



Original Article



Exercise Practices and Awareness of Physiotherapy among Psoriatic Arthritis Patients Attending a Dermatology Clinic: A Cross-sectional Study

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ABSTRACT

Psoriatic arthritis causes joint pain and stiffness, and while physical therapy can help manage symptoms, awareness of its benefits is limited among patients. **Objectives:** To explore the frequency of physiotherapy utilization and exercise practices among individuals diagnosed with psoriatic arthritis attending a dermatology clinic. **Methods:** A cross-sectional study was conducted among 217 patients with psoriatic arthritis using a convenience sampling technique at a dermatology and dental clinic in Bahria Town, Lahore, over 4 months. Participants aged 18-50 years, diagnosed with psoriatic arthritis and attending dermatology consultations at the study site, were included. Data were collected via a structured questionnaire assessing knowledge, attitudes, and practices related to psoriatic arthritis and physical therapy. The questionnaire was adapted from a previously validated Indian study and administered in English and Urdu during dermatology clinic visits after obtaining informed consent. Data were analyzed using SPSS version 24.0. **Results:** A total of 153 participants with a mean age of 40.61 ± 6.73 years were included, with a slightly higher proportion of female (53.6%). Most were single (58.2%) and had an education ranging from primary to postgraduate. While 69.9% had heard of psoriasis, only 49% were aware of psoriatic arthritis. Nearly half had symptoms for more than a year, yet 26.1% were unaware of their current diagnosis. Rheumatologist visits were infrequent, and only 35.3% reported full compliance with therapy. **Conclusions:** Most participants knew about psoriasis and had long-term symptoms, but had limited awareness of psoriatic arthritis and poor engagement with physiotherapy practices.

INTRODUCTION

Psoriatic arthritis (PsA) is a chronic inflammatory disease that primarily affects the joints and entheses, the sites where tendons and ligaments attach to bones [1]. It is closely associated with psoriasis, a skin condition characterized by red, scaly plaques, and is classified as a seronegative spondyloarthropathy, meaning it does not involve rheumatoid factor positivity like rheumatoid arthritis. PsA is a systemic disease, meaning it can also impact other organs, including the cardiovascular system and metabolic processes [2]. The prevalence of PsA varies, with studies estimating that between 20-30% of individuals with psoriasis will develop this condition [3]. It

affects men and women equally and can arise at any age, though it typically manifests between the ages of 30 and 50 [4]. The global incidence of PsA differs depending on geographic and genetic factors, with estimates ranging from 0.1% to 1% of the population [5]. The underlying pathophysiology of PsA involves immune system dysfunction, where genetic, environmental, and immunological factors contribute to chronic inflammation in the joints and surrounding tissues [6]. Over activation of T cells and cytokines such as TNF- α , IL-17, and IL-23 plays a central role in triggering inflammatory pathways [7]. This results in synovitis, the inflammation of the synovial



membrane that lines the joints, and enthesitis, the inflammation of the tendon and ligament attachment points [8]. Over time, the chronic inflammatory response leads to structural changes, including both bone erosion and excessive bone formation, which can cause joint deformities [9]. PsA also has systemic effects, contributing to an increased risk of metabolic disorders, cardiovascular diseases, and psychological conditions [10]. PsA can affect both peripheral and axial joints. The most commonly involved areas include the fingers, wrists, knees, and ankles, as well as the spine and sacroiliac joints. Enthesitis is a hallmark feature of the disease, often affecting areas such as the Achilles tendon and the plantar fascia. Additionally, the skin and nails are frequently involved, with psoriasis plaques and nail abnormalities, such as pitting and onycholysis (nail separation), being common manifestations [11]. Several factors contribute to the development of PsA, with genetic predisposition playing a significant role. A family history of PsA or psoriasis, particularly in individuals carrying the HLA-B27 gene, increases the risk of developing the condition [12]. Psoriasis itself is the strongest risk factor, especially in those with nail involvement [12]. Environmental triggers, including infections, physical trauma, and lifestyle factors such as smoking and obesity, can also influence disease onset. Additionally, metabolic syndrome, which includes obesity, diabetes, and hypertension, has been linked to a higher severity of PsA and may worsen disease progression [13]. The treatment of psoriatic arthritis (PsA) focuses on reducing inflammation, preventing joint damage, and improving quality of life. Disease-modifying antirheumatic drugs (DMARDs) are the primary treatment, including conventional synthetic DMARDs (csDMARDs) like methotrexate, as well as biologic (bDMARDs) and targeted synthetic DMARDs (tsDMARDs) that target inflammatory pathways [14]. Despite advancements, many patients still experience unmet treatment needs, as PsA presents with diverse symptoms and severities [9]. Given its impact on both physical and mental well-being, incorporating patient preferences into treatment strategies is essential [15]. Research continues to explore treatment adherence, particularly concerning methotrexate use, while non-pharmacological approaches, such as lifestyle modifications, are also gaining recognition [3, 16]. Raising awareness of physical therapy (PT) in psoriatic arthritis (PsA) is essential, as many patients underutilize it due to a lack of knowledge [17]. Despite its benefits in improving mobility, reducing pain, and enhancing quality of life, PT remains overlooked in PsA management. Limited awareness prevents patients from considering it alongside medical treatment. Additionally, the lack of high-quality research on the impact of physical therapy has further

