ORIGINAL ARTICLE

Determinants and Correlates of Depression in Psoriasis Patients: Does Marital Adjustment Play a Role?

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Abstract

Aim: To assess the prevalence and severity of depression in married psoriasis patients and to determine its correlates with special reference to marital adjustment.

Materials and methods: A total of 50 patients with a history of psoriasis for more than or equal to 2 years (age range, 26–45 years; mean age, 33.0 ± 5.61 years; 80% males) were enrolled in the study. The prevalence and severity of depression were assessed using the Hamilton depression rating scale (HDRS), and the severity of psoriasis was assessed using the psoriasis area and severity index (PASI). The marital adjustment was assessed using the marital adjustment questionnaire (MAQ). Multivariate linear regression was performed to find out independent factors related to HDRS.

Results: Mean HDRS was 10.06 ± 5.25. Mild, moderate, and severe depression was seen in 46%, 18%, and 6% of patients, respectively. On multivariate linear regression, after adjusting for age, sex, place of residence, occupation, socioeconomic status, duration of marriage, number of children, BMI, psoriasis type, and duration of psoriasis, only PASI scores ($p = 0.035$) and MAQ scores ($p < 0.001$) emerged as factors independently associated with HDRS score ($r^2 = 0.602$). In a reduced linear regression model, both PASI scores and MAQ scores were significantly associated with HDRS ($r^2 = 0.527$).

Conclusion: Depressive symptoms were common in psoriasis patients and were associated with psoriasis severity (PASI). Marital adjustment offered a protective effect against depressive symptoms.

Keywords: Body mass index, Marriage, Psoriasis.

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Introduction

Psoriasis is a chronic inflammatory disease that has more than just a physical impact. Despite psoriasis being an immune-mediated disease having systemic involvement, it affects the patient's self-esteem, confidence, and perception of self-image, which has an impact on the personal, social, and sexual life of the patient.[1–3] A combination of these systemic, dermatological, psychological, personal, social, and sexual disturbances in life results in psychological stress that is reflected in terms of psychological morbidities such as depression.[3–5] While chronic inflammation has been documented to play a pathogenic role in the precipitation of depressive symptoms in psoriasis patients,[3,5,6] social factors such as social support and disease acceptability as the protective factors against depression cannot be ruled out.[3,7] Marriage is considered to be one of the most important social institutions that is the basis of social support from within the family. Spouses tend to spend maximum time together and the importance of adjustments and support from marital partners in psychological well-being cannot be ruled out. Over the years, a number of studies have shown that marital adjustments have a strong relationship with quality of life and psychological well-being.[8–10] The role of marital adjustments and spousal support in coping with chronic disease-related stress has also been documented in various studies.[11,12] Because of its chronic inflammatory and dermatological nature, psoriasis has a huge impact on marital life. Psoriasis is known to affect marital relationships, including sexual functioning and marital quality of life, and may subsequently result in the breakdown of marriage.[13–15] Thus, marital adjustments have an important role to play in determining the psychological status of psoriasis patients. In the present study, we make an attempt to study whether marital adjustment has a relationship with depression in psoriasis patients.

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Materials and Methods

The present study was carried out at the Department of Psychiatry in collaboration with the Department of Dermatology, Gajra Raja Medical College, Gwalior after obtaining ethical clearance from the Institutional Ethics Committee and getting informed consent from the participants.

A total of 50 married patients aged between 25 and 45 years with a diagnosis of psoriasis for at least two years, having at least five

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years of marital history were enrolled in the study after excluding the patients or their spouses having any systemic illness, endocrinal disorder or known history of psychiatric illness and those who were sexually inactive for last 6 months.

Data were collected on a semi-structured proforma. A detailed history regarding the age and sociodemographic profile was obtained. Following a thorough physical examination, type of psoriasis and duration of illness were noted. The severity of the disease was assessed using psoriasis area and severity index (PASI).[16]

Marital details like time since marriage and number of children were noted. The spousal relationship was assessed using, the 25-item marital adjustment questionnaire (MAQ) proposed by Kumar and Rohatagi[17] which is a highly validated and popular tool for the assessment of the marital quality of life in the Indian population. This questionnaire is available in Hindi and contains 25 questions that can be answered as yes or no. For each correct response, a score of 1 is awarded. The total summed-up score reflects the interviewed partner's marital adjustment. A score of 25 is reflective of absolute marital adjustment while a score of 0 reflects no marital adjustment.

