included in the study, 11 are normal, 6 have mild anxiety, 2 have moderate anxiety and 1 patient has severe anxiety. Of the 17 patients in rural areas, 9 patients with psoriasis are normal, 5 patients have mild anxiety, and 3 patients have moderate anxiety.

### ***3.5. Alcohol consumption***

27 patients stated that they did not consume alcohol. Of the group of psoriasis patients who do not consume alcohol, 15 are normal, 6 have mild anxiety and 3 patients have moderate anxiety. Of the 10 patients who consume alcohol, 5 are normal, 2 have mild anxiety, 2 have moderate anxiety and 1 patient has severe anxiety.

### ***3.6. Smoking***

There are 8 patients in the category of smoking patients. 7 are normal and 1 patient has mild anxiety. Of the 29 non-smokers included in the study, 13 are normal, 10 have mild anxiety, 5 have moderate anxiety and 1 patient has severe anxiety.

### ***3.7. The severity of psoriasis***

The severity of psoriasis was determined using the Psoriasis area and Severity Index (PASI) criteria (Naldi & Gambini, 2007), who specified that a PASI score < 10 defines the mild form, between 10 - 20 the moderate form and > 20 the severe form. Thus, patients were divided into three categories, namely, patients with mild form psoriasis, patients with moderate form psoriasis and patients with severe form psoriasis. Of the 14 patients with a mild form of psoriasis, 10 are normal and 4 have mild anxiety. Of the 17 patients with moderate psoriasis, 8 are normal, 5 have mild anxiety, 3 have moderate anxiety and 1 patient has severe anxiety. 6 patients have severe psoriasis, of these, 2 are normal, 2 have mild anxiety and 2 have moderate anxiety.

### ***3.8. Comorbidities***

28 patients included in the study have multiple comorbidities, of these, 13 are normal, 9 have mild anxiety, 3 have moderate anxiety and 1 patient has severe anxiety. 9 patients do not have comorbidities, of these, 7 are normal and 2 have mild anxiety.

### ***3.9. Psoriasis treatment administration***

Within the group of those who systemically administer their psoriasis treatment, there are 21 patients, of whom 11 are normal, 6 have mild anxiety, 3 have moderate anxiety and one patient has severe anxiety. 16 patients are receiving topical treatment for psoriasis, of whom 9 are normal, 5 have mild anxiety and 2 have moderate anxiety.

### ***3.10. Self-isolation and quarantine***

Out of a total of 37 patients included in the study, 30 stayed in self-isolation and quarantine for more than 14 days. This is due, in particular, to the orders imposed by the authorities. Of these, 16 are normal, 9 have mild anxiety, 3 moderate anxiety and 1 patient has severe anxiety. Of the 7 patients who were in self-isolation and quarantine for 14 days or less, 4 are normal, 2 have mild anxiety and 1 patient has moderate anxiety.

## **4. Discussions**

In this study we assessed the impact of the pandemic on the psychic of patients with psoriasis. The current situation has forced us to choose an online way to conduct the study. Following this study, we obtained the following conclusions: prone to developing anxiety during the pandemic are: women, patients over the age of 65, those in urban areas, alcohol users, non-smokers, those with moderate forms of psoriasis, those with multiple morbidities, those who systemically administer their treatment for psoriasis and those who have been in isolation or quarantine for more than 14 days.

We must however admit that our research has some limitations. Firstly, the sample size of patients included in the study was small and has, therefore, reduced the credibility of the study. Secondly, we used an online way to conduct the study, so that, those in urban areas, those who are retired or who do not have a job, were able to respond affirmatively to our invitation to participate in the study. Thirdly, we used a self-assessment scale to assess the anxiety symptoms of psoriasis patients, which might have some deviation from the outcome.

One of the questions asked to patients was whether they were infected with Covid-19 during this pandemic, and most refused to answer, which is why the degree of infection with Covid-19 could not be included in the list of variables.

## **5. Conclusions**

Most patients with psoriasis will not develop significant mental health problems during the pandemic, even those who have a severe form of the disease, but the widespread impact could be considerable.

Looking beyond the current situation, it is essential to evaluate and restructure the way we think about patient's care.

