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Psychological Stress, Significant Life Occurrences, Exhaustion, and Disposition in Individuals Diagnosed with Psoriasis

Vijendra Mood[1], Durlav Singh Parihar[2] Rakesh Kumar[3]

[1,2,3] *School of Nursing Sciences*

ITM University, Gwalior, India

Abstract

Objective: Examine the relationship between psoriasis patients' temperament profiles, levels of perceived stress, and the impact of life events on their condition.

Methods: Psoriasis sufferers and healthy controls were both included in this cross-sectional study. Scores on the Multidimensional Assessment of Fatigue, the Perceived Stress Scale (PSS), and the number of life events were used to compare the two groups. For this purpose, we administered the Temperament Evaluation of the Memphis, Pisa, Paris, and San Diego Auto questionnaire to each of the two classes.

Summary: Participants in the study included 75 individuals with psoriasis (mean ± SD age, 44.94 ± 13.62 years) as well as 75 healthy controls (mean ± SD age, 41.10 ± 8.89 years). Life event presence, PSS score, exhaustion, and temperament profiles were all areas where the two groups differed statistically. A greater PSS score was observed in psoriasis patients who exhibited depressive, cyclothymic, or anxious temperament traits. Positive correlations between the number of life events and the PSS scores were observed in the psoriasis group.

Psoriasis was discovered to be associated with stress and life events. Perceived stress levels were higher in psoriasis patients with depressed, cyclothymic, or anxious temperament profiles.

Keywords- *healthcare, hospital, pneumonia, ventilator, psoriasis*

1. Introduction

Patients' lives can be greatly impacted by psoriasis, a chronic inflammatory skin disease. There is a high rate of psychological discomfort and psychiatric illness, and it can have a significant psychosocial effect on patients' quality of life [1, 3]. Estimates of psoriasis prevalence in epidemiological studies that utilised clinical examinations as their survey method ranged from 0.3% to 2.5%, indicating that the condition is relatively common [4].

Several factors have been linked to psoriasis, according to epidemiological research. These include, but are not limited to, genetic determinants, racial and regional variance, injury and infection, cigarette smoking, alcohol, and food [4]. Psoriasis is thought to be influenced by psychosomatic factors as well. Psoriasis is believed by many patients to be caused or worsened by stress. A study of 62 dermatologists in France found that 100% of them agree that stress is a major factor in psoriasis [5].

A small prospective study [8], [9] and several controlled retrospective studies [10], [11], [12], [13], [14], [15] have provided support to the hypothesis that stressful events may activate or worsen psoriasis. Earlier, numerous anecdotal observations and uncontrolled case series had proposed this idea. Research has shown that stressful

events can worsen or start psoriasis episodes [16], but these studies have mostly looked at people who have had the condition for a long time and have focused solely on the impact of life events on disease susceptibility, rather than other possible factors like social support, attachment security, or alexithymia. Not all studies found the same thing [21], and only one of those that did managed to account for potential confounding variables like smoking and alcohol consumption [15].

Psychosomatic variables in specific skin diseases are the focus of this subset of a bigger research endeavour. The researchers set out to find out whether stressful experiences or other psychosomatic factors could bring on a flare-up of psoriasis. We studied a group of outpatients with newly diagnosed psoriasis and a large group of outpatients with skin conditions where psychosomatic factors are often disregarded to determine the impact of recent stressful life events, perceived social support, attachment security, alexithymia, alcohol, and tobacco use.