Assessment of depression was done using a 17-item Hamilton depression rating scale (HDRS).[18] It is a 17-item scale that analyses the depressive symptoms on a 0–4 scale with 0 showing total absence/no impact whereas a score of 4 indicates marked presence/extreme impact of the symptom. Thus, the total scores can range between 0 and 68. A higher score indicates a higher severity of depression. Scores 0–7 are considered to be an indicator of the normal state, 8–13 a mild depression, 14–18 a moderate depression, score of 19 or more is reflective of severe depression.

Data Analysis

We used a Statistical Package for the Social Sciences (SPSS) software, version 21.0 (IBM, Inc.), for data analysis. Qualitative data has been represented as frequency (number) and proportions (percentage). Parametric/continuous data have been reflected as mean ± standard deviation (SD). Multivariate stepwise linear regression was performed to find out various continuous or qualitative variables (that were transformed into nominal scores) independently related to depression scores. The initial model was prepared with the help of all the variables available. Finally, a reduced model was prepared taking into account only those variables that emerged as significant independent factors related to the depression scores. The explanatory power of the linear regression models was assessed by calculating the value of r^2.

Results

Table 1 shows the sociodemographic profile of patients and HDRS scores. The mean age of patients was 33 ± 5.61 years (range 26–45 years). The study population was dominated by males (70%) and urbanites (70%). The mean body mass index (BMI) of patients was 27.50 ± 4.13 (range 21.1 to 35.4) kg/m^2. The occupational profile of the patients was highly diversified and included housewives (22%), manual laborers (20%), businessmen (16%), those doing service (16%), professionals (14%), agriculturists (6%) and students (6%). The majority of patients (66%) were from the lower middle/upper lower socioeconomic class. The HDRS scores ranged from 0 to 22 with a mean of 10.06 ± 5.25. Mild, moderate, and severe depression was seen in 46, 18, and 6% of patients, respectively. There were 15 (30%) patients who had HDRS scores in normal range (Table 1).

Table 1: Sociodemographic profile of patients, diagnosis, and psoriasis severity of patients

S.No.	*Characteristic*	*Statistic*
1.	Mean age ± SD (range) in years	33.0 ± 5.61 (26–45)
2.	Male:Female	35 (70%):15 (30%)
3.	Rural:Urban	15 (30%):35 (70%)
4.	Mean BMI ± SD (Range) in kg/m^2	27.50 ± 4.13 (21.1–35.4)
5.	Occupation	
	Agriculturist	3 (6%)
	Businessman	8 (16%)
	Housewife	11 (22%)
	Manual laborer	10 (20%)
	Professional	7 (14%)
	Service	8 (16%)
	Student	3 (6%)
6.	Socioeconomic status	
	Upper	1 (2%)
	Upper middle	9 (18%)
	Lower middle	20 (40%)
	Upper lower	13 (26%)
	Lower	7 (14%)
7.	Mean HDRS ± SD (range)	10.06 ± 5.25 (0–22)
	No depression (score 0–7)	15 (30.0%)
	Mild depression (score 8–13)	23 (46.0%)
	Moderate depression (score 14–18)	9 (18.0%)
	Severe depression (score 19 and above)	3 (6.0%)

Table 2: Duration of marriage, number of children and marital adjustment scores

S.No.	*Variable*	*Statistic*
1.	Time since marriage	
	5–10 years	20 (40%)
	11–15 years	17 (34%)
	>15 years	13 (26%)
2.	Number of children	
	Nil	14 (28%)
	1–2	22 (44%)
	3–4	11 (22%)
	>4	3 (6%)
3.	Mean marital adjustment scores ± SD (range)	13.69 ± 4.24 (5–21)

Table 2 shows information related to marriage and marital adjustment. Duration of marriage ranged from 5–10 years in 20 (40%), 10–15 years in 17 (34%), and above 15 years in 13 (26%) cases. A maximum number of cases had 1–2 children (44%) followed by those having no children (28%), 3–4 children (22%), and more than 4 children (6%), respectively. MAQ scores ranged from 5 to 21 with a mean of 13.69 ± 4.24 (Table 2).

