**Scope**
**Volume 14 Number 02 June 2024**

# Assessment of Depression, Anxiety and QOL in Patient Diagnosed with Psoriasis

**Dr. Divya Yadav[1], Dr. Simranjit Kaur[2], Dr. Niraj[3], Dr. Monika Bhan[4], Dr. Abhishek Chakladar[5]**

PG Resident, Department of Psychiatry, Varun Arjun Medical College, Rohilkhand Hospital, Shahjahanpur, UP, India

Associate Professor, Department of Dermatology, Varun Arjun Medical College, Rohilkhand Hospital, Shahjahanpur, UP, India

PG Resident, Department of Psychiatry, Varun Arjun Medical College, Rohilkhand Hospital, Shahjahanpur, UP,India

Assistant Professor, Department of Psychiatry, Varun Arjun Medical College, Rohilkhand Hospital, Shahjahanpur, UP, India

PG Resident, Department of Dermatology, Varun Arjun Medical College, Rohilkhand Hospital, Shahjahanpur, UP, India

Corresponding Author **:** **Rajendra Pratap Singh Bais**

**Abstract**

**Introduction**: Psoriasis is a common, chronic, immune-mediated, multisystem, inflammatory disorder. It affects all age groups, including infants. Psoriasis is associated with a variety of psychological problems. **Aim**: The aim of study is to assess Depression, Anxiety, QOL and Coping in patient of Psoriasis. **Materials and Methods**: APROSPECTIVE Hospital-Based study of clinically diagnosed Psoriasis cases studied over six months from September2023 to February 2024 comprising of 35 cases. PASI score was done on the day ofinitial assessment along with subjecting the patient to Hamilton Anxiety Rating Scale to assess quantum of anxiety, Hamilton Depression rating scale to quantum depression, QOL questionnaire and, brief cope. **Results & Conclusion:** Psoriasis affectsthe anxiety and depression outcomes as also the quality of life and coping. Even though there was no statistical correlation a clinical association was seen. The utility of the study is well in place and further understanding through research based upon bigger sample size is suggested.

**Keywords**: Psoriasis, Anxiety, Depression, QOL , HARS, HDRS & Brief COPE.

(QOL- Quality of life , HARS- Hamilton Anxiety Rating Scale , HDRS- Hamilton Depression Rating Scale , Brief COPE- Coping Orientation to Problems Experienced Inventory)

## Introduction

Skin exemplifies the visible and perceivable interface between mind and body. Skin also comes to the forefront because it has not onlya protective and homeostatic functions but it's afflictions, as in Psoriasis, causes severe distress by virtue of pain, discomfort and above all impacting the physical appearance of oneself also. Theeffect on the Quality Of Life is also noteworthy as also the ways one copes with the illness and its consequences.The concept of the "brain-skin-axis" describes the interaction between mental aspects, immune system, and cutaneous inflammation. In patients with psoriasis, psychosocial stress can worsen the condition, which increases disease-associated and experienced stress, impairs quality of life, and increases psychosocial strain and comorbidity.The Immune System is a vital link through which Neuropsychological triggers play its effects upon the body, and vice versa too- The Basis of Psychosomatic Medicine and also Somatopsychic Medicine.Psoriasis is one such illness seen in dermatological practice that has a Psychosomatic as well as Somatopsychic basis.

For the purpose of our study however, is to understand 'Psoriasis' within the realm of our study aims in terms of psychiatric ramifications of psoriasis (Anxiety & Depression)and its effect on the Quality of Life and Coping with the illness.

