We are IntechOpen, the world's leading publisher of Open Access books Built by scientists, for scientists

6,900
Open access books available

185,000
International authors and editors

200M
Downloads

Our authors are among the

154
Countries delivered to

TOP 1%
most cited scientists

12.2%
Contributors from top 500 universities



WEB OF SCIENCE™

Selection of our books indexed in the Book Citation Index in Web of Science™ Core Collection (BKCI)

Interested in publishing with us?
Contact book.department@intechopen.com

Numbers displayed above are based on latest data collected.
For more information visit www.intechopen.com



11

Personality in Patients with Psoriasis

Ramón Martín-Brufau[1], Jorge C. Ulnik[2],
Carmen Brufau Redondo[1] and Francisco-Javier Corbalán Berná[1]
[1]*Universidad de Murcia*
[2]*Universidad de Buenos Aires*
[1]*Spain*
[2]*República Argentina*

1. Introduction

1.1 Skin diseases and psychological factors

It has been known since antiquity that a connection exists between the skin and the mind. In fact, the first documented case of psychodermatosis dates to 1700 BC, when the physician to the prince of Persia speculated that the prince's psoriasis was caused by anxiety over succeeding his father to the throne (Shafii & Shafii, 1979). However, it was not until 1891 that Brocq and Jacquet coined the term neurodermatitis and hypothesised that there was a pathological association between the skin and the autonomic nervous system, given that itching precipitates the appearance of lesions (Braun-Falco, Plewig, Wolff, & Winkelmann). A further 62 years passed before "Emotional Factors in Skin Disease" (Wittkower & Russell, 1953) was published. Since then, physicians, and dermatologists in particular, have been steadily becoming aware of the impact of an individual's emotional state on skin disease and how this organ can reflect, like a mirror, their psychological state. It should come as no surprise that these two structures have a common origin in the ectoderm.

Psychological factors have traditionally been associated with the onset, development, and persistence of skin disease (Alexander, 1951) and there is evidence to suggest an association between stress and the exacerbation of skin lesions (Kimyai-Asadi & Usman, 2001; Robles, 2007; Vileikyte, 2007). Recent longitudinal studies of a general hospital population show the involvement of psychological factors, such as stress, depression, and anxiety, in individuals who present skin disease (Magin, Sibbritt, & Bailey, 2009). In addition to depression or anxiety (da Silva, Müller, & Bonamigo, 2006; Fried, Gupta, & Gupta, 2005; Lotti, Buggiani et al., 2008; Morell-Dubois et al., 2008; Radmanesh & Shafiei, 2001; Richards & Fortune, 2006), higher rates of dissociative disorders (Konuk, 2007; Gupta, 2006), sexual dysfunction (Mercan, 2008) or problems of excessive alcohol consumption attributed to psychological distress (Kirby et al., 2008) have been found in this group than in the healthy population. Psoriasis has been associated with psychological distress, such as feelings of shame, shyness, low self-esteem, and stigmatization (Magin, Adams, Heading, Pond, & Smith, 2009).

Psychological stress occupies a special place among the factors that trigger psoriasis, of which patients are very aware. They openly identify it as underlying many of their

outbreaks of psoriasis. In 1998, the National Psoriasis Foundation (NPF) published the preliminary results of a survey that had been answered by 18,000 psoriasis patients who were members of the NPF. When they were asked to identify the factors that aggravate psoriasis, 52% answered that emotional stress was the most frequent trigger. Some 41% attributed outbreaks to seasonal changes, 9% to chemical substances, 8% to medications, 8% to certain food or diets, 7% to alcohol, and 29% did not know (Annual Report, 1998). Thus, emotional stress was considered the most important factor by more of half of the sample. Subsequently, their findings were published in a scientific journal (Krueger et al., 2001).

The high percentage of dermatological patients who need psychiatric care is also striking. This ranges from 25.2% reported in a sample of 2579 patients attending a dermatology unit (Picardi, Abeni, Melchi, Puddu, & Pasquini, 2000) to 95% of the dermatological patients who fulfilled the criteria for a psychiatric disorder and were referred to a psychosomatic medicine specialist (Woodruff, Higgins, Du Vivier, & Wessely, 1997). A study that reviewed the prevalence of psychiatric symptoms in psoriasis patients found a higher rate of psychiatric disorders than in the healthy population (Russo, Ilchef, & Cooper, 2004). Similarly, another study found that the prevalence of psychiatric disease among psoriasis patients was less than in psychiatric patients but higher than in healthy controls (Chaudhury, Das, John, & Ramadasan, 1998). Psoriasis patients experience a greater number of stressful events (Jankovic et al., 2009; Malhotra & Mehta, 2008; Picardi et al., 2003). A prospective study which measured daily stressors in psoriasis patients found a direct association between disease severity and increased itching on days perceived as more stressful, but not on days of medium or low stress (Verhoeven et al., 2009).

It is generally accepted that psoriasis patients experience reduced quality of life (Hong, Koo, & Koo, 2008). Compared to healthy subjects, psoriasis patients experience greater physical discomfort, mood swings, poor body image and self image, and restricted daily and social activities due to their lesions (De Korte, Sprangers, Mombers, & Bos, 2004). Other authors have found a stronger association between quality of life and psychological variables and fear of rejection than with the physical characteristics of the disease, such as the extent of the lesions and their visibility (Kimball, Jacobson, Weiss, Vreeland, & Wu, 2005). In an intermediate position, some authors suggest that the relationship between psoriasis and psychiatric symptoms could be reciprocal (Devrimci Ozguven, Kundakci, Kumbasar, & Boyvat, 2000).

1.2 Personality, stress, and skin

Given the role of the skin as the interface between the external and internal environment, the personality would be the psychological construct fulfilling the same role between the internal and external environment. That is, the personality would be the psychological analogue of the skin.

The term personality represents the different behavioural styles that individuals present in their habitual habitats or environments (Davis, 1999). In other words, the personality would be the means of responding to the environment. According to Darwinian theory, individuals behave in the way that is most conducive to reproductive success. Millon selected several characteristics present in all living beings and, based on these, generated a dimensional system to classify the way individuals adapt to their environment, thus matching the

personality categories presented in DSM-IV (American Psychiatric Association [*DSM-IV-TR*], 2000).

The healthy personality, conceived of in this way, would reflect the specific adaptation modes that individuals find effective in their environment. In turn, personality disorders would be represented by the various maladaptive response styles that can be attributed to deficiencies, imbalances, or conflicts in an individual's capacity to relate to his or her environment (Millon, 2001). In the context of Millon's evolutionary theory, strategies that favour individual survival and reproductive are equivalent to the personality (Million, 1990).

Million compared the personality to the immune system. According to this perspective, the personality can be studied as an interface between the outer and inner world, as described by Freud (Quiroga, 2003), and between the social and biological levels. Just as in the biological perspective the skin or immune system protects the individual from external attacks and maintains the internal environment in homeostasis, similarly, Million suggested that within the framework of the DSM-IV, axis I (clinical disorders due to anxiety or depression, etc), would be equivalent to cough or fever, axis II (personality disorders) would represent a coping style equivalent to the immune system, and axis IV (psychological and social stressors, such as marital or economic conflict) would be analogous to infectious agents.

