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Original Article

Prevalence and Factors Associated with Psoriatic Arthritis among Psoriasis Patients on Follow-up at the Dermatology and Rheumatology Units, Kenyatta National Hospital, Kenya

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Keywords:
Psoriatic arthritis, Psoriasis, Polyarticular arthritis, Nail Changes, Facial psoriasis, PASI score.

ABSTRACT

Background: Psoriatic arthritis (PsA) is a serious and potentially debilitating condition that frequently occurs in individuals with psoriasis. The burden of PsA ranges between 6 – 42 percent globally and occurs in approximately 30% of patients with psoriasis. However, the burden of PsA has not been fully investigated within the local context. **Purpose of the study:** To determine the prevalence and factors associated with psoriatic arthritis among psoriasis patients on follow-up at the Dermatology and Rheumatology units, Kenyatta National Hospital. **Methodology**: This was a cross-sectional study conducted at Kenyatta National Hospital. A consecutive sampling technique was used to sample 80 patients diagnosed with psoriasis. A structured questionnaire was used to collect data. The CASPAR criteria were used to screen for PsA. The prevalence of PsA was obtained as a proportion of patients with PsA over the total sample size and expressed as a percentage. Bivariate and multivariable analyses were done to investigate factors associated with PsA using binary logistic regression. A STATA version 16 was used to analyse the data. **Results:** The Majority of the patients were male (65%), 47.5% were aged between 31 and 49 years, with the youngest being four years and the oldest being 75 years. Further, 52.5% had psoriasis for more than 48 months, and 33.8% had a family history of psoriasis. The average PASI score was 11.5 (SD=8.9). The common type of psoriasis was plaque (70%), and the common site of psoriasis included the extremities (78.8%). The prevalence of psoriasis arthritis was 23(28.8%) with a 95%CI: 19.4% to 40.2%. The common psoriatic arthritis subtypes included polyarticular arthritis (39.1%), spondylarthritis (26.1%), and oligoarticular arthritis (21.7%). The multivariable analysis revealed that significant factors associated with Psoriatic Arthritis include gender (females, aOR = 10.11, 95% CI: 1.12, 91.61, p = 0.040), history of smoking (aOR = 21.37, 95% CI: 2.45, 186.71, p = 0.006), nail involvement (aOR = 5.44, 95% CI: 2.69, 42.1, p = 0.006), onycholysis morphology (aOR = 11.39, 95% CI: 1.42, 91.50, p = 0.022), Oil drops (aOR = 12.11, 95% CI: 1.44, 34.12, p = 0.034), and the PASI score (aOR = 2.11, 95% CI: 1.34, 6.11, p < 0.001). **Conclusion and recommendations:** Psoriatic arthritis (PsA) burden is high, with polyarticular arthritis being the most common subtype. Female gender, smoking history, nail

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involvement, onycholysis morphology, Oil drops, and a higher PASI score are key contributors to the likelihood of developing PsA. Early monitoring for these factors is recommended.

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INTRODUCTION

Psoriasis is defined as a systemic inflammatory condition that is characterised by a higher rate of skin and joint manifestations. The psoriatic arthritis condition affects about 30% of the psoriasis patients (Wilson et al., 2009). However, there is no clear path for the development of Psoriatic arthritis (PsA) among psoriasis patients. Thus, identifying the underlying risk factors is integral to effective diagnosis and management of this condition.

Among patients with psoriasis, an approximate prevalence of psoriatic arthritis, ranging from 20% to 40%, and incidence of 2.7 patients per 100 patients per year, is reported globally (Alinaghi et al., 2019). PsA was once assumed to be a harmless ailment, but it is now widely recognised as a systemic inflammatory disease that can cause severe joint damage and disability. Among most patients with psoriasis; psoriasis and arthritis often emerge at the same time, however, arthritis may precede psoriasis in 10%-15% of patients. Data on the epidemiology of PsA among the general population and patients with psoriasis are conflicting because of disparities in the geographical location, target population, techniques, and definition of PsA utilised in the studies (Rech et al., 2020).