Feinstein first used the word "clinimetric" in 1982 (1). Even though there had been a lot of progress in assessment procedures, he found that many clinical phenomena were being ignored. Although numerous indices have been employed for disease classification, Feinstein contended that the majority of them fall short when it comes to assessing clinical occurrences. Because of this, he brought attention to the fact that new indexes are required to handle clinical data that does not fit into the conventional diagnostic taxonomy. Dermatologists and, more generally, doctors pay close attention to certain details when treating patients. For instance, a cross-sectional perspective is typically used to evaluate the number of symptoms, which is then used to measure severity. Instead, clinimetric indices provide clinically important data, such as symptom kinds and presentation order, which is particularly useful for making therapy decisions. The disease's longitudinal course also necessitates similar thinking. As an example, the staging of an illness is significant because it provides information about the patient's current position on the illness course continuum and also identifies the patient's clinical state at a given moment in time (assessment). Because chronic diseases like psoriasis have attention and deteriorating stages, staging is crucial for their management. Before making a treatment decision, doctors must collect data on the patient's comorbidities (the number and severity of co-occurring physical and mental health conditions), how the patient has responded to past treatments (side effects, resistance, tolerance, etc.), how the patient is able to function in daily life, when life events occur, and the patient's psychological and social health. Psychologists and psychiatrists were able to completely alter their methods of psychopathology diagnosis with the publication of the Diagnostic and Statistical Manual (DSM) of Mental Disorders about 30 years ago. It led to remarkable improvements in reduced variability caused by diverse evaluators. Unfortunately, gathering certain clinically useful data has been significantly hindered by the use of diagnostic criteria for psychiatric diseases. One point of contention with the DSM is that the clinical syndromes it classifies are not uniform. A wide variety of clinical case conceptualizations may emerge from the wide variety of possible symptom combinations. Therefore, a DSM diagnosis can cover a lot of ground in terms of severity, prognosis, and symptoms, but it doesn't take into account a patient's unique treatment history, including how their body has responded to past treatments [15, 19-22]. This means that a patient's current symptoms might be a result of how their symptoms have evolved over time. Although patients with the same diagnosis could appear to be very similar at first glance, the clinical taxonomy fails to account for these subtle discrepancies in classification that might lead to significant treatment and prognosis variations. Therapy failures, partial or complete, could be caused in part by the absence of these data.

2. Method

Every participant was selected in a sequential fashion from scheduled appointments at the out-patient clinic of the Department of Dermatology and Venereology at the Skåne University Hospital in Malmö, Sweden. Men and women between the ages of 18 and 65 with a dermatologist-diagnosed case of plaque psoriasis, fluency in Swedish, and the absence of significant mental or cognitive disorders were eligible to participate. There was a total of 109 patients contacted in the autumn of 2008 (53% of the total) and 2009 (47% of the total). Among them, 102 (or 94% of the total) provided both verbal and written informed consent in order to participate. A patient withdrew from the trial for reasons related to their own well-being. Of the 101 patients that remained, all but one was unpaid volunteers (93%). There were no statistically significant differences in any of the clinical or

socio-demographic factors when comparing the 2008 and 2009 cohorts. Because of this, statistical analyses treated the subjects as a single cohort.

In terms of clinical, psychosocial, psychological, and psoriasis-related characteristics, as well as socio-demographic variables, there were no statistically significant differences between the sexes.

The outpatient clinic provided a peaceful environment for the administration of a 25-item psychosocial semi-structured interview. One researcher (CR) interviewed each subject. Two writers (KS and CR) created the interview to evaluate (i) socio-demographic factors, (ii) social circumstances and close relationships, and (iii) suffering associated to psoriasis. Using a 5-point Likert scale, responses were evaluated. We asked patients about their level of happiness with their living conditions, their working conditions, the private economy, and their relationships with their parents, partners, children, friends, and coworkers in relation to (ii) their social situation and intimate ties. "Not satisfied" (4-5) and "satisfied" (1-3) were the two possible responses. In order to assess the extent to which psoriasis affected patients' daily lives and sexual relations, we looked at the concept of (iii) distress associated to psoriasis. A "low impact" (1-3) and a "high impact" (4-5) category was used to categorise the responses.

Towards the conclusion of the interview, patients were asked: (A) "Do you attribute the beginning of your psoriasis to a specific traumatic event in your life?" (Yes, no, and "don't know" were the responses) and (B) "Do you find that your psoriasis gets worse when you're stressed?" (The options for responses were "yes," "no," "sometimes," and "don't know"). In order to compare two groups, we divided the participants into "stress reactors" (SRs) and "non-stress reactors" (NSRs). This was done in response to question (B).