Personality would be a complex behavioural system that evolved due to the need to deal with a threatening environment undergoing constant change (Million, 1990; Millon, 1999). Million suggested that the different ways of dealing with the environment may be more or less adaptative. It is of interest to apply these ideas to dermatology. Adaptive personality styles could modulate external events and ensure, with increased likelihood, the maintenance of physiological states that may allow the skin to function in a healthy way. However, individuals who experience difficulty in adaptation can be more vulnerable to stressful events and their impact on health. That is, biological differences may not only be due to genetic factors but to an entire group of environmental factors (Davidson, 2001).

Studies have shown how certain personality variables can modulate response to stress. Associations have been found between the tendency to experience positive or negative emotions and extraversion or neuroticism (personality variables), respectively (Ng, 2009). These tendencies may modulate the effect that emotional responses to stressful events have on the physiology of the skin (Mardaga Solange, 2006).

In general, psychological stress has been frequently described as a variable that triggers skin disease, and has been commonly associated with high levels of sympathetic activation and difficulties in regulating emotions (Arck & Paus, 2006; Berg, Svensson, Brandberg, & Nordlind, 2008; Gupta, 2008; Gupta & Gupta, 2004; Mastrolonardo, Alicino, Zefferino, Pasquini, & Picardi, 2007; Arck, 2006; Picardi, Pasquini, Cattaruzza, Gaetano, Melchi, et al., 2003; Wright, Cohen, & Cohen, 2005).

It has also been proposed that patients with skin disease usually present psychological traits that would make them vulnerable to stress (Cordan Yazici et al., 2006; Kim et al., 2006; Papadopoulos, 2003). In fact, psoriasis-associated psychological vulnerability has been described (Valverde, Mestanza, & Asenjo, 2005) and increased reactivity of the

hypothalamic-pituitary-adrenal axis has been found in patients with this disease (Richards, Ray, et al., 2005); thus, the link between stressful events and psychological vulnerability may play an important role in the development of skin disease (Laguna, Pena Payero, & Marquez, 2006).

Higher levels of alexithymia have been found among psoriasis patients and other skin diseases than in control groups (Gupta, 2006). One study assessed alexithymia before and after patients received PUVA therapy which led to lesion regression. The level of alexithymia did not vary and thus this disorder could not be a response to the severity of the lesions or the degree of discomfort occasioned by them (Richards, Fortune, Griffiths, & Main, 2005). The authors suggested that alexithymia could be understood as a stable internal psychological trait more than as a strategy to cope with the lesions. Other researchers have not found higher levels of alexithymia in patients with skin disease (Picardi, Pasquini, Cattaruzza, Gaetano, Baliva, et al., 2003).

Taking this into account, it is not surprising that some authors have proposed psoriasis as a psychosomatic disease due to the close link between stress and the exacerbation of psoriasis lesions (Ginsburg, 1995; Kilic, Gulec, Gul, & Gulec, 2008). One of the most valuable, rigorous, and exhaustive studies of psoriasis concluded that the disease is caused by genetic and environmental factors, influenced by psychological stress, and where the patients' attitudes, knowledge of, and behavior towards their disease have a profound effect on its course and severity (Ginsburg, 1995). The author suggested that psoriasis, by attacking the skin, attacks the individual's sense of identity. Thus, the relationship between skin and identity is implicit. In a survey of NPF members conducted by Jobling, 84% of respondents stated that the worst aspect of having psoriasis was the difficulty involved in establishing relationships. What is striking is that few respondents had experienced avoidance or exclusion, such that the problem was more related to their constant anticipation of this occurring rather than it being a real event (Jobling, 1976).

Doodley and Finlay attempted to define social adjustment in psoriasis patients by examining the relationship between subjective experience and various social situations, such as wearing a swimming suit (Dooley & Finlay, 1990). They found no correlation between chronicity, the natural course of the disease, visibility, and the various measures of social adjustment taken by the experimental group compared to the control group.

In an attempt to provide an in-depth account of the patients' subjective experience, Ginsburg and Link assessed 100 patients using the concept of stigma defined as a negative social or biological mark that sets a person off from others and changes how they interact with other people due to the anticipation of rejection, among other reasons. Although bleeding is not one of the main symptom of psoriasis, it is strongly correlated with stigma. This may be caused by scratching scales or their removal that leads to punctate bleeding spots known as Auspitz's sign. Regarding all the aspects of the disease, bleeding lesions was the strongest predictor of feelings of being stigmatized and despair. Thus, feelings of despair and stigmatization may lead to non-compliance with treatment, possibly aggravating the disease (Ginsburg & Link, 1989).

In relation to feelings of stigmatization, evidence suggests that psoriasis patients fear being rejected or negatively labelled, regardless of physical lesions (Richards, Fortune, Griffiths, & Main, 2001). This could be modulated by personality variables (Schmid-Ott et al., 2005), as is

the case among patients with other skin diseases such as acne (Krejci-Manwaring, Kerchner, Feldman, Rapp, & Rapp, 2006). All the evidence suggests that the patients themselves are one of the main sources of stigmatization and despair and that these feelings are not caused by the disease.

It has been suggested that psoriasis patients have a particular way of reacting to feelings of stigmatization and that their feelings are divided and denied, to the point that the fact of being rejected due to psoriasis significantly predicted alcohol consumption, without the patient being consciously aware of feeling stigmatized because of the disease. Thus, the patients act out their feelings without being aware of their relationship to behaviour (Ginsburg & Link, 1993).

To sum up, psoriasis, as well as other skin diseases, has frequently been associated with emotional disturbances, vulnerability to stress, and difficulty in expressing emotions. However, up to the present, no personality differences between psoriasis patients and the healthy population have been found. Matussek, Agerer & Seibt reported differences in personality traits between healthy individuals and those with psoriasis (Matussek, Agerer, & Seibt, 1985), but this was not corroborated in later studies conducted by Doodley and Finlay (Dooley & Finlay, 1990), Ginsburg et al. (Ginsburg & Link, 1993) and Gupta et al. (Gupta et al., 1989). Although some studies have identified personality traits associated with the development or exacerbation of skin disease, including psoriasis (Magin, Pond, Smith, Watson, & Goode, 2008), no differences have been found between the healthy population and the psoriatic population or the findings have not been conclusive (Pérez et al., 2000; Willemsen, Roseeuw, & Vanderlinden, 2008). Therefore, more research is required on the way personality traits modulate the course of skin disease (Verhoeven et al., 2008). For example, the hypothesis that individuals with psoriasis share common personality traits that are related to the exacerbation of symptoms has only been partially upheld.

Despite some evidence suggesting that psoriasis patients have poor quality of life, experience emotional disturbances, are vulnerable to stressful events, suffer feelings of stigmatization that are independent of lesion severity, and possibly share nonfunctional personality traits, it cannot be asserted beyond doubt that these patients have personality traits that differ from the healthy population.

2. Is there a different personality profile in psoriasis?

To test this hypothesis a study including 36 psoriasis patients attending the Reina Sofía University Hospital (Murcia, Spain) was conducted. The inclusion criterion was the presence of psoriasis as diagnosed by a dermatologist who agreed to participate in the study. Patients were recruited between October 2005 and June 2009.

The exclusion criteria were as follows: severe psychological disorders such as psychosis, factitious or simulation disorders, neurological disorders, etc. Given that the Million Index of Personality Styles (MIPS) is designed to evaluate the personality of individuals more than 18 years old, younger patients were excluded.