PsA is an increasing problem among patients with psoriasis, occurring in approximately 7 to 41% (Ogdie & Weiss, 2015). Even though there have been advancements in treatment with novel immune modulating medicines, such as tumour necrosis factor α (TNFα) inhibitors, patients who have Psoriatic arthritis (PsA) continue to face severe morbidity. This includes the gradual degradation of joints, dysfunctional impairment, and increasing expenditures associated with medical care (Wilson et al., 2009).

Although a number of studies have produced evidence of risk factors for the development and progression of psoriatic arthritis (PsA), relatively little is known about the clinical characteristics of psoriasis that are connected with the onset of PsA. Both acute life stressors and physical trauma in individuals with psoriasis, which is referred to as the deep Koebner phenomenon, have been discovered to be related to the onset of psoriatic arthritis (PsA) in recent research. However, within the local context, there has been a paucity of data on the burden of PsA among patients with psoriasis and associated factors. This study sought

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to determine the prevalence and factors associated with psoriatic arthritis among psoriasis patients on follow-up at the Dermatology and Rheumatology units of Kenyatta National Hospital, Kenya.

METHODS AND MATERIALS

Study Design

This was a cross-sectional study between January 2025- May 2025.

Study Site

This study was conducted at Kenyatta National Hospital in Nairobi, Kenya. Participants were recruited from the Dermatology and Rheumatology outpatient clinics and inpatient wards. With a capacity of 2,400 beds and over 6,000 staff members, Kenyatta National Hospital is the largest referral hospital in the country of Kenya. Nairobi County, located in the upper hill region of Kenya. KNH is a national referral institution that accepts patients who have complex medical conditions and require specialist treatments from throughout the country. Kenyatta National Hospital is a comprehensive medical facility that offers specialised care in a variety of departments, including but not limited to Surgery, Internal Medicine, Paediatrics, Obstetrics and Gynecology, Orthopedics, and Dermatology, amongst others. There are approximately three patients with Psoriasis who attend the Dermatology and Rheumatology clinics every week.

Study Population

The study population included both pediatric and adult patients diagnosed with psoriasis in the Dermatology and Rheumatology units of Kenyatta National Hospital. Adults and pediatric patients attending the Dermatology and Rheumatology outpatient clinic at Kenyatta National Hospital or admitted to the Dermatology and Rheumatology wards and diagnosed to have biopsy-proven psoriasis by a KNH consultant. Those who declined were excluded.

Sample Size Determination

The sample size was determined using Fisher's formula based on the assumptions from a study in Malaysia by Loo et al., which established that the prevalence of PsA was 29.7% (Loo et al., 2023a). The confidence interval was considered at 95% and a 10% margin of error, giving a sample size of 80 patients.

Sampling Procedure

Consecutive sampling was used.

Data Collection Procedure

Recruitment of the study participants was done by the principal investigator with the help of research assistants. The research assistants were trained beforehand on filling out the data collection tool and obtaining informed consent. The researcher approached patients at each respective study area and explained the purpose of the study and administered consent. Those who met the inclusion criteria were recruited to the study. The recruitment at the clinic was done as the patients waited in line before seeing a doctor. Others were recruited while in the wards or the phototherapy unit. A structured questionnaire was administered. The questionnaire was interviewer-administered to ensure that patients effectively understood the components included in the questionnaire.

The CASPAR (Classification Criteria for Psoriatic Arthritis) screening tool is a widely used set of criteria for the classification of psoriatic arthritis (PsA) in clinical and research settings. It was developed to help identify individuals who may have PsA based on a standardised set of features. CASPAR criteria are often used for the classification of PsA in research studies and clinical trials to ensure that the study participants have PsA.

The CASPAR criteria include five key features. Individuals with established inflammatory articular disease are classified as having PsA by meeting a score of three or more. This helps to distinguish PsA from other forms of arthritis. The CASPAR criteria aim to provide a standardised and consistent method for identifying PsA patients in research and clinical settings, ensuring

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that studies and clinical trials are conducted with a well-defined patient population.

