

Quality of life in patients with psoriasis seen in the Department of Dermatology, Antananarivo Madagascar.

Fandresena Arilala Sendrasoa (✉ nasendrefa@yahoo.fr)

Universite d'Antananarivo Faculte de Medecine <https://orcid.org/0000-0003-2606-3539>

Ratovonjanahary Volatantely

Universite d'Antananarivo Faculté de Médecine

Razanakoto Naina Harinjara

Université d'Antananarivo Faculté de Médecine

Raharolahy Onivola

Université d'Antananarivo Faculté de Médecine

Rakotoarisaona Mendrika Fifaliana

Université d'Antananarivo Faculté de Médecine

Rakotonaivo Niriantsoa Avotriniaina

Université d'Antananarivo Faculté de Médecine

Andrianarison Malalaniaina

Université d'Antananarivo Faculté de Médecine

Sata Moril

Université d'Antananarivo Faculté de Médecine

Ranaivo Irina Mamisoa

Université d'Antananarivo Faculté de Médecine

Ramarozatovo Lala Soavina

Université d'Antananarivo Faculté de Médecine

Rapelanoro Rabenja Fahafahantsoa

Université d'Antananarivo Faculté de Médecine

Research

Keywords: psoriasis, quality of life, severity, negative impact

Posted Date: April 24th, 2020

DOI: <https://doi.org/10.21203/rs.2.23219/v3>

License:  This work is licensed under a Creative Commons Attribution 4.0 International License.

[Read Full License](#)

Abstract

BACKGROUND: Psoriasis is a chronic, inflammatory and multifactorial dermatosis that impairs quality of life (QoL). Health-related QoL has become an important element in medical decision making along with the effectiveness and the harmlessness of the treatments.

OBJECTIVE: To assess the impact of psoriasis in the QoL of patients with psoriasis by using the DLQI scales.

METHODS: A cross-sectional study, during ten months, was conducted in the Department of Dermatology of the University Hospital Joseph Rasetra Befelatanana Antananarivo Madagascar including patients more than 15 years-old with moderate to severe psoriasis. The severity of psoriasis was assessed using the "Psoriasis Area and Severity Index (PASI)". QoL of patients with psoriasis was evaluated by using the DLQI scales.

RESULTS: 80 patients were included, their mean age was 36.52 years and the male to female was 1.5:1. The mean DLQI score was 13.85. Symptoms, feelings and psychic were the most altered dimensions. QoL was impaired in young patients, single, having medium level education. Even though patients with disease duration more than 5 years had higher DLQI score than other patients, the difference was not statistically significant ($p=0.36$). Furthermore, clinical presentation of psoriasis didn't influence patient's QoL ($p=0.73$). Patients with nail involvement had QoL impaired but the difference with another localization was not statistically significant ($p=0.2$).

The quality of life was influenced by body area involved. The higher the body surface area involved, the more QoL is impaired ($p=0.002$). Furthermore, the higher the PASI, the more QoL is altered ($p=0.002$).

CONCLUSION: Psoriasis has a negative impact in the quality of life in Malagasy patients with psoriasis, especially in younger and single patients. Worse quality of life is correlated to severity of psoriasis.

Background

Psoriasis is an immune-mediated, chronic, inflammatory skin disease which affects 0.9 to 8.5% of the world's adult population [1]. It is a complex, multifaceted skin disease that may have a major impact on the patient's quality of life, influencing daily, social activities, and all other aspects of life [2].

The diagnostic is essentially clinical. It is characterized by well-delimited erythematous-desquamative plaques, which evolve with flare-ups. Disease severity is variable: mild, moderate and serious forms. The severity of psoriasis is measured in terms of appearance of the lesions and body surface involved; however, the degree of clinical involvement is not indefinitely correlated with the degree of physical impairment perceived by the patient [3].

The treatments control the evolution of the disease, allowing more or less complete transient regression of the lesions, which is adapted to the severity of disease and the impact on the patient's quality of

life.

