

# The impact of psoriasis on the lifequality: a cohort of 140 Moroccan patients

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## ABSTRACT

**Introduction:** The alteration of the life quality in psoriasis is currently proved. **Aim:** To evaluate the particularity of this impact in Moroccan psoriatic population. **Methods:** It was a prospective cohort of 140 psoriatic patients who filled the 16-Skindex questionnaire to evaluate this alteration of the life quality. **Results:** The life quality was significantly affected in patients having severe or old psoriasis and in young females, also it was related to the low Socioeconomic level and the living in rural areas, to the presence of psoriatic arthritis, to the scalp, the nails and mucosal involvement and to the use of systemic treatments. However, the emotional life, the impact on daily activities and the sleep quality were not affected in our population. **Conclusions:** we had a low negative impact on the sleep quality and the emotional life which may be explained by the role of the family support in our society.

**Keys words:** Psoriasis; quality of life; Prospective cohort study

## INTRODUCTION

The Psoriasis is an inflammatory, systemic and multifactorial skin disease affecting about 2% of the Moroccan population [1]. It is considered as an autoimmune disease with abnormality of mitosis and differentiation of keratinocytes where the cyclic nucleotide and lipid mediators play a key role [2,3].

This systemic disease is also known linked to a great number of comorbidities especially metabolic [4] and psychiatric [5] ones.

The alteration of the life quality of psoriatic patients has been shown in many epidemiological studies in adults and in children [6-14]. So the aim of our study was to evaluate this psycho-social impact of psoriasis in Moroccan psoriatic patients.

## MATERIALS AND METHODS

It was a descriptive, analytical, unisentric and prospective study of 140 psoriatic patients treated

in the Department of Dermatology of the Hospital Hassan II of Fez, during a period of 1 year: 2013/2014. Epidemiological and clinical data were collected in the psoriasis consultation by our doctors of the Department of Dermatology.

Psoriasis severity was calculated based on the Psoriasis Area Severity Index (PASI): Mild psoriasis: PASI <7, Moderate psoriasis: PASI between 8 and 12 and Severe psoriasis: PASI > 12.

we used the 16-Skindex as a questionnaire for the evaluation of the impact of psoriasis on the life quality of psoriatic patients which include several items: pruritus, psychological impact: "No improving and recidivism, fear of worsening or persisting lesions or scars, frustration, shame, depression and anger", relationships with others and the integrity in society, Emotional life, impact on daily activities and hobbies.

We estimated that a low impact on the life quality is a score of Skindex <10, a moderate impact on the

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life quality if the Skindex between 10 and 50, and a significant impact on the life quality if the Skindex > 50.

Data analysis was performed using the SPSS 20 software, 2 kinds of analysis were carried out: Descriptive and univariate analysis.

In the univariate analysis: we analyzed the epidemiological and clinical data significantly related to each item of the Skindex.

## RESULTS

We collected 140 patients with psoriasis for this study, the mean age was 30.5 years.

58.9% of our patients were young (between 15 years and 45 years old) and we had a slight male predominance (51%). Our patients had a moderate socioeconomic level in 55.5% of cases and 50.4% of them had a recent psoriasis.

Plaque psoriasis was the most frequent form (80.5%) and we had a scalp involvement in 74.1% of cases. 51.8% of patients had a mild psoriasis while 31.4% had a severe one.

Besides, severe itching was present in 31.9% of our patients and 26.8% of patients had moderate pruritus.

Furthermore, 50% of our patients had an important impact on the life quality, 35% had a moderate impact and 15% of patients had a low impact on the life quality.

Concerning the treatments used in our patients: 74.5% of patients used topical treatments, 24.8% used systemic treatments (30 patients: methotrexate, 2 patients: Infliximab (Remicade) for Psoriatic arthritis, 2 patients: Retinoids), and 26.6% of patients used phototherapy UVB TL01 (Table. I).

### In the Univariate Analysis

The characteristics of psoriasis significantly related to the Pruritus in our population study were: the low SEL ( $p=0,05$ ), the Mild psoriasis ( $p=0,011$ ) and the living in rural areas ( $p=0,05$ ) while the No improving and recidivism was significantly associated with Young age ( $p=0,000$ ), Female gender ( $p=0,000$ ), Psoriatic arthritis ( $p=0,004$ ) and Psoriasis of the scalp, the nails and mucosal psoriasis ( $p=0,000$ ).