Validity and Reliability

A pre-test was conducted at the Kenyatta National Hospital Dermatology and Rheumatology clinics. The pre-test ensured that the selected research instruments contained all the necessary questions to help achieve better outcomes in improving research validity. To enhance reliability, an expert Dermatologist and Rheumatologist reviewed the study data collection instrument concerning the study objectives. An expert statistician was also contacted to review the data collection tool.

Data Management and Analysis

Data was collected using a structured questionnaire and stored in a lockable drawer accessible to the researcher. Data entry was done daily using EpiData version 3.1 to ensure a high level of completeness and exclude any questionnaires with incomplete information. The data was then uploaded to a password-protected Google Drive to prevent any unintentional loss. This database was updated as data entry was done throughout the data collection process. The hard copy questionnaires will be stored for five years, after which they will be discarded. Data was analysed using both descriptive and inferential analysis. Categorical data were grouped and analysed in terms of frequencies and percentages, while continuous variables were assessed using mean and standard deviation. The prevalence of PsA was obtained as a proportion of patients with PsA over the total sample size and expressed as a percentage. Bivariate and multivariable analyses were done to investigate factors associated with PsA using binary logistic regression. Significant findings from the bivariate analysis were subjected to multivariable analysis. A STATA version 16 was used to analyse the data.

Ethical Consideration

Ethical approval was obtained from KNH-UoN ERC number: **KNH-ERC/A/368**

RESULTS

A total of 88 patients were screened, 5 did not meet the study criteria, and three declined consent. Thus, 80 psoriasis patients were included in the study.

Characteristics of Psoriasis Patients on Follow-up at the Dermatology and Rheumatology Units, Kenyatta National Hospital, Kenya

The findings showed that 38 (47.5%) were aged between 31 and 49 years, and 52 (65%) of the patients were male. In terms of education level, 26 (32.5%) had tertiary level education, while 25 (31.3%) had primary level education. More than half of the patients, 42 (52.5%), had the psoriatic disease for more than 48 months. The average PASI score was 11.5±8.9, as shown in Table 1.

Table 1: Characteristics of Psoriasis Patients on Follow-up at the Dermatology and Rheumatology Units, Kenyatta National Hospital, Kenya

	Frequency	Percent
Age		
Less than 30 years	15	18.8
31 - 49 years	38	47.5
50 years and above	27	33.8
Gender		
Male	52	65.0
Female	28	35.0
Highest level of education		
No formal education	7	8.8
Primary level education	25	31.3
Secondary	22	27.5
Tertiary	26	32.5
Marital status		

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	Frequency	Percent
Single	27	33.8
Divorced/Separated	15	18.8
Married	38	47.5
Religion		
Christian	69	86.3
Muslim	11	13.8
Duration of psoriasis		
≤24 months	21	26.3
25 - 48 months	17	21.3
>48 months	42	52.5
History of psoriasis in the family		
No	53	66.3
Yes	27	33.8
History of smoking		
No	61	76.3
Yes	19	23.8
History of alcohol use		
No	39	48.8
Yes	41	51.3
Presence of pre-existing condition		
No	39	48.8
Yes	41	51.3
PASI score (Mean, SD)	11.5±8.9	

Types of Psoriasis

Plaque psoriasis was the most common type, affecting 56 patients (70.0%), followed by sebopsoriasis, present in 42 patients (52.5%). Pustular psoriasis; 16 patients (20.0%), while guttate psoriasis was the least common, seen in 4 patients (5.0%).

Site of Psoriasis

In investigating the site of psoriasis, 63 (78.8%) had extremities, 60 (75%) had psoriasis in the trunk, while 51 (60%) had scalp, and 48 (60%) had nail involvement as shown in Table 2.

Table 2: Site of Psoriasis

	Frequency	Percent
Site of psoriasis		
Extremities	63	78.8
Trunk	60	75.0
Scalp	51	63.8
Nail involvement	48	60.0
Palms and/or soles	37	46.3
Intergluteal/perianal	26	32.5
Axilla/groin	22	27.5
Face	21	26.3
Face involvement	13	16.3
Genital involvement	7	8.8
Unknown	2	2.5

Morphology of Nail Patterns

Pitting was the most frequently observed nail morphology, present in 37 patients (46.3%). Onycholysis affected 26 patients (32.5%), while leukonychia was seen in 25 patients (31.3%). Subungual hyperkeratosis was observed in 17 patients (21.3%), and oil drops in 13 patients (16.3%). Splinter haemorrhages occurred in 10

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patients (12.5%), with crumbling nails being the least common morphology, seen in 7 patients (8.8%).