Depending on the severity and localization of psoriasis, patients may suffer from physical discomfort and significant disability. They may be embarrassed by their appearance and have low self-esteem due to social rejection or psychological difficulties. Many studies have described the various ways in which psoriasis can affect a patient's life [4,5]. However, no previous data about the impact of psoriasis on the QoL of Malagasy patients was reported. So, this study aims to describe the extent to which psoriasis affects the QoL of patients seen in the department of Dermatology of the University Hospital Joseph Rasetra Befelatanana, Antananarivo Madagascar.

Methodology

A cross-sectional study, during ten months, was conducted in the Department of Dermatology of the University Hospital Joseph Rasetra Befelatanana Antananarivo Madagascar which is the only reference center on Dermatology in Madagascar. Patients more than 15 years-old with moderate to severe psoriasis, seen in the Department of Dermatology of the University Hospital Joseph Rasetra Befelatanana Antananarivo, were included. Patients were excluded if they had a significant comorbid condition likely to impact QoL exclusive of psoriasis. We informed them about the purpose of this study, and written informed consent was obtained.

Demographic data, medical history were collected and patients had physical examination on their date of selection. The patients had a definite diagnosis of psoriasis confirmed by clinical assessment. The physicians assessed the severity of their eruptions using the "Psoriasis Area and Severity Index (PASI)" at the same time. The PASI is the most tools used to quantify disease severity in psoriasis taking into account erythema, infiltration, scale and area involved [6]. The scores are calculated by simple addition based on the extent of the symptoms. A single score between 0 = no psoriasis and 72 = very severe psoriasis is obtained, with PASI being interpreted as > 12 = severe, 7-12 = moderate and < 7 = mild.

The patients were asked to answer the questions listed in "Dermatology life quality index (DLQI)" translated in Malagasy language. The *DLQI, which is a dermatology-specific tool to measure health-related quality of life*, consists of *ten item including 6 dimensions (symptoms and feelings, daily activities, leisure, work and school, personal relationships and treatment)*, with four possible responses to each *item : 0 (not at all), 1 (a little), 2 (a lot) and 3 (very much)*. *Responses are calculated for the total DLQI score, which is 0-30*. The higher the score is, the poorer the quality of life. DLQI scores from 0-1 mean no effect of the disease on the patient's quality of life, scores of 2-5 mean a small effect, scores of 6-10 mean a moderate effect, scores of 11-20 correspond to a great effect and scores of 21-30 mean a very important effect of disease on the patient's quality of life [7].

Statistical analysis

Statistical analysis was performed using Epi info 7 software.

Student's test, Chi-square and Fisher's exact test were used for quantitative and qualitative variables, respectively. $p \leq 0.05$ is considered statistically significant.

Results

Clinical features of study population

Out of 99 patients with psoriasis seen during the period of our study, 10 were excluded (due to comorbidities) and 9 declined participation. 80 patients who accepted to answer the questionnaire were included in this study. The mean age was 36.5 years and 60% were men (sex ratio: 1.5). Most patients were married (54%), and had received a medium-length education (51.2%). Among all patients, 63.7% were employed and 27.5% were students. 50% of patients presented psoriasis less than 1 year and 32.5% between 1 and 5 years. There were 64.25% patients with psoriasis vulgaris, 21.52% with guttate psoriasis, 9 patients with erythrodermic psoriasis and 2 patients with pustular psoriasis. 42 patients had scalp involvement.

Less than 30% of body surface area was involved in 36 patients (45.5%) and more than 30% in 44 patients (54.4%). The mean PASI score was 9.21. Forty-eight patients (60%) had PASI score < 7 ; 22 patients (27.5%) with PASI score from 8 to 12 and 10 patients presented severe form of psoriasis with PASI score > 12 .