limited its recognition in the management of psoriatic arthritis (PsA).

This study aims to assess the frequency of physiotherapy utilization and exercise habits among individuals diagnosed with psoriatic arthritis attending a dermatology clinic.

METHODS

This cross-sectional survey-based study was conducted on patients diagnosed with psoriatic arthritis, with a total sample size of 217 individuals selected using a convenience sampling technique. Initially, data collection took place at the Derma and Dental Clinic in Bahria Town, Lahore, and the study duration was four months following the approval of the synopsis (July 2024 to October 2024). Although 217 patients were included, 153 individuals were ultimately analyzed based on complete and eligible responses. The inclusion criteria for participation involved adults aged between 18 to 50 years who were diagnosed with psoriatic arthritis according to established diagnostic criteria. Participants were required to be attending dermatology settings and willing to complete the study questionnaire. Conversely, the exclusion criteria included individuals unable to respond due to limited literacy, those diagnosed with other forms of arthritis, such as rheumatoid arthritis, individuals with severe cognitive impairments or mental illnesses hindering comprehension of the survey, those undergoing treatments that could influence the study outcomes, and pregnant or breastfeeding women. Data were collected from participants who met the inclusion criteria after informed consent was obtained and the study was explained to them. The questionnaire, adapted from an Indian study assessing the knowledge, attitude, and practice of psoriatic patients, included 35 multiple-choice questions covering demographic details and key areas such as patients' perceptions of psoriatic arthritis, its management, the role of physical therapy, quality of life, and opinions on the care received. The questionnaire was adapted from a previously validated KAP study on psoriatic arthritis patients. It was modified for the local context and administered in English and Urdu to ensure accessibility. Eligible patients completed the questionnaire independently during their visits to participating centers [18]. Data were analyzed using SPSS version 24.0.

RESULTS

The study included 153 participants with a mean age of 40.61 ± 6.73 years (Figure 1).

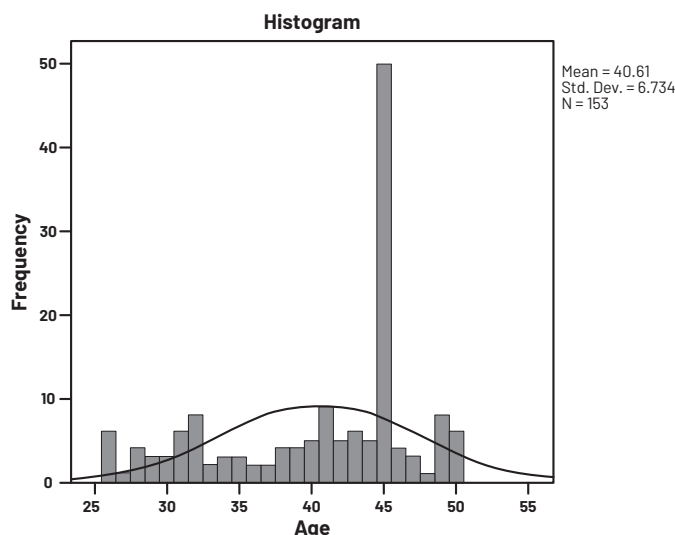


Figure 1: Age Distribution of Psoriatic Arthritis Patients (n=153)

The sample comprised slightly more female (53.6%) than male (46.4%). Most participants were single (58.2%), followed by married (22.2%) and divorced/widowed (19.6%). Educational backgrounds varied, with 29.4% completing high school and 24.8% holding undergraduate degrees. Occupations were diverse, including clerks and students (both 22.2%), teachers (20.3%), shopkeepers (19.0%), and engineers (16.3%). Employment status showed 53.6% were employed, while 46.4% were unemployed (Table 1).

