

Quality of life and self-esteem in patients with psoriasis, vitiligo and healthy controls: A cross sectional study

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Abstract

Introduction: Psoriasis and vitiligo are among the most common chronic skin diseases, which have a negative impact on the psychosocial well-being. Patients may experience social rejection and stigmatization. So, the aim of this present study is to assess and compare the self-esteem and quality of life (QoL) in patients with vitiligo, psoriasis and healthy controls and its relationship with age and gender.

Materials and Methods: A cross-sectional and comparative study was conducted at a tertiary care hospital, Udaipur, Rajasthan, with a sample of total 150 cases, 50 each of psoriasis, vitiligo and healthy controls, aged between 18-64years. The assessment of all subjects was done for quality of life and self-esteem by using scales Short Form-36 (SF-36) and Rosenberg Self-Esteem Scale (RSES) respectively.

Results: The results of our study showed that the self-esteem & quality of life was low in psoriatic patients when compared to vitiligo patients (p-0.000) and healthy controls (p-0.009). No relationship was found in patients of psoriasis and vitiligo between age and gender with regards to self-esteem and quality of life except poor social function domain of QoL, which was observed in middle age group (40-64years) patients of psoriasis.

Conclusion: While evaluating and arranging treatment of psoriasis and vitiligo patients, these results in poor psychosocial functioning should be considered and along with dermatologic interventions, psychiatric approaches should also be included for a better outcome.

Keywords: Quality of life, Self-esteem, Psoriasis, Vitiligo.

Introduction

Due to its responsiveness to emotional stimuli, skin has a special position in psychiatry. Its role is crucial in the development of self-esteem and ego integrity.¹ Based on the fact that both being originated from the same ectodermal structure, the relationship between skin and brain is clear.² So, psychodermatology makes up a common area of interest based on this mutual relationship between psychiatry and dermatology.³ Dermatology inpatients have been reported to have a higher prevalence of psychiatric disorders compared with general medical inpatients.⁴

Vitiligo is a depigmenting disorder. The total population affected with vitiligo is 0.5% to 1%. Psoriasis is a psychocutaneous disease of the skin. It affects approximately 1.4-2% of the world's population, with men and women being affected equally.⁵ Psoriasis waxes and wanes in the form of episodes.⁶

Various degrees of psychological stress and altered Quality of Life (QoL) is experienced by the patients with vitiligo.^{7,8} Vitiligo patients also reported psychosocial impairments and altered QoL.⁹⁻¹² The social stigma attached to vitiligo is known to produce deep psychological trauma.¹³ The forms of discrimination that patients with psoriasis experience includes the social rejection and alienation.^{14,15} The self-image of the patients is impaired by visible disfigurement.¹⁶⁻¹⁹

Previous studies have shown that, regardless of psoriasis severity, nearly 60% of the patients have a major effect on their QoL.²⁰ Many patients with psoriasis suffer from social isolation and stigmatization.^{21,22} Furthermore, patients with severe psoriasis were found to have significant impaired

work productivity.^{23,24} Psychological distress can lead to significant depression and social isolation.²⁵

There is paucity of published psychosocial research in vitiligo and psoriasis available from India; most of the studies were targeted over psychiatric comorbidity in chronic disorders. Hence, the present study has been undertaken with the aim to study and compare the self-esteem and quality of life in patients with vitiligo and psoriasis and healthy controls and its relationship with age and gender.

Materials and Methods

This cross-sectional and comparative study was conducted at Geetanjali Medical College & Hospital, Udaipur in the department of Psychiatry along with the department of Dermatology. Before starting the study, approval of the institutional ethics committee was taken. The study was conducted from August 2016-April 2017. One fifty, subjects who gave the informed consent were included in the present study. Out of which, 50 consecutive patients belonging to vitiligo and 50 consecutive patients belonging to psoriasis were taken. Age and gender matched 50 healthy controls preferably relatives and friends of the patients were taken. All patients were first examined by the consultant dermatologist who confirmed the diagnosis of psoriasis and vitiligo. In the study, patients of age between 18-64 years were included. Patients with past history of psychiatric disorders, those with serious/terminal medical illness, with other chronic dermatologic illness and with major medical or surgical illness were excluded. The investigator collected the socio-demographic and clinical variables on the proforma designed for the present study. Short Form-36 (SF-36) and

Rosenberg Self-Esteem Scale (RSES) were used to assess QoL and self-esteem respectively in all subjects.