Psoriasis is one of the most common chronic inflammatory skin diseases and has a prevalence of 1 to 3 % in western industrial countries. [1,2].It's prevalence in India is 0.44 to 2.8%. The commonest type of psoriasis is "Psoriasis Vulgaris" also called "Plaque Psoriasis." It is assumed that about 25% of patients have moderate to severe disease, and a relevant proportion needs a lifelong treatment [3].Studies also indicate that psoriasis often is associated with other medical conditions, especially in severe cases with a long history of the disease [4]. Known comorbidity includes psoriatic arthritis (PsA) [5]; inflammatory bowel disease [6]; cardiovascular disease [7]; and diabetes [8], influencing morbidity and mortality [9,10]. Increased rates of comorbidity are already found in young children and adolescents [11]In addition to somatic comorbidity psoriasis can be associated with psychosocial stress and mental illness. Patients with psoriasis show an increased risk of depression, anxiety, and suicidal ideation [12-15].

## Materials and Methods

The study was carried out onpatients diagnosed with Psoriasis (newly diagnosed as well as those who were already on treatment)attending the department of Dermatology at Varun Arjun Medical College & Rohilkhand Hospital, Shahjahanpur,Uttar Pradesh.35 patients werestudied from September 2023 to February 2024 .

Based on disease severity the patients were divided into two groups based on the body area and severity as measured by PASI (Psoriatic Area Severity Index). PASI score<10 can be classified as mild psoriasis, PASI score≥10 is defined as moderatetosevere

psoriasis.Demographic information from all participants was gathered and diagnosis made. The psoriasis area severity index (PASI) scale was applied to assess the extent & severity of psoriasis. HARS and HDRS were applied to assess the extent of Anxiety and Depression respectively. QOL questionnaire was also administered along with Brief COPE.

**Table 1: Table showing correlation between socio-demographic variables, psychometric variables and Psoriatic Area Severity Index score**

| | | PASI | Hamilton-D | Hamilton-A | Brief COPE | Physical Health | Psychological Health | Social | Environmental |
|---|---|---|---|---|---|---|---|---|---|
| Age | r-value | -.108 | -.060 | .032 | -.026 | -.366* | -.168 | -.167 | -.169 |
| | p-value | .537 | .733 | .857 | .880 | .031 | .336 | .338 | .331 |
| | N | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 |
| PASI | r-value | 1 | .031 | .021 | -.058 | .245 | -.153 | .027 | .047 |
| | p-value | | .861 | .905 | .739 | .155 | .381 | .877 | .788 |
| | N | | 35 | 35 | 35 | 35 | 35 | 35 | 35 |
| Hamilton-D | r-value | | 1 | .620** | .231 | -.053 | -.031 | -.168 | -.418* |
| | p-value | | | .0001 | .181 | .764 | .861 | .336 | .013 |
| | N | | | 35 | 35 | 35 | 35 | 35 | 35 |
| Hamilton-A | r-value | | | 1 | .230 | -.397* | -.095 | -.146 | -.361* |
| | p-value | | | | .185 | .018 | .589 | .404 | .033 |
| | N | | | | 35 | 35 | 35 | 35 | 35 |
| Brief COPE | r-value | | | | 1 | .074 | .271 | -.211 | -.195 |
| | p-value | | | | | .672 | .116 | .223 | .262 |
| | N | | | | | 35 | 35 | 35 | 35 |
| Physical | r- | | | | | 1 | .368* | .128 | .241 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Health | value | | | | | | | | |
| | p-value | | | | | | .030 | .463 | .163 |
| | N | | | | | | 35 | 35 | 35 |
| Psychological Health | r-value | | | | | | 1 | .194 | .613** |
| | p-value | | | | | | | .265 | .0001 |
| | N | | | | | | | 35 | 35 |
| Social | r-value | | | | | | | 1 | .324 |
| | p-value | | | | | | | | .057 |
| | N | | | | | | | | 35 |
| * Correlation is significant at the 0.05 level (2-tailed). | | | | | | | | | |
| **Correlation is significant at the 0.01 level (2-tailed). | | | | | | | | | |

Figure 1: Pie diagram showing the frequency distribution of gender of the participants in the study (n=35)