Regarding comorbidity, high levels of depression and anxiety are often observed in populations with skin disease (Konuk, 2007); however, the study participants did not have a

clinical diagnosis of depression or anxiety. They had never been admitted to a psychiatric unit due to either of these disorders, and therefore the results obtained are unlikely to be attributable to psychiatric syndromes.

The Spanish version of the MIPS was used to evaluate the participants' personality styles (Millon, 2001). This index measures the healthy personality and analyzes 24 personality dimensions, including a clinical index that measures an individual's level of adaptation to their environment. This instrument has been previously used with dermatological patients and has demonstrated sensitivity to differences with a non-dermatological sample (Martín-Brufau, Corbalán Berná, Ramirez Aandreo, Brufau Redondo, & Limiñana Gras, 2010). The instrument consists of different bipolar scales divided into three dimensions: motivating, thinking, and behaving styles.

For details of the participants and the selection procedure, see above. The questionnaires were given to the participants by the dermatologist who explained the purpose of the research, the requirements for participation and any consequences for the patients. The dermatologist obtained prior consent from the participants.

The Spanish version of the MIPS was validated using a normative sample of 1184 individuals (643 women and 541 men) who were used as the control group. The test showed good psychometric properties.

The control group did not present chronic, severe or disfiguring skin disease. It was assumed that the sociocultural characteristics of both populations were similar. This methodology has been previously used to evaluate personality styles in patients with other disorders (Limiñana Gras, Corbalán Berná, & Sánchez López, 2009) and skin diseases (Martín-Brufau et al., 2010).

The Student t-test was used to analyse mean differences between groups and each personality scale was compared individually. Those items that did not fulfil the reliability index or that the participants did not fill in properly were excluded for the analysis. Mean t values were obtained for the 24 personality scales of the MIPS. The SPSS version 17.0 software package for Mac was used for data analysis.

The social and demographic data for both groups are shown in Table 1.

Characteristics	**Mean/percentage psoriasis N=36**	**Mean/percentage healthy group N=1184**
Female gender, n (%)	22 (59.5%)	634 (54.31%)
Mean age/range (y)	42.59/(24-86)	37.60/(18-65)

Table 1. Sociodemographic Data.

Differences in personality were found between the two groups in the following variables: Self-indulging, Other-nurturing, Intuition, Innovation-seeking, Dissenting, Dominating, and Acquiescent. The results are shown in Table 2.

Personality trait	Psoriasis Mean	Healthy Mean	Student t-test	*P*
1. (1A) - Pleasure-Enhancing	57.67	62.05	-1.155	.256
2. (1B) - Pain-Avoiding	43.75	39.86	0.981	.333
3. (2A) - Actively Modifying	44.56	50.52	-1.371	.179
4. (2B) - Passively Accommodating	55.89	51.63	0.980	.334
5. (3A) - Self-Indulging*	41.72	52.14	-2.390	.022
6. (3B) - Other-Nurturing	60.19	51.64	1.916	.064
7. (4A) - Externally Focused	46.41	48.59	-0.482	.633
8. (4B) - Internally Focused	48.67	51.45	-0.570	.572
9. (5A) - Realistic/Sensing	61.42	58.39	0.859	.396
10. (5B) - Imaginative/Intuiting*	35.22	42.82	-2.529	.016
11. (6A) - Thought-Guided	44.25	49.46	-1.251	.219
12. (6B) - Feeling-Guided	57.83	51.36	1.486	.146
13. (7A) - Conservation-Seeking	49.67	50.30	-0.155	.878
14. (7B) - Innovation-Seeking*	33.22	42.67	-2.396	.022
15. (8A) - Asocial/Withdrawing	55.83	50.60	1.379	.177
16. (8B) - Gregarious/Outgoing	44.36	51.04	-1.680	.102
17. (9A) - Anxious/Hesitating	49.47	46.32	0.672	.506
18. (9B) - Confident/Asserting	44.44	50.89	-1.554	.129
19. (10A) - Unconventional/Dissenting*	36.97	43.62	-2.170	.037
20. (10B) - Dutiful/Conforming	59.31	51.93	1.739	.091
21. (11A) - Submissive/Yielding	45.92	45.33	0.162	.872
22. (11B) - Dominant/Controlling*	34.47	44.65	-2.436	.020
23. (12A) - Dissatisfied/Complaining	39.50	44.62	-1.06	.296
24. (12B) - Cooperative/Agreeing***	77.58	59.18	5.269	.000
Clinical Index**	43.13	50.69	3.111	.004

*p> .05; ** p>.01; ***p>.000.

Table 2. Differences Between Psoriasis Patients and the Healthy Sample.

3. And if so, how do they differ from the normal population?

Individuals with psoriasis have a tendency towards complying with the wishes of other individuals as a motivating style. This tendency is reinforced by the fact that their self-motivation or self-drive is low.

Regarding thinking styles, psoriasis patients had lower scores on the intuition scale than the healthy population, suggesting that they are more oriented toward practical thinking rather than abstract thinking. In addition, they had a tendency not to employ innovative or creative ways of thinking.

In relation to behaving styles, psoriasis patients are more conventional than the reference group. They were less dominating and more acquiescent. Overall, they tend to seek cooperation and agreement and avoid disagreement as a way of bonding with others. They may be dependent, submissive, and lack initiative or their own opinion. In general, the results indicate a personality profile which is not well adjusted, and this has been associated

with lower satisfaction with life (Díaz Morales & Sánchez López, 2002). The graph in Figure 1 depicts these differences.

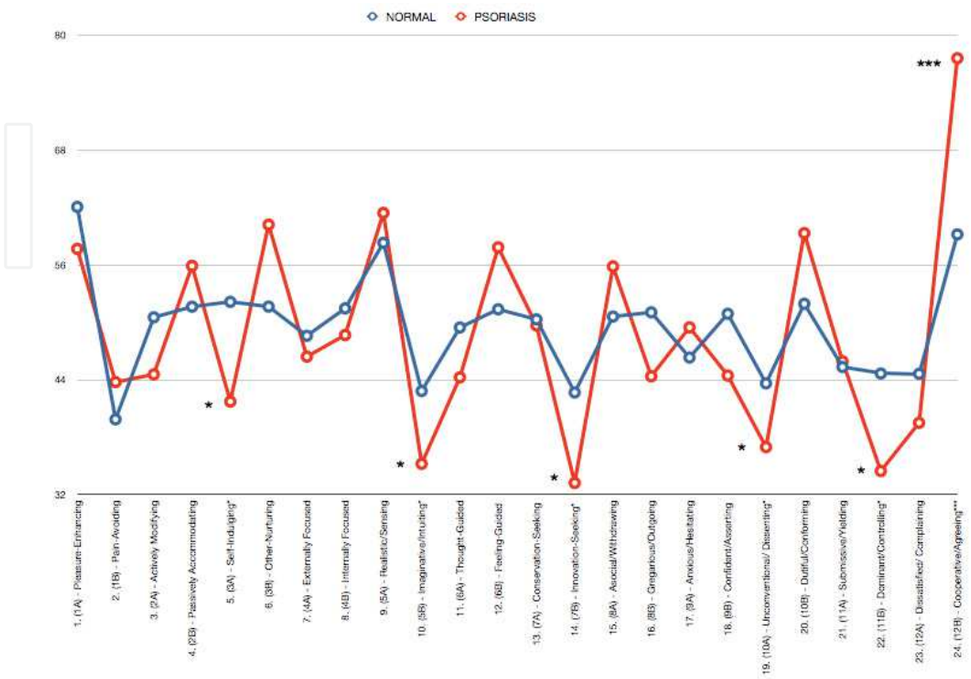


Fig. 1. Graphical representation of psoriasis (red) and non-dermatological (blue) profiles. *p> .05; ** p>.01; ***p>.000.