The Prevalence of Psoriatic Arthritis among Psoriasis Patients on Follow-up at the Dermatology and Rheumatology Units, Kenyatta National Hospital, Kenya

The prevalence of psoriasis arthritis was 23 (28.8%) with a 95%CI: 19.4% to 40.2%.

The Psoriatic Arthritis Subtypes among Psoriasis Patients on Follow-up at the Dermatology and Rheumatology Units, Kenyatta National Hospital, Kenya

Among the PSA cases, polyarticular arthritis was the most common subtype, affecting 9 patients (39.1%). Spondyloarthritis was present in 6 patients (26.1%), followed by oligoarticular arthritis in 5 patients (21.7%). Distal interphalangeal arthritis was seen in 2 patients (8.7%), while arthritis mutilans was the least common subtype, affecting 1 patient (4.3%).

Demographic and Clinical Characteristics Associated with Psoriatic Arthritis among Psoriasis Patients on Follow-up at the Dermatology and Rheumatology Units

Female patients were 2.8 times more likely to have PSA with an Odds ratio (OR) = 2.80 (95% CI: 1.03 to 7.61, p =0.038). A family history of psoriasis increased the odds of PSA by nearly fourfold (OR = 3.99, 95% CI: 1.4 to 11.09, p = 0.009). The history of smoking also significantly raised the odds of PSA by more than five times (OR = 5.62, 95% CI: 1.85 to 17.01, p = 0.003). Further, the presence of pustular psoriasis was associated with significantly reduced odds of PSA (OR = 0.13, 95% CI: 0.02 to 1.03, p = 0.031) as shown in Table 3.

Table 3: Demographic and Clinical Characteristics of Psoriatic Arthritis among Psoriasis Patients on Follow-up at the Dermatology and Rheumatology Units

		PSA			
	Total	PSA absent n (%)	PSA present n (%)	OR (95%CI)	p value
Age					
Less than 30 years	15	12(80.0)	3(20.0)	Ref	
31 - 49 years	38	26(68.4)	12(31.6)	1.85(0.44, 7.78)	0.403
50 years and above	27	19(70.4)	8(29.6)	1.68(0.37, 7.63)	0.499
Gender					
Male	52	41(78.8)	11(21.2)	Ref	
Female	28	16(57.1)	12(42.9)	2.80(1.03 7.61)	0.038
Highest level of education					
No formal education	7	5(71.4)	2(28.6)	Ref	
Primary level education	25	16(64.0)	9(36.0)	1.41(0.23, 8.78)	0.715
Secondary	22	17(77.3)	5(22.7)	0.74(0.11, 5.01)	0.754
Tertiary	26	19(73.1)	7(26.9)	0.92(0.14, 5.89)	0.931
Marital status					
Single	27	20(74.1)	7(25.9)	Ref	
Divorced/Separated	15	9(60.0)	6(40.0)	1.90(0.50, 7.31)	0.348
Married	38	28(73.7)	10(26.3)	1.02(0.33, 3.14)	0.972
Religion					
Christian	69	46(66.7)	23(33.3)		
Muslim	11	11(100)	0		
Duration of disease					
≤24 months	21	14(66.7)	7(33.3)		
25 - 48 months	17	17(100)	0		
>48 months	42	26(61.9)	16(38.1)		
History of psoriasis in the family					

