

Original Research Article

Pruritus among adult psoriatic patients attending Khartoum dermatology and venereology teaching hospital (2019-2020)

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Received: 03 May 2026

Revised: 15 May 2026

Accepted: 19 May 2026

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ABSTRACT

Background: Pruritus is one of the most common subjective symptoms in dermatological diseases and significantly affects the quality of life of psoriasis patients. Psoriasis is a chronic inflammatory skin disease with complex and multifactorial pathogenesis.

Methods: A hospital-based descriptive cross-sectional study was conducted at Khartoum Dermatology and Venereology Teaching Hospital from August 2019 to August 2020. Sixty adult psoriasis patients fulfilling the inclusion criteria were enrolled in the study. Data were collected using structured questionnaires and analyzed using SPSS version 25.0.

Results: Among the study participants, 50% were older than 40 years and 56.7% were males. Plaque psoriasis was the most common clinical type (41.8%). Pruritus was reported in 68.3% of patients, with localized pruritus observed in 60% of cases. Severe pruritus was present in 45% of patients, while weather was identified as the main aggravating factor by 46% of participants. Medications were reported as the primary relieving factor by 97.6% of patients.

Conclusions: Pruritus is highly prevalent among psoriasis patients and represents an important clinical symptom that may significantly affect patients' quality of life. Proper evaluation and management of pruritus should be integrated into psoriasis care.

Keywords: Pruritus, Psoriasis, Psoriatic arthritis, Khartoum dermatology

INTRODUCTION

Pruritus is the most frequently reported subjective symptom in dermatological and some systemic diseases, significantly impairing quality of life. Psoriasis, a common chronic inflammatory skin condition affecting approximately 1-3% of the global population, is characterized by complex and multifactorial etiopathogenesis that remains incompletely understood.¹ Though pruritus affects 64% to 97% of psoriasis patients, it has historically been under-recognized as a major symptom in psoriasis literature.^{2,3}

Psoriasis manifests as well-demarcated, red papules and plaques with white or silver scales, often causing itching, stinging, and pain. It affects men and women worldwide, predominantly between ages 50-69, and is associated with comorbidities including psoriatic arthritis (1.3%-34.7%), nail changes (4.2%-69%), cardiovascular diseases, and psychological burdens such as depression, stigma, and social exclusion.^{4,5} The disease etiology involves genetic predisposition and immune system dysregulation, with triggers like trauma, infections, drugs, and stress. Treatment aims at symptom control using

topical, systemic, and phototherapy, but a definitive cure remains elusive.

Several studies have examined pruritus in psoriasis across various populations:

Italy (2019)

In 10,802 patients from the PsoCare registry, itch intensity correlated with female gender, specific psoriasis types and locations, severer disease, shorter disease duration, and fewer prior systemic treatments.⁶

University of Florence (2018)

Among 90 moderate-to-severe psoriasis patients, 85% reported pruritus with moderate intensity; phototherapy (nb-UVB) and biologics (etanercept, efalizumab) were most effective in itch reduction.⁷

Australia (2017)

In 179 patients, higher itch frequency was linked to greater disease severity (PASI>10), while nail psoriasis was associated with less frequent itch; no treatment showed itch reduction.⁸

Japan (2017)

Using the Japanese 5-D Itch Scale, pruritus was prevalent and impacted quality of life; pruritus scores correlated with psoriasis severity.⁹

Turkey (2016)

In 880 patients, pruritus was more common in females and those with higher BMI, and was associated with disease severity but not systemic disease presence.¹⁰

India (2015)

Among 614 patients, 79% experienced pruritus, more commonly and severely in females; no significant difference was found between mild and severe psoriasis.¹¹

USA (2015)

In 197 patients treated with tofacitinib, pruritus reduction was shown to be a direct effect of the drug and mostly independent of visible skin improvements, validating the Itch Severity Score as a pruritus measure.¹²

METHODS

Study design

The study design was a hospital based, descriptive cross-sectional study.

Study area

The study conducted at Khartoum dermatology and venereology teaching hospital which had been and remained to be the first and largest specialized dermatology hospital in Sudan. The role of the hospital became a national training center in dermatology for medical students, house officers, registrars and specialists. It also provides healthcare services to patients from different states of the country. To coup up with the demands of its' clients, the hospital has to expand and has established many medical activities.

