

Treatment satisfaction among patients with psoriasis in Saudi Arabia

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Abstract

Psoriasis, affecting 2% of the population, burdens individuals physically and emotionally, with adherence challenges (39-73%). Treatment ranges from topical to systemic therapy, including biologics. Although biologic therapy improves clinical outcomes,

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side effects lead 50% of severe cases to prefer topical treatment. This study evaluates patient satisfaction in Saudi Arabia with various psoriasis treatments, offering insights and addressing the crucial aspect of satisfaction in management. This is a cross-sectional study, using an electronic questionnaire aligned with prior research, that included Saudi adults with psoriasis undergoing topical, biological, or phototherapy treatment. Exclusions encompassed non-treatment recipients and participants outside Saudi Arabia. A total of 314 psoriasis patients receiving treatment were included, the most reported type being plaque psoriasis. The most reported sites of psoriasis included scalp. 70.1% of the patients received topical treatment, 36.3% received systematic treatment, and 18.2% used phototherapy. The participants showed an intermediate satisfaction level, the highest satisfaction for systematic treatments followed by phototherapy and the lowest satisfaction for topical treatments. Male gender, plaque psoriasis, and lack of disease follow-up were associated with poor satisfaction levels.

Introduction

Psoriasis is a chronic inflammatory skin disease exhibiting erythematous, scaly plaques in different body areas.^{1,2} It significantly negatively impacts patients' physical, emotional, and psychosocial status.³ Additionally, psoriasis has a significant financial impact due to decreased productivity, disabilities, and treatment expenses.⁴ Psoriasis is linked to numerous comorbidities, including obesity, diabetes, hypertension, cardiovascular disease, psoriatic arthritis, autoimmune disease, psychiatric illness, and malignancy.¹ For the treatment of psoriasis, there are several choices, including topical therapy, phototherapy, and systemic therapy.⁴ About 39-73% of psoriasis patients fail to take their medicine as directed.⁴ Topical therapy would be beneficial to a high percentage of patients.⁵ Treating psoriasis symptoms with biological drugs has improved clinical outcomes, productivity, and quality of life. However, due to side effects, inconvenience, and toxicity, up to 50% of patients with moderate to severe psoriasis continue only to use topical therapy.

Additionally, psoralen-ultraviolet A (PUVA) and narrow-band ultraviolet B (NB-UVB) continue to be widely used with satisfactory results.⁶ According to most patients in a study conducted by Fernández-Guarino *et al.* 2017, 8.35 out of 10 were globally satisfied with the phototherapy treatment results. The biggest drawback of phototherapy is the need for hospital visits, while the main benefit is the outcome of the therapy. Interestingly, even in a poor response, 96% of all treated patients said they would repeat the treatment if necessary.⁷ In the USA, 97.8% of patients with moderate to severe psoriasis were unsatisfied with their non-biologic therapy, compared to 95.1% of patients receiving biologic therapy.⁸ Our study aims to assess satisfaction levels among patients in Al-Ahsa with different treatment options.

Materials and Methods

A cross-sectional study based on an anonymous questionnaire in Arabic was conducted among the Saudi population with psoriasis. The survey was conducted between July and August 2023. The modified version of a satisfaction questionnaire previously utilized by Finch, Tracey, *et al.* was used.⁴

Data analysis

The data were collected, reviewed, and then fed to Statistical Package for Social Sciences version 21 (SPSS: An IBM Company). All statistical methods used were two-tailed with an alpha level of 0.05, considering significance if the p-value is less than or equal to 0.05. Descriptive analysis was done by prescribing frequency distribution and percentage for study variables, including participants' personal data, psoriasis data, and age at diagnosis. The received treatment and its details were graphed and tabulated. Range and mean with standard deviation were used to display the treatment satisfaction level. Cross tabulation for assessing factors associated with patients' satisfaction with different types of psoriasis treatment was carried out with One-Way ANOVA and independent samples *t*-tests.

Results

A total of 314 psoriasis patients receiving treatment were included. Patients' ages ranged from 21 to 70 years, with a mean age of 32.1 ± 12.7 years old. A total of 181 (57.6%) were females. As for the type of psoriasis, the most reported type was Plaque psoriasis (26.1%), Guttate psoriasis (20.1%), Inverse psoriasis (16.2%), Pustular psoriasis (7.3%), and Erythrodermic psoriasis (4.5%). The most reported sites of psoriasis included scalp (89.8%), leg (28.3%), ear (26.8%), arm (26.1%), elbow (24.5%), thigh (24.5%), and hand (19.4%). Exact 206 (65.6%) of the patients were diagnosed at the age of 21-30 years, 58 (18.5%) at the age of 31-40 years, and 27 (8.6%) at the age of 41-50 years. A total of 161 (51.3%) follow the disease at/with or through Dermatology clinics rather than stating it blindly; 87 (27.7%) at Dermatology clinics in a private hospital, 28 (8.9%) follow in Primary health care center clinics while 38 (12.1%) do not follow-up (FU) psoriasis (Table 1).