Short Form-36 (SF-36): This questionnaire consisted of 36 items forming 8 domains or scales: physical functioning; role physical; role emotional; bodily pain; social functioning; mental health; vitality; and general health perceptions. All questions are scored on a scale of 0 to 100, with 100 representing the highest level of functioning possible.

Rosenberg Self-Esteem Scale (RSES): The RSES is a unidimensional instrument elaborated from a phenomenological conception of self-esteem that captures subjects' global perception of their own worth by means of a 10-item scale. A four-point scale ranging from strongly agree to strongly disagree is used to answer these 10 items. The scale ranges from 0-30, with 30 indicating the highest score possible. Scores between 15 and 25 are within normal range; scores below 15 suggest low self-esteem.

Statistical Analysis

Suitable statistical analysis (One Way ANOVA, Student 't' test and Karl Pearson Coefficient of Correlation) using SPSS 20 software were subjected to the information so gained and data so collected and conclusions were drawn.

Results

Results of the study have been depicted below-

Table 1 shows the age & gender profile of all three groups. The significantly high difference was observed in the self-esteem of psoriatic patients when compared to healthy controls (p- 0.009) and vitiligo patients (p- 0.000). And there was no difference in self-esteem of vitiligo patients when compared to healthy controls (p- 0.266) (Table 2). Psoriatic patients have significantly poor QoL when compared total score to healthy controls (p- 0.000) & in domains of physical health, emotional problems, emotional well-being & social functioning with all having a p-value of 0.000 (Table 3). No significant difference was found in total scores of QoL & its domains in vitiligo patients with healthy controls (p- 0.068, 0.320, 0.320, 0.638). But the significant difference in Emotional well-being domain of QoL (Table 3). The differences in total scores and its domains of QoL in psoriatic patients and vitiligo patients was statistically highly significant (p-0.000) (Table 3). With regard to age (p-0.130, 0.138) (Table 4) and gender (p- 0.178, 0.809) (Table 4), no significant difference was found in self-esteem of psoriatic patients and vitiligo patients. The significant difference in total scores of QoL and its domain social functioning in psoriatic patients with regard to age were found and no difference in its other domains QoL with regard to age was observed. But no significant difference was found in total scores of QoL & its domains in vitiligo patients with regard to age (Table 5). When compared gender and QoL with its domains in psoriatic patients and vitiligo patients no significant difference was observed (Table 6).

Table 1: Age and gender profile of psoriatic patients, vitiligo patients & healthy controls-

| | Group | Psoriasis | Vitiligo | Healthy controls |
|-----------|--------|-----------|-----------|------------------|
| Age (Yrs) | 18-39 | 26(52.0%) | 29(58.0%) | 25(50.0%) |
| | 40-64 | 24(48.0%) | 21(42.0%) | 25(50.0%) |
| Sex | Male | 37(74.0%) | 31(62.0%) | 29(58.0%) |
| | Female | 13(26.0%) | 19(38.0%) | 21(42.0%) |

Table 2: Comparison of self-esteem (RSES) in psoriatic patients & vitiligo patients & healthy controls-

| | Type | N | Mean | Std. Deviation | Std. Error Mean | Mean Diff | 't' | P value |
|------------------------------------|-------------------------------|----|---------|----------------|-----------------|-----------|-------|---------|
| RSES (Rosenberg Self-Esteem Scale) | Psoriasis Vs Healthy Controls | 50 | 16.6200 | 1.65233 | .23368 | 0.82000 | 2.664 | 0.009 |
| | | 50 | 17.4400 | 1.41652 | .20033 | 0.30000 | 1.119 | 0.266 |
| | | | | | | 1.12000 | 3.813 | 0.000 |
| RSES | Vitiligo Vs Healthy Controls | 50 | 17.7400 | 1.25860 | .17799 | 0.30000 | 1.119 | 0.266 |
| | | 50 | 17.4400 | 1.41652 | .20033 | | | |
| RSES | Psoriasis Vs Vitiligo | 50 | 16.6200 | 1.65233 | .23368 | 1.12000 | 3.813 | 0.000 |
| | | 50 | 17.7400 | 1.25860 | .17799 | | | |