Evaluation by DLQI score

The mean DLQI score was 13.85. Symptoms, feelings and psychic were the most altered dimensions. Sexual dimension was altered only in 2.5% of patients. A score higher than 10 indicates that the patient's life is being severely affected by their skin disease. Fifty percent of patients reported a great effect of psoriasis in their QoL (DLQI: 11-20), 2% had a very important effect (DLQI>21), 35% had a moderate effect (DLQI: 6-10), 11% had a small effect (DLQI: 2-5) and only 1% had no effect of the disease on his quality of life.

Correlation between demographics data and DLQI score

Age and QoL

We found statistically significant higher scores in DLQI questionnaire in patients ≤ 37 year-old compared with patients > 37 year-old ($p=0.015$).

Sex and QoL

Sex and quality of life were found to be unrelated ($p=0.21$),

Marital, educational status and QoL

Marital status was associated with the quality of life in patients with psoriasis ($p=0.008$). We found statistically significant higher scores in DLQI questionnaire in single patients. Furthermore, compared to employees, students had a more impaired quality of life (Fisher's exact test: $p=0.002$, OR: 0.17 CI 95% [0.04; 0.61]). Patients with medium level education had quality of life more impaired than another groups ($p=0.03$).

Clinical presentation of psoriasis and QoL

Even though patients with disease duration more than 5 years had higher DLQI score than other patients, the difference was not statistically significant ($p=0.36$). Furthermore, clinical presentation of psoriasis didn't influence patient's QoL ($p=0.73$)

Even though patients with nail involvement had quality of life impaired, the difference with another localization was not statistically significant ($p=0.2$).

However, the quality of life was influenced by body area involved. The higher the body surface area involved, the more quality of life is impaired ($p=0.002$). Distribution of participants via DLQI score according to sociodemographic and clinical data was shown in Table I. Furthermore, the higher the PASI, the more QoL is altered ($p=0.002$). The correlation between the severity of psoriasis and QoL was shown in Table II. The impact on QoL was classified in two groups $\text{DLQI} \leq 10$ and $\text{DLQI} > 10$. The skin disease is having a very large effect on the patient's life if the DLQI score is greater than 10.

Discussion

Our data show that there are no correlation between sex, educational status and quality of life in psoriatic patients. Younger age, marital status, extensive body surface area involved and high PASI were significantly correlated with a poor QoL. These results may raise some discussion.

The mean DLQI score in our study was 13.85. $\text{DLQI} > 10$ indicating significant impairment of QoL was found in 52.5% of patients. The symptom and psychic are the more altered dimensions. This score is higher than results reported by several authors (Table III) [8-13]. However, Maoua et al reported a very poor QoL in psoriatic Tunisian patients (mean DLQI: 16.1); symptoms and psychic were the dimensions most altered [14].

In our study, younger age was statistically significant associated with poor QoL ($p=0.015$). It is possible that young people assess their quality of life better than older people and the disease duration is not yet long. It is consistent with other findings reported by Amy de la Breteque et al (correlation statistically significant between age and QoL, $p<0.006$) [15] and Kelati et al who used skindex16 to evaluate the QoL in psoriatic patients [16]. Young people have more professional responsibilities and interpersonal relationship and therefore have difficulty accepting their illness.

Gender and quality of life were found to be unrelated in our study. It is consistent with the result reported by Kouris et al [13]. Generally, there are no difference in the severity of physical symptoms suffered by

men and women. Anterior controversial results have been reported by several authors regarding the correlation between gender and quality of life in psoriasis. Most of studies reported that female had poor quality of life compared to male with psoriasis [17, 18, 19]. However, Valenzuela et al in chilian patients reported that men were consistently more affected in almost all areas [11], which is rarely reported before.

Marital status was a determinant of quality of life in psoriasis patients in our study (correlation p=0.008). Single patient had poor quality of life. It can be explained by the fact that single people take more care of their physical appearance and have trouble accepting their chronic illness.