Types of treatments received by the patients with psoriasis in the current study

70.1% of the study patients received local treatment, 36.3% received systematic treatment, and 18.2% used phototherapy. A total of 220 (70.1%) patients received local treatment. The most used local treatment was Topical treatment that contains corticosteroid only (60%), followed by topical treatments containing Calcipotriol/betamethasone (33.2%), and topical calcineurin inhibitors (15%). As for Shampoos containing substances to treat psoriasis, 54 (17.2%) used Salicylic acid shampoo, 22 (7%) used Coal tar shampoo, and 12 (3.8%) used Salicylic acid in combination with Coal tar shampoo (Table 2).

Other types of treatment received by the study's population

57 (18.2%) of the study patients used phototherapy for psoriasis, and 114 (36.3%) used systematic treatments (oral and injectable). The most used systematic treatments are Adalimumab (53.5%), Methotrexate (48.2%), Etanercept (35.1%), and others (3.5%) (Table 3).

Treatment-satisfaction among patients

As for satisfaction with topical treatment, the highest rate (mean score) was for the comfort of using topical treatment (3.4 out of 5), then for satisfaction with provided information by the medical staff (3.3 out of 5), and for safety and use (3.2 for each). Generally, the mean satisfaction score was 3.3 ± 1.2 out of 5. As for phototherapy, the highest satisfaction score was for information provided (3.9 out of 5), comfort of using phototherapy (3.8 out of 5), and for safety and use (3.7 for each). Generally, the mean satisfaction score was 3.8 ± 1.3 out of 5. Regarding systemic therapy, the highest satisfaction score was for the information provided (4.1 out of 5), comfort of using therapy, and safety and use (4.0 for each). Generally, the mean satisfaction score was 4.0 ± 1.0 out of 5 (Table 4).

Table 1. Bio-demographic data of study patients with psoriasis and on treatment, Saudi Arabia.

Bio-demographic data	No	%
Age in years		
21-30	141	44.9%
31-40	89	28.3%
41-50	20	6.4%
51-60	48	15.3%
61-70	16	5.1%
Gender		
Male	133	42.4%
Female	181	57.6%
Type of psoriasis		
Plaque psoriasis	82	26.1%
Guttate psoriasis	63	20.1%
Inverse psoriasis	51	16.2%
Pustular psoriasis	23	7.3%
Erythrodermic psoriasis	14	4.5%
Other types	5	1.6%
I dont know	76	24.2%
Site of psoriasis		
Scalp	282	89.8%
Ear	84	26.8%
Arm	82	26.1%
Elbow	77	24.5%
Hand	61	19.4%
Nail	41	13.1%
Umblicus	61	19.4%
Genetalia	54	17.2%
Intergrluteal cleft	36	11.5%
Back	6	1.9%
Leg	89	28.3%
Thigh	77	24.5%
Knee	56	17.8%
Foot	72	22.9%
Age at diagnosis		
21-30	206	65.6%
31-40	58	18.5%
41-50	27	8.6%
51-60	17	5.4%
61-70	6	1.9%
How do you FU your psoriasis condition?		
Dermatology clinics in a government hospital	161	51.3%
Dermatology clinics in a private hospital	87	27.7%
Primary health care center clinics	28	8.9%
I do not FU psoriasis	38	12.1%

FU, follow-up.

Factors associated with patients' satisfaction with 3 different types of psoriasis treatment

As for patients' satisfaction with topical treatment. It was significantly higher among male patients (3.51) than females (3.13); $p=.016$. Also, the highest satisfaction or topical therapy was reported among patients with inverse psoriasis (4.16) and the lowest among plaque psoriasis (2.9); $p=.001$. Satisfaction with phototherapy was significantly higher among patients who were followed at primary health care center clinics (4.5) and lowest among others who did not follow up for their disease ($p=.040$). Regarding systemic treatment, the highest satisfaction was among patients with pustular psoriasis (4.46) and lowest among those who do not know their type (3.31); $p=.010$ (Table 5).

Discussion

The current study was conducted with two main objectives: first was to assess the most used types of treatments among the patients with psoriasis in Saudi Arabia, and second was to determine the satisfaction level of the different treatment modalities among patients with psoriasis in Saudi Arabia. Most of the patients in the current study were on topical treatment, mainly topical treatment that contains cortisone only (about two-thirds of patients), followed by a topical treatment containing calcipotriol/betamethasone (one-third of them) and calcineurin inhibitors. Regarding the shampoos containing substances to treat psoriasis, less than one-fifth used Salicylic acid shampoo, but few cases used Coal tar shampoo combined with Salicylic acid or Coal tar shampoo alone.

