



The Rate of Social Acceptance in Psoriasis Patients: A Cross-Sectional Study in Iran

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Abstract

Background: Psoriasis is recognized as a chronic immune system disease with unknown etiology that affects the skin. It might lead to psychological issues and pose considerable distress. The purpose of this study was to investigate the rate of social acceptance in psoriasis patients.

Methods: This was a cross-sectional study which was carried out on all the patients (n=100) referred to specialized skin diseases clinic in Yazd, Iran. 100 psoriasis patients and 100 healthy people as a control group were enlisted. The patients were eliminated from the research in case they had other chronic medical conditions since it could affect social acceptance. The patients completed a social acceptability questionnaire (Marlowe–Crowne Social Desirability Scale) and demographic information was also collected. Data were analyzed by ANOVA and chi square test in the form of descriptive and inferential statistics using SPSS-24 software.

Results: The mean of patients' age was 36.97±13.94 years old and 66% of the patients were female. Mean score of social acceptance was 18.04±4.4. The mean score of social acceptance in psoriasis patients' group (>40 years old) was estimated higher than in other groups (p>0.05). The results revealed that only the job variable affected the Mean±SD of social acceptance in these patients. The rate of social acceptance in psoriasis patients was higher in those with governmental jobs in comparison to those with self-employment jobs. Overall, the level of social acceptance in people with psoriasis was lower than in the control group.

Conclusion: This study showed that psoriasis patients who had governmental jobs received a great deal of acceptance via the people around them and they generally had a better quality of life.

Keywords: Psoriasis, Social acceptance, Mental disorders, Life quality, Inflammatory disease

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Received: 29 Jul 2022

Accepted: 24 Jan 2023

Citation to this article:

Bidaki R, Ghanei N, Hajmohamadkarimi M, Poursamimi M, Bozorg B, Kolahi N, et al. The Rate of Social Acceptance in Psoriasis Patients: A Cross-Sectional Study in Iran. *J Iran Med Counc.* 2023;6 (3):479-87.

Introduction

Psoriasis is viewed as a chronic skin disease with serious manifestations that is incompatible with some of its manifestations, especially at young age. It will create many problems related to appearance, physical disability, and psychiatric considerations (1). A plaque psoriasis rash includes ruby blotches of plaque which have a silvery-white wearing of scale. It commonly looks on the capitis, the bottom back, the elbows, and the kicks. The patches can be thicker with sore and pruritis (2). Endogenous agents such as pro-inflammatory cytokines and exogenous agents such as sunlight, infection, trauma, and medications are known as the inducers of the disease (2).

The severity of dermis injury in psoriasis is graded in three categories: mild, moderate, and severe (2). In the mild grade, 3% of skin surface is affected which approximately comprises two-thirds of the psoriasis patients. At the commencement of the disease, three quarters of patients are lower than 40 years old and one-third of patients are less than 20 years old (3). The psoriasis prevalence is seen about both gender equally; moreover, heredity has a significant effect on disease (4,5). It impacts almost 2% of the European population with an outbreak of about 1-5% in Europe and 6% in France and Germany (6). An equal rate is seen in women and men in all social status (6).

Psoriatic patients require more attention, care to facilitate quality of life and minimize disability related to the psoriasis. The clinicians need to be empathetic, supportive and educate patients about nature of psoriasis and related considerations. They should make it clear and explain to the patients that primary goal of treatment is management rather than definite cure. Social awareness toward psoriasis, advocated as social support, plays an important role in the acceptance of the disease (7). Psoriasis exerts a significant and negative effect on patients' quality of life. Population studies, nevertheless, offer a general insight into the PQOL and factors affecting it. Disease severity, disability and its acceptance are independent predictors for quality of life.

The majority of complaints conclude mood disturbances, misperceptions, and social and psychological conflicts in association with physical symptoms (8). Nowadays, patients receive support from social networks including family, friends,

neighbors, peer groups and co-workers called social acceptance, which also improves outcome. If there is no social acceptance, self-care and medication alone will not be successful. This study attempts to estimate the social acceptance in psoriasis patients in Yazd, Iran, in 2016-2017.