The results of our study indicate that individuals with psoriasis tend to avoid distancing themselves from others or disagreeing with them. This is suggested by their high scores on acquiescence, low dissatisfaction and low dominance, which could be interpreted as a protective mechanism used by psoriasis patients due to their fear of being rejected or discriminated against (Ulnik, 2007; Ginsburg & Link, 1989; Lu, Duller, van der Valk, & Evers, 2003; Schmid-Ott et al., 2005). This is reflected in an increased tendency to be externally focussed, as shown by other studies: psoriasis patients have low scores on narcissistic traits, are more altruistic and more orientated towards others, and are less aggressive in the face of criticism (Bahmer, 2007). Whereas Matussek et al. (Matussek et al., 1985) found that psoriasis patients presented greater aggressivity toward others compared to the healthy population, the findings in our study are compatible with later studies which reported a decreased ability to express anger toward others (Ginsburg & Link, 1993) and a greater tendency among psoriasis patients who were more sensitive to stress to seek approval, to avoid expressing negative emotions and to avoid being rejected (Gupta et al., 1989). Other studies have also reported that these patients show difficulties in expressing feelings of anger and being assertive, which may be a factor making them vulnerable to stress (Devrimci Ozguven et al., 2000), and could explain the higher level of acquiescence observed in the psoriasis sample. The most relevant aspect of this is that, in contrast to the healthy population, individuals with psoriasis change the way they present themselves in relation to others, and this may correspond to a given personality profile. Patients may behave in this manner to reduce emotional and behavioural conflicts that could damage

their relationship with others. It has been found that these patients present attentional bias and are more responsive to subtle signs of rejection (Fortune et al., 2003). The tendency to avoid rejection is compatible with other findings which suggest that the only association with decreased quality of life in psoriasis patients was due to the fear of being rejected rather than to the physical characteristics of the lesions, their localization, or severity (Fortune, Main, O'Sullivan, & Griffiths, 1997).

The available data also shows that psoriasis patients have lower scores in self-directedness, which reinforces the tendency to be non-dominant and suggests that they are dependent, sociable and easily influenced, as reported by other authors (Kilic et al., 2008). However, our results indicate that individuals with psoriasis do not have a greater tendency to avoid pain, unlike the findings of Kilic who reported that psoriasis patients had higher scores on the harm-avoidance item. The high vulnerability to stress found in these patients (Valverde et al., 2005) may reinforce their tendency to avoid conflict with others, and may be related to the avoidance behavior reported in other studies (da Silva et al., 2006; Magin, Adams, et al., 2009). Some authors have explained these differences as being a way to compensate for poorly regulated emotions that may modulate outbreaks of psoriasis plaques (Picardi et al., 2005) and which has been confirmed by other studies (Richards, Fortune, et al., 2005). These personality traits suggest that, regardless of stressful events or lesion severity, psoriasis may be negatively affected by difficulties in managing emotions.

Concerning the clinical index, psoriasis patients as a group have lower scores than the healthy population. This decreased level of adjustment has also been found in other studies (Dooley & Finlay, 1990). Given that a low clinical index has been associated with lower life satisfaction in general (Díaz Morales & Sánchez López, 2002), this could indicate why psoriasis patients have less quality of life than the healthy population (Van Voorhees & Fried, 2009), as well as accounting for the psychological disturbances, such as anxiety, depression and sexual problems, that have been reported in other studies (eg, Mercan, 2008). The foregoing suggests that the personality variables measured by MIPS are poorly adjusted in the psoriasis population, which probably underlies the psychiatric vulnerability reported by other studies (Mastrolonardo et al., 2007; Picardi et al., 2005; Richards, Ray, et al., 2005; Valverde et al., 2005). Therefore, as suggested by other authors (Gieler, Niemeier, Brosig, & Kupfer, 2002; Melamed & Yosipovitch, 2004), psychological variables should be assessed in these patients, who should be referred to mental health specialists (Ginsburg, Prystowsky, Kornfeld, & Wolland, 1993; Schneider et al., 2006; Woodruff et al., 1997; Yosipovitch & Samuel, 2008).

4. Controversy

No consensus exists on the personality of dermatological patients. Buske-Kirschbaum suggests that these patients have a common psychological profile (Buske-Kirschbaum et al., 2004). Despite the existence of features found in such patients, other authors do not accept the existence of a profile that differentiates them from the healthy population (Verhoeven et al., 2008). Similarly, research on personality variables in a Spanish dermatological population (Antuña-Bernardo, 2000), who were assessed using the Eysenck Personality Questionnaire, found that there were no differences between the healthy population and patients with various skin diseases, including psoriasis. However, they were found to have lower quality of life and above-average neuroticism scores.

There may be several reasons why no personality differences have been found between the healthy population and psoriasis patients. Firstly, by including all skin diseases, those less associated with psychological variables may have obscured the influence of distinctive personality patterns, thus hindering the detection of differences between the 2 populations. Second, few studies have analyzed the strategies used or differences in the way psoriasis patients manage their emotions compared to the healthy population (Fortune, Richards, Main, & Griffiths, 2002), whereas, in comparison, psychological research on dermatologic patients has mainly focussed on variables such as stress, anxiety and depression. By placing too much emphasis on variables such as depression and anxiety, or on psychopathological abnormalities based on diagnostic categories, there is an increased risk of losing specificity in the search for potential differences between the healthy population and psoriasis patients. An increase in psychiatric disorders can be observed in the latter group, but it would be more useful to know how these abnormalities arise, how are they qualitatively different, and what characterizes this group of patients. The relevance of personality may have become lost as a research aim, leading to a reduction in the number of empirical studies investigating personality in this group of patients. Finally, another possibility is that instruments used in the past to assess personality were not designed to measure specific personality variables in this group or were not sufficiently sensitive to detect subtle differences. This could explain why some studies have failed to find any differences; questionnaires were used that were not designed to assess profound personality structures. According to some authors, sensitive instruments are now available for assessing the association between personality and disease (Friedman, 1990).

5. Conclusions

The most important conclusion is that personality differences were found between the healthy population and psoriasis patients. These differences suggest that there is a greater tendency among psoriasis patients to be acquiescent and to restrain the expression of negative emotions in order to bond with others. The literature and the results from the study presented here shows a decreased capacity to adjust to the environment, which could, due to poor stress management, increase the risk of suffering psoriasis in susceptible individuals.

The number of subjects in the study presented here was sufficient to establish differences between psoriasis patients and healthy participants and the results are consistent with those obtained by other authors; however, further studies are needed that include a greater number of psoriasis patients, thereby providing stronger support to the results obtained here, as well as a greater degree of generalizability.

If we wish to understand the psychological characteristics of psoriasis patients and their characteristic personality styles, future studies should compare the personality of psoriasis patients to that of patients with other skin diseases associated with psychological traits in order to identify the different adaptation styles, if any.