Table 3: Comparison of quality of life (sf-36) between psoriatic patients, vitiligo patients & healthy controls-

| SF-36 (Short Form-36) | Type | N | Mean | Std. Deviation | Std. Error Mean | Mean Diff | 't' | P value |
|---|------------------|----|---------|----------------|-----------------|-----------|-------|---------|
| Total | Psoriasis | 50 | 69.27 | 25.035 | 3.541 | 26.741 | 7.452 | 0.000 |
| | Healthy controls | 50 | 96.01 | 4.122 | 0.583 | | | |
| RLEP-Role limitations due to physical health | Psoriasis | 50 | 64.50 | 46.863 | 6.627 | 35.500 | 5.356 | 0.000 |
| | Healthy controls | 50 | 100.00 | 0.000 | 0.000 | | | |
| RLEP- Role limitations due to emotional problems | Psoriasis | 50 | 63.33 | 47.738 | 6.751 | 36.667 | 5.431 | 0.000 |
| | Healthy controls | 50 | 100.00 | 0.000 | 0.000 | | | |
| EWB- Emotional well-being | Psoriasis | 50 | 68.8800 | 20.89101 | 2.95443 | 29.76000 | 9.645 | 0.000 |
| | Healthy controls | 50 | 98.6400 | 6.29143 | .88974 | | | |
| SF- Social functioning | Psoriasis | 50 | 69.95 | 28.078 | 3.971 | 24.910 | 6.027 | 0.000 |
| | Healthy controls | 50 | 94.86 | 8.101 | 1.146 | | | |
| Vitiligo Patients & Healthy Controls- | | | | | | | | |
| Total | Vitiligo | 50 | 93.69 | 7.888 | 1.115 | 2.321 | 1.844 | 0.068 |
| | Healthy controls | 50 | 96.01 | 4.122 | 0.583 | | | |
| RLEP-Role limitations due to physical health | Vitiligo | 50 | 99.00 | 7.071 | 1.000 | 1.000 | 1.000 | 0.320 |
| | Healthy Controls | 50 | 100.00 | 0.000 | 0.000 | | | |
| RLEP- Role limitations due to emotional problems | Vitiligo | 50 | 98.67 | 9.429 | 1.333 | 1.333 | 1.000 | 0.320 |
| | Healthy controls | 50 | 100.00 | 0.000 | 0.000 | | | |
| EWB- Emotional well-being | Vitiligo | 50 | 89.3600 | 12.71631 | 1.79836 | 9.28000 | 4.625 | 0.000 |
| | Healthy controls | 50 | 98.6400 | 6.29143 | .88974 | | | |
| SF- Social functioning | Vitiligo | 50 | 95.75 | 10.598 | 1.499 | 0.890 | 0.472 | 0.638 |
| | Healthy controls | 50 | 94.86 | 8.101 | 1.146 | | | |
| Psoriatic Patients & Vitiligo Patients | | | | | | | | |
| Total | Psoriasis | 50 | 69.27 | 25.035 | 3.541 | 24.420 | 6.578 | 0.000 |
| | Vitiligo | 50 | 93.69 | 7.888 | 1.115 | | | |
| RLEP-Role limitations due to physical health | Psoriasis | 50 | 64.50 | 46.863 | 6.627 | 34.500 | 5.147 | 0.000 |
| | Vitiligo | 50 | 99.00 | 7.071 | 1.000 | | | |
| RLEP- Role limitations due to emotional problems | Psoriasis | 50 | 63.33 | 47.738 | 6.751 | 35.334 | 5.135 | 0.000 |
| | Vitiligo | 50 | 98.67 | 9.429 | 1.333 | | | |
| EWB- Emotional well-being | Psoriasis | 50 | 68.8800 | 20.89101 | 2.95443 | 20.48000 | 5.921 | 0.000 |
| | Vitiligo | 50 | 89.3600 | 12.71631 | 1.79836 | | | |
| SF- Social functioning | Psoriasis | 50 | 69.95 | 28.078 | 3.971 | 25.800 | 6.079 | 0.000 |
| | Vitiligo | 50 | 95.75 | 10.598 | 1.499 | | | |