Even though patients with disease duration more than 5 years had higher DLQI score than other patients, the difference was not statistically significant (p=0.36). Kelati et al showed that the disease duration impaired the QOL in psoriasis (p = 0.009), mainly on the emotion dimension, depression and frustration (p = 0.007) [16]. However, Valenzuela et al showed that patients with recent psoriasis (<5 years) had a more impaired QoL than those with psoriasis over 20 years (p = 0.00007) [11]. The difference between several studies may result from the cultural, social and economic differences of the groups studied.

The localization of psoriasis is a determinant factor of QoL in several studies. In our study, even though the difference between localizations was not statistically significant (p=0.2), patients with nail involvement had quality of life impaired. Lin et al reported also that nail involvement was associated significantly with QoL altered [20]. Benchikhi H et al, Yang HJ et al reported that DLQI high scores in psoriasis were significantly associated with uncovered areas involvement particularly in personal relationship area [12, 21].

Our study confirmed the influence of body surface area involved with QDV, higher BSA involved was positively correlated with QoL impaired (p=0.002). Our result was consistent with those reported by several authors [12, 16, 20]. Strober B et al reported that DLQI worsened with disease severity evaluated by BSA (Affected body surface area) score and IGA 2011 scale (Investigator's Global Assessment) [22].

Most quality of life scales are validated in correlation with the severity of the disease. So, the doctor's point of view meets the patient's point of view. However, several previous data indicate variable results. High PASI was associated to poor QoL in our study (p=0.002). It is consistent with results reported by several authors [13, 14, 16]. A multicentre, prospective study conducted in Spain found psoriasis severity was the primary factor affecting QoL, using PASI for the multivariate modeling [23]. However, other results reported by Benchikhi H, Yang HJ and Amy De la Breteque et al showed a negative correlation between PASI and QoL [12, 15, 21]. This discrepancy between the scales of QoL and PASI show that the management of a psoriatic patient should include both physical and psychological dimensions.

This study was a cross-sectional analysis, which does not allow for causal interferences regarding psoriasis severity and the outcomes of interest. Furthermore, the subjectivity of the quality of life responses may interfere the results of this study

Even though our result isn't representative of general population due to small sample size (participants at a single institution), it will contribute to understanding the impact of psoriasis in patient's quality of life. Our department is the unique dermatology center in Madagascar where 6 dermatologists work and there is no dermatologist in private practice.

Conclusion

Younger age, marital status as single, medium level education, increased psoriasis severity was the determinant factors of QoL in patients with psoriasis seen in the department of Dermatology Antananarivo Madagascar. No correlation was found between gender, localization of psoriasis and QoL. Better understanding and communication between psoriasis patients and their physicians may help to improve not only the clinical outcomes in psoriasis but also the patient's QoL.

List Of Abbreviations

QoL: Quality of life

DLQI: Dermatology life quality index

PASI: Psoriasis Area and Severity Index

UH/JRB: University Hospital Joseph Rasetra Befelatanana

Declarations

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

All study procedures were performed in accordance with the Ethics Committee of University Hospital Joseph Rasetra Befelatanana Antananarivo, Madagascar and with the 1964 Helsinki declaration. Study participants were informed about the study procedures and informed consent was obtained.

CONSENT FOR PUBLICATION

Not applicable.

AVAILABILITY OF DATA AND MATERIALS

Data are available from the authors upon reasonable request.

COMPETING INTERESTS

The authors report no conflicts of interest in this work.

FUNDING STATEMENT

No funding.

AUTHOR'S CONTRIBUTIONS

All authors were involved in patient clinical care or in the drafting and writing of the manuscript. All authors read and approved the final manuscript.

ACKNOWLEDGEMENTS

We are grateful to all participants in this study.