Table 3 shows information related to psoriasis type, duration of illness, and psoriasis severity. Psoriasis vulgaris (62%) was the most common type followed by scalp psoriasis (16%), palmoplantar psoriasis (14%), and other types (2 sebopsoriasis, 1 each guttate psoriasis and plantar psoriasis) (8%), respectively. The majority had the diagnosis of psoriasis for 5–10 years (60%) followed by more than 10 years (22%) and 2–5 years (18%), respectively. The PASI scores ranged from 1.2 to 36 with a mean of 8.88 ± 7.35. There were 16 (32%) patients each having PASI scores 6–10 and above 10, respectively; however, the maximum (36%) had PASI score less than or equal to 5 (36%) (Table 3).

Table 4 shows the step-1 multivariate linear regression model that included HDRS score as the dependent variable on the independent variables age, sex, place of residence, occupation, socioeconomic status, duration of marriage, number of children, body mass index, psoriasis type, duration of psoriasis, PASI scores, and MAQ scores. In this model, only PASI scores and MAQ scores emerged as significant independent predictors of HDRS scores ($p < 0.05$). The r^2 value obtained for the model was 0.602 (Table 4).

Table 5 shows the step-2 reduced multivariate linear regression model for the estimation of HDRS scores in patients with psoriasis. In this model, HDRS scores were estimated only with the help of factors emerging as significant independent predictors of HDRS in step 1 of the analysis, that is, PASI scores and MAQ scores. Both factors maintained their independent predictor status in the reduced model too ($p \leq 0.001$). The r^2-value of this reduced model was 0.527 (Table 5).

Table 3: Psoriasis type, diagnosis, and severity

S.No.	Variable	Statistic
1.	Diagnosis	
	Psoriasis vulgaris	31 (62%)
	Scalp psoriasis	8 (16%)
	Palmoplantar psoriasis	7 (14%)
	Others (2 sebopsoriasis, 1 each guttate psoriasis and plantar psoriasis)	4 (8%)
2.	Duration of illness	
	2–5 years	9 (18%)
	5–10 years	30 (60%)
	>10 Years	11 (22%)
3.	PASI score	
	≤5	18 (36%)
	5.1–10	16 (32%)
	>10	16 (32%)
	Mean PASI ± SD (range)	8.88 ± 7.35 (1.2–36)

Discussion

The present study showed a high prevalence of depression (70%) in psoriasis patients although it was of mild order in 23/35 (65.7%) of patients with depression. However, a total of 24% of patients had moderate-to-severe depression. The findings of the study showed that the psoriasis severity (PASI scores) and marital adjustment (MAQ scores) were independent predictors of depression symptom scores (HDRS scores). It was also seen that the predictive model based on these two predictors only had excellent explanatory power ($r^2 = 0.527$) which was only slightly lower than that obtained from a comprehensive model that took 12 factors into account ($r^2 = 0.602$). The findings of the study thus place marital adjustment

Table 5: Reduced multivariate linear regression model for estimation of HDRS scores

S.No.	Variable	β ± SE	t-value	p-value
1.	Constant (α)	16.199 ± 2.225	7.244	<0.001
2.	PASI score	0.270 ± 0.077	3.506	0.001
3.	MAQ score	−0.618 ± 0.133	−4.642	<0.001

$r^2 = 0.527$; SE, standard error

Table 4: Multivariate linear regression for identification of independent factors related with HDRS scores