Table 4: Relationship of self-esteem (RSES) with regard to age & gender in psoriatic patients and vitiligo patients-

| RSES (Rosenberg Self-Esteem Scale) | Age & Gender | N | Mean | Std. Deviation | Std. Error Mean | Mean Difference | 't' | P value |
|------------------------------------|----------------|----|---------|----------------|-----------------|-----------------|-------|---------|
| Psoriasis | 18-39 vs 40-64 | 26 | 16.9615 | 1.50946 | .29603 | 0.71154 | 1.543 | 0.130 |
| | | 24 | 16.2500 | 1.75078 | .35738 | | | |
| Vitiligo | 18-39 vs 40-64 | 29 | 17.9655 | 1.40109 | .26018 | 0.53695 | 1.508 | 0.138 |
| | | 21 | 17.4286 | 0.97834 | .21349 | | | |
| Psoriasis | Male vs Female | 37 | 16.4324 | 1.59061 | .26149 | 0.72141 | 1.366 | 0.178 |
| | | 13 | 17.1538 | 1.77229 | .49155 | | | |
| Vitiligo | Male vs Female | 31 | 17.7742 | 1.28348 | 0.23052 | 0.08998 | 0.243 | 0.809 |
| | | 19 | 17.6842 | 1.24956 | 0.28667 | | | |

Table 5: Relationship of quality of life with (sf-36) with regard to age in psoriatic patients and vitiligo patients

| | SF-36 (Short Form-36) | Age | N | Mean | Std. Deviation | Std. Error Mean | Mean Difference | 't' | P value |
|---------------------------|--|-------|---------|----------|----------------|-----------------|-----------------|--------------|---------|
| Psoriasis | Total | 18-39 | 26 | 76.32 | 24.963 | 4.896 | 14.686 | 2.147 | 0.037 |
| | | 40-64 | 24 | 61.64 | 23.257 | 4.747 | | | |
| | RLPH-Role limitations due to physical health | 18-39 | 26 | 75.00 | 43.012 | 8.435 | 21.875 | 1.679 | 0.100 |
| | | 40-64 | 24 | 53.13 | 49.074 | 10.017 | | | |
| | RLEP- Role limitations due to emotional problems | 18-39 | 26 | 73.08 | 45.234 | 8.871 | 20.301 | 1.522 | 0.134 |
| | | 40-64 | 24 | 52.78 | 49.066 | 10.016 | | | |
| EWB- Emotional well-being | 18-39 | 26 | 73.0769 | 20.75557 | 4.07050 | 8.74359 | 1.497 | 0.141 | |
| | 40-64 | 24 | 64.3333 | 20.49532 | 4.18359 | | | | |
| SF- Social functioning | 18-39 | 26 | 78.75 | 28.074 | 5.506 | 18.333 | 2.418 | 0.019 | |
| | 40-64 | 24 | 60.42 | 25.310 | 5.166 | | | | |
| Vitiligo | Total | 18-39 | 29 | 95.08 | 4.376 | 0.813 | 3.315 | 1.485 | 0.144 |
| | | 40-64 | 21 | 91.77 | 10.905 | 2.380 | | | |
| | RLPH-Role limitations due to physical health | 18-39 | 29 | 100.00 | 0.000 | 0.000 | 2.381 | 1.180 | 0.244 |
| | | 40-64 | 21 | 97.62 | 10.911 | 2.381 | | | |
| | RLEP- Role limitations due to emotional problems | 18-39 | 29 | 100.00 | 0.000 | 0.000 | 3.175 | 1.180 | 0.244 |
| | | 40-64 | 21 | 96.83 | 14.549 | 3.175 | | | |
| | EWB- Emotional well-being | 18-39 | 29 | 89.9310 | 11.39527 | 2.11605 | 1.35961 | 0.370 | 0.713 |
| | | 40-64 | 21 | 88.5714 | 14.60333 | 3.18671 | | | |
| | SF- Social functioning | 18-39 | 29 | 97.41 | 7.748 | 1.439 | 3.961 | 1.314 | 0.195 |
| | | 40-64 | 21 | 93.45 | 13.474 | 2.940 | | | |

