



Feeling of stigmatization and satisfaction with life among Arabic psoriatic patients

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ARTICLE INFO

Article history:

Received 21 August 2020

Accepted 23 November 2020

Available online 25 November 2020

Keywords:

Psoriasis

6-Item stigmatization scale

Satisfaction with life scale

Predictors

Quality of life

Cross-sectional

ABSTRACT

Background: Satisfaction and stigmatization are experienced differently in different cultural contexts, especially, in patients with dermatological diseases affecting visible body parts. Reports in Arabic countries remain rare and very appealing in a multicultural population.

Aims: To evaluate feeling of stigmatization and satisfaction with life in Arabic patients with psoriasis and identify predictors of feeling of stigmatization and satisfaction with life.

Methods: In a cross-sectional study design, Arabic patients with psoriasis completed the 6-item stigmatization scale and the satisfaction with life scale. Univariate and forward stepwise multivariate linear regression analyses were used to identify predictors of feeling of stigmatization and satisfaction with life. Covariates included patients' demographics (age, gender and education level), disease-related factors (disease severity, visibility, duration, and impact on quality of life) and patient-related factors (illness acceptance and dermatology self-care education level).

Results: In total, 199 Arabic psoriatic patients were included in the study. Despite feeling highly stigmatized by their skin disease [mean (95% Confidence Intervals (CI)) of 7.0 (6.3–7.7)], psoriasis patients were generally positive about their overall satisfaction with life (mean (95% CI) of 21.0 (20.0–22.3)). Impaired quality of life was the strongest predictor of both higher feeling of stigmatization (β -coefficient 0.39, 95% CI 0.30, 0.47) and less satisfaction with life (-0.36 , 95% CI -0.53 , -0.20). Higher levels of dermatology self-care education significantly predicted a lower feeling of stigmatization (-0.09 , 95% CI -0.16 , -0.01). Older patients (0.18, 95% CI 0.05, 0.30) and those with higher illness acceptance levels (0.14, 95% CI 0.03, 0.24) were more satisfied with life.

Conclusions: A level of stigmatization was detected in most psoriatic patients including the satisfied ones. Patients with more impaired quality of life experienced higher level of stigmatization and less satisfaction with life. These findings further enforce the multidisciplinary approach in psoriatic patients and highlight the unmet need to include psychologist in the therapeutic algorithm.

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1. Introduction

Psoriasis patients believe that the visibility of their skin problem is affecting people around them and they develop a feeling of stigmatization (Schmid-Ott et al., 2007). They think that others will avoid them or be uncomfortable being around them because

of their skin disease. This in turn may result in social withdrawal, precipitation of anxiety and depression, or having suicidal ideation (Zięciak et al., 2017). Measuring the level of feeling of stigmatization in chronic diseases as psoriasis is important to decide if psychological interventions are required (Jankowiak et al., 2020). The 6-item Stigmatization Scale and the 33-item Feelings of Stigmatization Questionnaire are used to assess the feeling of stigmatization in psoriasis patients (Dimitrov and Szepietowski, 2017).

The chronic inflammatory nature of psoriasis with a relevant burden of comorbidities (Conic et al., 2020; Kridin et al., 2020) and the visibility of the psoriatic lesions negatively impact on patients' self-image leading to patients not happy with their appearance, skin condition and limitations imposed by their condition and subsequently not satisfied with life. The fact of dealing

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Peer review under responsibility of King Saud University.



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with a chronic disease and the necessity to accept treatment risks and the time spent on skin self-care may contribute to dissatisfaction with life (Jankowiak et al., 2013). The satisfaction with life scale (Diener et al., 1985) has been used to evaluate levels of satisfaction with life in patients with psoriasis (Jankowiak et al., 2013).

Identifying possible predictors of the feeling of stigmatization and satisfaction with life in patients with psoriasis can help health professionals to identify potential patients' problems and take relevant decisions during the medical care process presented to those patients. Literature search identified several predictors of feeling of stigmatization including patients' demographics as younger age and level of education, disease severity and impact of disease on daily life (Hrehorów et al., 2012; Lu et al., 2003). Patient-related factors as the level of illness acceptance and the dermatology self-care education level have hardly been explored as potential predictors of feeling of stigmatization and satisfaction with life in psoriasis patients in previous studies (van Beugen et al., 2017).

