

# Investigation of the development of depressive symptoms in patients with psoriasis

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ABSTRACT— This study aims at the relationship generated between patients with psoriasis and depression. Sixty patients were collected from different hospitals in Thi-Qar, Iraq, with ages ranging from 30 to 60 years. The patients were distributed according to gender: 40 women and 20 males. Has been relied upon DLQI Life Quality Index Score through distributing a questionnaire to patients to assess depression and anxiety, it was found that more than 60% had a level of depression more than the average, and by analyzing the relationship between the quality of life scale and Upper Limbs' Lesions, a statistically significant relationship was found at 0.001. It should be noted that this study revealed a significant correlation between the degree of depressive activity and the severity and prevalence of psoriasis, while self-satisfaction with life reflects, to some extent, the success of adapting to the disease and mental health is closely related to the quality of life.

**KEYWORDS:** DLQI, depressive, psoriasis, Facial Lesions, questionnaire.

#### 1. INTRODUCTION

Psoriasis is a chronic inflammatory skin disease associated with many medical comorbidities such as psychiatric disorders, psoriatic arthritis, and cardiovascular syndrome [1], [2].

Psoriasis is known to be a systemic, inflammatory, and autoimmune disease. Psoriasis is not contagious, but it can lead to social isolation and worsen the quality of life of a person with this condition [3-5].

According to published studies, people with psoriasis have a high risk of developing depression [6-8].

The study found that 16.5% of patients with psoriasis showed symptoms of depression, and at the same time, severe depression was more common in patients with psoriasis than in people without such diseases [9], [10].

Depression is a mental disorder characterized by pathologically low mood with pessimistic negative self-evaluation. Depression in patients with psoriasis is the focus of researchers' attention. Depressive states are known to be a factor in the history of dermatology. The patient's usual life, the possibilities of his professional activity are limited [11-13].

Statistical data indicate a huge percentage of psoriasis patients worldwide - within 3-5%. The disease mainly affects the skin, which appears in the form of a red rash with a characteristic inflammatory reaction. At the same time, the upper part of the plate is covered with silver scale. The main difficulty in treating the disease is the lack of drugs for a complete recovery [14-16]. It is assumed that the main factors affecting

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the prevalence of psoriasis are: metabolic abnormalities, external factors, stress, and heredity [17-20].

#### 2. Material and method

## 2.1 Patient sample

Patients with psoriasis, observed by a dermatologist, were selected as 60 patients from different hospitals in Thi-Qar, Iraq, were included.

## 2.2 Study design

Information and demographic data for patients were collected from Baghdad Hospital, where 60 patients were included. The data was distributed according to gender, with 40 female patients and 20 males. A questionnaire was distributed to patients that included questions related to the clinical file in addition to demographic characteristics. The type of psoriasis was determined in addition to the existing diseases. And a family history.

The HADS is an indicator and tool for measuring negative psychological phenomena (anxiety, stress, and depression) for psoriasis patients, and it is usually used by doctors to determine levels of anxiety and depression in psoriasis patients. It consists of fourteen items, seven of which are related to anxiety, and seven are related to depression.

## 2.3 Study period

A study was conducted in accordance with the binding rules of clinical practice after obtaining the consent of the persons participating in the study.

The study period, which included collecting patients and analyzing the results, was a year-long period of study from 12-3-2020 to 19-4-2021

#### 2.4 Aim of research

This study aims to know the effect of depression and anxiety on psoriasis patients in Iraq.

#### 3. Results

Through looking at the demographic information of the patients, as shown in the table below, we find that the mean s.d. to the patients' work is  $45\pm12.2$ , and the patients were distributed according to sex, with females 66: 6% and males 33.3%.

the large category was no smokers among the patients, as most patients suffer from Hypertension and diabetes.

As for the psoriasis area, most patients suffer from Upper limb Lesions 66.6%, and Scalp Lesions 58.3%, and Facial Lesions 50%.

**Table 1-** demographic results of patients

p	
Age (m±sd)	45±12.2
Gender	



Female	40 (66.6)			
N (f)				
Male	20 (33.3)			
N (f)				
Education level				
primary education N (f)	4 (6.6)			
secondary education N (f)	15 (25)			
bachelor's or equivalent N (f)	30 (50)			
high education N (f)	11 (18.33)			
Smoker				
Yes	8 (13.3)			
No	42 (86.7)			
Disease				
Diabetes mellitus	21 (35)			
Hypertension	20 (33.3)			
Dyslipidaemia	19 (31.6)			
Psoriasis area				
Facial Lesions	30 (50)			
Scalp Lesions	35 (58.3)			
Upper Limbs' Lesions	40 (66.6)			
Psoriatic Arthropathy	20 (33.3)			

This index measures the quality of life of dermatological patients, and it has been used in more than 36 skin diseases where it has been widely adopted and can be applied by physicians in routine clinical practice in order to assist in clinical study and evaluation in making a treatment decision. The DLQI has good and proven reliability and validity. It has been designed for use in adults over 16 years of age. The questionnaire is filled out by the patient himself without the need to explain the exact details, and usually, it takes a minute or two to fill out the form

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The DLQI score is calculated by adding the mark of each question, resulting in a maximum of 30 points and a minimum of 0 points. A higher total corresponds to a worse quality of life. This measure can also be expressed as a percentage.