**Table 1:** Descriptive analysis

Number of patients=140	N (%)
<b>Demographic data</b>	
Age (years)	
≤ 15	4 (2,9)
15-45	82 (58,9)
> 45	52 (37,4)
Gender	
Male	71 (51)
Female	67 (48,2)
Socio economic level	
Low	51 (37,2)
Moderate	76 (55,5)
High	10 (7,3)
Cultural level	
None	17 (12,4)
Primary	33 (24,1)
Secondary	52 (38)
Academic	35 (25,5)
Origin	
Rural	42 (30,7)
Urban	95 (69,3)
Duration of the disease (years)	
<5	69 (50,4)
5-10	36 (26,3)
>10	32 (23,4)
<b>Clinical Data</b>	
Type of psoriasis	
Plaque	112 (80,5)
Guttate psoriasis	12 (8,6)
Psoriatic arthritis	5 (3,6)
Pustular psoriasis	3 (2,1)
Erythrodermic psoriasis	6 (4,3)
Particular locations of psoriasis	
Scalp	103 (74,1)
mucosal psoriasis	7 (5)
Inverse psoriasis	1 (0,7)
Nail psoriasis	55 (39,5)
Palmoplantar psoriasis	13 (9,3)
Body surface area (BSA) (%)	
<10	71 (51,8)
Between 10 and 30	23 (16,8)
Between 30 and 50	29 (21,2)
BSA >50	14 (10,2)
PASI	
Mild psoriasis	87 (68,5)
Moderate psoriasis	16 (12,6)
Severe psoriasis	24 (18,9)
<b>The impact on the life quality</b>	
Pruritus	
Intense	44 (31,9)
Moderate	37 (26,8)
Psychological impact	
No improving and recidivism	65 (46,7)
Fear of worsening or persisting lesions or scars	73 (53,3)
Frustration	41 (41,3)
Shame	51 (37,2)
Depression	59 (42,8)
Anger	64 (46,4)
Emotional life	23 (16,7)
Integrity in the society	
Relationships with others	30 (21,7)

Cond..

**Table 1:** (Continued...)

Number of patients=140	N (%)
Desire to be accompanied	31 (22,6)
Impact on daily activities and hobbies	
Daily activities and quality of sleep	38 (27,7)
Hobbies	31 (22,5)
Total skindex	
Low impact on the life quality	21 (15)
Moderate impact on the life quality	49 (35)
Important impact on the life quality	70 (50)
Treatments	
Topical treatment	102 (74,5)
Systemic treatment	34 (24,8)
Phototherapy	37 (26,6)

The Fear of worsening or persisting lesions or scars was more frequent in women ( $p=0,05$ ) and the Shame was significantly related to the Young age ( $p=0,02$ ) and Severe psoriasis ( $p=0,006$ ). Anger was significantly related to severe psoriasis ( $p=0,013$ ), old one ( $0,07$ ) and the use of systemic treatments ( $p=0,046$ ).

Besides, Relationships with others was altered in female patients ( $p=0,041$ ), young patients ( $p=0,019$ ) and patients having Severe psoriasis ( $p=0,056$ ), and generally, the quality of life was significantly altered in patients having severe psoriasis ( $p=0,016$ ) and old psoriasis ( $p=0,009$ ).

However, the following items were not significantly affected or related to a particular characteristics of psoriasis: the frustration, the emotional life, the desire to be accompanied, the impact on daily activities, the sleep quality and Hobbies (Table. II).

## DISCUSSION

Psoriasis is a complex multifactorial skin disease which is known linked to many metabolic [15], autoimmune and psychiatric [10] comorbidities that must be taken into account in the management of this disease [16].

