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Quality of Life of Patients with Psoriasis: A Study of 54 Patients in Bamako

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Abstract: *Background:* Psoriasis is a chronic recurrent inflammatory dermatosis occurring in genetically predisposed individuals. Its dramatic nature of the lesions, successive flare-ups, and skin discomfort may affect the quality of life of patients and result in a depressive tendency. *Objective:* To assess the impact of psoriasis on the quality of life of patients and the relationship between disease severity and quality of life. *Methods:* A descriptive cross-sectional study was carried out in Bamako from September 3, 2018 to August 30, 2019. The Dermatology Life Quality Index (DLQI) and Psoriasis Area Severity Index (PASI) were used to assess quality of life and factors of disease severity. Inclusion was based on clinical and histopathologic criteria. Questionable cases were excluded from the study. *Results:* A total of 106 cases of psoriasis were identified out of 24,000 consultations, *i.e.*, a hospital frequency of 0.44%. Of these cases, 54 were included. Males accounted for 70% of the cases, and the average age was 37. The distribution of the social repercussions of the disease was as follows: disability (68.52%), non-participation in ceremonies (20.37%), stigmatization (18.52%), isolation (12.96%), work stoppage (11.11%), and non-sharing of meals (9.26%). However, the reception by caregivers was satisfactory in 96.30% of cases, and 85% of patients scored ≤ 10 on DLQI, suggesting that they had good quality of life. Among the patients with psoriasis, 35.04%, 12.96%, and 50.00% had mild, moderate, and severe disease, respectively. *Conclusion:* Quality of life is multifactorial and has no direct association with the severity of psoriasis. Dermatologists must take into account the dimensions of symptoms and psychological state when managing patients with psoriasis.

Keywords: Psoriasis; Quality of life; Bamako

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1. Introduction

Psoriasis is a chronic recurrent inflammatory dermatosis that occurs in genetically predisposed individuals. The mediation of factors that can trigger or perpetuate the pathogenic mechanism is a considerable acceleration of epidermal renewal. The clinical manifestations of psoriasis vary. Patients may present with rheumatoid-squamous plaques, pustules, and erythroderma.

Psoriasis is a ubiquitous disease that can affect all ages, and its prevalence is 2.2%–3.15% in the United States [1] and 2% in Europe [2]. In sub-Saharan Africa, the actual prevalence is not known. In Mali, psoriasis is an uncommon reason for consultation, comprising only 0.52% of consultations at Bamako Dermatology Hospital in (ex Institut Marchoux) [3].

The conspicuous nature of the lesions, the functional signs (pruritus and burning sensation), the successive flare-ups, and the cutaneous discomfort considerably affect the patient's quality of life and prognosis in view of depressive tendencies.

In recent years, several epidemiological studies have shown the association of psoriasis with an increased risk of comorbidities, including metabolic syndrome, obesity, diabetes, hypertension, dyslipidemia, fatty liver, neuropsychological disorders, and even cancer [4]. According to some authors, psoriasis may, therefore, be perceived today as a kind of psychosomatic disorder [5]. This skin disease has also been associated with various sleep disorders, as demonstrated in recently published research [6].

Several studies on psoriasis have been conducted in sub-Saharan Africa. However, few of them have assessed the quality of life of patients, which should logically guide therapeutic attitudes. This is justified this study, which aimed to assess quality of life of patients with psoriasis.

2. Materials and methods

A descriptive cross-sectional study on psoriasis and quality of life was carried out from September 3, 2018, to August 30, 2019, at Bamako Dermatology Hospital. The Dermatology Life Quality Index (DLQI) and Psoriasis Area Severity Index (PASI) were used to assess the quality of life and factors of disease severity. Chi-square test with a risk of $\alpha = 0.05$ was used. Inclusion was based on clinical and histopathologic criteria. Cases without a definite diagnosis of psoriasis were excluded from the study.

2.1. Study design

Questionnaires were administered to all patients who participated in the study. The questionnaire included the items listed below.

(i) Socio-demographic data: sex, age, occupation, residence, marital status, education level, and socio-economic levels.

(ii) Family background, lifestyle, and socio-economic standard of living (NSE): very affluent, fairly affluent, affluent, not very affluent (able to pay for prescriptions and some additional examinations); very poor (unable to pay for all prescriptions); and social case (covered by the National Health Assistance Agency [ANAM]).

(iii) Clinical data: onset of disease, triggering factors, duration of evolvement, pruritus, previous treatment, clinical forms, number of sites, affected body surface area, comorbidities.