Table 1: Demographic Characteristics of Psoriatic Arthritis Patients

Variables		N
Age	Minimum	26
	Maximum	50
Gender	Male	71
	Female	82
Marital Status	Single	89
	Married	44
	Divorced	30
Job Status	Employed	82
	Unemployed	71
Education	High School	45
	Undergraduate	38
	Post-Graduation	33
Occupation	Shopkeeper	29
	Student	34
	Teacher	31

Regarding family history, 34.0% reported a positive family history of the condition, while an equal percentage were unsure. Most participants (69.9%) had heard of psoriasis, and 51.6% had experienced skin symptoms for over a year. Joint symptoms lasting more than a year were reported by 54.2%. A total of 30.7% visited dermatologists annually,

and 23.5% saw rheumatologists once a year. Diagnosis was commonly made by general physicians (36.6%), followed by dermatologists and rheumatologists. Only 26.8% reported being diagnosed with both psoriasis and psoriatic arthritis, and 26.1% were unaware of their diagnosis (Table 2).

Table 2: Clinical and Diagnostic Characteristics of Psoriatic Arthritis Patients (n=153)

Disease Domain		Frequency (%)
Heard Psoriasis	Yes	107 (69.9%)
	No	46 (30.1%)
Duration	Less Than 1 Year	74 (48.4%)
	More Than 1 Year	79 (51.6%)
Joint Symptoms	Less Than 1 Year	70 (45.8%)
	More Than 1 Year	83 (54.2%)
Heard Psoriasis Arthritis	Yes	75 (49.0%)
	No	78 (51.0%)
Time Before Visit to Doctor	less Than 1 years	79 (51.6%)
	More Than 1 Years	74 (48.4%)
Dermatologist Visit Frequency	Once in A Month	27 (17.6%)
	Once in Two Months	23 (15.0%)
	Once in A Three Month	15 (9.8%)
	Once in Six Months	20 (13.1%)
	Once A Year	47 (30.7%)
	Never	21 (13.7%)
Rheumatologist Visit Frequency	Once in A Month	19 (12.4%)
	Once in Two Months	24 (15.7%)
	Once in A Three Month	19 (12.4%)
	Once in Six Months	27 (17.6%)
	Once A Year	36 (23.5%)
	Never	28 (18.3%)
First Diagnosis	Rheumatologist	45 (29.4%)
	Dermatologist	52 (34.0%)
	General Physician	56 (36.6%)
Current Diagnosis	Don't Know	40 (26.1%)
	Psoriasis with Psoriatic Arthritis	41 (26.8%)
	Psoriasis	32 (20.9%)
	Psoriatic Arthritis	40 (26.1%)
Diagnosis	Rheumatologist	34 (22.2%)
	Dermatologist	20 (13.1%)
	Orthopedic	37 (24.2%)
	General Physician	38 (24.8%)
	Others	24 (15.7%)

Medication use was reported by 56.9%, with fatigue and nausea being the most common side effects. OTC medication was used by 56.2%, and pain medicine was most frequently taken 2–4 times a month or less. Biologic therapy was used by 47.1%, and therapy compliance was split nearly evenly across full, partial, and non-compliance (Table 3).

Table 3: Distribution of Psoriasis and Psoriatic Arthritis Patients

Management Domain	Response	Frequency (%)
Current Medication	Yes	87(56.9%)
	No	66(43.1%)
Side Effects	Fatigue	40(26.1%)
	Nausea	40(26.1%)
	None	34(22.2%)
	Weight Gain	39(25.5%)
OTC Medication	Yes	86(56.2%)
	No	67(43.8%)
Pain Medicine Frequent	Once A Day	18(11.8%)
	Two Or More Times A Day	27(17.6%)
	2-6 Times A Week	25(16.3%)
	Once A Week	25(16.3%)
	2-4 Times A Month	29(19.0%)
	Less Than Once A Month	29(19.0%)
Bio Therapy	Yes	72(47.1%)
	No	81(52.9%)
Therapy Compliance	Fully Compliant	54(35.3%)
	Partially Compliant	49(32.0%)
	Not Compliant	50(32.7%)

Exercise habits varied, with 20.9% exercising two or more times a day and 15.0% never exercising. Overall, the data reflect a moderately diverse patient population with varying awareness, diagnosis experiences, treatment patterns, and lifestyle practices (Table 4).