References

- [1] Parisi R, Symmons DP, Griffiths CEM et al. Global epidemiology of psoriasis: a systematic review of incidence and prevalence. *J Invest Dermatol* 2013; 133: 377-85.
- [2] Tadros A, Vergou T, Stratigos A et al. Psoriasis: is it the tip of the iceberg for the quality of life of patients and their families? *Eur Acad Dermatol Venereol* 2011; 25: 1282-7.
- [3] García-Sánchez L, Montiel-Jarquín AJ, Vázquez-Cruz E, May-Salazar A, Gutiérrez-Gabriel I, Loría-Castellanos J. Quality of life in patients with psoriasis. *Gac Med Mex.* 2017;153:171-4
- [4] Mease PJ, Menter MA. Quality of life issues in psoriasis and psoriatic arthritis : outcome measures and therapies from a dermatological perspective. *J Am Acad Dermatol* 2006; 54: 685-704.
- [5] Mukhtar R, Choi J, Koo Jy. Quality of life issues in psoriasis. *Dermatol Clin* 2004; 22: 389-95.
- [6] Fredriksson T, Pettersson U. Severe psoriasis–oral therapy with a new retinoid. *Dermatologica* 1978; 157(4):238-244.
- [7] Finlay AY, Khan GK. Dermatology life quality index (DLQI) a simple practical measure for routine clinical use. *Clin Exp Dermatol* 1994; 19: 210-216
- [8] Mazzotti E, Barbaranelli C, Picardi A, Abeni D, Pasquini P. Psychometric properties of the dermatology life quality index (DLQI) in 900 Italian patients with psoriasis. *Acta DermVenereol* 2005; 85: 409-13.
- [9] Wahl AK, Mork C, Lillehol BM, Myrdal AM, Helland S, Hanestad S et al. Changes in quality of life in persons with eczema and psoriasis after treatment in departments of dermatology. *Acta DermVenereol* 2006; 86: 198-201.
- [10] Eghlileb AM, Davies EE, Finlay AY. Psoriasis has a major secondary impact on the lives of family members and partners. *Br J Dermatol* 2007; 156:1245-50.
- [11] Valenzuela F, Silva P, Valdes MP, Popp K. Epidemiology and quality of life of patients with psoriasis in chile. *Actas Dermosifiliograficas* 2011; 102: 810-6.

- [12] Benchikhi H, Abarji H, Nani S, Hassoune S, Maaroufi A. Psoriasis et qualité de vie: étude de 40 patients Marocains consultant pour psoriasis. Ann Dermatol Venereol 2013; 140: 1-10.
- [13] Kouris A, Christodoulou C, Stefanaki C, Livaditis M, Tsatovidou R, Kouskoukis C et al. Quality of life and psychosocial aspects in greek patients with psoriasis: a cross-sectional study. An Bras Dermatol.2015; 90: 841-5.
- [14] Maoua M, El maalel O, Boughattas W, Kalboussi H, Ghariani N, Nouira R, et al. Qualité de vie et activité professionnelle des patients atteints de psoriasis au centre tunisien. Archives des Maladies Professionnelles et de l'Environnement. 2015; 76:439-48.
- [15] Amy De la Breteuque M, Sigal ML, Estève E, Le Guyadec T, Maccari F, Reguiai Z, et al. Evaluation des paramètres expliquant la discordance PASI/DLQI chez les patients atteints de psoriasis. Ann Dermatol Venereol 2014;141:438-9.
- [16] Kelati A, Meziane M, Jaafari M, Mernissi FZ. The impact of psoriasis on the life quality: a cohort of 140 Moroccan patients. Our Dermatol Online. 2016; 7: 10-6.
- [17] Finzi A, Colombo D, Caputo A, Andreassi L, Chimenti S, Vena G et al. Psychological distress and coping strategies in patients with psoriasis: the PSYCHAE Study. J Eur Acad Dermatol Venereol 2007; 21: 1161-9.
- [18] Boehm D, Stock Gissendanner S, Bangemann K et al. Perceived relationship between severity of psoriasis symptoms, gender, stigmatization and quality of life. J Eur Acad Dermatol Venereol 2012; doi: 10.1111/j.1468-3083.2012.04451.x
- [19] Misery L, Thomas L, Jullien D et al. Comparative study of stress and quality of life in outpatients consulting for different dermatoses in 5 academic departments of dermatology. Eur J Dermatol 2008; 18: 412-5.
- [20] Lin TY, See LC, Shen YM, Liang CY, Chang HN, Lin YK. Quality of life in patients with psoriasis in northern Taiwan. Chang Gung Med J 2011; 34: 186-96.
- [21] Yang HJ, Yang KC. Impact of psoriasis on quality of life in Taiwan. Dermatologica Sinica 2015; 33: 146-50.
- [22] Strober B, Greenberg JD, Karki C, Mason A, Guo N, Hur P et al. Impact of psoriasis severity on patient-reported clinical symptoms, health-related quality of life and work productivity among data from the Corrona Psoriasis Registry. BMJ Open 2019; 9e027535. doi: 10.1136/bmjopen-2018-027535.
- [23] Daudén E, Pujol RM, Sanchez-Carazo JL et al. Demographic characteristics and health-related quality of life of patients with moderate-to-severe psoriasis: The VACAP study. Actas Dermosifiliogr 2013; 104: 806-14.