(iv) DLQI

The DLQI is a 10-item self-administered questionnaire with six domains, including symptoms (item 1), psychology (item 2), functioning (items 3–7), relationship (item 8), sexual life (item 9), and treatment (item 10), assessing the impact of skin problems on patients' quality of life. For each question, there are four options, which are quantified on a scale of 0–3 and then summed, ranging from 0–30. The DLQI score reflects the patient's quality of life. The score indications are as follows:

(a) 0–1: no effect on patient's life;
(b) 2–5: small effect on patient's life;
(c) 6–10: moderate effect on patient's life;
(d) 11–20: large effect on the patient's life;
(e) 21–30: extremely large effect on patient's life.

In this study, we classified the impact of psoriasis on patients' health-related quality of life (HRQoL) by DLQI score into two categories:

(a) DLQI ≤ 10: low to moderate impact (good HRQoL);
(b) DLQI > 10: high to very high impact (poor HRQoL).

Based on the DLQI domains and scoring, the significance of scores obtained from the functioning domain is as follows: 0–5 indicate low impact, while 6–15 indicate moderate to high impact; the significance of scores obtained from other domains is as follows: 0–1 indicate no to low impact, while 2–3 indicate moderate to high impact.

(v) PASI [8]

PASI is scored from 0 to 72.

(a) < 8: mild psoriasis
(b) 8–12: moderate psoriasis
(c) > 12: severe psoriasis

2.2. Data analysis

Data were collected on individual questionnaires, entered into Microsoft Office Word and Excel 2013, and analyzed on Epi Info 7. Pearson's chi-square tests with significance level of $P < 0.05$ were used. The data were collected anonymously after gaining consent from the patients and their guardians for minors. The recruitment did not present any risk to the patients.

3. Results

During the study period, 106 cases of psoriasis were identified out of 24,000 patients, *i.e.*, a frequency of 0.44%. Of these 106 patients, 54 were included in our study.

3.1. Socio-demographic data

There were 30% female and 70% male patients, with a 2.3 ratio. The age of the patients ranged from 6 to 85, with an average of 37.83; the mode was 21, while the median was 22. Among the patients, 23 were in the 20–39 age group, and 66% resided in Bamako. The "very poor" represented 62.96% of the sample (34/54). A history of psoriasis was observed in 8 patients (15%).

Among the 54 patients in the study, 18 were physically active (33%), 8 were smokers (15%), and only one was an alcohol user.

3.2. Clinical data

The onset of the disease was progressive in almost all patients (53/54). The comorbidities associated with the disease were mainly anxiety-depression (31/54), hypertension (12/54), obesity (6/54), dyslipidemia (3/54), diabetes and asthma (2/54), as well as human immunodeficiency virus (HIV) and hepatitis B (1 case).

The triggering factors were psycho-affective in 36 patients (66.67%) and infectious in 6 patients (11.11%). The disease had been evolving for less than a year in 26% (14/54) and for more than 5 years in about 1/3 of patients.

The lesions were pruritic in 90.74% of patients, and 42 patients (78%) had previous medical treatment. Psoriasis vulgaris was observed in 39 patients (72%), followed by guttate psoriasis in 9 patients (16.16%), and the erythrodermic form in 5 patients (9.26%) (**Figures 1**–**3**). The number of affected sites was ≥ 3 in 31 patients (57%). In 19 patients (35%), the body surface area affected was less than 10%. According to PASI, psoriasis was severe in 27 patients, moderate in 7 patients, and mild in 20 patients.