The psychological impact of psoriasis and the alteration of the life quality is currently proven in many studies, There are even some series that have proven that this negative impact is stronger than other chronic dermatitis such as atopic dermatitis [17], and that this impact of psoriasis is similar to other dangerous diseases such as breast cancer and certain serious heart diseases [18]. Other studies proposed a theory that this alteration of the life quality is compounded by the other comorbidities of psoriasis. Furthermore, a recent study

**Table 2:** Univariate analysis

The skindex items	Characteristics of psoriatic patients significantly associated with the item affected	P value
Pruritus	Low SEL	0,05
	Mild psoriasis	0,011
	Origin from rural regions	0,05
No improving and recidivism	Young age	0,000
	Female	0,000
	Psoriatic arthritis	0,004
	Psoriasis of the scalp, the nails and mucosal psoriasis	0,000
Fear of worsening or persisting lesions or scars	Female	0,005
	Shame	
	Young age	0,02
	Severe psoriasis	0,006
Depression	BSA >30%	0,026
Anger	Severe psoriasis and BSA >30%	0,013
	Old psoriasis	0,007
Relationships with others	Systemic treatment	0,046
	Young age	0,019
	Female	0,041
	BSA >30%	0,056
Total skindex	Severe psoriasis and BSA >30%	0,01
	Old psoriasis	0,009

proved that this alteration of the quality of life affects not only psoriatic patients but also their families [19].

In our study, we aimed to evaluate this alteration of the life quality in Moroccan patients, we didn't study the life quality on psoriatic patients families, or the relationship of this impact and comorbidities. So we noticed that the Severity and the duration of psoriasis are the two characteristics significantly related to the general alteration of the life quality which is almost the same for other studies (resumed in Table III).

This impact is also increased by the scalp and nails involvement which affects the general health, emotional life, and increase the severity of psoriasis [20-22]. In our psoriatic patients, the scalp and nail involvement were significantly related to the fear of recurrence and persistence of lesions which may be explained by the fact that these areas of the body are the symbol of beauty especially in women.

Besides, there is currently a great interest in the psoriatic arthritis (PSA) and his negative impact on the life quality, especially if it complicates skin psoriasis, So several scales for assessing the quality of life of these patients were validated [23,24].

Furthermore, many studies proved the alteration of the life quality in patients with PSA than patients

**Table 3:** Review of literature

Study	Year	Number of patients	Method of measurement	Results
Taiwanese <sup>[28]</sup>	2011	480	Dermatology life quality index (DLQI)	The psoriasis severity and the young age have a negative impact on quality of life
Chilean <sup>[29]</sup>	2011	153	Skindex 29	Important impact in males , young age , recent psoriasis, facial involvement
Japanese <sup>[30]</sup>	2012	213	Questionnaire (total work and productivity impairment)	The severity of psoriasis has an impact on work and productivity
American <sup>[31]</sup>	2012	5604		The severity of psoriasis increases the feeling of anger, frustration, embarrassment, pruritus and pain
Spanish (Pso life study) <sup>[5]</sup>	2013	304	Dermatology life quality index (DLQI)	Impact parallel to the severity of psoriasis and the involvement of uncovered areas
Polish <sup>[32]</sup>	2013	100	Satisfaction with life scale	The importance of satisfaction level increases with age
Polish <sup>[33]</sup>	2013	168	Skindex 29	Important Impact parallel to the severity of psoriasis, young age, somatic symptoms and disease acceptance
Iranian <sup>[34]</sup>	2014	55	Questionnaire (social functioning (SF)-36)	alteration of the well-being and the quality of work
Spanish (Arizona study) <sup>[35]</sup>	2014	1022	DLQI, Short form 36 questionnaire	Alteration of quality of life in females with sleep disorders, depression, anxiety
Malaysian <sup>[36]</sup>	2013	250	(DLQI) and Version 2 of the 12-Item Short-Form Health Survey	The severity of psoriasis and the young age have a negative impact on quality of life with increased health care costs
Our study	2013/2014	139	Skindex 16	The severity, duration of psoriasis, young age, female gender, low CL and SEL have a negative impact on the life quality

with cutaneous psoriasis only [25,26], except one study which noticed that there was no change in the impairment of the quality of life with the presence of PSA in patients with cutaneous psoriasis using the PSAQOL questionnaire [27]. In our study, we had a small sample of PSA with skin psoriasis (5 patients) because these patients are also followed by Rheumatologists especially those without skin psoriasis. Despite this fact, we proved that it affected significantly the life quality of our patients especially the fear of no improving and recidivism.

### Pruritus

Psoriasis is known among the most pruritic inflammatory dermatoses according to the results of several studies [37-41]. Furthermore, this pruritus increases the negative impact of psoriasis on the life quality such as sleep disorders, sexual, appetite and concentration troubles and the alteration of the quality of work [42-44].