Materials and Methods

This study was a cross-sectional study carried out on all types of psoriasis patients referred to the dermatology clinic in Yazd, Iran, from 2016 to 2017. Two-hundred volunteers, 100 psoriasis patients (34 men and 66 women) and 100 healthy as a control group (40 men and 60 women) enrolled and Marlowe-Crowne Social Desirability Scale (SDS) was completed for all the subjects. Before beginning the study, researchers presented the objectives and the execution. All the subjects completed the informed consent form.

The healthy control group had no medical, psychological, or dermatological disorders. The aim of adjusting this control group had the base of social acceptance in the society in order to be compared with the patients' group.

The inclusion criteria included suffering from psoriasis, receiving any other medication, and willing to collaborate in the research. Exclusion criteria consisted of refusal to participation in the research or chronic disorders such as multiple sclerosis, Diabetes Mellitus (DM), Hypertension (HTN), malignancy, heart failure, hypothyroidism or hyperthyroidism.

In this study, a greater emphasis was placed on the psychological aspects, and biological treatments (such as clobetasol and corticosteroids) were not considered, but based on ethical the principles, the patients received their common treatments and were compared with the control group.

Marlowe-Crowne Social Desirability Scale (MC-SDS) is one of the most widely used scales for detecting social desirability and assessing social acceptance. MC-SDS comprises 33 questions with "yes and no" options for each item. MC-SDS consists of 33 items with 2 options for each item [yes (1) or no (0)]. The total score, which is the sum of all scores, was calculated and ranges from 0 to 33. The scores from 0 to 8, 9 to 19, and 20 to 33 indicated low, moderate, and high levels of social desirability,

respectively (9). In Sharafuddin survey, two methods including Cronbach’s alpha and split half method have been used to measure the reliability of the scale, which are equal to 0.70 and 0.67, respectively that indicate acceptable coefficients (10). In terms of validity and reliability, this scale has high correlation and acceptance with other psychological tools designed for social acceptance (11).

Marlowe–Crowne Social Desirability scale achieved an acceptable internal consistency coefficient of 0.88 and reported as 0.89 for reliability of the retest (12).

Statistical methods

To analyze the data, IBM SPSS Statistics 24 (IBM Corp, USA) was employed. Descriptive analytics such as frequency of age, gender, marital status, occupation, educational level and location of the lesion in each group were reported. Then one-way analysis of variance (ANOVA) was used to compare the different groups of patients in variable of social acceptance (p-values less than 0.05 were considered as significant).

Ethics approval

Before starting the study, researchers presented the objectives and execution of the study. All subjects completed the informed consent form. The study was authorized by the ethics committee and board of Islamic Azad University of Yazd, Iran. Ethical code is IR.IAU.YAZD.REC.1397.019.

Results

Variables included age, gender, education, occupation, marital status, location of the lesion, and the Body Surface Area (BSA) covered by lesions which are abbreviated in table 1.

This cross-sectional study was conducted on psoriasis patients (34 men and 66 women) and a healthy control group (40 men and 60 women). Mean age of the patients was 36.97±13.94 years old. Most of the patients had diplomas (32%, n=32) and high school education (32%, n=32). Majority of the patients were married (87%), 11% (11 patients) were single and about 2% of them (2 patients) were divorced. Regarding the occupational status, 43% of the patients (43 patients) were housewives, 24% of them (24 patients) had governmental jobs, 24% (24

Table 1. Descriptive statistics results of all participants from both groups (psoriasis patients and healthy control group)