This pandemic teaches us that digital solutions are indispensable to minimizing the psychological consequences of self-isolation and quarantine,

but also the lack of access to medical services. Maximizing the psychosocial support available to patients with psoriasis during a pandemic can play a significant role in controlling disease activity.

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## References

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- Fleming, P., Bai, J. W., Pratt, M., Sibbald, C., Lynde, C., & Gulliver, W.P. (2017). The prevalence of anxiety in patients with psoriasis: a systematic review of observational studies and clinical trials. *Journal of the European Academy of Dermatology & Venereology*, 31(5), 798–807. <https://doi.org/10.1111/jdv.13891>
- Hamilton, M. (1959). The assessment of anxiety states by rating. *British Journal of Medical Psychology*, 32(1), 50-55. <https://doi.org/10.1111/j.2044-8341.1959.tb00467.x>
- Jensen, P., Zachariae, C., Skov, L., & Zachariae, R. (2018). Sleep disturbance in psoriasis: a case-controlled study. *British Journal of Dermatology*, 179(6),1376–84. <https://doi.org/10.1111/bjd.16702>
- Karam, R. A., Zidan, H. E., & Khater, M. H. (2014). Polymorphisms in the TNF and IL-10 gene promoters and risk of psoriasis and correlation with disease severity. *Cytokine*, 66(2),101-105. <https://doi.org/10.1016/j.cyto.2014.01.008>
- Koo, J., Marangell, L. B., Nakamura, M., Armstrong, A., Jeon, C., Bhutani, T., Bhutani, T., & Wu, J. J. (2017). Depression and suicidality in psoriasis: review of the literature including the cytokine theory of depression. *Journal of the European Academy of Dermatology & Venereology*, 31(12),1999-2009. <https://doi.org/10.1111/jdv.14460>
- Ljosaa, T.M., Rustoen, T., Mork, C., Stubhaug, A., Miaskowski, C., Paul, S.M., Wahl, A.K. (2010). Skin pain and discomfort in psoriasis: an exploratory study of symptom prevalence and characteristics. *Acta Dermato-Venerologica*, 90(1), 39–45. <https://doi.org/10.2340/00015555-0764>
- 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>
- Parisi, R., Symmons, D. P., Griffiths, C. E., & Ashcroft, D. M. (2013). Global epidemiology of psoriasis: a systematic review of incidence and prevalence. *Journal of Investigative Dermatology*, 133(2), 377–385. <https://doi.org/10.1038/jid.2012.339>
- Sandu, A. (2020a). Bioethics of Public Policies. Ethical Standards in Crisis Situations. *Postmodern Openings*, 11(1Sup2), 141-160. <https://doi.org/10.18662/po/11.1sup2/147>

- Sandu, A. (2020b). Bioethics – Philosophy or Science?. *Logos Universality Mentality Education Novelty: Philosophy & Humanistic Sciences*, 8(1), 44-60.  
<https://doi.org/10.18662/lumenphs/8.1/35>
- Sandu, A. (2020c). Pandemic - Catalyst of the Virtualization of the Social Space. *Postmodern Openings*, 11(1Sup2), 115-140.  
<https://doi.org/10.18662/po/11.1sup2/146>
- Sandu, A. (2020d). Autonomy and Informed Consent in the Context of a Pandemic. *BRAIN. Broad Research in Artificial Intelligence and Neuroscience*, 11(2), 260-276. <https://doi.org/10.18662/brain/11.2/87>
- Sandu, A., & Damian, S-I. (2018). Perceived quality of life and responsibility for own health condition. Micro-research. *Arhiv Euromedica*, 8(2), 18-23.  
[http://journal-archiv euromedica.eu/archiv-euromedica\\_02\\_2018/PAGES\\_archiv\\_euromedica\\_02\\_2018\\_maket\\_27\\_1\\_2\\_2018-18\\_23.pdf](http://journal-archiv euromedica.eu/archiv-euromedica_02_2018/PAGES_archiv_euromedica_02_2018_maket_27_1_2_2018-18_23.pdf)
- Sandu, A., & Nistor, P. (2020). Digital Dementia. *Eastern-European Journal of Medical Humanities and Bioethics*, 4(1), 1-6. <https://doi.org/10.18662/eejmhb/4.1/22>
- Worldometer (March, 2021). *Worldometer*.  
<https://www.worldometers.info/coronavirus/>