Finally, the relevance of these findings lies in their deepening our understanding of the psychological problems of psoriasis patients.

If psychopathological abnormalities, such as depression and anxiety, are observed in dermatological patients as a group, then this should lead to investigating potential

differences between specific subgroups of dermatological patients, particularly in relation to what qualitatively characterizes psoriasis patients as one such subgroup.

There are few personality studies on dermatological patients, and on psoriasis patients in particular, indicating a need for further research in personality psychology and psycho-dermatology. Such studies would lead to a better understanding of this group of patients and to help them better manage stress and the impact this has on their disease, quality of life, and their relationships with others.

6. References

Alexander, E. J. (1951). Psychosomatic Medicine-Its Principles and Applications. *American Journal of Psychiatry, 108*(4), 318-318. ISSN: 1535-7228.

Aller, M. A. & Lorente, L. (1996). The psycho-neuro-immune endocrine response a physiological and pathological way of life. *Psicothema, 8*(2), 375-381. ISSN: 0214-9915.

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (Revised 4th ed.). Washington, DC. American Psychiatric Association. ISBN: 9781557987914.

Annual Report. (1998). *National Psoriasis Foundation Bulletin, 29*(6). ISSN: 1040-0060.

Antuña-Bernardo, S., García-Vega, E., González menéndez, A., Secades villa, R., Errasti Pérez, J. & Curto Iglesias, J.R. (2000). Perfil Psicológico y calidad de vida en pacientes con enfermedades dermatológicas. *Psichothema, 12*(2), 30-34. ISSN: 0214-9915.

Arck, P., & Paus, R. (2006). From the brain-skin connection: the neuroendocrine-immune misalliance of stress and itch. *Neuroimmunomodulation, 13*(5-6), 347-356. ISSN: 1423-0216.

Arck, P.C., Slominski, A., Theoharides, T. C., Peters, E. M. J. & Paus, R. (2006). Neuroimmunology of stress: skin takes center stage. *J Invest Dermatol, 126*(8), 1697-1704. ISSN: 0022-202X.

Berg, M., Svensson, M., Brandberg, M., & Nordlind, K. (2008). Psoriasis and stress: a prospective study. *J Eur Acad Dermatol Venereol, 22*(6), 670-674. ISSN: 1468-3083.

Braun-Falco, O., Plewig, G., Wolff, H., & Winkelmann, R. Dermatology, 1991: Springer-Verlag Berlin Heidelberg. ISBN: 978-3-540-29312-5.

Brown, R. (2004). Psychological mechanisms of medically unexplained symptoms: an integrative conceptual model. *Sychol Bull, 130*, 793-812. ISSN: 0146-1672.

Buske-Kirschbaum, A., Ebrecht, M., Kern, S., Hollig, H., Gierens, A., & Hellhammer, D. (2004). Personality characteristics and their association with biological stress responses in patients with atopic dermatitis. *Dermatol Psychosom, 5*(1), 12-16. ISSN: 1422-9196.

Camelo-Roa, S. M. (2005). Psiconeuroinmunología: breve panorámica. *Diversitas, 1*(2). ISSN: 1794-9998.

Campos Roldan, M. (2007). La relación psiconeural en el estrés o de las neuronas a la cogniciñon social: una revisión empírica. *Rev. investig. psicol., 10*(1), 125-143. ISSN 1609-7475.

Chaudhury, S., Das, A., John, R. T., & Ramadasan, P. (1998). Psychological factors in psoriasis. *Indian Journal of Psychiatry, 40*(3), 295. ISSN: 0019-5545.

Critchley, H. D. (2002). Electrodermal responses: What happens in the brain. . *Neuroscientists, 8*, 132-142. ISSN: 1073-8584.

da Silva, J., Müller, M., & Bonamigo, R. (2006). Coping strategies and stress levels in patients with psoriasis. *An Bras Dermatol, 81*(2), 143-149. ISSN: 0365-0596.

Davidson, R. J. (2001). Toward a Biology of Personality and Emotion. *Annals New York Academy of Science*, 191-207. ISSN: 00778923.

Davis, R. D. (1999). Millon: Essentials of His Science, Theory, Classification, Assessment, and Therapy. *Journal of Personality Assessment, 72*(3), 330-352. ISSN: 1532-7752.

De Korte, J., Sprangers, M. A. G., Mombers, F. M. C., & Bos, J. D. (2004). *Quality of life in patients with psoriasis: a systematic literature review*. ISSN: 1087-0024.

Devrimci Ozguven, H., Kundakci, N., Kumbasar, H., & Boyvat, A. (2000). The depression, anxiety, life satisfaction and affective expression levels in psoriasis patients. *Journal of the European Academy of Dermatology and Venereology, 14*(4), 267-271. ISSN: 1468-3083.

Díaz Morales, J. F., & Sánchez López, P. (2002). Relaciones entre estilos de personalidad y satisfacción autopercibida en diferentes áreas vitales. *Psicothema, 14*(1), 100. ISSN: 0214-9915.

Dooley, G., & Finlay, A. (1990). Personal construct systems of psoriatic patients. *Clinical and Experimental Dermatology, 15*(6), 401-405. ISSN: 1365-2230.

Eung-Ho Choi, Brown. B. E., Crumrine, D., Chang, S., Man, M-Q., Elias, P. M., & Feingold, K. R. (2005). Mechanisms by wich psychologic stres alters cutaneous permeability barrier homeostasis and stratum corneum integrity. *J Invest Dermatol, 124*, 587-595. ISSN: 0022-202X.

Fortune, D., Main, C., O'sullivan, T., & Griffiths, C. (1997). Quality of life in patients with psoriasis: the contribution of clinical variables and psoriasis specific stress. *British Journal of Dermatology, 137*(5), 755-760. ISSN: 1365-2133.

Fortune, D., Richards, H., Corrin, A., Taylor, R., Griffiths, C., & Main, C. (2003). Attentional Bias for Psoriasis-Specific and Psychosocial Threat in Patients with Psoriasis. *Journal of Behavioral Medicine, 26*(3), 211-224. ISSN: *1573-3521.*

Fortune, D. G., Richards, H. L., Main, C. J., & Griffiths, C. E. (2002). Patients' strategies for coping with psoriasis. *Clin Exp Dermatol, 27*(3), 177-184. ISSN: 1365-2230.

Fried, R. G., Gupta, M. A., & Gupta, A. K. (2005). Depression and skin disease. *Dermatol Clin, 23*(4), 657-664. ISSN: 0733-8635.

Friedman, H. (1990). *Personality and disease*: Wiley. ISBN: 0471-618055.

Gieler, U., Niemeier, V., Brosig, B., & Kupfer, J. (2002). Psychosomatic aspects of pruritus. *Dermatology and Psychosomatics, 3*, 6-13. ISSN: 1424-0564.

Ginsburg, I., Prystowsky, J., Kornfeld, D., & Wolland, H. (1993). Role of emotional factors in adults with atopic dermatitis. *International Journal of Dermatology, 32*(9), 656-660. ISSN: *0011-9059.*

Ginsburg, I. H. (1995). Psychological and psychophysiological aspects of psoriasis. *Dermatologic clinics, 13*(4), 793. ISSN: 1558-0520.