Study duration

The study was conducted during the period from August 2019 to august 2020.

Study population

All patients attending Khartoum dermatology and venereology teaching hospital who is known to be psoriatic and complaining of pruritus during the period of study will be include in our study.

Inclusion criteria

Adults (aged 18 years or more), diagnosed with psoriasis, attended psoriasis clinic in Khartoum dermatology and venereology teaching hospital in the study time period, accepted to participate in study were included in study.

Exclusion criteria

Any patients had pruritus due to other chronic illness such as patients with hepatic or renal problems, any patient not fulfill the inclusion criteria above or refuse to participate in the study were excluded from study.

Sample size

Since this cross sectional study which simplified formula to calculate sample sizes. This formula was used to calculate the sample sizes in attached tables. Formula: $n = Z^2 * P(1-P) / E^2$

n: the sample size, z: constant score=1.96, p: prevalence of psoriasis 2-4%with mean of 3%, E: constant=0.04 then the estimated sample size is; 59.6=60 patients.

Sample techniques

Simple random techniques wereapplied to select a representative study sample.

Data collection

Data collection is conduct by 2 trained interviewers through specifically pre-test design questionnaire. Data

are collect using structured questionnaires, developed and piloted before the start of data collection, and data collectors will be train in their use. Questionnaires are review for both the content and structure by the researcher.

Pre-test questionnaire is administered to the patients including proper history, clinical examinations, routine investigations done for AUB, diagnosis and surgical procedures. All the surgical procedures and medical management and investigations will be conduct under direct guidance and supervision of our guide

Study variables

Dependent variable was pattern of pruritus.

In dependent variable were socio demographics factors and age.

Data entry and quality control

Then data was exported to SPSS version 25.0 for data analysis.

Data analysis

Descriptive statistics in term of frequency tables with percentages and graphs.

Descriptive analysis will perform for all study variables with mean and standard deviation for quantitative data and frequencies with proportions for qualitative data.

Bi-variable analysis to determine the associations between the main outcome variable and the other relevant risk factors with Chi square test (for categorical variables) and t test (quantitative variables) statistical tests. $P=0.05$ or less is considered significant

Data presentation

Data with be represented after analysis in form of uni-variable tables, cross tabulation (bi variable tables), multivariable tables, figures and narrative illustration.

Ethical consideration

Ethical clearance and approval for conducting this research was obtained from the SMSB.

Ethical clearance and approval for conducting this research was obtained from the general manager of the Hospital.

Informed written consent was obtained from every respondent who agree to participate in the study. Of course, the respondents were informed that the study is not associated with experimental or therapeutic intervention.

All participants was informed about the objectives of the study and that their participation is on voluntarism and none rock-solid for participation.

RESULTS

In a descriptive cross-sectional hospital-based study, 60 study participants were enrolled in this study from Khartoum dermatology and venereology teaching hospital fulfilling all inclusion criteria, SPSS version 25 used for analysis and obtaining the following the results.

Half (50%) of psoriasis patients were >40 years old, as shown in Figure 1 below. More than half (56.7%) of psoriasis patients were males, as shown in Figure 2 below. Less than half (46.7%) of psoriasis patients were having basic educational level, as shown in Figure 3 below. Less than half (41.7%) of psoriasis patients having the disease for duration of 1-5 years, as shown in Figure 4 below. Less than half (41.8%) of psoriasis patients had plaque psoriasis, as detailed in Table 1 below. More than half (68.3%) of psoriasis patients complained of pruritus, as shown in Figure 5 below. More than half (56.3%) of psoriasis patients were having pruritus for >1 month, as shown in Figure 6 below. More than half (60%) of psoriasis patients were having localized pruritus, as shown in Figure 7 below. Less than half (45%) of psoriasis patients were having severe pruritus, as shown in Figure 8 below. Less than half (46%) of psoriasis patients mentioned that weather was main aggravating factor, as detailed in Table 2 below. Majority (97.6%) of psoriasis patients mentioned that main relieving factor was medicines, as detailed in Table 3 below.