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	Total	PSA absent n (%)	PSA present n (%)	OR (95%CI)	p value
No	53	43(81.1)	10(18.9)	Ref	
Yes	27	14(51.9)	13(48.1)	3.99(1.4, 11.09)	0.009
History of smoking					
No	61	49(80.3)	12(19.7)	Ref	
Yes	19	8(42.1)	11(57.9)	5.62(1.85, 17.01)	0.003
History of alcohol use					
No	39	27(69.2)	12(30.8)	Ref	
Yes	41	30(73.2)	11(26.8)	0.83(0.31, 2.18)	0.806
Pre-existing medical condition					
No	39	28(71.8)	11(28.2)	Ref	
Yes	41	29(70.7)	12(29.3)	1.05(0.40, 2.78)	0.557
Plaque					
No	24	15(62.5)	9(37.5)	Ref	
Yes	56	42(75.0)	14(25.0)	0.56(0.20, 1.55)	0.289
Guttate					
No	76	53(69.7)	23(30.3)		
Yes	4	4(100)	0		
Seborrheic psoriasis					
No	38	26(68.4)	12(31.6)	Ref	
Yes	42	31(73.8)	11(26.2)	0.77(0.29, 2.03)	0.629
Pustular					
No	64	42(65.6)	22(34.4)	Ref	
Yes	16	15(93.8)	1(6.3)	0.13(0.02, 1.03)	0.031

Association between the Site of Psoriasis and Psoriatic Arthritis among Psoriasis Patients on Follow-up at the Dermatology and Rheumatology Units

Patients with psoriasis on extremities were 75% less likely to have PSA compared to those without extremity involvement (OR = 0.25, 95% CI: 0.08–0.78, p = 0.031). Face involvement showed a significant protective association against PSA (OR = 0.19, 95% CI: 0.04–0.90, p = 0.024). Patients with nail psoriasis were almost seven times more likely to have psoriatic arthritis compared to those without nail involvement (OR = 6.91, 95% CI: 1.85–25.85, p = 0.002), as shown in Table 4.

Table 4: Association between Site of Psoriasis and Psoriatic Arthritis among Psoriasis Patients on Follow-up at the Dermatology and Rheumatology Units

	Total	PSA absent n (%)	PSA present n (%)	OR (95%CI)	p value
Site of psoriasis					
Scalp					
No	29	20(69.0)	9(31.0)	Ref	
Yes	51	37(72.5)	14(27.5)	0.84(0.31, 2.28)	0.8
Extremities					
No	17	8(47.1)	9(52.9)	Ref	
Yes	63	49(77.8)	14(22.2)	0.25(0.08, 0.78)	0.031
Trunk					
No	20	11(55.0)	9(45.0)	Ref	
Yes	60	46(76.7)	14(23.3)	0.37(0.13, 1.08)	0.087

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		PSA			
	Total	PSA absent n (%)	PSA present n (%)	OR (95%CI)	p value
Intergluteal/perianal					
No	54	35(64.8)	19(35.2)	Ref	
Yes	26	22(84.6)	4(15.4)	0.34(0.10, 1.12)	0.112
Face					
No	59	38(64.4)	21(35.6)	Ref	
Yes	21	19(90.5)	2(9.5)	0.19(0.04, 0.90)	0.024
Palms and/or soles					
No	43	30(69.8)	13(30.2)	Ref	
Yes	37	27(73.0)	10(27.0)	0.86(0.32, 2.27)	0.808
Axilla/groin					
No	58	40(69.0)	18(31.0)	Ref	
Yes	22	17(77.3)	5(22.7)	0.65(0.21, 2.05)	0.585
Unknown					
No	78	57(73.1)	21(26.9)		
Yes	2	0	2(100)		
Nail involvement					
No	32	29(90.6)	3(9.4)	Ref	
Yes	48	28(58.3)	20(41.7)	6.91(1.85, 25.85)	0.002
Face involvement					
No	67	46(68.7)	21(31.3)	Ref	
Yes	13	11(84.6)	2(15.4)	0.40(0.08, 1.96)	0.328
Genital involvement					
No	73	50(68.5)	23(31.5)		
Yes	7	7(100)	0		

Association between Nail Morphology and Psoriatic Arthritis among Psoriasis Patients on Follow-up at the Dermatology and Rheumatology Units

The findings showed that onycholysis showed a strong association with PSA. Patients with onycholysis had 4.4 times higher odds of having PSA compared to those without (OR = 4.40, 95% CI: 1.57–12.33, p = 0.007). Further, Oil drops were the strongest predictor among the nail morphologies studied. Its presence increased the odds of PSA nearly 14-fold (OR = 13.85, 95% CI: 3.33–57.58, p < 0.001), however, a wide CI was observed. This means that there is a higher level of uncertainty in the estimate, as it spans both very low and near null values (1.03). Therefore, the true relationship between oil drops nail morphology and PsA might not be as clear as the p-value suggests, and further research with a larger sample size would be needed to confirm the results, as shown in Table 5.