In Arabic population, few studies have addressed the feeling of stigmatization and satisfaction with life in psoriatic patients. A recent study addressed stigmatization in Arabic psoriatic patients in the United Arab Emirates (Dimitrov et al., 2019). Literature search revealed no studies that have evaluated satisfaction with life in Arabic patients with psoriasis. The current study aimed to evaluate the feel of stigmatization and satisfaction with life in Arabic psoriatic patients. A secondary aim was to identify disease-related and patient-related predictors of feeling of stigmatization and satisfaction with life.

2. Methods

2.1. Study design

Patients' data were collected using a cross-sectional study design. An Arabic language online survey was created for that purpose. Links to the survey were posted to Arabic patients with psoriasis via social media and official websites of psoriasis associations. Patients diagnosed with psoriasis and aged 18 years or older were eligible for inclusion in the study.

Ethical approval for the study was granted from Institutional Ethical Committee prior to the commencement of the data collection process. Patients were informed about the study and their consent was obtained after explaining the purpose of the study.

2.2. Study measures

2.2.1. The 6-item stigmatization scale

The scale consists of 6 items that address the feeling of stigmatization because of the skin condition. Examples of the items are "I think others stare at my skin disease" and "Others avoid me due to my skin disease". The participants respond to each item by 0 (not at all), 1 (sometimes), 2 (very often), or 3 (always). The sum of the responses to the 6 items generates a score ranging from 0 to 18 with higher scores corresponding to a higher feeling of stigmatization (Evers et al., 2008).

2.2.2. The satisfaction with life scale

The scale was developed by Diener et al. (1985). The scale consists of five statements that measure the cognitive judgments of life satisfaction. The participants respond to each statement on a scale from 1 to 7 which represents strongly disagree, disagree, slightly disagree, neither agree nor disagree, slightly agree, agree, and strongly agree respectively. This generates a score from 5 to 35 with higher scores corresponding to more satisfaction with life. The score is categorized to extremely dissatisfied (5–9), dissatisfied

(10–14), slightly dissatisfied (15–19), neutral (20), slightly satisfied (21–25), satisfied (26–30), and extremely satisfied (31–35).

2.3. Measures of predictor variables

2.3.1. Patients' demographics

Demographic variables include age, gender, and level of education. The level of education was categorized to below secondary education (primary and preparatory level), secondary education, and high education (university degree level or higher).

2.3.2. Disease-related factors

Disease-related factors included disease severity, visibility, duration, and impact on patients' quality of life (QoL). Disease severity was measured by self-assessed Simplified Psoriasis Index-severity score (saSPI-s) which ranges from 0 to 50 with higher scores representing more severe disease (Chularojanamontri et al., 2013). Disease visibility was detected by the presence of widespread psoriasis lesions in any exposed body area including face, neck, ears, scalp, hairline, hands, fingers, and fingernails. Disease duration was calculated by subtracting the onset of psoriasis from the patient's age. Patients' QoL was measured by the Dermatology Life Quality Index (DLQI) which is a dermatology-specific QoL measure. The DLQI ranges from 0 to 30 with higher scores representing more impaired QoL (Finlay and Khan, 1994).

2.3.3. Patient-related factors

Patient-related factors included the degree of patients' acceptance of the disease and the level of dermatology self-care education. Acceptance of psoriasis was measured by the Acceptance of illness scale (AIS). The AIS ranges from 8 to 40 with higher scores representing higher levels of illness acceptance (Felton et al., 1984; Felton and Revenson, 1984). The level of dermatology-self-care education was measured by the Person-centered Dermatology Self-care Index (PeDeSI). The PeDeSI ranges from 0 to 30 with higher scores representing higher levels of education about the disease and higher abilities for personal skin self-care and disease management (Cowardell et al., 2012).

2.4. Statistical analyses

Descriptive statistics were used to describe all variables. Mean values were presented as mean and 95% confidence intervals (95% CI). Univariate linear regression analyses were used to study the factors associated with the feeling of stigmatization and satisfaction with life. Each variable is tested individually and only variables that showed a significant effect ($P < 0.05$) in univariate analysis were entered into the multivariate analysis. Forward stepwise multivariate analysis was used to study the effect of the variables altogether. The forward stepwise selection approach begins with an empty model and adds variables to the model one by one based on the level of significance starting with the strongest predictor. Results of the univariate and the multivariate models were presented as β -coefficients and 95% CI.