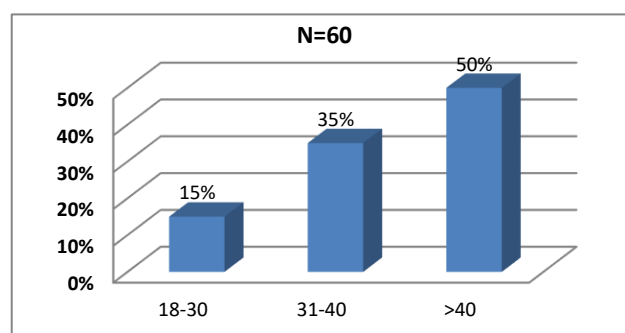


Figure 1: Age group in years distribution among psoriasis patients, KTHDV 2020.

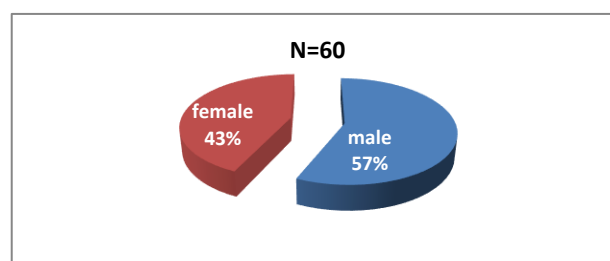


Figure 2: Gender distribution among psoriasis patients, KTHDV 2020.

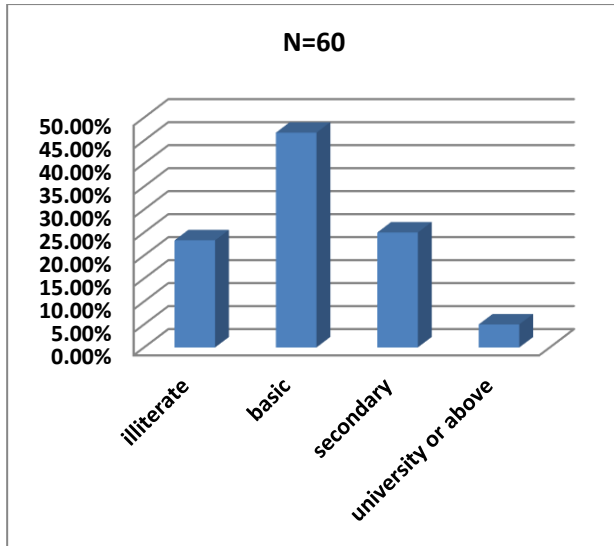


Figure 3: Educational level distribution among psoriasis patients, KTHDV 2020.

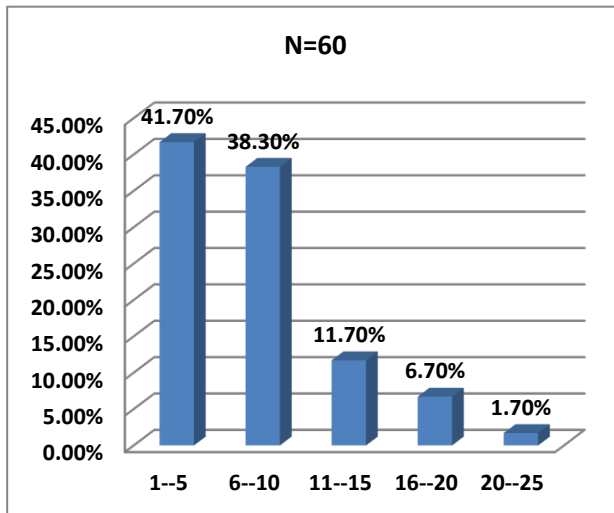


Figure 4: Disease duration distribution among psoriasis patients, KTHDV 2020.

Table 1: Clinical type distribution among psoriasis patients, KTHDV 2020.

Clinical type	N	Percentage (%)
Plaque psoriasis	41	41.8
Guttate psoriasis	2	2.2
Inverse psoriasis	2	2.2
Pustular psoriasis	1	1.1
Erythrodermic psoriasis	8	8.1
Scalp psoriasis	20	20.2
Nail psoriasis	13	13.1
Psoriatic arthritis	1	1.1
Oral psoriasis	1	1.1
Palmo planter psoriasis	9	9.1
Others	0	0.0

Table 2: Pruritus aggravating factors distribution among psoriasis patients, KTHDV 2020.