Likewise, the vast majority of the study's population used phototherapy for psoriasis. However, one-third of them used systematic treatments (oral and injectable). The most used systematic treatments included adalimumab, Methotrexate, and Etanercept. In the USA, Armstrong AW *et al.* documented that 29.5% of moderate psoriasis patients and 21.5% of severe psoriasis patients were treated with only topical agents. UV-B is the most common phototherapy modality, while methotrexate is the most frequently used oral agent.⁹ On the other hand, Florek AG *et al.* found that

Table 2. Local treatment received among study patients with psoriasis.

Local treatment	No	%
Local treatment		
Yes	220	70.1%
No	94	29.9%
Which of the following treatments are used?		
Topical treatment that contains cortisone only	132	60.0%
A topical treatment containing vitamin D/betamethasone	73	33.2%
A topical treatment that contains only vitamin D	18	8.2%
Calcineurin inhibitors	33	15.0%
Others	5	2.3%
None of these	20	9.1%
Shampoos containing substances to treat psoriasis		
Salicylic acid shampoo	54	17.2%
Coal tar shampoo	22	7.0%
Nizoral	2	.6%
Salicylic acid and Coal tar shampoo	12	3.8%
None of these	224	71.3%

Table 3. Other types of treatment received by study psoriasis patients.

Other types of treatment	No	%
Local treatment		
Yes	220	70.1%
No	94	29.9%
Which of the following treatments are used?		
Topical treatment that contains cortisone only	132	60.0%
A topical treatment containing vitamin D/betamethasone	73	33.2%
A topical treatment that contains only vitamin D	18	8.2%
Calcineurin inhibitors	33	15.0%
Others	5	2.3%
None of these	20	9.1%
Shampoos containing substances to treat psoriasis		
Salicylic acid shampoo	54	17.2%
Coal tar shampoo	22	7.0%
Nizoral	2	.6%
Salicylic acid and Coal tar shampoo	12	3.8%
None of these	224	71.3%

Table 4. Treatment-satisfaction among patients with psoriasis in Saudi Arabia.

Satisfaction	Range	Mean	SD
Topical treatment			
How satisfied are you with the topical treatment you use?	1-5	3.2	1.3
How satisfied are you with the safety of the topical cream you are using?	1-5	3.2	1.3
How satisfied are you with the comfort of using topical treatment?	1-5	3.4	1.3
How satisfied were you with the information provided about your topical treatment?	1-5	3.3	1.3
Overall satisfaction	1-5	3.3	1.2
Phototherapy			
How satisfied are you with the phototherapy use?	1-5	3.7	1.4
How satisfied are you with the safety of the phototherapy you are using?	1-5	3.7	1.4
How satisfied are you with the comfort of using phototherapy?	1-5	3.8	1.5
How satisfied were you with the information provided about your phototherapy?	1-5	3.9	1.3
Overall satisfaction	1-5	3.8	1.3
Systematic treatment			
How satisfied are you with the systematic treatment?	1-5	4.0	1.2
How satisfied are you with the safety of the systematic treatment you are using?	1-5	4.0	1.2
How satisfied are you with the comfort of using systematic treatment?	1-5	4.0	1.2
How satisfied were you with the information provided about systematic treatment?	1-5	4.1	1.2
Overall satisfaction	1-5	4.0	1.0

SD, standard deviation.

psoriasis patients had diverse and evolving preferences for their treatment. Regardless of the type of treatment, the key factors that mattered the most to the patients were the treatment location, the likelihood of improvement, and the delivery method. When it came to biologics, the most significant considerations were the risk of side effects and the probability of treatment success.¹⁰

Concerning patients' satisfaction with topical treatments for psoriasis, the current study revealed that the highest rate was for the comfort of using topical treatment, then for the provided information, and for safety and use with more than average overall satisfaction level (exceeding 60%). Regarding phototherapy, the highest satisfaction score was for the provided information, comfort of using phototherapy, and safety and use, with an overall satisfaction exceeding 65%. A higher satisfaction (80%) was reported for systemic therapy, mainly about information provided, comfort of using therapy, and safety and use. Male gender, type of psoriasis, mainly plaque psoriasis, and irregular follow-up were the significant factors associated with poor satisfaction with the received treatment. A low satisfaction level was reported by Dubertret L *et al.*,¹¹ according to a survey conducted in Europe, only 27% of psoriasis patients were very satisfied with their treatment. The primary reasons for patients' dissatisfaction were their time spent on treatment (49%) and their poor efficiency (32%). In the United States, almost 90% of patients surveyed expressed concern about their psoriasis worsening. This low rate of satisfaction also has an