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Table 5: Association between Nail Morphology and Psoriatic Arthritis among Psoriasis Patients on Follow-up at the Dermatology and Rheumatology Units

		PSA			
	Total	PSA absent n (%)	PSA present n (%)	OR (95%CI)	p value
Morphology					
Onycholysis					
No	54	44(81.5)	10(18.5)	Ref	
Yes	26	13(50.0)	13(50.0)	4.40(1.57, 12.33)	0.007
Subungual hyperkeratosis					
No	63	48(76.2)	15(23.8)	Ref	
Yes	17	9(52.9)	8(47.1)	2.84(0.93, 8.67)	0.075
Oil drops					
No	67	54(80.6)	13(19.4)	Ref	
Yes	13	3(23.1)	10(76.9)	13.85(3.33, 57.58)	<0.001
Pitting					
No	43	31(72.1)	12(27.9)	Ref	
Yes	37	26(70.3)	11(29.7)	1.09(0.41, 2.88)	0.526
Splinter hemorrhages					
No	70	51(72.9)	19(27.1)	Ref	
Yes	10	6(60.0)	4(40.0)	1.79(0.46, 7.05)	0.462
Leukonychia					
No	55	40(72.7)	15(27.3)	Ref	
Yes	25	17(68.0)	8(32.0)	1.26(0.45, 3.51)	0.791
Crumbling					
No	73	52(71.2)	21(28.8)	Ref	
Yes	7	5(71.4)	2(28.6)	0.99(0.18, 5.51)	0.679

Multivariable Analysis of Factors Associated with Psoriatic Arthritis

The multivariable analysis of factors associated with Psoriatic Arthritis revealed that gender was a significant factor, with females having an odds ratio (aOR) of 10.11 (95% CI: 1.12, 91.61, p = 0.040), indicating a higher likelihood of Psoriatic Arthritis compared to males. The history of smoking was strongly associated with Psoriatic Arthritis, with an aOR of 21.37 (95% CI: 2.45, 186.71, p = 0.006), suggesting that smoking increases the risk of developing the condition. Nail involvement was another significant predictor, with an aOR of 5.44 (95% CI: 2.69, 42.1, p = 0.006), showing a higher risk of Psoriatic Arthritis in individuals with nail involvement. Onycholysis morphology was also significant, with an aOR of 11.39 (95% CI: 1.42, 91.50, p = 0.022), indicating a strong association with the condition. Oil drops were found to be significant with an aOR of 12.11 (95% CI: 1.44, 34.12, p = 0.034), suggesting an increased risk. Finally, the PASI score was highly significant, with an aOR of 2.11 (95% CI: 1.34, 6.11, p < 0.001), indicating that higher PASI scores are strongly associated with Psoriatic Arthritis, as shown in Table 6. These findings, however, show wide confidence intervals, which illustrate that the true risk could vary widely, with a possibility of a very large effect.

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Table 6: Multivariable Analysis of Factors Associated with Psoriatic Arthritis

Variables	aOR(95%CI)	P value
Gender		
Male		
Female	10.11(1.12, 91.61)	0.04
Family history of psoriasis	1.66(0.16, 16.76)	0.669
History of smoking	21.37(2.45, 186.71)	0.006
Pustular psoriasis	0.10(0.01, 10.10)	0.333
Trunk psoriasis	1.17(0.10, 13.03)	0.899
Face	0.32(0.11, 0.89)	0.031
Nail involvement	5.44(2.69, 42.1)	0.006
Onycholysis morphology	11.39(1.42, 91.50)	0.022
Oil drops	12.11(1.44, 34.12)	0.034
PASI score	2.11(1.34, 6.11)	<0.001