Tables

Table I : Distribution of participants via DLQI score according to sociodemographic and clinical data

	Patients with DLQI≤10 n(%)	Patients with DLQI>10 n(%)	p
Age			
≤37 years (n=45)	17(37)	29 (63)	0.015
>37 years (n=35)	21(62)	13 (38)	
Gender			
Male (n=48)	21(44)	27 (56)	0.21
Female (n=32)	17(53)	15 (47)	
Educational status			
Elementary school (n=15)	7 (47)	8 (53)	
Secondary school (n=41)	8 (20)	33 (80)	0.03
University (n=24)	11(46)	13 (54)	
Marital status			
Single (n=33)	9 (27)	24 (73)	
Married (n=43)	25 (58)	18 (42)	0.008
Divorced (n=1)	1 (100)	0 (0)	
Widower (n=3)	3 (100)	0 (0)	
Occupation			
Students (n=22)	4 (18)	18 (82)	0.002
Employees (n=58)	33(57)	25 (43)	
Duration of disease (years)			
≤1 (n=40)	22 (55)	18 (45)	
]1-5] (n=26)	12 (46)	14 (54)	0.36
]5-10] (n=5)	1 (20)	4 (80)	
>10 (n=9)	3 (33)	6 (67)	
Clinical presentation			
Psoriasis vulgaris (n=51)	26 (51)	25 (49)	
Guttate psoriasis (n=17)	6 (6)	11 (64)	0.73
Pustular psoriasis (n=9)	4 (44)	5 (55)	
Erythrodermic psoriasis (n=2)	1 (50)	1 (50)	
Localization of the psoriasis			
Scalp (n=42)	17 (40)	25 (60)	
Nail (n=4)	1 (25)	3 (75)	0.2
Skin fold (n=2)	1 (50)	1 (50)	
Palmo-plantar (n=3)	3 (100)	0	
Body surface area involved			
≤30% (n=35)	23(66)	12 (34)	
>30% (n=45)	15(33)	30 (67)	0.002

Table II : Correlation between the severity of psoriasis and QOL

DLQI	Number of patients	Mean of PASI	Standard deviation of PASI	p
≤10	38	5.23	3.3	0.002
>10	42	10.38	4.67	

Table III: DLQI in psoriasis reported by several authors

Authors/Country	Year	Number of cases	Mean DLQI
Mazotti E et al. Italie [7]	2005	900	8
Wahl AK et al. Norvège [8]	2006	85	10.6
Eghileb AM et al. Angleterre [9]	2007	63	10
Valenzuela F et al. Chile [10]	2010	153	14
Benchikhi H et al. Maroc [11]	2013	40	11.15
Kouris A et al. Grec [12]	2015	84	12.61
Maoua M et al. Tunisie [13]	2015	58	16.1
Our study	2018	80	13.85