impact on patients' choice of physician. One-third of European patients reported visiting three or more physicians for psoriasis treatment in the last two years, and 21% no longer consulted any physician. In the USA, almost 90% of psoriasis patients expressed their fear of worsening the condition. This lack of satisfaction also influences patients' selection of physicians. Armstrong *et al.*⁹ showed that 52.3% of patients with psoriasis and 45.5% of patients with psoriatic arthritis were dissatisfied with their treatment. Also, in Germany, Franzke N *et al.*¹³ documented that over half of the patients (54.6%) expressed dissatisfaction with their psoriasis treatment, ranging from topical applications, phototherapy, and oral systemic treatments to biologics. In another study, only one-fourth of psoriasis patients in the Canadian population were very satisfied with their current treatment.¹⁴ A recent study found that only 23% of psoriasis patients were completely satisfied with their current treatment. 65% of patients reported no progress, and 40% desired more effective treatments.¹⁵ On the other hand, other studies have shown that patients receiving biologics are more satisfied than those receiving oral systemic treatments, topical treatments, and phototherapy. One study showed that patients treated with biologics reported higher satisfaction rates (mean satisfaction score of 8.2/10) compared to those treated with traditional oral systemic drugs (mean satisfaction score of 6.4).¹⁶ Another study revealed that treatment satisfaction was higher in participants taking infusions or injections (52% stated

Table 5. Factors associated with patients' satisfaction about different types of psoriasis treatment.

Factors	Topical satisfaction		Phototherapy satisfaction		Systemic satisfaction	
	Mean	SD	Mean	SD	Mean	SD
Age in years						
21-30	3.16	1.11	3.88	1.38	4.06	1.07
31-40	3.54	1.13	3.88	1.07	4.08	1.10
41-50	2.95	1.43	4.00	1.06	4.28	.69
51-60	3.23	1.12	3.56	1.43	3.92	.95
61-70	3.33	1.07	2.63	.43	3.55	.84
p	.229	.439	.757			
Gender						
Male	3.51	1.19	4.00	1.23	4.09	1.06
Female	3.13	1.08	3.44	1.27	3.97	.97
p ^s	.016*	.101	.550			
Type of psoriasis						
Pustular psoriasis	3.15	1.05	3.25	1.32	4.46	.72
Plaque psoriasis	2.90	1.29	3.42	1.51	3.91	1.12
Guttate psoriasis	3.22	1.07	3.64	1.38	4.04	.92
Inverse psoriasis	4.16	.81	4.44	.93	4.23	.83
Erythrodermic psoriasis	4.06	.83	4.44	.83	4.79	.51
Other types	1.81	.63			3.50	
I I know	3.22	.93	3.14	1.10	3.31	1.24
p	.001*	.068	.010*			
Age at diagnosis						
21-30	3.24	1.16	3.79	1.34	4.02	1.08
31-40	3.37	1.12	4.13	1.03	4.14	.86
41-50	3.27	1.03	3.75	1.19	3.94	1.09
51-60	3.57	1.11	3.33	1.26	3.86	.89
61-70	3.00	1.41	2.75	0.00	4.75	.35
p	.871	.757	.822			
How do you FU your psoriasis condition?						
Dermatology clinics in a government hospital		3.34	1.16	3.63	1.34	3.93 1.10
Dermatology clinics in a private hospital		3.26	1.13	4.09	1.00	4.23 .94
Primary health care center clinics	3.64	1.29	4.50	.84	4.19	.81
I do not FU psoriasis	3.07	1.03	2.08	1.01	3.08	.88
p	.537	.040*	.189			

*p<0.05 (significant); P, One Way ANOVA; \$, independent samples t-test; SD, standard deviation, FU, follow-up.

very high treatment satisfaction) in comparison to cases of phototherapy (<8%) and topical therapy (>8%).¹⁷ Additionally, it showed that biologics, biologic-methotrexate combination, and phototherapy were associated with a higher satisfaction (mean adjusted overall satisfaction score 83/100) compared to topical treatment, methotrexate, cyclosporine, or acitretin monotherapy (mean adjusted overall satisfaction score 67/100).

Conclusions

In conclusion, the current study showed various treatments the participants received. The participants showed an intermediate satisfaction level for the received treatments, with the highest satisfaction for systematic treatments followed by phototherapy and the lowest satisfaction for topical treatments. Male gender, plaque psoriasis, and lack of disease follow-up were associated with poor satisfaction levels.

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