DISCUSSION

The prevalence of psoriatic arthritis (PsA) in this study was 28.8% (95% CI: 19.4% to 40.2%), which is comparable to findings from other studies. A cross-sectional study conducted in a tertiary hospital in Turkey found a prevalence of 25.4% (Çınar, 2015), while a similar study in the United States reported a prevalence of PSA arthritis of 29.8% (Truong et al., 2015). The similarities in these studies could be attributable to a similar cross-sectional design approach, employing comparable diagnostic criteria and patient recruitment strategies, which enhances the validity of comparing prevalence estimates.

Polyarticular arthritis was the most common subtype in this study, affecting 39.1% of participants, followed by spondylarthritis (26.1%) and oligoarticular arthritis (21.7%). Other subtypes included distal interphalangeal predominant arthritis (8.7%) and arthritis mutilans (4.3%). In contrast, a cross-sectional study in Turkey reported that the most common subtypes of psoriatic arthritis (PsA) were asymmetrical oligoarticular arthritis (53.1%) and spondyloarthritis (43.8%) (Çınar, 2015). Similarly, an observational cross-sectional study in China found that among PsA patients, the most common patterns were oligoarthritis (48%), spondyloarthritis (27%), and polyarthritis (20%) (Yang et al., 2011). These differences in findings could be attributed to genetic and ethnic variations across populations, which can influence the clinical expression of PsA, resulting in differing predominant arthritis patterns. Additionally, environmental factors such as climate, lifestyle, and access to healthcare might affect disease manifestation and diagnosis.

Female gender and smoking history were found to significantly increase the risk of psoriatic arthritis (PsA) in this study, with nail changes strongly associated with the condition. Interestingly, facial psoriasis showed a reduced risk, while higher psoriasis severity (as measured by PASI score) correlated with a greater likelihood of developing PsA. These findings are comparable to other studies. A study in Malaysia found that PsA was significantly associated with being an ever-smoker and nail involvement (Loo et al., 2023b). In Sweden, research indicated that individuals with severe psoriasis had a 3.2 times higher risk of developing PsA compared to those with mild psoriasis (Lindberg et al., 2020). Similarly, a study in Italy reported that the burden of the disease was higher in females (Lubrano et al., 2023). All these studies employed observational designs focusing on clinical risk factors, which enhances the validity of these consistent associations across diverse populations.

Study Strengths and Weaknesses

The study employed CASPAR, ensuring a standardised and consistent identification of PsA cases, enhancing the reliability and comparability of the findings with other studies globally. A major limitation of this study was that there was a likelihood that we may have missed early or

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atypical cases of psoriatic arthritis that do not yet meet the full classification thresholds.

CONCLUSION AND RECOMMENDATIONS

The present study established that psoriatic arthritis affected nearly one-third (28.8%) of psoriasis patients, with polyarticular arthritis as the predominant subtype. Female gender, smoking history, and nail changes were significant risk factors, while facial psoriasis was linked to a lower PsA risk. Greater psoriasis severity, measured by PASI score, was strongly associated with increased likelihood of developing PsA. These findings illustrate the need to establish routine screening protocols for PsA among psoriasis patients, focusing on those with identified associated factors such as female gender and nail involvement as well as enhance training for healthcare providers on recognizing clinical signs of PsA, including nail changes and disease severity indicators, to enable early diagnosis and timely treatment with the appropriate systemic therapies.

The clinical significance of nail assessment during routine psoriasis follow-up is emphasised by the findings in this study. Smoking cessation support needs to be incorporated in the psoriatic disease treatment protocols to reduce the risk of progression to psoriatic arthritis and improve the overall disease outcomes.

Patient awareness of the need for seeking early assessment for any joint symptoms should also be emphasised during their routine visits for the cutaneous disease.

Future studies in this subject can use other standardised tools like the Disease Activity in Psoriatic Arthritis score (DAPSA) to follow up patients, assess for more risk factors and efficacy of different treatment options.

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Conflict of Interest

There was no known conflict of interest to declare

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