Stata 10.1 software (Stata Corp., College Station, TX, USA) was used to run all statistical analyses. P -values of less than 0.05 were considered significant.

3. Results

3.1. Patients' characteristics

The study included 199 patients, of them 134 (67.3%) were men. The mean \pm SD age was 35.6 ± 10.0 years. More than half the

patients were highly educated to a university level (60.3%). The mean \pm SD psoriasis duration was 13.2 ± 9.1 years (Table 1). The disease severity was mild to moderate, however, 38 (19.1%) of the patients had severe disease. The disease was visible in exposed body areas in 88 (44.2%) patients and it had a moderate impact on patients' QoL with a mean (95% CI) of 11.3 (10.2–12.3). The patients showed moderate levels of disease acceptance with a mean (95% CI) of 26.5 (25.1–27.9). About one-fifth of the patients required intensive education to support dermatology self-care.

3.2. Feeling of stigmatization

According to the 6-item Stigmatization Scale, the mean (95% CI) score was 7.0 (6.3–7.7) and ranged from 0 to 18. Only 8 (4.0%) patients showed no feeling of stigmatization (score of 0) while the rest of the patients showed some degree of feeling of stigmatization in at least one of the six items. In total, 166 (83.4%) patients thought that others stare at their skin disease, and 157 (78.9%) patients thought that others are not attracted to them due to their skin problem (Fig. 1). While 107 (53.8%) patients thought that others are avoiding them as result of their skin disease.

The results of the univariate linear regression models showed that feeling of stigmatization did not differ by gender, level of education, or the visibility of psoriasis lesions. However, patients with more severe disease and those with more QoL impairment were

feeling more stigmatized by others. Older patients, those with longer disease duration, those with higher levels of disease acceptance, and those with higher levels of dermatological self-care education were significantly less stigmatized (Table 2).

3.3. Satisfaction with life

There was quite a widespread of scores of the satisfaction with life scale that ranged from 5 to 35 with a mean (95% CI) of 21.2 (20.0–22.3) reflecting slight satisfaction with life. In total, 17 (8.5%) patients were extremely dissatisfied, while 30 (15.1%) were extremely satisfied with their life (Table 1). The responses to each item of the satisfaction with life scale are presented in Fig. 2.

The results of the univariate linear regression models showed that satisfaction with life did not differ by gender, level of education, disease duration, disease visibility, or disease severity. However, patients with more impaired QoL were significantly less satisfied with life while older patients, those with higher levels of illness acceptance, and those with higher dermatological self-care education level were more satisfied with life (Table 2).

3.4. Predictors of feeling of stigmatization and satisfaction with life

The results of the multivariate model showed that QoL impairment was the strongest predictor of both feeling of stigmatization

Table 1
Patient demographics and study measures.

Variables	Mean (95% CI)	Range	n (%)
Patient demographics			
Age (year)	35.6 (34.1–37.0)	(18.0–67.0)	–
Gender			
Male	–	–	134 (67.3)
Female	–	–	65 (32.7)
Education level			
Less than secondary	–	–	25 (12.6)
Secondary	–	–	54 (27.1)
High	–	–	120 (60.3)
Disease characteristics			
Disease duration (year)	13.2 (11.9–14.6)	(0.0–43.0)	–
Disease severity	10.7 (9.3–12.1)	(0.0–50.0)	–
Mild disease (<10)	–	–	114 (57.3)
Moderate disease (10–20)	–	–	47 (23.6)
Sever disease (>20)	–	–	38 (19.1)
Disease visibility	–	–	88 (44.2)
Disease impact on Quality of life	11.3 (10.2–12.3)	(0.0–28.0)	–
No impact at all (0–1)	–	–	11 (5.5)
Small impact (2–5)	–	–	42 (21.1)
Moderate impact (6–10)	–	–	50 (25.1)
Very large impact (11–20)	–	–	69 (34.7)
Extremely large impact (21–30)	–	–	27 (13.6)
Patient-related variables			
Acceptance of illness	26.5 (25.1–27.9)	(8.0–40.0)	–
Low acceptance level (<20)	–	–	48 (24.1)
Moderate acceptance level (20–30)	–	–	71 (35.7)
High acceptance (>30)	–	–	80 (40.2)
Dermatology self-care education	16.6 (15.5–17.8)	(0.0–30.0)	–
Require intensive education (0–10)	–	–	41 (20.6)
Require some education (11–20)	–	–	81 (40.7)
Require limited education (21–29)	–	–	57 (28.6)
Has enough education (30)	–	–	12 (6.0)
Feeling of stigmatization	7.0 (6.3–7.7)	(0.0–18.0)	–
Satisfaction with life	21.0 (19.8–22.2)	(5.0–35.0)	–
Extremely dissatisfied (5–9)	–	–	17 (8.5)
Dissatisfied (10–14)	–	–	33 (16.6)
Slightly dissatisfied (15–19)	–	–	33 (16.6)
Neutral (20)	–	–	6 (3.0)
Slightly satisfied (21–25)	–	–	44 (22.1)
Satisfied (26–30)	–	–	36 (18.1)
Extremely satisfied (31–35)	–	–	30 (15.1)