Table 6: Relationship of quality of life with (sf-36) with regard to gender in psoriatic patients and vitiligo patients -

| | SF-36 (Short Form-36) | Sex | N | Mean | Std. Deviation | Std. Error Mean | Mean Difference | 't' | P value |
|---------------------------|--|----------------|---------|----------|----------------|-----------------|-----------------|-------|---------|
| Psoriasis | Total | Male vs Female | 37 | 66.25 | 24.556 | 4.037 | 11.619 | 1.456 | 0.152 |
| | | | 13 | 77.87 | 25.338 | 7.028 | | | |
| | RLPH-Role limitations due to physical health | Male vs Female | 37 | 60.14 | 47.675 | 7.838 | 16.788 | 1.114 | 0.271 |
| | | | 13 | 76.92 | 43.853 | 12.163 | | | |
| | RLEP- Role limitations due to emotional problems | Male vs Female | 37 | 58.56 | 48.690 | 8.005 | 18.366 | 1.199 | 0.237 |
| | | | 13 | 76.92 | 43.853 | 12.163 | | | |
| EWB- Emotional well-being | Male vs Female | 37 | 66.8108 | 20.93089 | 3.44102 | 7.95842 | 1.186 | 0.241 | |
| | | 13 | 74.7692 | 20.42121 | 5.66382 | | | | |
| SF- Social functioning | Male vs Female | 37 | 67.50 | 27.329 | 4.493 | 9.423 | 1.042 | 0.303 | |
| | | 13 | 76.92 | 30.124 | 8.355 | | | | |
| Vitiligo | Total | Male vs Female | 31 | 94.39 | 4.980 | 0.894 | 1.846 | 0.800 | 0.428 |
| | | | 19 | 92.55 | 11.216 | 2.573 | | | |
| | RLPH-Role limitations due to physical health | Male vs Female | 31 | 100.00 | 0.000 | 0.000 | 2.632 | 1.286 | 0.205 |
| | | | 19 | 97.37 | 11.471 | 2.632 | | | |
| | RLEP- Role limitations due to emotional problems | Male vs Female | 31 | 100.00 | 0.000 | 0.000 | 3.509 | 1.286 | 0.205 |
| | | | 19 | 96.49 | 15.295 | 3.509 | | | |
| | EWB- Emotional well-being | Male vs Female | 31 | 89.6774 | 11.35015 | 2.03855 | 0.83531 | 0.223 | 0.824 |
| | | | 19 | 88.8421 | 15.00097 | 3.44146 | | | |
| | SF- Social functioning | Male vs Female | 31 | 95.97 | 9.347 | 1.679 | 0.573 | 0.184 | 0.855 |
| | | | | | | | | | |

Discussion

The present study was aimed to assess and compare QoL and self-esteem of patients diagnosed with psoriasis, vitiligo and healthy controls. Though many studies have been done to assess the QoL but on self-esteem very few studies are available.

Self-esteem can be an important part of individual's personality. Self-esteem (SE) describes the belief and confidence in one's own worth, strengths, efficacy and success. It is a subjective state of feeling formed by the individual's realistic evaluation of himself or herself.²⁶ According to our results, psoriatic patients had low self-esteem on RSES but vitiligo patients had better self-esteem than did psoriasis patients. Too low self-esteem can leave people feeling defeated or depressed. On psychosocial well-being, psoriasis has a negative impact. Therefore, psoriasis may lead to a decrease in the self-esteem.^{27,28} Psoriasis is an illness that involves both the skin and joints, and thus may negatively affect self-esteem.²⁹ In line with our findings, Ersin Aydin et al also observed patients with psoriasis have lower self-esteem than the control group.³⁰ While our finding is contradictory with previous study, they concluded that both groups did not differ in overall self-esteem.³¹ Porter J et al showed that the patients with vitiligo who cope well with their disfigurement have higher self-esteem than a matched control group without the disorder and those who cope poorly have significantly lower self-esteem, which suggests that response to disfiguring diseases is affected by basic ego strength.³² In contrast to our findings, a previous study assessing self-esteem in 644 vitiligo patients reported reduced self-esteem among vitiligo patients.³³