In our study, Pruritus was present in 58,7% of our patients and was intense in 31,9%. It was significantly related to the Lower SEL, the origin from rural regions of and it increases the severity of psoriasis.

### Depression

If psychiatric comorbidity is important in psoriasis, depression is by far the most common psychiatric illness encountered [45-47]. The links between psoriasis and

depression are not only psychopathological, biological factors may explain this association (elevated levels of substance P and TNF, decreased serotonin levels) [48]. There is thus a vicious circle “psoriasis- alteration of the life quality- depression” which may further complicate the management of psoriasis, because the treatment of psoriasis doesn't improve necessarily the depression. On the contrary, it is obvious that depressed psoriatic patient could not treat correctly his psoriasis [49].

A UK population-based cohort study of 146,042 patients [50] demonstrated an increased incidence of diagnoses of depression, anxiety and suicidality in psoriasis; the authors estimated that over 10400 diagnoses of depression, 7100 diagnoses of anxiety, and 350 diagnoses of suicidality were attributable to psoriasis each year, while Gupta [51] found that 5.5% of patients with psoriasis had active suicidal ideation and that 9.5% expressed a death wish and that this depression is increased by the pruritus. Another study demonstrated an increased use of antidepressant drugs in psoriasis [52].

In our study, Depression was significantly observed in patients with severe psoriasis and fortunately we had no cases of suicidality.

### Sleep Quality

the sleep quality is among the domains the most affected in patients with psoriasis and this Sleep disturbances can cause significant quality of life impairment, which

was proved in many studies (koo and al [53]; Delfino and al [54]; Hu and al [55]). This sleep impairment in psoriasis is known linked to many reasons such as the pruritus, the psychological burden and the obstructive sleep apnea which is a common and an increasingly prevalent sleep disorder that is receiving attention in terms of a potential association with psoriasis, psoriatic arthritis and rheumatoid arthritis [56].

In our study, this sleep quality was not significantly affected, maybe because of spiritual and religious reasons and the role of the family support in our society.

### **Relationships and Social Integrity**

Human kind is known very sociable, but this sociability could be injured in some situations that makes the person want to be alone and distant from others. This situation could be in some chronic diseases like psoriasis. In the same time, psoriasis may attract attention and cause avoidance and public rejection which may cause a disturbance in the social integrity in psoriatic patients.

This social integrity disturbance is proven in some epidemiological studies [57,58] like the survey of Poot [59] that found severe family dysfunction in these patients in comparison with families without a psoriasis. Even in our study, we noticed an alteration of relationships with others especially in young female patients and patients with severe psoriasis with a significant persistence of the desire to be accompanied.

The psoriasis affects also sexual functioning. In Gupta's cross-sectional survey [60] of 120 inpatients, 40% reported a decline in sexual activity since the onset of psoriasis. Another survey of Sampogna and al [61] proved this sexual dysfunctioning.

In our study the sexual life has not been well exploited but psoriasis did not influence significantly the emotional life of our patients.

### **Anger**

Anger is also among the most psychological troubles that we can observe in chronic diseases, unfortunately, it's association with psoriasis has not been well described.

In an Indian recent study [62] of 48 psoriatic patients, the prevalence of anger was estimated: 58.3%, and in

another American study, the prevalence of anger was more important: 89% [63].

In our study, we had a low prevalence of anger in comparison with others which may be explained by the religious convictions of our patients.

However, anger was significantly related to severe and old psoriasis and the use of systemic treatments in our patients.

**Others items:** like the fear of no improving and recidivism; the fear of worsening or persisting lesions or scars and the shame were items proved related to psoriasis in our population but were not described in other publications according to our knowledge.

Besides, the frustration and the desire to be accompanied were not related to psoriasis in our population and it were not described enough in the literature since there is just one descriptive American study of 75000 patients that reported the frustration in 89% of psoriatic patients [63].

## **CONCLUSION**

In our study, Severe and old psoriasis causes an important impact on the life quality especially in young females which leads us to insist on the psychiatric approach of these patients to complete the global management of this chronic disease by the realization of a team work containing a psychologist in the special consultation of psoriasis patients.

### **Statement of Human and Animal Rights**

All procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation (institutional and national) and with the Helsinki Declaration of 1975, as revised in 2008.

### **Statement of Informed Consent**

Informed consent was obtained from all patients for being included in the study.

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