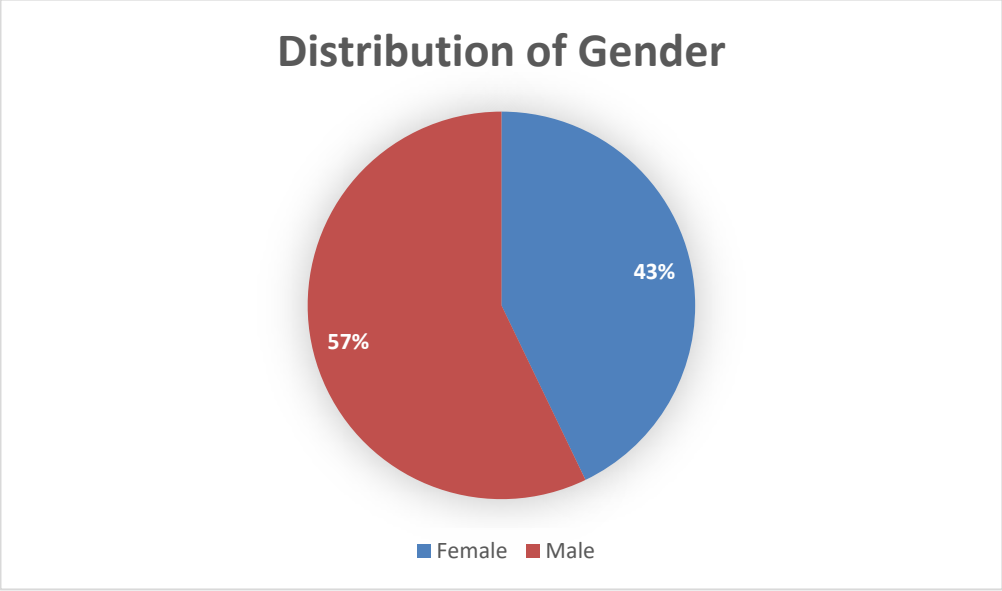


Figure 2: Pie diagram showing the frequency distribution of socio-economic status of the participants in the study (n=35)