Figure 1. Plaque psoriasis

Figure 2. Erythrodermic form with helmet-like scalp involvement

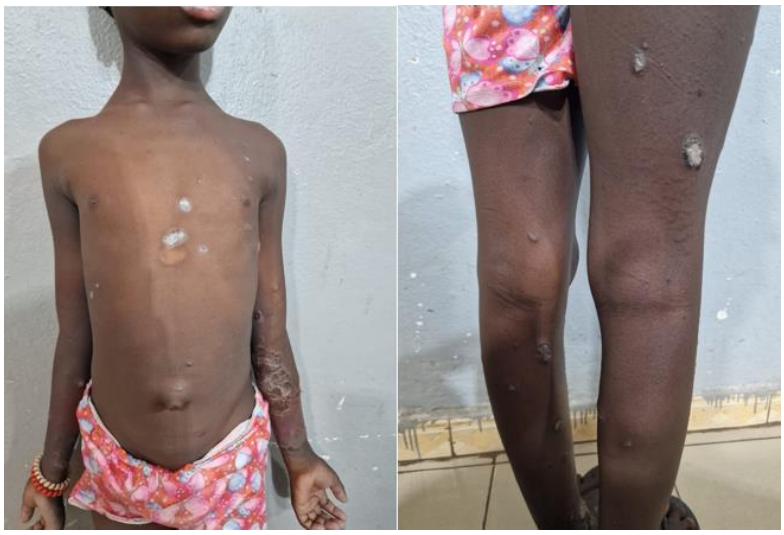

Figure 3. Guttate psoriasis in a 9-year-old girl

3.3. Quality of life

The disease resulted in disability in 37 patients, work stoppage in 6 patients, and isolation in 7 patients; 5 patients did not share meals with their families, 10 patients felt stigmatized by others, and 11 patients did not participate in family rituals due to the disease. The majority of patients were satisfied with the reception of caregivers and their attitude toward them. According to the DLQI, psoriasis had a moderate effect on the quality of life of 22 patients (41%). The mean DLQI score was 6.64, with extremes ranging from 0 to 21; the mode was 4, while the median was 6.

3.4. Quality-of-life category according to the Dermatology Life Quality Index

In our study, 46 patients (85%) had good quality of life, and 63% of patients had moderate to high impact under the symptom domain. Half of the patients had altered psychological state, and only 13% of patients had moderate to high impact under the functioning domain. No patient had impairment under the relationship domain. Only one patient had impaired sexual life, and only three patients had a moderate to severe impact under the treatment domain.

3.5. Linkage study

Table 1. Influence of different factors on quality of life

Links	*P*
Influence of gender on quality of life	$P = 0.31$
Influence of age on quality of life (mean age = 37.83 ≈ 38)	$P = 0.43$
Influence of socio-economic level on quality of life	$P = 0.03$
Influence of clinical form on quality of life	$P = 0.075$
Influence of affected body surface area on quality of life	$P = 0.09$
Influence of PASI on quality of life	$P = 0.075$
Influence of pruritus on quality of life	$P = 0.36$
Influence of anxiety-depressive state on quality of life	$P = 0.33$

4. Discussion

We conducted a 12-month descriptive cross-sectional study from September 2018 to August 2019 on the quality of life in patients with psoriasis at Bamako Dermatology Hospital. The diagnosis was based on clinical and histopathological findings. Their quality of life was assessed using Finlay's DLQI [7], and disease severity was assessed by PASI. The association between quality of life and psoriasis was assessed by Pearson's chi-square tests with significance level of $P < 0.05$.

The monocentric study, the small sample size, the place of recruitment, and the fact that some patients did not undergo additional examinations (due to lack of financial means) were the main limitations of our work. However, this work contributes to the description of the epidemiological and clinical profile as well as the quality of life of patients with psoriasis at Bamako Dermatology Hospital.

4.1. Frequency

During our study period, there were 106 cases of psoriasis diagnosed out of 24,000 consultations, *i.e.*, a frequency of 0.4%. In 2002, Mbouopda *et al.* [3] reported a frequency of 0.5% in Mali, Kaloga *et al.* [10] reported a frequency of 0.4% in Côte d'Ivoire, and Ly [11,12] reported a frequency of 0.6% in Dakar. Our results, which are almost identical to those previously cited, indicate that the prevalence of psoriasis remains low in sub-Saharan Africa, despite the fact that it is high in Western countries, ranging from 2% to 3% [1,2]. African studies were mostly monocentric and hospital-based; hence, the low prevalence.

In our cohort, the majority was male. This male predominance was also noted in a study by Mouopda [3] in Mali and other West African studies, such as those by Kaloga [10] in Abidjan and Ndiaye [15] in Dakar, which respectively found a gender ratio of 3:2.85 and 3:1.37. However, we have not found any scientific explanation for this male predominance.

In our cohort, the average age was 37.83. This finding is similar to that of Kaloga *et al*. [10] and Barro/Traore *et al*. [13] who found an average age of 36.7 and 34.53, respectively.

In our study, 43% of patients were in the age range of 20–39. This finding is in line with the study of Barro/Traore *et al*. [13] in Ouagadougou who found an age range of 21–40 in 44% of patients, but it differs from that of Kaloga [10] in which the majority of patients were between 30 and 49.

Housewives and students represented 22% and 20% of our patients, respectively. This finding is similar to that observed by Barro/Traore [13], who reported 21% housewives and 20% students.

This could be explained by the fact that these are young active adults (20–39 years) and, therefore, exposed to stress, which is a triggering factor for the disease.