S.No.	Variable	β ± SE	t-value	p-value
1.	Constant (α)	9.666 ± 6.818	1.418	0.165
2.	Age (years)	0.092 ± 0.175	0.523	0.604
3.	Sex (1 = Male, 2 = Female)	−1.222 ± 1.414	−0.865	0.393
4.	Rural (1)/Urban (2)	1.979 ± 1.449	1.366	0.180
5.	Occupation (1 = Agriculturist; 2 = Business; 3 = Housewife; 4 = Manual laborer; 5 = Professional; 6 = Service; 7 = Student)	0.281 ± 0.382	0.735	0.467
6.	Socioeconomic status (1 = Upper; 2 = Upper middle; 3 = Lower middle; 4 = Lower upper 5 = lower)	0.288 ± 0.620	0.465	0.645
7.	Duration of marriage (1 = <5 years; 2 = 5–10 years; 3 = >10 years)	0.567 ± 1.018	0.557	0.581
8.	Number of children (0 = Nil; 1 = 1–2; 2 = 3–4; 4 = >4)	−1.279 ± 0.945	−1.352	0.184
9.	BMI (kg/m^2)	−0.079 ± 0.162	−0.486	0.630
10.	Diagnosis (1 = Psoriasis vulgaris; 2 = Palmoplantar psoriasis; 3 = Scalp psoriasis; 4 = Others)	0.633 ± 0.699	1.039	0.305
11.	Duration of psoriasis (1 = 2–5 Years, 2 = 6–10 years; 3 = >10 years)	0.539 ± 1.083	0.498	0.622
12.	PASI score	0.234 ± 0.107	2.183	0.035
13.	Marital adjustment (MAQ score)	−0.604 ± 0.153	−3.952	<0.001

$r^2 = 0.602$; SE, standard error

to have independent protective value against depression in psoriasis patients.

The high prevalence of depression in psoriasis patients has been documented in earlier studies too. Its prevalence has been reported to range from 6 to 62% in various studies as reported in a systematic review.[19] A slightly higher prevalence of depression in the present study may be owing to the fact that all the patients had a history of psoriasis for more than or equal to 2 years. Moreover, the study targeted a specific group of married psoriasis patients. A recent study from India, that had 87.8% married psoriasis patients reported the prevalence of depression to be as high as 78.9%.[20] As far as the dominance of patients with mild depression is concerned, the findings in the present study were in agreement with the study of Fabrazzo et al.[21] who also found mild depression to be more common (38.3%) than moderate/severe depression (22.5%). As far as the prevalence and severity of depression are concerned, it may also be dependent on the overall patient profile, psoriasis severity, duration, and a host of other sociodemographic factors.

In the present study, we mostly had young couples with a duration of a marriage within 5–15 years (74%), however, the MAQ scores depicted a huge gap with mean scores of 13.69 out of a maximum possible of 25, which is showing a percentage gap of nearly 45% thereby showing that marital quality of life of psoriasis patients was adversely affected showing large adjustmental gaps. These findings are in agreement with the observations of Hassani et al.[22] who also found mean marital quality of life scores showing nearly a 45% gap. Adverse impacts of psoriasis on marital quality of life have also been documented in other studies too.[13–15]

In the present study, we found a significant independent association of psoriasis severity and marital adjustments on depressive symptom scores. The association of depression with psoriasis severity has also been documented in other studies too.[20,23,24]

One of the important findings of the study was the protective role of marital adjustment on depression in psoriasis patients. This is important as social support seems to help psoriasis patients to mold their own perceptions toward disease and increase its acceptability.[7] A better adjustment with the spouse may help the patient cope with chronic disease-related stress.[11,12] On the contrary, a poor adjustment with a partner may result in affecting the marital quality adversely and could result in psychological distress[13–15] that may be responsible for the onset of depressive symptoms and their severity in married psoriasis patients. Thus, marital adjustments seem to play the role of a bi-edged sword that may influence the psychological well-being of the patient immensely.

Unfortunately, there is limited literature issuing the role of marital relationships on psychological status, particularly depression, in psoriasis patients. The present study is one of the pioneering studies in this direction that tried to explore this relationship and showed how marital adjustments could help to reduce the burden of psychological morbidity in psoriasis patients. Further studies with a larger sample size with the inclusion of a matched control group comprising individuals without psoriasis are also recommended.

Conclusion

Psoriasis severity and marital adjustments emerged as independent factors that affect the depressive symptom severity in young adult married psoriasis patients.

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