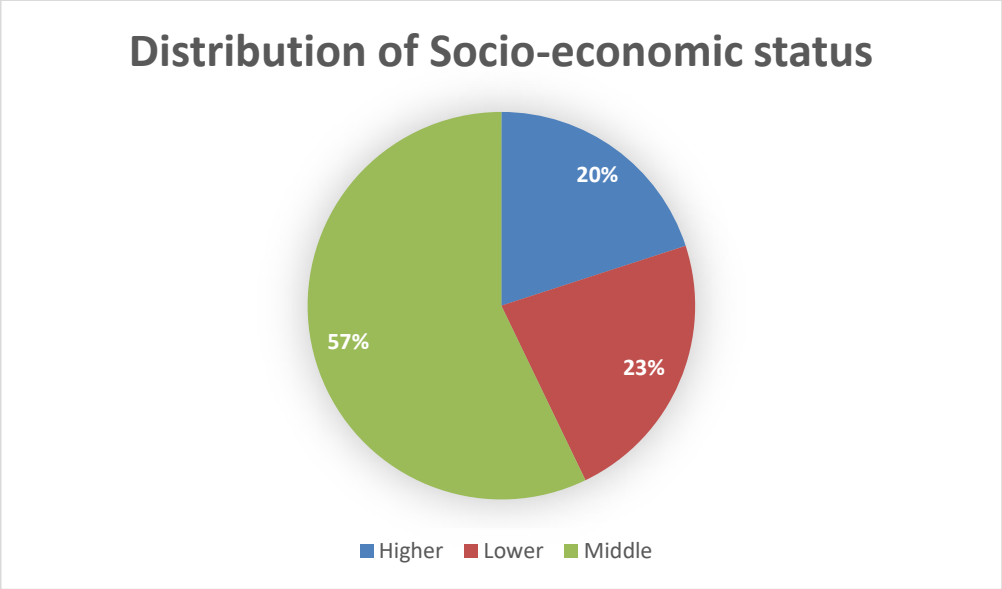
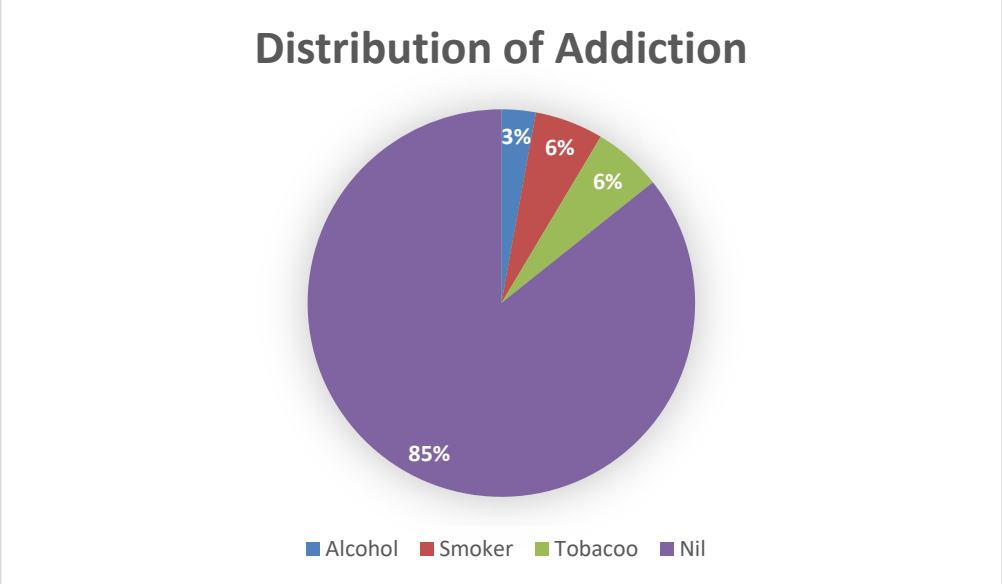



Figure 3: Pie diagram showing the frequency distribution of substance use among the participants in the study (n=35)




[Figure – 3]

**Results**

Assimilating the result from the data gathered and subsequent statistical evaluation, it was observed that out of the,35 patients studied 15 were Females and 20 were Males.[Figure -1]20% of the study population belonged to higher Socioeconomic class,57% from middle and 23% from lower of Socioeconomic status. [Figure – 2].

Similarly, 85% had no substance use habits, 6% smoked tobacco, 6% chewed tobacco and 3% used alcohol. [Figure – 3]

The parameters obtained on PASI, HARS, HDRS, QOL,Brief COPEwas corelated with age and with each other to observe any statistical significance (p-value) and linear correlation (R-value) between them were also studied:

- A Positive Linear Correlation was seen between Psychological Health&Physical Health. A Negative Linear Correlation was seen between Physical Health and Age; Environmental Health and HDRS; Environmental Health and HARS; Physical Health and HARS. A Significantly High Correlation was seen between HARS & HDRS, and between Environmental Health & Psychological health.

- A Significant Statistical Significance was seen between Age &Physical Health; HDRS & Environmental Health; as well as between HARS and Environmental Health; HARS &Physical Health; and between Physical Health & Psychological Health.

- A High Statistical Significance was also seen between HARS & HDRS and between Environmental Health & Psychological Health

None of the assessment parameters showed significance when corelated with PASI, thereby making us conclude that psoriasis shows no association with Anxiety, Depression, QOL and Coping parameters studied.

**Disscussion**

Based on the results obtained through statistical assimilation we carry on our discussion as below:

Psoriasis by virtue of its etiopathogenesis has biological & psychosocial basis. The exacerbation of the illness too is biopsychosocial to large extent.Research suggests that psychosocial stress is not just a consequence of psoriasis but can also be involved in the exacerbation of the symptoms [28]. Also it was noted by Reich et al [29] that the itch intensity experienced during psoriasis exacerbation correlated positively with stressful events one month earlier.As discussed in the introduction we have observed through the review of literature, the myriad comorbidities associated with psoriasis.