4.2. Quality of life

The mean DLQI score was 6.64 with extremes from 0 to 21. These results are different from those of Attaqi [19] and Maoua *et al*. [20], who respectively reported a mean DLQI score of 8 and 16.1.

Only 15% of the patients in the present study scored higher than 10, reflecting a deterioration in the patients' quality of life. This figure is lower than those of Attaqi [19] and Maoua *et al*. [20], who reported 40.8% and 86.2%, respectively. The psychological and symptom domains had significant impact on the patients' quality of life, *i.e*., 50% and 63%. Attaqi [19] found that the psychological and functioning domains were significantly affected in 65% and 55% of cases, respectively.

This disparity can be explained by the difference in study populations, study locations, and sample sizes.

Through this study, we found an association between socio-economic level and HRQoL ($P = 0.03$). Indeed, patients with lower socio-economic levels have difficulties in complying to their prescriptions, leading to treatment disruptions and consequently a deterioration in their quality of life.

However, we did not find any relationship between quality of life and disease severity ($P = 0.075$). The lack of association could be explained by the fact that some patients may have severe psoriasis without having their quality of life being impaired. There are several factors that may influence this relationship, such as patient experience and other socio-cultural factors [22].

4.3. Comorbidities

In the present study, anxiety and depression were observed in more than half of the patients (57%). This finding is higher than those of Kaloga [10] and Lapeyre *et al*. [21], who reported 10% and 21% of cases of depression, respectively. The incidence of anxiety and depression was described in both genders ($P = 0.14$). Both of these conditions can be considered indications of disease severity. However, we did not find any significant association between anxiety-depression and quality of life ($P = 0.33$).

Depression is described by some authors as a comorbidity [23], although psoriasis itself may be responsible for it [23].

In our study, hypertension, obesity, and diabetes were reported in 22%, 11%, and 3.7% of patients, respectively. These figures are higher than those of Dioussé *et al*. [24], who reported 6.58% hypertension, 2.63% diabetes, and 1.31% obesity in a study conducted in Dakar.

Several authors have described psoriasis as frequently associated with chronic inflammatory diseases, such as dyslipidemia and diabetes. The association of these inflammatory conditions with psoriasis is thought to reflect the systemic nature of the condition, which is not limited to the skin and joints [22]. It is

important to determine the contribution of psoriasis to the occurrence of these comorbidities.

5. Conclusion

Psoriasis does not necessarily lead to impaired quality of life, but patients with low socioeconomic status may experience deterioration in their quality of life. It is widely recognized that pruritus is often associated with the disease. In patients with psoriasis, quality of life is multifactorial and not solely dependent on disease severity. A multicenter study of a large population is needed to substantiate the issue.

Disclosure statement

The authors declare no conflict of interest.

References

[1] Kurd SK, Gelfand JM, 2009, The Prevalence of Previously Diagnosed and Undiagnosed Psoriasis in US Adults: Results from NHANES 2003–2004. Journal of the American Academy of Dermatology, 60(2): 218–224.

[2] Dereure O, Guilhou JJ, 2003, Epidémiologie et Génétique du Psoriasis [Epidemiology and Genetics of Psoriasis]. Ann Dermatol Venereol, 130(8–9): 829–836.

[3] Mbouopda NR, 2002, Aspects Épidémio-Cliniques et Thérapeutiques du Psoriasis à l'Institut Marchoux de 1990 à 1999 et de Novembre 1000 à Avril 2001 [Epidemiological and Therapeutic Aspects of Psoriasis at the Marchoux Institute from 1990 to 1999 and from November 1000 to April 2001]. Thèse Med Bamako, 2002: 132.

[4] Schmutz JL, 2019, Psoriasis et Comorbidités [Psoriasis and Comorbidities], viewed on August 15, 2019, http://www.jim.fr

[5] Dubertret L, 2009, Le Psoriasis 2ème Édition [Psoriasis 2nd Edition], MED COM, Paris, 155.

[6] Garnier M, Delamare V, Delarmare J, et al., 2006, Dictionnaire Illustré des Termes de Médecine, 29ème Édition [Illustrated Dictionary of Medical Terms, 29th Edition], Maloine, Paris, 1048.

[7] Finlay AY, Khan GK, 1994, Dermatology Life Quality Index (DLQI) – A Simple Practical Measure for Routine Clinical Use. Clin Exp Dermatol, 19(3): 210–216.

[8] Finlay AY, 2005, Current Severe Psoriasis and the Rule of Tens. Br J Dermatol, 152(5): 861–867.

[9] Finlay AY, 1997, Quality of Life Measurement in Dermatology: A Practical Guide. Br J Dermatol, 136(3): 305–314.