Participants	Psoriasis patients (N=100)	Healthy control (N=100)
Age (y)		
<25	13 (13%)	14 (14%)
25-35	38 (38%)	44 (44%)
35-45	20 (20%)	22 (22%)
>45	29 (29%)	20 (20%)
Gender		
Female	34 (34%)	40 (40%)
Male	66 (66%)	60 (60%)
Educational level		
Below diploma	32 (32%)	14 (14%)
Diploma	32 (32%)	35 (35%)
Upper diploma	3 (3%)	3 (3%)
Bachelor	24 (24%)	30 (30%)
Master	6 (6%)	13 (13%)
Doctor	3 (3%)	15 (15%)
Occupation		
Government	24 (24%)	38 (38%)
Self-employment	24 (24%)	18 (18%)
Housekeeper	43 (43%)	19 (19%)
Student	9 (9%)	25 (25%)
Marital status		
Married	87 (87%)	73 (73%)
Single	11 (11%)	25 (25%)
Divorced	2 (2%)	2 (2%)
Location of the lesion		
Head and neck	12 (12%)	
Trunk	5 (5%)	
Upper limb	5 (5%)	
Lower limb	20 (20%)	
Both organs	24 (24%)	
Generalized	34 (34%)	
The body surface area covered by lesions (BSA)		
10%	12 (12%)	
11-29%	5 (5%)	
30-49%	30 (30%)	
50-69%	28 (28%)	
70-89%	4 (4%)	
90-100%	21 (21%)	

patients) were self-employed and about 9% of them (9 patients) were students. About 34% of the patients (34 patients) had diffuse lesions, 24% (24 patients) had lesions on the extremities, and 12% of them (12 patients) had lesions on their face.

The variables studied in groups (patient group and control group), the location of lesions, and the extent

of total body involvement with psoriasis lesions in the patient group are shown in table 1.

In table 1, the frequency is reported. It was not possible to calculate the p-value since it was not possible to check the correlation level. For example, the frequency of the BSA covered by lesions of 10% was 12 in our patients' group. Thus, calculation of p-value was not considered. The mean score of social acceptance in the psoriasis patients with attention to

different subgroups are displayed in table 2.

Table 2 shows that the mean score of social acceptance in psoriasis patients' group (>40 years old) was assessed higher than the other group ($p>0.05$). Due to Tukey post hoc test, it is recognized that the mean score of social acceptance in female patients in psoriasis patients' group was more than that of males ($p>0.05$). The findings showed that the mean score of social acceptance in psoriasis patients' group who had

Table 2. Analysis of variance (ANOVA) of social acceptance among different group of patients

Variables	Social acceptance (Mean \pm SD)	F	p-value	n(%)
The body surface area covered by lesions (BSA)				
10%	17 \pm 3.860			12 (12%)
11-29%	20.2 \pm 3.630			5 (5%)
30-49%	18.43 \pm 3.680			30 (30%)
50-69%	18 \pm 4.520	0.34	0.770	28 (28%)
70-89%	16.5 \pm 3.870			4 (4%)
90-100%	17.9 \pm 5.920			21 (21%)
Total				100 (100%)
Age of patients (years old) in psoriasis patients group				
<25	16.69 \pm 4.260			13 (13%)
25-35	18.26 \pm 3.460			38 (38%)
35-45	16.7 \pm 4.860	2.93	0.148	20 (20%)
>45	19.27 \pm 5.140			29 (29%)
Total	18.04 \pm 4.440			100 (100%)
Gender				
Man	17.55 \pm 4.680			34 (34%)
Woman	18.28 \pm 4.330	2.60	0.449	66 (66%)
Total				100 (100%)
Profession				
Government job	19.04 \pm 4.080			24 (24%)
Self employment	15.83 \pm 3.940	3.79	0.042 *	24 (24%)
Housekeeper	18.96 \pm 4.640			43 (43%)
Student	18.11 \pm 4.370			9 (9%)
The levels of education				
Under diploma	18.37 \pm 4.620			32 (32%)
Diploma	17.37 \pm 5.070			32 (32%)
Associate degree	19 \pm 2			3 (3%)
Under graduated	18.45 \pm 3.3			24 (24%)
Post graduated	19.16 \pm 4.02	1.69	0.729	6 (6%)
Doctorate	15 \pm 7			3 (3%)
Total	18.04 \pm 4.440			100 (100%)

Contd. table 2.