Aggravating factors	N	Percentage (%)
Weather	23	46.0
Food	3	6.0
Trauma	0	0.00
Clothes	3	6.0
Others	21	42.0

Table 3: Pruritus relieving factors distribution among psoriasis patients, KTHDV 2020.

Relieving factors	N	Percentage (%)
Weather	1	2.4
Medicines	41	97.6
Others	0	0.0

DISCUSSION

The present study was conducted to assess the prevalence and severity of pruritus among adult psoriatic patients attending Khartoum Dermatology and Venereology Teaching Hospital, Sudan, during the period from August 2019 to August 2020. A total of 60 patients diagnosed with psoriasis were included in the study. The findings of this study demonstrated that psoriasis was more common among older adults, with 50% of patients aged above 40 years and a mean age of 54 ± 3 years. These findings are consistent with the study conducted by Ishiuiji et al who reported a mean age of 54.6 ± 15.6 years among psoriasis patients.¹³ Similarly, Damiani et al documented a mean age of 48.8 ± 14.3 years among psoriatic patients.¹⁴

Regarding gender distribution, the current study showed male predominance, with males accounting for 56.7% of patients and a male-to-female ratio of 1.3:1. This finding is comparable to the study by Swain et al which reported that 55% of psoriasis patients were males.¹⁵

Concerning disease duration, 41.7% of patients had psoriasis for a duration ranging from 1 to 5 years. This finding partially agrees with the study conducted by Prignano et al who reported that most psoriasis patients had disease duration of less than 15 years.¹⁶

In terms of clinical type, plaque psoriasis was the most common subtype in this study, accounting for 41.8% of cases. This finding differs from the results reported by Damiani et al who observed predominance of pustular psoriasis.¹⁷

Pruritus was reported in 68.3% of psoriatic patients in the present study, indicating that itching is a common symptom among Sudanese psoriatic patients. This result is in agreement with Prignano et al who found that approximately 85% of psoriasis patients experienced pruritus.¹⁸

With respect to pruritus severity, 45% of patients experienced severe itching. This finding contrasts with the study by Damiani et al where only 18.7% of patients reported severe pruritus.¹⁹

Limitations

The present study had several limitations. The sample size was relatively small and was conducted in a single tertiary hospital, which may limit the generalizability of the findings to all Sudanese psoriatic patients. In addition, the cross-sectional design of the study limited the ability to establish causal relationships between psoriasis characteristics and pruritus severity. Further multicenter studies with larger sample sizes are recommended.

CONCLUSION

Pruritus is a common symptom among Sudanese patients with psoriasis and was reported in more than two-thirds of the studied patients. Plaque psoriasis represented the most frequent clinical subtype associated with pruritus. Severe itching was observed in a considerable proportion of patients, highlighting the substantial impact of pruritus on patient wellbeing and quality of life. The findings of this study emphasize the importance of early detection and proper management of pruritus in psoriatic patients to reduce disease burden and improve patient outcomes.

Pruritus was found to be very common in Sudanese psoriatic patients (68.3%). The pruritus is common in plaque type of psoriasis (41.8%).

Recommendations

Early detection and assessment of pruritus among psoriasis patients should be incorporated into routine dermatological practice to improve disease management and reduce morbidity. In addition, larger multicenter studies are recommended to further investigate the prevalence, severity, and associated factors of pruritus among Sudanese psoriatic patients.

Further large researches need to explore more about psoriasis among Sudanese patients.

ACKNOWLEDGEMENTS

Authors would like to thanks prof. Bakri AL-Agraa professor of dermatology and director of Khartoum Dermatology and Venereology teaching Hospital for taking the time to review and guide me through my research.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

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Cite this article as: Najib MM, Marahid RHM, Rahma ZM. Pruritus among adult psoriatic patients attending Khartoum dermatology and venereology teaching hospital (2019-2020). Int J Res Dermatol 2026;12:258-62.