Table 1. Social, demographic, and health-related variables (N = 101)

Male	67
Female	56
Age(years)	
Mean (SD), Median (range)	54.6(14.9), 56(18-65)
Age at onset of disease (years)	
Mean (SD), Median (range)	25.8(15.6), 31(0-62)
Duration of disease (years)	
Mean (SD), Median (range)	19.9(13.8), 19(1-67)
BMI	
Mean (SD), Median(ranghe)	27.3(5.6), 28.4(18.7-39.6)
Mild psoriasis, n (%)	48(88)
Moderate psoriasis, n (%)	9(18)
Severe psoriasis, n (%)	4 (7)

3. Psychosocial evaluation

Living conditions (93%), working conditions (98% of n=90), the private economy (89%), relationships with parents (92% of n=99), partners (91% of n=77), own children (100% of n=66), friends (94%), and colleagues (98% of n=80) were also areas of satisfaction for the majority of patients. As for the private economy, 89% of patients were content. Among those who suffered from psoriasis, 49% said it significantly affected their day-to-day lives, and 27% said it affected their sexual lives.

4. Anxiety and worsening

"Stress reactors" (SRs) accounted for 64% of the patients, "non-stress reactors" (NSRs) for 26%, "don't know" for 7%, and "sometimes" for 4%. Mean scores on the BDI-II for state and trait anxiety, as well as five personality factors on the SSP scale (i.e., somatic trait anxiety, psychic trait anxiety, stress susceptibility, lack of assertiveness, and mistrust) showed statistically significant differences between SRs and NSRs. Table 2 shows the results, average descriptive scores for the whole sample, and scores for each of the four categories of subjective stress-reactivity. Regarding all clinical and socio-demographic characteristics listed in Table 1, as well as psychosocial variables, psoriasis-related distress, and sleep problems, there were no statistically significant differences between SRs and NSRs.

Table 2: Findings from the Examining Instruments Average results across all subjects, broken down by group and comparing SRs to NSRs

STAI	Total Mean (SD) N=202	Yes (SR) Mean (SD) n=75	No(NSR) Mean (SD) n=37	Do not know Mean(SD) n=8	Sometimes Mean(SD) n=5	SRvsNSR significance of difference
State anxiety	49.1(13.3)	50.6(13.6)	28.7(9.1)	46.2(11.2)	41.9(11.7)	<0.0001
Trait anxiety	37.6(12.8)	39.4(13.5)	29.2(7.5)	44.3(14.2)	48(14.9)	<0.0001
Depression	9.4(9.2)	11.2(9.6)	4.5(4.7)	14.2(11.6)	8.2(5.1)	<0.0001
Somatic trait anxiety	52.3(11.9)	54.3(11.6)	46.2(9.7)	57.2(11.7)	48.2(5.8)	0.001
Psychic trait anxiety	48.6(10.1)	48.3(11.7)	43.3(7.4)	54.4(7.8)	47.7(13.7)	<0.0001
Mistrust	49.8(12.7)	48.7(11.7)	44.8(10.8)	60.2(9.3)	51.4(7.2)	n.s

5. Conclusion

Our findings indicate that individuals who view stress as a contributing factor to the worsening of their disease appear to possess a more fragile psychological makeup. This discovery implies significant possibilities for physicians to identify individuals who may gain from further psychiatric investigation and assistance.

References

[1] Pancar Yuksel, Esra, Dilek Durmus, and Gokhan Sarisoy. "Perceived stress, life events, fatigue and temperament in patients with psoriasis." *Journal of International Medical Research* 47, no. 9 (2019): 4284-4291.

[2] Remröd, Charlotta, Karin Sjöström, and Åke Svensson. "Subjective stress reactivity in psoriasis–a cross sectional study of associated psychological traits." *BMC dermatology* 15 (2015): 1-8.

[3] Basińska, Małgorzata A., and Agnieszka Woźniewicz. "The relation between type D personality and the clinical condition of patients suffering from psoriasis." *Advances in Dermatology and Allergology/Postępy Dermatologii i Alergologii* 30, no. 6 (2013): 381-387.

[4] Buske-Kirschbaum, A., M. Ebrecht, S. Kern, H. Höllig, A. Gierens, and D. Hellhammer. "Personality characteristics and their association with biological stress responses in patients with atopic dermatitis." *Dermatology and Psychosomatics/Dermatologie und Psychosomatik* 5, no. 1 (2004): 12-16.

[5] Raparthi, M., Dodda, S. B., & Maruthi, S. (2023). Predictive Maintenance in IoT Devices using Time Series Analysis and Deep Learning. Dandao Xuebao/Journal of Ballistics, 35(3). https://doi.org/10.52783/dxjb.v35.113

[6] Naik, Priya Vishal. "Study of comparative psychological changes in psoriasis and eczema." PhD diss., Tilak Maharashtra Vidyapeeth, 2022.