Dermatology self-care education was missing for 8 patients.

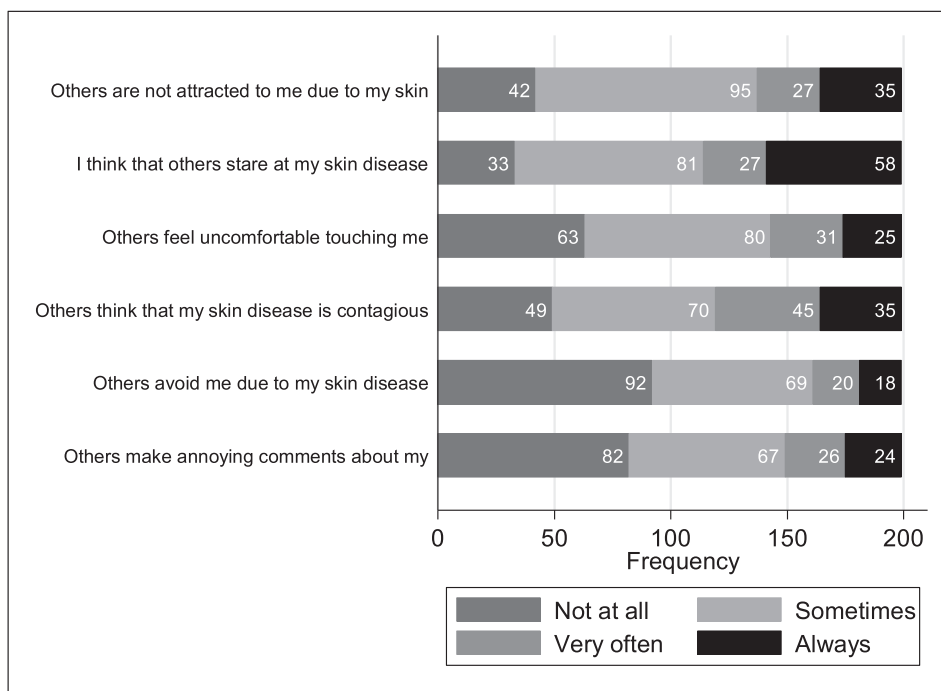


Fig. 1. Response distribution to each item of the 6-Item Stigmatization Scale.

Table 2

Univariate and forward stepwise multivariate linear regression analyses of feeling of stigmatization and satisfaction with life.

Variables	Feeling of stigmatization			Satisfaction with life		
	β Coefficient	95% CI	P value	β Coefficient	95% CI	P value
Univariate linear regression						
Age (year)	−0.10	[−0.17, −0.03]	0.01	0.20	[0.09, 0.32]	0.00
Gender						
Male	Reference					
Female	−0.20	[−1.69, 1.28]	0.79	−0.19	[−2.68, 2.31]	0.88
Education						
Below secondary education	Reference					
Secondary education	−1.20	[−3.57, 1.17]	0.32	−0.55	[−4.54, 3.45]	0.79
High education	−1.86	[−4.02, 0.29]	0.09	−0.07	[−3.70, 3.56]	0.97
Disease related factors						
Disease duration (year)	−0.08	[−0.16, −0.01]	0.03	0.09	[−0.04, 0.22]	0.19
Disease severity	0.10	[0.03, 0.17]	0.00	−0.02	[−0.13, 0.10]	0.80
Disease visibility	0.35	[−1.05, 1.76]	0.62	−0.41	[−2.76, 1.94]	0.73
Quality of life impairment	0.42	[0.34, 0.50]	0.00	−0.48	[−0.63, −0.34]	0.00
Patient-related factors						
Acceptance of illness	−0.17	[−0.24, −0.10]	0.00	0.31	[0.20, 0.42]	0.00
Dermatological self-care education	−0.15	[−0.23, −0.06]	0.00	0.29	[0.15, 0.44]	0.00
Forward stepwise Multivariate linear regression						
Quality of life	0.39	[0.30, 0.47]	0.00	−0.36	[−0.53, −0.20]	0.00
Dermatological self-care education	−0.09	[−0.16, −0.01]	0.02	−	−	−
Acceptance of illness	−	−	−	0.18	[0.05, 0.30]	0.01
Age	−	−	−	0.14	[0.03, 0.24]	0.01