In addition to somatic comorbidity psoriasis can be associated with psychosocial stress and mental illness. Patients with psoriasis show an increased risk of depression, anxiety, and suicidal ideation [12-15]. However it was observed in our study that there was no positive correlation between PASI and Depression & between PASI and Anxiety, this may be due to the small sample size of our study. However in theQuality Of Lifescale there was a positive correlation betweenpsychological health & physical health domains. Similarly between the environmental &psychological health domains there was a positive correlation.

As per the review of earlier studies done it was seen that in an individual with an early onset of psoriasis there is an increased risk for depression andanxiety [14,16]. In our study we found a positive correlation between age of the patient& the physical health domain of QOL scale.Moreover, alcohol consumption and nicotine abuse seems to be greater in patients with psoriasis than in the general population [17,18]. However as per data we cannot draw a firm conclusion of this aspect as the majority of our subjects did not have any substance use habits (85% - figure 3).

Reasons for the psychosocial burden of patients with psoriasis are experienced stigmatization in social situations, the workplace, difficulties with body image, self-esteem, and self-concept [14,19-22].These factors can be substantial components leading to impaired health-related quality of life (HrQoL) [23]. Other predictors of HrQoL impairments are pruritus [24,25], the time needed for daily treatment and treatment dissatisfaction [26].The QoL studied by us shows a positive correlation between all of the domains i.e. Physical health, Psychological health, Social health, Environmental health.Blome C, Augustin M. et al note that patients show a large variety of needs related to disease management which go far beyond symptomatic treatment and include a plurality of psychosocial aspects [27]. Hence we also concur that psychosocial aspects should be considered in our treatment strategies.The stress reactivity of an individual can affect both adherence as well as treatment response in patients with Psoriasis [28]. Besides the individual stress reactivity, age, sex, psychosocial, disease-specific, and treatment-specific factors predict the adherence or compliance [30]. In terms of Coping, Eskin et al in their study observed that psoriasis patients showed lower scores in social problem-solving skills as well as higher degrees in negative problem orientation and impulsive-careless problem-solving style compared to healthy controls [29], which indicates that those patients might profit from interventions like problem-solving trainings. To measure the coping style in our patients we used Brief-COPE scale, which did not reveal any positive significance.

In the end we can surmise through the observation made by Wohlrab J, Fiedler G et al, that the current concepts of psoriasis management, must include screening for mental comorbidity and recommend interdisciplinary teamwork and psychosocial support if applicable [4].

**Conclusion**:

The above study was aimed to study the relationship between Psoriasis and the psychosocial aspects of it, including its effect on the quality of life and coping. As physicians with a holistic view on the patient's problem and for the sake of the ultimate therapeutic outcomes we have to be cognizant of these facts and include them in our treatment plans.

Our study in statistical terms fell short in deriving a firm correlation between Psoriasis and the possible psychiatric comorbidities, which we intended to study, namely anxiety& depression, this was probably because of a small sample size. While in terms

of Quality-of-LifeScale there were correlations noted amongst its domains, no statistically significant correlation could be drawn with PASI.Also, in terms of Coping we could not draw conclusive insights.

Hence, we need to have:

1. A larger sample size.
2. Widen our sample selection to include individuals from different socioeconomic class and educational levels.
3. Similarly understanding of coping needs should be studied in the light of other variables too apart from the disease.

A holistic outlook to patient care, includes understanding what causes or exacerbates the illness and what are the comorbidities associated with it in terms of antecedents, consequences and those affecting the course of treatment, including the functionality, coping with the illness and the overall quality of life. This holds true for any illness and more so Psoriasis, since it has strong Psychosomatic and Somatopsychic bearings, in its manifestations and illness course.