Ginsburg, I. H., & Link, B. G. (1989). Feelings of stigmatization in patients with psoriasis. *Journal of the American Academy of Dermatology, 20*(1), 53-63. ISSN: *0190-9622.*

Ginsburg, I. H., & Link, B. G. (1993). Psychosocial consequences of rejection and stigma feelings in psoriasis patients. *International Journal of Dermatology, 32*(8), 587-591. ISSN: *0011-9059.*

Grimalt, F., & Cotterill, J. A. (2002). Dermatología y Psiquiatría. *Grupo Aula Médica, S.A*, 329. ISBN: 84-7885-282-4.

Gupta, M. (2008). Stress and Urticaria. In: *Neuroimmunology of the Skin: Basic Science to Clinical Practice*. Springer, 209. ISBN: 978-3540359869.

Gupta, M., & Gupta, A. (2004). Stressful major life events are associated with a higher frequency of cutaneous sensory symptoms: an empirical study of non-clinical subjects. *J Eur Acad Dermatol Venereol, 18*, 560-565. ISSN: 1468-3083.

Gupta, M. A., Gupta, A. K., Kirkby, S., Schork, N. J., Gorr, S. K., Ellis, C. N., et al. (1989). A psychocutaneous profile of psoriasis patients who are stress reactors: A study of 127 patients. *General hospital psychiatry, 11*(3), 166-173. ISSN: 0163-8343.

Hong, J., Koo, B., & Koo, J. (2008). The psychosocial and occupational impact of chronic skin disease. *Dermatol Ther, 21*(1), 54-59. ISSN: 1396-0296.

Jankovic, S., Raznatovic, M., Marinkovic, J., Maksimovic, N., Jankovic, J., & Djikanovic, B. (2009). Relevance of psychosomatic factors in psoriasis: a case-control study. *Acta Dermato-Venereologica, 89*(4), 364-368. ISSN: 0001-5555.

Jobling, R. (1976). Psoriasisóa preliminary questionnaire study of sufferers' subjective experience. *Clinical and Experimental Dermatology, 1*(3), 233-236. ISSN: 1365-2230.

Judith A. Bahmer, J. K., Friedrich A. Bahmer. (2007). How Do Personality Systems Interact in Patients With Psoriasis, Atopic Dermatitis and Urticaria? *Acta Derm Venereol, 87*, 317-324. ISSN: 0001-5555.

Kilic, A., Gulec, M. Y., Gul, U., & Gulec, H. (2008). Temperament and character profile of patients with psoriasis. *Journal of the European Academy of Dermatology and Venereology, 22*(5), 537-542. ISSN: 1468-3083.

Kim, T. S., Pae, C. U., Jeong, J. T., Kim, S. D., Chung, K. I., & Lee, C. (2006). Temperament and character dimensions in patients with atopic dermatitis. *J Dermatol, 33*(1), 10-15. ISSN: 1346-8138.

Kimball, A. B., Jacobson, C., Weiss, S., Vreeland, M. G., & Wu, Y. (2005). The psychosocial burden of psoriasis. *American journal of clinical dermatology, 6*(6), 383-392. ISSN: 1175-0561.

Kimyai-Asadi, A., & Usman, A. (2001). The role of psychological stress in skin disease. *Journal of Cutaneous Medicine and Surgery: Incorporating Medical and Surgical Dermatology, 5*(2), 140-145. ISSN: 1615-7109.

Kirby, B., Richards, H., Mason, D., Fortune, D., Main, C., & Griffiths, C. (2008). Alcohol consumption and psychological distress in patients with psoriasis. *British Journal of Dermatology, 158*(1), 138-140. ISSN: 1365-2133.

Konuk N., K. R., Atik L., Muhtar S., Atasoy N., Bostanci B. (2007). Psychopathology, depression and dissociative experiences in patients with lichen simplex chronicus. *General Hospital Psychiatry, 29*(3), 232-235. ISSN: 0163-8343.

Krejci-Manwaring, J., Kerchner, K., Feldman, S. R., Rapp, D. A., & Rapp, S. R. (2006). Social Sensitivity and Acne: The Role of Personality in the Integrative Social Consecuences and Quality of Life. *The International Journal of Psychiatry in Medicine, 36*(1), 121-130. ISSN: 0091-2174.

Krueger, G., Koo, J., Lebwohl, M., Menter, A., Stern, R. S., & Rolstad, T. (2001). The impact of psoriasis on quality of life: results of a 1998 National Psoriasis Foundation patient-membership survey. *Archives of Dermatology. Chicago. 137*(3), 280-286. ISSN: 0096-5359.

Laguna, E. V., Pena Payero, M. L., & Marquez, A. V. (2006). Influencia de la ansiedad en diversas patologías dermatológicas. *Actas dermo-sifiliográficas, 97*(10), 637-643. (ISSN: 1138-8196).

Limiñana Gras, R. M., Corbalán Berná, J., & Sánchez López, P. (2009). Thinking Styles and Coping when Caring for a Child with Severe Spina Bifida. *J Dev Phys Disabil, 21*, 169-183. ISSN: 1573-3580.

Lotti T., Buggiani G., & F., P. (2008). Prurigo nodularis and lichen simplex chronicus. *Dermatologic Therapy, 21*(1), 42-46. ISSN: 1529-8019.

Lu, Y., Duller, P., van der Valk, P., & Evers, A. (2003). Helplessness as predictor of perceived stigmatization in patients with psoriasis and atopic dermatitis. *Dermatol Psychosom, 4*(3), 146-150. ISSN: 1424-0564

Madhulika A. Gupta. (2006). Somatization disorders in dermatology. *International Review of Psychiatry, 18*(1), 41-47. ISSN: 1369-1627.

Madhulika A. Gupta, A. K. G. (2006). Medically unexplained cutaneous sensory symptoms may represent somatoform dissociation: an empirical study. *Journal of Psychosomatic Research, 60*, 131-136. ISSN: 0022-3999.

Magin, P., Adams, J., Heading, G., Pond, D., & Smith, W. (2009). The psychological sequelae of psoriasis: results of a qualitative study. *Psychology, Health and Medicine, 14*(2), 150-161. ISSN:1354-8506.

Magin, P., Pond, C., Smith, W., Watson, A., & Goode, S. (2008). A cross-sectional study of psychological morbidity in patients with acne, psoriasis and atopic dermatitis in specialist dermatology and general practices. *J Eur Acad Dermatol Venereol*. *ISSN*: 1468-3083.

Magin, P., Sibbritt, D., & Bailey, K. (2009). The Relationship Between Psychiatric Illnesses and Skin Disease: A Longitudinal Analysis of Young Australian Women. *Archives of Dermatology, 145*(8), 896. ISSN: 0096-5359.

Malhotra, S., & Mehta, V. (2008). Role of stressful life events in induction or exacerbation of psoriasis and chronic urticaria. *Indian Journal of Dermatology, Venereology, and Leprology, 74*(6), 594. ISSN: 0973-3922.

Mardaga Solange, L. O., Hansenne Michel. (2006). Personality traits modulate skin conductance response to emotional pictures : An investigation with Cloninger's model of personality. *Personality and individual differences, 40*(8), 1603-1614. ISSN: 0191-8869.

Martín-Brufau, R., Corbalán Berná, J., Ramirez Aandreo, A., Brufau Redondo, C., & Limiñana Gras, R. (2010). Personality differences between patients with lichen simplex chronicus and normal population: A study of pruritus. *European Journal of Dermatology, 1*(1). ISSN: 1167-1122.