[10] Mamadou K, Vagamon B, Isidore KY, et al., 2015, Psoriasis Among African Blacks: The Abidjan Experience of 17 Years. J Clin Exp Dermatol Res, 6(4): 1–3.

[11] Ly F, 2013, Psoriasis sur Peaux Pigmentées [Psoriasis on Pigmented Skin]. Ann Dermatol Venereol, 140: S11–S12.

[12] Ly F, Ndiaye M, Diatta M, et al., 2013, Aspects Épidémiologiques, Cliniques et Thérapeutiques du Psoriasis au Sénégal. A Propos de 295 Patients Suivis à la Clinique Dermatologique du CHU Aristide Le Dantec (1997–2011) [Epidemiological, Clinical and Therapeutic Aspects of Psoriasis in Senegal. A Follow-Up of 295 Patients at the Dermatological Clinic of Aristide Le Dantec University Hospital (1997–2011)]. Nouv Dermatol, 32: 5–7.

[13] Barro/Traoré F Korsaga/Somé N, Kopa PY, et al., 2015, Aspects Épidémiologiques et Cliniques du Psoriasis à Ouagadougou [Epidemiological and Clinical Features of Psoriasis at Ouagadougou]. Dakar

Med, 60(1): S11–S19.

[14] Kassi K, Djeha D, Gbery IP, et al., 2016, Psoriasis in Elderly Patients in the Côte d'Ivoire: Socio-Demographic, Clinical, Therapeutic Aspects and Follow-Up. Int J Dermatol, 55(2): e83–e86.

[15] Ndiaye M, 2010, Le psoriasis: Aspects Épidémiologiques, Cliniques et Thérapeutiques à Propos de 240 Patients Suivis à la Clinique Dermatologique du CHU Aristide Le Dantec (1997–2008) [Psoriasis: Epidemiological, Clinical and Therapeutic Aspects of 240 Patients Followed-Up at the Dermatological Clinic of Aristide Le Dantec University Hospital (1997–2008)]. Thèse Méd Dakar, 2010: 113.

[16] Boisseau-Garsaud AM, Marie C, Garsaud P, et al., 1999, Epidémiologie du Psoriasis Dans Une Population Hospitalière Martiniquaise [Epidemiology of Psoriasis in a Martinican Hospital Population]. Ann Dermatol Venereol, 126(2s79): 213.

[17] Salami TA, Samuel SO, Eze KC, et al., 2009, Prevalence and Characteristics of Aquagenic Pruritus in a Young African Population. BMC Dermatology, 9: 4.

[18] Hagg D, Sundstrom A, Eriksson M, et al., 2015, Decision for Biological Treatment in Real Life Is More Strongly Associated with the Psoriasis Area and Severity Index (PASI) Than with the Dermatology Life Quality Index (DLQI). J Eur Acad Dermatol Venereol, 29(3): 452–456.

[19] Attaqi K, 2017, Psoriasis et Qualité de Vie [Psoriasis and Quality of Life]. Thèse de Méd, Marrakech, 118.

[20] Maoua M, El Maalel O, Boughattas W, et al., 2015, Qualité de Vie et Activité Professionnelle des Patients Atteints de Psoriasis au Centre Tunisien [Quality of Life and Professional Activity of Patients with Psoriasis in a Tunisian Center]. Archives des Maladies Professionnelles et de l'Environnement, 76(5): 439–448.

[21] Lapeyre H, Hellot MF, Joly P, 2007, Motifs d'Hospitalisation des Malades Atteints de Psoriasis [Reasons for Hospitalization of Patients with Psoriasis]. Ann Dermatol Venereol, 134(5): 433–436.

[22] Wu C-Y, Hu H-Y, Li C-P, et al., 2018, Comorbidity Profiles of Psoriasis in Taiwan: A Latent Class Analysis. PLoS ONE, 13(2): e0192537.

[23] Dalgard FJ, Gieler U, Tomas-Aragones L, et al., 2015, The Psychological Burden of Skin Diseases: A Cross-Sectional Multicenter Study Among Dermatological Out-Patients in 13 European Countries. J Invest Dermatol, 135(4): 984–991.

[24] Dioussé P, Ndiaye M, Diatta BA, et al., 2013, Profil Épidémiologique, Clinique et Évolutif du Psoriasis dans la Région de Thiès au Sénégal [Epidemiological, Clinical and Evolutionary Profile of Psoriasis in the Region of Thi`es in Senegal]. Dakar Med, 60(1): 26–30.