**References:**

1. Schafer I, Rustenbach SJ, Radtke M, Augustin J, Glaeske G, Augustin M. Epidemiology of psoriasis in Germany-analysis of secondary health insurance data. Gesundheitswesen. 2011 May;73(5):308–13.
2. Augustin M, Reich K, Reusch M, Luger T, Franzke N, Schafer I, Rustenbach SJ, Radtke MA. Health services research in psoriasis-the German approach. Dermatology. 2009;218(4):293–301.
3. Reich K, Mrowietz U. Treatment goals in psoriasis. J Dtsch Dermatol Ges. 2007 Jul;5(7):566–74.
4. Wohlrab J, Fiedler G, Gerdes S, Nast A, Philipp S, Radtke MA, Thaçi D, Koenig W, Pfeiffer AFH, Härter M, Schön MP. Recommendations for detection of individual risk for comorbidities in patients with psoriasis. Arch Dermatol Res. 2013 Mar;305(2):91–8.
5. Gladman DD, Antoni C, Mease P, Clegg DO, Nash P. Psoriatic arthritis: epidemiology, clinical features, course, and outcome. Ann Rheum Dis. 2005 Mar;64 Suppl 2:ii14–7. ard.bmj.com
6. Christophers E, Barker JNWN, Griffiths CEM, Daudén E, Milligan G, Molta C, Sato R, Boggs R. The risk of psoriatic arthritis remains constant following initial diagnosis of psoriasis among patients seen in European dermatology clinics. J EurAcad Dermatol Venereol. 2010 May;24(5):548–54.
7. Parisi R, Rutter MK, Lunt M, Young HS, Symmons DPM, Griffiths CEM, Ashcroft DM, Identification and Management of Psoriasis and Associated ComorbidiTy (IMPACT) project team Psoriasis and the Risk of Major Cardiovascular Events: Cohort Study Using the Clinical Practice Research Datalink. J Invest Dermatol. 2015 Sep;135(9):2189–97.

8. Cohen AD, Dreiher J, Shapiro Y, Vidavsky L, Vardy DA, Davidovici B, Meyerovitch J. Psoriasis and diabetes: a population-based cross-sectional study. J EurAcad Dermatol Venereol. 2008 May;22(5):585–9.
9. Baumeister H, Hutter N, Bengel J, Härter M. Quality of life in medically ill persons with comorbid mental disorders: a systematic review and meta-analysis. PsychotherPsychosom. 2011;80(5):275–86.
10. Mrowietz U, Elder JT, Barker J. The importance of disease associations and concomitant therapy for the long-term management of psoriasis patients. Arch Dermatol Res. 2006 Dec;298(7):309–19. europepmc.org
11. Augustin M, Glaeske G, Radtke MA, Christophers E, Reich K, Schäfer I. Epidemiology and comorbidity of psoriasis in children. Br J Dermatol. 2010 Mar;162(3):633–6
12. Dalgard FJ, Gieler U, Tomas-Aragones L, Lien L, Poot F, Jemec GBE, Misery L, Szabo C, Linder D, Sampogna F, Evers AWM, Halvorsen JA, Balieva F, Szepietowski J, Romanov D, Marron SE, Altunay IK, Finlay AY, Salek SS, Kupfer J. The psychological burden of skin diseases: a cross-sectional multicenter study among dermatological out-patients in 13 European countries. J Invest Dermatol. 2015 Apr;135(4):984–91. linkinghub.elsevier.com
13. Jensen P, Ahlehoff O, Egeberg A, Gislason G, Hansen PR, Skov L. Psoriasis and New-onset Depression: A Danish Nationwide Cohort Study. Acta DermVenereol. 2016 Jan;96(1):39–42. www.medicaljournals.se
14. Łakuta P, Przybyła-Basista H. Toward a better understanding of social anxiety and depression in psoriasis patients: The role of determinants, mediators, and moderators. J Psychosom Res. 2017 Mar;94:32–38
15. Wu JJ, Penfold RB, Primatesta P, Fox TK, Stewart C, Reddy SP, Egeberg A, Liu J, Simon G. The risk of depression, suicidal ideation and suicide attempt in patients with psoriasis, psoriatic arthritis or ankylosing spondylitis. J EurAcad Dermatol Venereol. 2017 Jul;31(7):1168–1175
16. Kurd SK, Troxel AB, Crits-Christoph P, Gelfand JM. The risk of depression, anxiety, and suicidality in patients with psoriasis: a population-based cohort study. Arch Dermatol. 2010 Aug;146(8):891–5. europepmc.org
17. Gerdes S, Zahl VA, Weichenthal M, Mrowietz U. Smoking and alcohol intake in severely affected patients with psoriasis in Germany. Dermatology. 2010;220(1):38–43.
18. Brenaut E, Horreau C, Pouplard C, Barnetche T, Paul C, Richard M, Joly P, Le MM, Aractingi S, Aubin F, Cribier B, Jullien D, Ortonne J, Misery L. Alcohol consumption and psoriasis: a systematic literature review. J EurAcad Dermatol Venereol. 2013 Aug;27 Suppl 3:30–5.
19. Richards HL, Fortune DG, Griffiths CE, Main CJ. The contribution of perceptions of stigmatisation to disability in patients with psoriasis. J Psychosom Res. 2001 Jan;50(1):11–5.