Marital status				
Married	18.10±4.490			73 (73%)
Single	17.90±3.750			25 (25%)
Divorced	16±8.480	0.58	0.807	2 (2%)
Total				100 (100%)
Location of the lesion				
Head and neck	17±3.860			12 (12%)
trunk (thorax and abdomen)	18.80±3.890			5 (5%)
Upper limb	20.20±3.630			5 (5%)
Lower extremity	18.30±3.350	0.49	0.847	20 (20%)
Both (upper and lower) organs	17.83±4.740			24 (24%)
Generalized	17.97±5.240			34 (34%)
Total	18.04±4.440			100 (100%)

*p<0.05.

a governmental job was higher in comparison to other professions and the mean score of social acceptance in self-employments was lower in comparison to other professions ($p<0.05$). There was an increase in the mean score of social acceptance rate in post-graduated patients compared to others ($p>0.05$). Social acceptance rates were higher in married patients and it was low in divorced patients, but there was no significant difference in psoriasis patients in terms of marital status ($p>0.05$). In addition, there was no significant difference in psoriasis patients' group regarding education level ($p>0.05$). Moreover, there was no significant difference in psoriasis patients' group in terms of the location of the lesion ($p>0.05$). The results (Mean±SD) demonstrated a higher rate of social acceptance in the upper limbs and low social acceptance in head and neck regions compared to other areas ($p>0.05$).

The mean and standard deviation of social acceptance based on the level of involvement with disease-related lesions indicated that the highest rate of social acceptance was in the group with lesion involvement between 11-29% and the lowest rate of social acceptance was in the group with lesion involvement between 11-29%. However, there was no significant difference in psoriasis patients' group in terms of the BSA ($p>0.05$).

The average social acceptance in the psoriasis patients' group is 18.04, the highest value is 28 and the

lowest value is 5, and the average social acceptance for the control group is 19.72, the highest value is 30 and the lowest value is 9. Overall, the level of social acceptance in people with psoriasis was lower than in the control group.

Discussion

According to other studies, dermatologic diseases including psoriasis might have a great influence on all aspects of life such as profession and social functioning, as well as social and sexual life (13,14). The stigma of dermatological disease is as significant as psychological issues in Iranian culture. In Iran, especially in rural and urban areas with low socioeconomic status, people pay more attention to each other which can make their selfish people sensitive. In Iran, due to clothing type and Islamic wearing culture and custom, many body zones are covered or masked. Therefore, they are less exposed.

It is reported that psoriasis has fewer impacts on a patient's Quality of Life (QOL) for lifelong (15) in comparison to the other chronic diseases such as chronic obstructive pulmonary disease (COPD) and coronary artery disease which have more effects on patient's life quality (16). Vettuparambil *et al* in 2016 showed that all dimensions of QOL (physical function, mental health, and social interaction) were impressed by psoriasis (17). Another study revealed that at least 20% of the psoriasis patients had committed suicide

(15).

The results of this study demonstrated that the rate of social acceptance in psoriasis patients' group was 18.04 ± 4.44 which showed less social acceptance than the control group (19.72 ± 5.07).

The results indicated a significant distinction between the rates of social acceptance in different occupational groups in psoriasis patients ($p < 0.05$). There was a high level of social acceptance in some governmental occupations and a low level of social acceptance in self-employment occupations. This finding was in line with the results of studies carried out by Fowler and Horn in 2008 and 2007 which reported that choice of career, employment, and income were influenced by psoriasis (18,19). There was a reverse correlation between job, income, and psoriasis severity (20). A study conducted by Bidaki *et al* in 2016 showed that patients with AIDS who were occupied had more social acceptance and they also had a higher life quality (21). The reason for these results might be interpreted as if people with governmental jobs have a better ability to adapt to social conditions and environments where different people with different demographic characteristics are working. Therefore, they are expected to have higher social acceptance, which is also true for patients with psoriasis. Job is a protective factor and it will be a better prognosis for psychiatric disorders due to psoriasis.

According to findings of the online search engines such as PubMed, Google scholar, *etc.*, no research has found a connection between social acceptance and different professions.

In addition, this study showed that there was no relationship between BSA, demographic information including gender, age, marital status, level of education, lesion location, and the rate of social acceptance.