Table 4: Quality of Life-Related Behaviours and Lifestyle Factors among Patients with Psoriatic Arthritis

QoL		Frequency (%)
Exercise Frequency	Never	23 (15.0%)
	Daily	29 (19.0%)
	Once A Day	26 (17.0%)
	Two Or More Times A Day	32 (20.9%)
	2-6 Times A Week	22 (14.4%)
	Once A Week	21 (13.7%)
Have You Ever Seen Physiotherapist	Yes	81 (52.9%)
	No	72 (47.1%)
Regular Activity Affected	Yes	75 (49.0%)
	No	78 (51.0%)
What An Affected Employment	Yes	74 (48.4%)
	No	79 (51.6%)
Alcohol Consumes	No	35 (22.9%)
	Smoke	45 (29.4%)
	Consume Alcohol	39 (25.5%)
	Smoke and Consume Alcohol	34 (22.2%)

DISCUSSION

The present study revealed the identification of the major issues in diagnosis, treatment, and rehabilitation with physical therapy of psoriatic arthritis (PsA) clients in a dermatologic clinic. Perhaps the least known statistic was

that few of the participants understood or were even aware of PsA, with many of them having years of symptoms. 69.9 % of the respondents were aware of psoriasis, but in comparison, only 49 % knew of psoriatic arthritis, and 26.1 % of the respondents did not know they were diagnosed with psoriasis at all. This is in line with previous findings indicating that as high as 15.5 percent of PsA cases could be un-diagnosed because patients were unaware of this heterogeneous disease and lacked the understanding of its symptoms [19]. Even though the research has not assessed the diagnostic delay in specific months, more than half of the respondents indicated that they had experienced skin (51.6%) and joint (54.2%) symptoms over a year ago. In comparison with previous findings, which documented more than two years in delay of diagnosis in a large proportion of patients [20], with relevant impact on the course of the disease, damage over joints, and response to therapy [21]. Based on our results, the study highlights the importance of early diagnosis, more screenings during dermatology visits, and more cooperation between rheumatologists and dermatologists [22]. Although clinical guidelines suggest early intervention and personalized treatment schemes, only 23.5% of the respondents acted on a rheumatologist regularly, and general physicians were the most frequently initial diagnosing physicians (36.6 %). That trend can possibly be an indication of a specialist access or referral system and highlights the necessity of a better diagnostics infrastructure and patient referral system. It was also observed that the gap between the recognition of healthcare providers and the diagnosis reported by their patients indicates that they may experience communication failure during the visits, which has also been noted in other global studies (16,32). In this study, the rate of therapy compliance was moderate as only 35.3% answered that they are fully compliant, whereas the other half of respondents were either partially compliant (32 %) or non-compliant (32.7%). The most common side effects were fatigue (26.1%), nausea (26.1%), and weight gain (25.5%). Such side effects could have led to withdrawal of the medication. Additionally, 56.2 % relied on over-the-counter medicines, showing that they did not depend on professionals and their counsel and which also may not be in line with best practice. 47.1% one percent of the respondents were under treatment with biologic therapy; however, a large percentage still indicated ongoing symptoms and unmet care needs [19]. Another significant aspect of PsA management is physical activity/physiotherapy, which continues to be an underused tool. Of the patients in this study, 52.9% had a prior exposure to physiotherapist visits and 15 % had never exercised before. Previous research findings support the argument that

substantial functional decline and low quality of life can be aggravated by physical inactivity and non-provision of rehabilitation services (28,31). Almost all of them did report effects on daily tasks (49.1%) and work (48.4%), yet their physiotherapy and exercise programs' reception and use were poor. These results prompt further inclusion of physiotherapy as a part of PsA management and improvement of educational efforts surrounding the benefits of physiotherapy [23]. Despite the chronicity of symptoms and treatment limitations, a substantial proportion of patients appeared to have adjusted psychologically, with many reporting active employment (53.6%) and consistent daily functioning. This could be partly explained by the comparatively high level of education of the sample, as more than 58% of people were graduates of undergraduate or higher education, associated with higher health literacy and coping abilities [24]. Although 217 patients were initially recruited, only 153 were included in the final analysis due to incomplete or ineligible responses. The research was restrained with an average sample size (153), a 30% attrition rate, and a convenience sampling at one clinic. Patients with low literacy or cognitive impairments were excluded, which could have provided selection bias and limited generalizability.

CONCLUSIONS

This study highlights limited awareness and underutilization of physiotherapy among psoriatic arthritis patients, despite prolonged disease duration. Poor compliance and low referral rates point to gaps in patient education and care integration. Promoting early multidisciplinary intervention and including physiotherapy in routine care could improve outcomes and quality of life for these patients.

Authors Contribution

Conceptualization: MG

Methodology: SS¹

Formal analysis: ST

Writing review and editing: SS², TA, KAS

All authors have read and agreed to the published version of the manuscript.

Conflicts of Interest

All the authors declare no conflict of interest.

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