and dissatisfaction with life. For each unit increase in the QoL impairment (DLQI score), there was a 0.39 (95% CI 0.30, 0.47) units increase in the 6-item stigmatization scale and a −0.36 (95% CI −0.53, −0.20) units decrease in satisfaction with life scale. For each unit increase in the dermatological self-care education score, there was a −0.09 (95% CI [−0.16, −0.01]) units decrease in the 6-item stigmatization scale. For each unit increase in the acceptance of illness scale, there was a 0.18 (95% CI 0.05, 0.30) units increase in satisfaction with life scale. Finally, for each year increase in a patient's age, there was a 0.14 (95% CI 0.03, 0.24) units increase in satisfaction with life scale (Table 2).

4. Discussion

The current study assessed the feeling of stigmatization and satisfaction with life and their possible disease-related and patient-related predictors in Arabic psoriatic patients. The majority of Arabic patients with psoriasis (96.0%) showed some degree of stigmatization. This was comparable to 90.2% in Polish patients (Hrehorów et al., 2012) and 88.0% in Arabic Emirati patients (Dimitrov et al., 2019).

The mean (95% CI) 6-item stigmatization score was 7.0 (6.3–7.7) which was comparable to that reported in a single-center study conducted in the United Arab Emirates (mean ± SD of 5.6 ± 4.5)

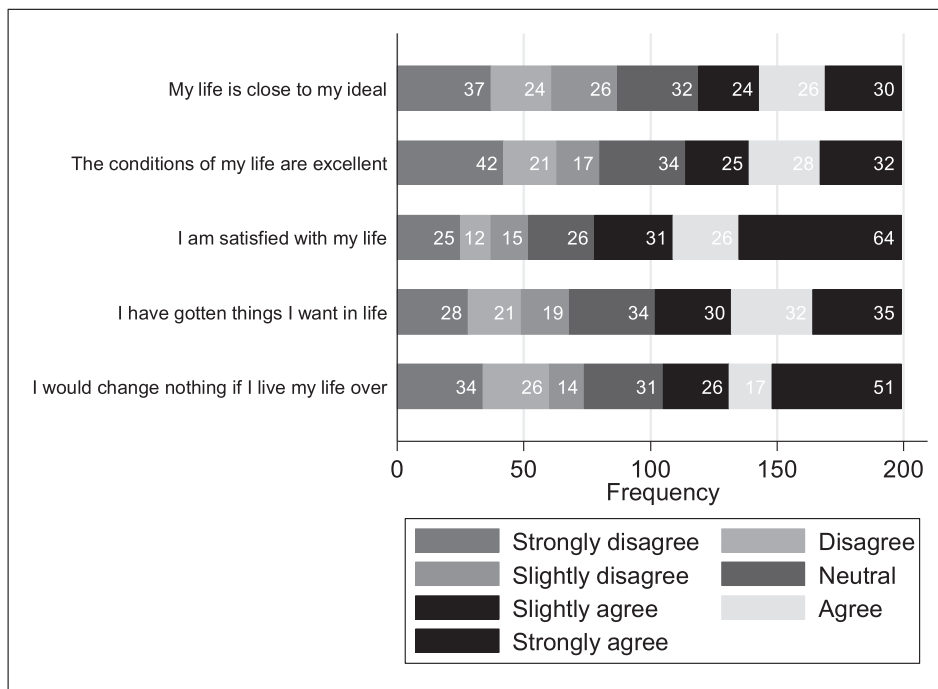


Fig. 2. Response distribution to each item of the satisfaction with life scale.