The results of the DLQI can be interpreted as:

- 0-1 There is absolutely no impact on the patient's quality of life.
- 2-5 There is little impact on the patient's quality of life.
- 6-10 There is an average effect on the patient's quality of life.
- 11-20 There is a significant impact on the patient's quality of life.
- 21-30 There is a very severe impact on the patient's quality of life.

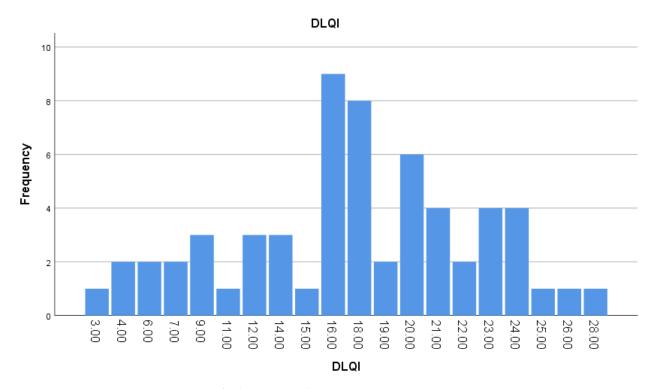


Fig 1- DLQI Life Quality Index Score

Correlation	ns		
		DLQI	depression
			patient
			Upper Limbs'
			Lesions
DLQI	Pearson Correlation	1	0.99
	Sig. (2-tailed)		0.001
	N	60	60

Table 2- correlation between DLQI with depression patient



depression	Pearson Correlation	0.99	1
patient	Sig. (2-tailed)	0.001	
Upper Limbs'	N	60	60
Lesions			

#### 4. Discussion

Through the distributed questionnaire and through the scale of the degree of depression in patients with psoriasis, the prevalence of depression was widely reduced among patients.

As it was found nine patients with a depression score of 16,8 patients (18) and eight patients with a depression score from 23 to 24.

It should be noted that in more than 60% of cases, there was a mixture of anxiety and depression, and a statistically significant relationship was found between the depression scale and its effect on patients in the study of anxiety and depression and their relationship to quality of life.

In recent years, quality of life assessment has become a topic of clinical interest, scientific research, and a standard for prescribing or correcting drug use. Also, diseases affect both the physical condition of the individual and the patients' behavior and emotional reactions, often changing their place and role in social life. Therefore, it is important to obtain the most complete explain of the nature of the impact of the disease on the most important functions of a person, which makes it possible to make a method for assessing the quality of life. Data on quality of life makes it possible to constantly monitor the patient's condition and correct treatment if necessary.

Self-assessment of quality of life is a valuable and reliable indicator of its general condition and provides indicators of quality of life.

As for the effect of the age of patients with psoriasis on the quality of life, it cannot be said conclusively that the older the patient, the lower the quality of life, although there is a slight relationship between the age of patients with psoriasis and the quality of life. Indicators of life, i.e., that psoriasis had an impact on quality of life both at an early age and in the elderly. Most likely, the social activity of patients with psoriasis is of primary importance.

#### 5. Conclusion

The analysis performed showed statistically significant associations between quality-of-life indicators and psoriasis patients. Therefore, in people with a low degree of social activity, the correlation coefficient is (p < 0.001) according to a questionnaire. It should be noted that this study revealed a significant association between degree of depressive activity, severity, and prevalence of psoriasis, whereas subjective life satisfaction reflects to some extent the success of adapting to illness, and mental health is closely related to the quality of life.

Timely diagnosis of emotional disorders, as well as their correction in a dermatological institution, is an integral part of therapeutic, rehabilitative, and preventive measures.

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#### 6. Recommendation

1. The authors concluded that a patient with psoriasis should consult a physician if they begin to experience any symptoms of depression.

- 2. "Psoriasis has far-reaching consequences for patients' physical and mental health, including the potential to increase the risk of depression. I urge all psoriasis patients to consult a dermatologist, as modern treatment can improve their quality of life."
- 3. In patients with psoriasis, examination of health-related psycho-emotional status and quality of life is recommended.