Mastrolonardo, M., Alicino, D., Zefferino, R., Pasquini, P., & Picardi, A. (2007). Effect of psychological stress on salivary interleukin-1beta in psoriasis. *Arch Med Res, 38*(2), 206-211. ISSN: 0188-0128.

Matusushima, H., Hayashi, S. & Shimada, S. (2003). Skin scratching switches immune responses from Th2 to Th1 type in epicutaneously immunizd mice. *Journal of Dermatological Science, 32*, 223-230. ISSN: 0923-1811.

Matussek, P., Agerer, D., & Seibt, G. (1985). Aggression in depressives and psoriatics. *Psychotherapy and psychosomatics, 43*(3), 120-125. ISSN: 1423-0348.

Melamed, Y., & Yosipovitch, G. (2004). Itching as a focus of mental disturbance. In: *Itch. Basic Mechanisms and Therapy*, 369–375. Informa Healthcare. ISBN-10: 9780824747473.

Mercan, S., Altunay, Ilknur Kivanc, Demir, Basaran, AkpInar, Abdullah and Kayaoglu, Semra. (2008). Sexual Dysfunctions in Patients with Neurodermatitis and Psoriasis. *Journal of Sex & Marital Therapy, 34*(2), 160-168. ISSN: 1521-0715.

Michael G Griffin, P. A. R., Mindy B Mechanic. (1997). Objective Assesment of Peritraumatic Dissociation: Psychophysiological Indicators. *Am J Psychiatry, 154*(8). ISSN: 1535-7228.

Millon, T. (1990). *Toward a new personology: An evolutionary model*. John Wiley & Sons. ISBN-10: 0471515736.

Millon, T. (1999). Reflections on Psychosynergy: A Model for Integratin Science, Theory, Classification, Assesment, and Therapy. *Journal of Personality Assessment, 72*(3), 437-456. ISSN: 1532-7752.

Millon, T. (2001). Mips, inventario de Estilos de Personalidad de Millon, Manual. *Tea Ediciones*. *ISBN: 8471749939.*

Mine Ozmen, M. O., Ayten Erdogan, Ertugrul H. Aydemir, Oya Oguz. (2006). Dissociative idntity disorder presenting as dermatitis artefacta. *International Journal of Dermatology, 45*, 770-771. *ISSN*: *0011-9059.*

Denda, M., Tsychiya, T., Elias, P. M. & Feingold, K. R.. (2000). Stress alters cutaneous permeability barrier homeostasis. *Am J Physiol Regulatory Integrative comp. Physiol, 278*, 367-372. ISSN: 1522-1490.

Morell-Dubois, S., Carpentier, O., Cottencin, O., Queyrel, V., Hachulla, E., Hatron, P.-Y. & Delaporte, E. (2008). Stressful life events and pemphigus. *Dermatology, 216*(2), 104-108.

Nakano, Y. (2004). Stress-induced modulation of skin immune function: to types of antigen-presenting cells in the epidermis are differentially regulated by chronic stress. *British Journal of Dermatology, 151*, 50-64. *ISSN*: 1365-2133.

Ng, W. (2009). Clarifying the relation between neuroticism and positive emotions. *Personality and Individual Differences*. 47(1), 69-72. ISSN 0191-8869.

Niemeier, V., Kupfer, J., Al-Abesie, S., Schill, W. B., & Gieler, U. (1999). From neuropeptides and cytokines to psychotherapy. Skin diseases between psychoneuroimmunology research and psychosomatic treatment. *Forsch Komplementarmed, 6 Suppl 2*, 14-18. ISSN: 1021-7096.

Nijenhuis, E. (2004). Somatoform dissociation: phenomena, measurement and theoretical issues. *New York: WW Norton & Company*. ISBN: 0393704602.

Nijenhuis E.R., Spinhoven, P., Vanderlinden, J., van Dyck, R. & Van der Hart, O. (1998). Somatoform dissociative symptoms as related to animal defensive reactions to predatory imminence and injury. *Journal of Abnormal Psycology, 107*(1), 63-73. ISSN: 0021-843X.

Papadopoulos L. & Walker, C. (2003). Personality, Coping and Sex as Psychosocial Aspects of Psoriatic Arthropathy. *Dermatol Psychosom, 4*(1), 27-32. *ISSN*: 1424-0564.

Paus, R., Schmelz, M., Biró, T. & Steinhoff, M. (2006). Frontiers in pruritus research: scratching the brain for more effective itch therapy. *J. Clin. Invest., 116*, 1174-1185. ISSN: 1558-8238.

Peter-Bob. (2007). Hypnotic abreaction releases chaotic patterns of electrodermal activity during dissociation. *Intl. Journal of Clinical and Experimental Hypnosis, 55*(435-456). ISSN: 0020-7144.

Picardi, A., Abeni, D., Melchi, C., Puddu, P., & Pasquini, P. (2000). Psychiatric morbidity in dermatological outpatients: an issue to be recognized. *British Journal of Dermatology, 143*(5), 983-991. *ISSN*: 1365-2133.

Picardi, A., Mazzotti, E., Gaetano, P., Cattaruzza, M., Baliva, G., Melchi, C., Biondi, M., & Pasquini, P. (2005). Stress, social support, emotional regulation, and exacerbation of diffuse plaque psoriasis. *Psychosomatics.* (Vol. 46, pp. 556-564). ISSN: 1545-7206.

Picardi, A., Pasquini, P., Cattaruzza, M., Gaetano, P., Melchi, C., Baliva, G., Camaioni, D., Tiago, A, Abeni, D. & Biondi, M. (2003). Stressful Life Events, Social Support, Attachment Security and Alexithymia in Vitiligo A Case-Control Study. *Psychother Psychosom, 72*, 150-158. ISSN: 1423-0348.

Picardi, A., Pasquini, P., Cattaruzza, M. S., Gaetano, P., Baliva, G., Melchi, C. F., Tiago, A., Camaioni, D., Abeni, D., & Biondi, M. (2003). Only limited support for a role of psychosomatic factors in psoriasis: Results from a case-control study. *Journal of Psychosomatic Research, 55*(3), 189-196. ISSN: 0022-3999.

Quiroga Romero, E. & Fuentes Ortega, J. B. (2003). El significado psicológico y metapsicológico de los Modelos Biosocial y Evolucionista de Theodore Millon. *Psicothema, 15*(2), 190-196. ISSN: 1886-144X.

Rabung, S., Ubbelohde, A., Kiefer, E., & Schauenburg, H. (2004). [Attachment security and quality of life in atopic dermatitis]. *Psychother Psychosom Med Psychol, 54*(8), 330-338. ISSN: 0173-7937.

Radmanesh, M., & Shafiei, S. (2001). Underlying Psychopathologies of Psychogenic Pruritic Disorders. *Dermatology and Psychosomatics, 2*, 130-133. *ISSN*: 1424-0564.

Richards, H., & Fortune, D. (2006). Psychological distress and adherence in patients with psoriasis. *Journal of the European Academy of Dermatology and Venereology, 20*(s2), 33-41. *ISSN*: 1468-3083

Richards, H., Fortune, D., Griffiths, C., & Main, C. (2005). Alexithymia in patients with psoriasis Clinical correlates and psychometric properties of the Toronto Alexithymia Scale-20. *Journal of Psychosomatic Research, 58*(1), 89-96. ISSN: 0022-3999.