(Dimitrov et al., 2019). The problem of thinking that others stare at the affected skin was the most troubling to patients in both the current study and the Emirati study. The current results showed that QoL impairment was the strongest predictor of the feeling of stigmatization reflecting that patients with uncontrolled disease, to the level of impairing the QoL, were subject to stigmatization. Similar findings were reported in a study involving 514 patients with psoriasis in the Netherlands where disease severity and impaired QoL were identified as predictors of stigmatization with the later as a stronger predictor (van Beugen et al., 2017). The impact of the disease on QoL seems to be more important to patients than the disease severity which can be justified by the fact that psoriasis related stress resulting from other people's reactions towards the disease associated the patients' QoL rather than any other variables including disease severity (Fortune et al., 1997).

A higher level of dermatology self-care education was identified as a significant predictor of a less feeling of stigmatization. Previous studies revealed better QoL in patients with higher levels of dermatology self-care education (Soliman, 2020; Tucker and Stewart, 2017). In agreement with our study, similar stigmatization levels were reported for both males and females in previous studies (Kowalewska et al., 2020; van Beugen et al., 2017).

Patients who participated in this study were generally positive about their overall satisfaction with life. This might be explained by the satisfaction with life scale measuring patients satisfaction in regard to their own achievements and conditions in comparison to their own proposed standard (Diener et al., 1985). Besides, the skin disease may not be the only factor that determines the level of satisfaction with life; many other factors may play a role as the patient's type of personality (van Beugen et al., 2017). Older patients were more satisfied with life; this finding comes in agreement with Jankowiak et al. who reported more satisfaction with life in psoriasis patients older than 50 years (Jankowiak et al., 2013). This can be justified by the accommodation with the condition over time and the decision taken to enjoy life regardless of the disease (Diener et al., 1985). Acceptance of illness significantly predicted higher levels of satisfaction with life. A recent Polish study

of 366 patients with psoriasis reported significant positive correlation ($r = 0.5$) between acceptance of illness scale and the satisfaction with life scale, with the majority of patients with low levels of disease acceptance reporting low levels of satisfaction with life (Kowalewska et al., 2020).

Using the cross-sectional study design was convenient providing rapid responses at a minimal cost. The online survey was suitable for collecting data from patients within the current regulations of social distancing due to the coronavirus disease 19 (COVID19) pandemic especially with the recent recommendation to use telemedicine to monitor psoriasis patients on biologics who are at higher risk of infection (Damiani et al., 2020). The online survey also allowed patients to fill the questionnaires at their most suitable time. However, selection bias may limit the results of the current study because some patients may not be familiar with online participation in surveys especially older patients and those who are illiterate. In addition, patients with higher levels of feeling of stigmatization may be more likely to participate in the study as they might relate the study to themselves while patients with low levels of stigmatization may choose not to participate as they might mistakenly think that the study is irrelevant to them. However, it was mentioned to the patients that all psoriasis patients should participate irrespective of having a feeling of stigmatization or not. Another limitation of the study is the inability to know the causal ordering of the variables. Lastly, a patient-reported measure (saSPI-s) was used to assess disease severity; however, the saSPI-s is strongly correlated with the professionally measured version (pro-SPI-s) which is assessed by a health professional (Chularojanamontri et al., 2013).

Future studies are needed to report on the satisfaction and stigma associated with other dermatological disorders such as vitiligo and atopic dermatitis in Arabic countries.

5. Conclusions

Despite feeling highly stigmatized by their skin disease, psoriasis patients were generally positive about their overall satisfaction

with life. More impaired QoL significantly predicted higher levels of feeling of stigmatization and lower levels of patients' satisfaction with life. High level of dermatology self-care education predicted less feeling of stigmatization; this highlights the importance of educating patients about their disease, skin-care and self-management which can be effectively introduced by nurses and community pharmacists during patient counseling to improve patients' outcomes. The medical community is encouraged to consider the problem of stigmatization and patient dissatisfaction within the holistic patient care approach introduced to psoriasis patients especially those with highly impaired QoL.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Acknowledgments

The author would like to thank all study participants.

Author contributions

MS contributed to all the work done in the study including the study design, developing the survey, analysis of the patients' responses, writing and reviewing the manuscript.

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