#### 7. References

- [1] Griffiths, C.E., Armstrong, A.W., Gudjonsson, J.E. and Barker, J.N., 2021. Psoriasis. The Lancet, 397 (10281), pp.1301-1315.
- [2] Ding, X., Wang, T., Shen, Y., Wang, X., Zhou, C., Tian, S., Liu, Y., Peng, G., Zhou, J., Xue, S. and Wang, R., 2012. Prevalence of psoriasis in China: a population-based study in six cities. European Journal of Dermatology, 22 (5), pp.663-667.
- [3] Parisi, R., Iskandar, I.Y., Kontopantelis, E., Augustin, M., Griffiths, C.E. and Ashcroft, D.M., 2020. National, regional, and worldwide epidemiology of psoriasis: a systematic analysis and modelling study. Bmj, 369.
- [4] Ryan, C., Sadlier, M., De Vol, E., Patel, M., Lloyd, A.A., Day, A., Lally, A., Kirby, B., and Menter, A., 2015. Genital psoriasis is associated with significant impairment in quality of life and sexual functioning. Journal of the American Academy of Dermatology, 72 (6), pp.978-983.
- [5] Henseler, T. and Christophers, E., 1985. Psoriasis of early and late-onset: characterization of two types of psoriasis vulgaris. Journal of the American Academy of Dermatology, 13 (3), pp.450-456.
- [6] Alonso, S., Tejón, P., Sarasqueta, C., Coto, P., Alperi, M. and Queiro, R., 2016. Age at disease onset may help to further characterize the disease phenotype in psoriatic arthritis. Joint Bone Spine, 83 (5), pp.533-537.
- [7] Patel N, Nadkarni A, Cardwell LA, Vera N, Frey C, Patel N, et al.
- [8] Psoriasis, depression, and inflammatory overlap: a review. Am J Clin Dermatol. 2017; 18:613–20.
- [9] Dalgard FJ, Svensson A, Gieler U, Tomas-Aragones L, Lien L, Poot F, et al. Dermatologists across Europe underestimate depression and anxiety: results from 3635 dermatological consultations. Br J Dermatol. 2018; 179:464–70.
- [10] Langley, R.G. and Ellis, C.N., 2004. Evaluating psoriasis with psoriasis area and severity index, psoriasis global assessment, and lattice system physician's global assessment. Journal of the American Academy of Dermatology, 51 (4), pp.563-569.
- [11] Kuang, Y., Xiao, Y., Fang, Z., Zhang, Y., Shen, M., Chen, X., Chen, M., Lv, C. and Zhu, W., 2020. Association of serum vitamin D with psoriasis and effect modification by central obesity. Frontiers in Medicine, 7, p.236.



- [12] Lamb, R.C., Matcham, F., Turner, M.A., Rayner, L., Simpson, A., Hotopf, M., Barker, J.N.W.N., Jackson, K. and Smith, C.H., 2017. Screening for anxiety and depression in people with psoriasis: a cross-sectional study in a tertiary referral setting. British Journal of Dermatology, 176 (4), pp.1028-1034.
- [13] Vrublevska, J., Trapencieris, M. and Rancans, E., 2018. Adaptation and validation of the Patient Health Questionnaire-9 to evaluate major depression in a primary care sample in Latvia. Nordic journal of psychiatry, 72 (2), pp.112-118.
- [14] Jin W, Zhang S, Duan Y. Depression symptoms predict worse clinical response to etanercept treatment in psoriasis patients Dermatology 2019;235:55–64.
- [15] Bosanquet K, Bailey D, Gilbody S, Harden M, Manea L, Nutbrown S, et al. Diagnostic accuracy of the Whooley questions for the identification of depression: a diagnostic meta-analysis. BMJ Open. 2015;5: e008913.
- [16] Ahmadi F, Hussin NAM, Mohammad MT. Religion, Culture and Meaning-Making Coping: a study among cancer patients in Malaysia. J Relig Health 2019; 58: 1909e1924.
- [17] Fortune DG, Main CJ, O'Sullivan TM, Griffiths CEM. Assessing illness-related stress in psoriasis: the psychometric properties of the Psoriasis Life Stress Inventory. J Psychosom Res 1997; 42 (5): 467e475. https://doi.org/10.1016/S0022-
- [18] Kuang Y, Xiao Y, Fang Z, Zhang Y, Shen M, Chen X, et al. . Association of serum vitamin D with psoriasis and effect modification by central obesity. Front Med (Lausanne). (2020) 7:236. 10.3389/fmed.2020.00236
- [19] Joseph J, Golden S. Cortisol dysregulation: the bidirectional link between stress, depression, and type 2 diabetes mellitus. Ann N Y Acad Sci. (2017) 1391:20–34. 10.1111/nyas.13217
- [20] Milaneschi Y, Simmons W, van Rossum E, Penninx B. Depression, and obesity: evidence of shared biological mechanisms. Mol Psychiatry. (2019) 24:18–33. 10.1038/s41380-018-0017-5



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