[7] Panconesi, Emiliano, and Giuseppe Hautmann. "Psychophysiology of stress in dermatology: the psychobiologic pattern of psychosomatics." *Dermatologic clinics* 14, no. 3 (1996): 399-422.

[8] Man, Alessandra-Mădălina, Meda Sandra Orăsan, Oana-Alina Hoteiuc, Maria-Cristina Olănescu-Vaida-Voevod, and Teodora Mocan. "Inflammation and Psoriasis: A Comprehensive Review." *International Journal of Molecular Sciences* 24, no. 22 (2023): 16095.

[9] Pariser, David, Brad Schenkel, Chureen Carter, Kamyar Farahi, T. Michelle Brown, Charles N. Ellis, and Psoriasis Patient Interview Study Group. "A multicenter, non-interventional study to evaluate patient-reported experiences of living with psoriasis." *Journal of Dermatological Treatment* 27, no. 1 (2016): 19-26.

[10] Rahman, Syed Minhaj, Abrahim Abduelmula, and Mohammad Jafferany. "Psychopathological symptoms in dermatology: A basic approach toward psychocutaneous disorders." *International Journal of Dermatology* 62, no. 3 (2023): 346-356.

[11] Heim, Christine, Ulrike Ehlert, and Dirk H. Hellhammer. "The potential role of hypocortisolism in the pathophysiology of stress-related bodily disorders." *Psychoneuroendocrinology* 25, no. 1 (2000): 1-35.

[12] Sirois, Fuschia M., and Alex M. Wood. "Gratitude uniquely predicts lower depression in chronic illness populations: A longitudinal study of inflammatory bowel disease and arthritis." *Health Psychology* 36, no. 2 (2017): 122.

[13] Lugović-Mihić, Liborija, Hrvoje Cvitanović, Ivka Djaković, Matea Kuna, and Ana Šešerko. "The influence of psychological stress on HPV infection manifestations and carcinogenesis." *Cell Physiol Biochem* 55, no. S2 (2021): 71-88.

[14] Morita, Akimichi, and Hidehisa Saeki. "Pediatric psoriasis: Understanding pathological conditions and advances in treatment." *The Journal of Dermatology* (2023).

[15] Mars, Thomas S., and Hilary Abbey. "Mindfulness meditation practise as a healthcare intervention: A systematic review." *International Journal of Osteopathic Medicine* 13, no. 2 (2010): 56-66.

[16] Cohen, Sheldon, Denise Janicki-Deverts, and Gregory E. Miller. "Psychological stress and disease." *Jama* 298, no. 14 (2007): 1685-1687.

[17] Lazarus, Richard S., James Deese, and Sonia F. Osler. "The effects of psychological stress upon performance." *Psychological bulletin* 49, no. 4 (1952): 293.

[18] Lazarus, Richard S., and Anita DeLongis. "Psychological stress and coping in aging." *American psychologist* 38, no. 3 (1983): 245.

[19] O'Riordan, Adam, Siobhán Howard, and Stephen Gallagher. "Blunted cardiovascular reactivity to psychological stress and prospective health: a systematic review." *Health Psychology Review* 17, no. 1 (2023): 121-147.

[20] Guo, Jia, Hanyi Zhang, Wenri Lin, Lixia Lu, Juan Su, and Xiang Chen. "Signaling pathways and targeted therapies for psoriasis." *Signal Transduction and Targeted Therapy* 8, no. 1 (2023): 437.

[21] Lee, Hyun-Ji, and Miri Kim. "Challenges and Future Trends in the Treatment of Psoriasis." *International Journal of Molecular Sciences* 24, no. 17 (2023): 13313.

[22] Man, Alessandra-Mădălina, Meda Sandra Orăsan, Oana-Alina Hoteiuc, Maria-Cristina Olănescu-Vaida-Voevod, and Teodora Mocan. "Inflammation and Psoriasis: A Comprehensive Review." *International Journal of Molecular Sciences* 24, no. 22 (2023): 16095.

[23] Schön, Michael P., and Dagmar Wilsmann-Theis. "Current developments and perspectives in psoriasis." *JDDG: Journal der Deutschen Dermatologischen Gesellschaft* (2023).