It maybe because vitiligo patients exhibited better adjustment in their daily routines because of its painless nature, while psoriatic patients reported more interpersonal problems in our study.

According to WHO, QoL is a broad ranging concept affected in a complex way by the person's physical health, psychological state, level of independence, social relationships, personal beliefs and their relationship to salient features of their environment.³⁹ It is defined as individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns.³⁹ Psoriatic patients have significantly poor quality of life when compared total score to vitiligo patients ($p=0.000$) and healthy controls ($p=0.000$) & in domains of physical health, emotional problems, emotional well-being & social functioning ($p=0.000$) according to our study. Mahsa Ghajarzadeh et al also observed that psoriasis cases had more impairment in quality of life than alopecia or vitiligo cases as shown by higher mean DLQI (Dermatology Life Quality Index) scores among alopecia or vitiligo cases than psoriasis cases.^{28,34} Other researchers also observed that QoL impairment in psoriasis was greater than in vitiligo.³⁵⁻³⁷ It maybe because physical problems such as pain and itching were reported more by psoriasis patients more as compared to vitiligo patients in our study.

The impact of vitiligo on QoL is controversial. Lucy Beth N Sangam et al found that 95% of patients of vitiligo had elevated DLQI against 30% in control group ($P < 0.001$).³⁸ Linthorst Homan et al. assessed QoL in 245 multiracial adult patients (≥ 18 years) with generalized vitiligo. These vitiligo patients had a low mental Health Related Quality of Life (HRQL).⁴⁰

We didn't find any statistically significant difference between vitiligo and healthy control with regard to QoL. It maybe because patients with vitiligo had good social occupational functioning in our study.

In our study, with regard to age and gender, no significant difference in self-esteem in psoriatic patients and vitiligo patients was observed. In a study by Bohm et al observed no gender differences ($P < 0.05$) in the frequency of items related to appearance and socialization; however, men reported greater work-related stresses.⁴³ Middle age group psoriatic patients had poor social functioning according to our study. Maire Karelson et al observed that in vitiligo patients the mean DLQI was not associated with gender and age.⁴⁴ QoL score did not significantly vary among different types of disease, age and marital status groups observed by Soodabeh Zandi et al.⁴¹ In line with our findings, the same results were reported by Wong & Baba in a survey of Malaysian patients with vitiligo.⁴² On the contrary, several studies have reported lower QoL in women with vitiligo, who may be more emotional and sensitive about their appearance.^{44,45} It maybe because of the differences in social beliefs about vitiligo in this part of country.

Conclusion

The profound effect of psoriasis and vitiligo on the QoL and self-esteem of the patients is important to understand. The burden of psoriasis and vitiligo on the QoL and self-esteem is quantified by the present study. Vitiligo and psoriasis are chronic diseases and they are disappointing and distressing for patients. During the evaluation and treatment of psoriasis and vitiligo patients, it should be considered that these are not only dermatological diseases, but also reduce self-esteem and quality of life, therefore for a better outcome, along with dermatologic interventions, psychiatric approaches should also be included. Further research could also consider appropriate interventions targeted towards improving quality of life and self-esteem of the patients.

Strengths of the study is that different kind of groups are compared. Different domains of QoL were assessed. This is the first study of its kind which was conducted in the state of Rajasthan, where there is paucity of published psychosocial research in vitiligo and psoriasis.

There are some limitations to this study. The sample size being compared in the study was small. The study was done in a tertiary care center and the samples were selected consecutively, such a sample does not include many more sufferers treated elsewhere, hence not a true representative of the actual problem.

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Conflicts of Interest: Nil.

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