20. Vardy D, Besser A, Amir M, Gesthalter B, Biton A, Buskila D. Experiences of stigmatization play a role in mediating the impact of disease severity on quality of life in psoriasis patients. Br J Dermatol. 2002 Oct;147(4):736–42
21. Sampogna F, Tabolli S, Söderfeldt B, Axtelius B, Aparo U, Abeni D, IDI Multipurpose Psoriasis Research on Vital Experiences (IMPROVE) investigators Measuring quality of life of patients with different clinical types of psoriasis using the SF-36. Br J Dermatol. 2006 May;154(5):844–9.
22. Weiss SC, Bergstrom KG, Weiss SA, Kimball AB. Quality of life considerations in psoriasis treatment. Dermatol Nurs. 2003 Apr;15(2):120, 123–7.
23. de Arruda LH, De Moraes AP. The impact of psoriasis on quality of life. Br J Dermatol. 2001 Apr;144 Suppl 58:33–6.
24. Augustin M, Krüger K, Radtke MA, Schwippl I, Reich K. Disease severity, quality of life and health care in plaque-type psoriasis: a multicenter cross-sectional study in Germany. Dermatology. 2008;216(4):366–72.
25. Langenbruch AK, Radtke MA, Augustin M. Quality of psoriasis care from the patients' perspective--results of the national health care study PsoReal. Eur J Dermatol. 2012;22(4):518–24.
26. Blome C, Simianer S, Purwins S, Laass A, Rustenbach SJ, Schaefer I, Radtke M, Augustin M. Time needed for treatment is the major predictor of quality of life in psoriasis. Dermatology. 2010;221(2):154–9
27. Blome C, Augustin M, Behechtnejad J, Rustenbach SJ. Dimensions of patient needs in dermatology: subscales of the patient benefit index. Arch Dermatol Res. 2011 Jan;303(1):11–7.
28. Hunter HJA, Griffiths CEM, Kleyn CE. Does psychosocial stress play a role in the exacerbation of psoriasis? Br J Dermatol. 2013 Nov;169(5):965–74
29. Eskin M, Savk E, Uslu M, Küçükaydoğan N. Social problem-solving, perceived stress, negative life events, depression and life satisfaction in psoriasis. J EurAcad Dermatol Venereol. 2014 Nov;28(11):1553–9
30. Augustin M, Holland B, Dartsch D, Langenbruch A, Radtke MA. Adherence in the treatment of psoriasis: a systematic review. Dermatology. 2011;222(4):363–74