Some studies indicated comparable rates of social support about both sexes with psoriasis (22) and there was no difference between them regarding stigma in society context (23,24). Due to the observable cosmetic side effects on men's and women's bodies, psoriasis influences the stigmatization of both sexes equally (25). Paradoxically, some studies demonstrated that women tended to perceive more rate of social support than men (25,26). Therefore, sex differences in correlation between social support

and depressive symptoms suggest that social support would be generally more efficient than in the prevention of depression in the women's group in comparison to men's psoriasis group. In addition to the somatic problems depending on the individual characteristics of the person as well as cultural issues, it causes considerable worries about treatment, physician visits and the fate of the disease.

In Iran, where coverage is mandatory for women, about some dermatological diseases and areas that may be exposed are covered, which may reduce the psychological burden on women. Therefore, psychosocial interventions for psoriasis patients should be based and tailored on sex (21).

Our results showed that the minimum of social acceptance rate was found in patients aged less than 25 years old and its maximum was found in patients aged over 45 years old.

A study performed by Kouris *et al* in 2012, showed no correlation between the QOL, anxiety, depression, loneliness, self-esteem, and age in psoriasis patients (27). Moreover, the findings of this study on social acceptance in psoriasis patients' group with distinct marital status suggested that there was a meaningful increment in married patients in comparison to the other marital status ($p < 0.05$).

Another study by Soltandehghan and Najafi-Ghezalje in 2017 evaluated the correlation between life quality and intensity of disease in psoriasis patients and it was reported that different groups of marital status were not different regarding QOL (26). In addition, Cakmur and Dervis in 2015 showed that there was no correlation between marital status and QOL (28). On the contrary, it is reported that QOL in illiterate psoriasis patients was lower than literate patients who had university education (17).

There was no correlation between lesion location and social acceptance frequency in our research. However, an indirect correlation has been noted between location of psoriasis lesion including hand (the main tool in work and physical contact), head, and genital area with social acceptance rates (29).

Kostyla *et al* in 2013, reported that patients with severe psoriasis had higher interpersonal sensitivity scores than patients with mild or moderate psoriasis, therefore they felt more stigmatization and might avoid communication and social participation (30).

How dermatologists communicate with patients and their literacy reduces the psychological burden.

Findings of Cakmur and Dervis in 2015 demonstrated that there was a linear correlation between the score of psoriasis severity on the scale of BSA and the score of QOL (29). An Iranian study showed that religious and spiritual beliefs play a key role in acceptance, adaptation and coping with disease. This study also discusses the role of experiences of other people who have the disease and transfer their experiences to the patient. The patients tend to share the disease details with someone. On the other hand, they are afraid that their relationship will be ruined. This study also discuss the role of social support that can improve the quality of life (31).

The data showed that social and psychological support which is effective in reducing the deleterious effects of the disease on the social life of these patients should be increased to improve the functioning of these patients in the context of community. This difference could be attributed to discrepancy in tools, sample sizes, cultures, population characteristics, and access to care. The findings of this study are a small view of disease and cultural issues, which include items like care, self-disclosure, confidentiality, nursing, intrapsychic relationship, education, stigma, accommodation and adaptation. Including samples from few clinics and not specifying the government job type limit the generalization of the results. Therefore, more comprehensive and precise studies are needed, especially on the impact of culture, religion and spirituality on the views and acceptance of people,

especially patients of certain populations. Carrying out research in the city, a small sample, conducting research in a clinic, cross-sectional research and lack of follow-up program are research limitations that should be considered in future research.

In this study, patients were asked and the questionnaires were completed before receiving any biologic or psychiatric treatments. As the purpose of this study was to evaluate the rate of social acceptance in psoriasis patients, PASI questionnaire was not used.

Conclusion

Psoriasis is linked to degradation of patients' function and social relations, including their social acceptance. The results of this study showed that psoriasis patients who had governmental jobs enjoyed a great deal of acceptance from the people around them and they had a higher life quality in general. It also led to suggestions for further study to find more effective solutions for psoriasis patients to deal with psychological disorders. Such research could also help to provide an enhanced understanding of the potential psychological impact that psoriasis imposes on patients in Iran.

Acknowledgements

We acknowledge all psoriasis patients who agreed to cooperate in this survey. This study was based on an MSc thesis in clinical psychology, approved by the Research Council at Islamic Azad University, Yazd, Iran.

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