Richards, H., Ray, D., Kirby, B., Mason, D., Plant, D., Main, C., Fortune, D. G. & Griffiths, C.E.M. (2005). Response of the hypothalamic-pituitary-adrenal axis to psychological stress in patients with psoriasis. *British Journal of Dermatology, 153*(6), 1114-1120. *ISSN*: 1365-2133.

Richards, H. L., Fortune, D. G., Griffiths, C. E. M., & Main, C. J. (2001). The contribution of perceptions of stigmatisation to disability in patients with psoriasis. *Journal of Psychosomatic Research, 50*(1), 11-15. ISSN: 0022-3999.

Robles, T. F. (2007). Stress, Social Support, and Delayed Skin Barrier Recovery. *Psychosomatic Medicine, 69*(8), 807-815.

Russo, P. A. J., Ilchef, R., & Cooper, A. J. (2004). Psychiatric morbidity in psoriasis: a review. *Australasian journal of dermatology, 45*(3), 155-161. ISSN: 1440-0960.

Schmid-Ott, G., Künsebeck, H. W., Jäger, B., Sittig, U., Hofste, N., Ott, R., Malewski, P. & Lamprecht, F. (2005). Significance of the stigmatization experience of psoriasis patients: a 1-year follow-up of the illness and its psychosocial consequences in men and women. *Acta Dermato-Venereologica, 85*(1), 27-32. ISSN: 0001-5555

Schneider, G., Driesch, G., Heuft, G., Evers, S., Luger, T. A., & Stander, S. (2006). Psychosomatic cofactors and psychiatric comorbidity in patients with chronic itch. *Clinical dermatology, 31*(6), 762-767. ISSN: 15075516.

Shafii, M., & Shafii, S. (1979). Exploratory psychotherapy in the treatment of psoriasis. Twelve hundred years ago. *Archives of general psychiatry, 36*(11), 1242. ISSN: 0003990X.

Solomon, G. F. (2001). Psiconeuroinmunología: Sinopsis de su Historia, Evidencia y Consecuencias. Interpsiquis. (In press).

Torello Lotti, Bianchi, B. & Ilaria Ghersetich. (2002). Can the brain inhibit inflammation generated in the skin? The lesson of alfa-malonocyte-stimulating hormone. *Journal of Dermatology, 41*, 311-318. *ISSN*: 1346-8138.

Ulnik, J. C. (2007). *Skin in Psychoanalysis*: Karnac Books. ISBN 10: 1855755165.

Ulnik, J. C. (2004). *Distancias Afectivas en Pacientes con Psoriasis*. Granada: Universidad de Granada.

Valverde, J., Mestanza, M., & Asenjo, C. (2005). Psoriasis relacionada a vulnerabilidad psiquiátrica. *Folia Dermatol, 16*(3), 119-122. *ISSN* 1609-7254.

Van Voorhees, A., & Fried, R. (2009). Depression and quality of life in psoriasis. *Postgraduate medicine, 121*(4), 154. ISSN: 0032-5481.

Verhoeven, E. W. M., De Klerk, S., Kraaimaat, F. W., Van De Kerkhof, P., De Jong, E., & Evers, A. W. M. (2008). Biopsychosocial Mechanisms of Chronic Itch in Patients with Skin Diseases: a Review. *Acta Dermato-Venereologica, 88*(3), 211-218. ISSN: 0001-5555.

Verhoeven, E. W. M., Kraaimaat, F. W., de Jong, E. M. G. J., Schalkwijk, J., van de Kerkhof, P. C. M., & Evers, A. W. M. (2009). Effect of daily stressors on psoriasis: a prospective study. *Journal of Investigative Dermatology, 129*(8), 2075-2077. ISSN: 0022-202X.

Vileikyte, L. (2007). Stress and wound healing. *Clinics in Dermatology, 25*(1), 49-55. ISSN: 0738-081X.

Willemsen, R., Roseeuw, D., & Vanderlinden, J. (2008). Alexithymia and dermatology: the state of the art. *Int J Dermatol, 47*(9), 903-910.

Wittkower, E. D., & Russell, B. (1953). *Emotional factors in skin disease*: PB Hocher. ASIN: B001VGNE7I.

Woodruff, P., Higgins, E., Du Vivier, A., & Wessely, S. (1997). Psychiatric illness in patients referred to a dermatology-psychiatry clinic. *General hospital psychiatry, 19*(1), 29-35. *ISSN*: 0163-8343.

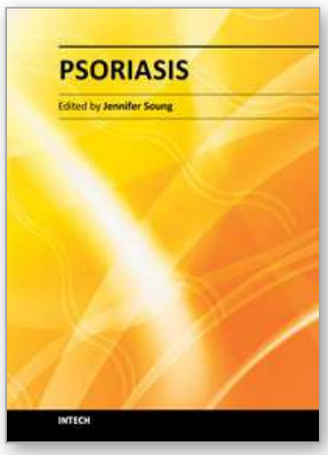
Wright, R. J., Cohen, R. T., & Cohen, S. (2005). The impact of stress on the development and expression of atopy. *Current Opinion in Allergy and Clinical Immunology, 5*(1), 23. *ISSN*:1528-4050.

Yazici A. C., Basterzi, A., Acar, S. T., Ustunsoy, D., Ikizoglu, G., Demirseren, D. & Kanik, A. (2006). Alopecia areata and alexithymia. *Turk Psikiyatri Derg, 17*(2), 101-106. *ISSN*:1300-2163.

Yosipovitch, G., & Samuel, L. (2008). Neuropathic and psychogenic itch. *Dermatologic Therapy, 21*(1), 32-41. ISSN: 1529-8019.

IntechOpen

IntechOpen



Psoriasis

Edited by Dr. Jennifer Soung

ISBN 978-953-307-878-6

Hard cover, 372 pages

Publisher InTech

Published online 15, February, 2012

Published in print edition February, 2012

We hope you enjoy and find the information provided in this book useful in your research or practice. We urge that you continue to keep abreast of the new developments in psoriasis and share your knowledge so that we may advance treatment and cures of psoriasis.

How to reference

In order to correctly reference this scholarly work, feel free to copy and paste the following:

Ramón Martín-Brufau, Jorge C. Ulnik, Carmen Brufau Redondo and Francisco-Javier Corbalán Berná (2012). Personality in Patients with Psoriasis, Psoriasis, Dr. Jennifer Soung (Ed.), ISBN: 978-953-307-878-6, InTech, Available from: http://www.intechopen.com/books/psoriasis/personality-and-psoriasis

INTECH
open science | open minds

InTech Europe

University Campus STeP Ri
Slavka Krautzeka 83/A
51000 Rijeka, Croatia
Phone: +385 (51) 770 447
Fax: +385 (51) 686 166
www.intechopen.com

InTech China

Unit 405, Office Block, Hotel Equatorial Shanghai
No.65, Yan An Road (West), Shanghai, 200040, China
中国上海市延安西路65号上海国际贵都大饭店办公楼405单元
Phone: +86-21-62489820
Fax: +86-21-62489821

© 2012 The Author(s). Licensee IntechOpen. This is an open access article distributed under the terms of the Creative Commons Attribution 3.0 License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

IntechOpen

IntechOpen