

# A Study to Know Correlation among De-Pigmentation of Body Areas and Sex of Vitiligo Patients with their Self Esteem and Impact of Vitiligo on Quality of Life

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## ABSTRACT

**Introduction:** Vitiligo is a skin disorder characterized by patches of depigmented skin. It has impact on self-esteem and quality of life. Present study was done to know correlation between different body areas of de-pigmentation in vitiligo patients, sex of vitiligo patients with their self-esteem and also impact of vitiligo on different domains of life which affect overall quality of life.

**Material and methods:** 100 vitiligo patients and 100 subjects as control group were evaluated for self-esteem and quality of life by Rosenberg's Self-Esteem Scale (RSES), WHO Quality of Life – Bref's Scale (WHOQOL-BREF'S). Data were tabulated, analyzed and suitable statistics applied (i.e. chi square, T-test).

**Results:** vitiligo patients report significantly low self-esteem, compared to lighter skinned individuals. 59%, 29%, and 12% vitiligo patients suffered from low, normal and high self-esteem respectively. Vitiligo patients had developed poor body image for himself, due to which they faced unexpected psychosocial traumas and made negative view for life, which declined Quality of life in various life domains.

**Conclusion:** Vitiligo generates psychological distress, violates self-confidence, self-esteem, disrupts social relationship and creates stress-vitiligo vicious cycle.

**Keywords:** quality of life, self-confidence, self-esteem, vitiligo.

## INTRODUCTION

Vitiligo is a common, acquired, idiopathic skin disorder characterized by one or more patches of depigmented skin due to the loss of cutaneous melanocytes with no other texture changes. It is considered a significant problem in India. Skin diseases are associated with psychological abnormalities including anxiety, depression, psychosomatic symptoms including pain and discomfort, embarrassment, social inhibition and suicidal ideation. Effective treatment of vitiligo needs to accompany improvement in self-esteem, affect, shame, embarrassment, body image, social assertiveness and self-confidence.

Psycho-dermatologic disorders fall into three categories. (1) Psycho-physiologic disorders (e.g., acne, vitiligo, psoriasis and eczema) are skin problems, not directly connected to the mind but react to emotional states, as stress. (2) Primary psychiatric disorders that result in self-induced cutaneous manifestations. eg. trichotillomania and delusions of parasitosis. (3) Secondary psychiatric disorders that result in psychological problems. eg. decreased self-esteem, depression or social phobia.

The highest incidence of the condition has been recorded in Indians from the Indian subcontinent, followed by Mexico and Japan. Vitiligo, in India, is referred to as "ven kushtam" meaning white leprosy.<sup>1,2</sup> Parameters used to assess the severity of vitiligo are area of involvement, disfigurement, progression of disease/disease stability, potential for re-pigmentation and psycho-

social impact. The patients of vitiligo report embarrassment, helplessness and low self-esteem leading to emotional stress and social isolation, particularly if the disease develops on exposed areas of the body. These feelings can affect their relationships with friends, co-workers and even family members, which in turn increases the risk of depression and other psychosocial disorders.<sup>3-6</sup>

Vitiligo patients developed an exaggerated perception of disfigurement that usually leads to a distorted self-image, lack of confidence which may induce shame and avoidance of social relationships. Vitiligo had major impact on the quality of life (QOL) of patients. Skin determines our appearance and any patches may cause considerable influence on patients' psychological well-being. It causes cosmetic disfigurement and leading to psychological trauma to the patients. Moreover, many patients suffer from poor body image and low self-esteem, which results in social lives that are quite distressful. Present study was planned with the aim to study the impact of vitiligo on self-esteem and quality of life of patients.

## MATERIAL AND METHODS

The present study was a single centre, cross-sectional, single interview study that was approved by the institutional ethical board. 100 Vitiligo patients attending OPD in department of Dermatology, Government Medical College, Kota (Rajasthan) were selected randomly, who were aged 13 years and above, ready to give informed consent and literate enough to understand the questionnaire constituted study group and 100 suitably matched subjects preferably the relatives of the patients constituted the control group, who had no known dermatological or psychiatric disorders. Subjects with mental retardation, psychotic disorder, dementia, delirium and other amnesic disorders and who had not given consent after preliminary interview were not included in the study.

The selected patients (study group) and controls (control group) were interviewed in detail and were evaluated on three tools. First tool was specially designed semi-structured proforma to collect identification data, socio-demographic data, past history of psychiatric illness, illness characteristics, clinical

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diagnosis (confirmed by Dermatologist). Second tool was Hospital Rosenberg’s Self-Esteem Scale (RSES) developed by sociologist Dr. Morris Rosenberg. It is a ten-item Likert-type scale with items answered on a four-point scale to reflect self esteem of respondents about their feelings, and third tool was World Health Organization Quality Of Life- Bref (Hindi Version) WHOQOL-BREF for quality of life assessment in the four domains, which were (i) physical health, (ii) physiological well-being, (iii) social relations, (iv) environment.

**STATISTICAL ANALYSIS**

Information and data so collected were tabulated, analyzed and subjected to suitable statistical methods (mean, percentages and Chi square test) and conclusions were drawn.

**RESULTS**

Table-1 shows distribution of comparative impairment of self esteem between male and female on the basis of Rosenberg self esteem scale (RSES). It was evident that patients had scored < 15 on RSES scale indicating low self esteem and patients had scored 15-25 on RSES scale indicate normal self esteem while patients scored >25 on RSES scale indicate high self esteem. In our study 33% female and 67% were male vitiligo patients. Among 33% female vitiligo subjects, it was evident that 70% female patients (approx. ¾ population of female) had scored < 15 on RSES scale indicating low self esteem, While 12% female patients had score 15-25 on RSES scale which indicate normal self esteem and only 18% female patients scored >25 on RSES scale which indicate high self esteem. Similarly among 67% male vitiligo subjects, It was evident that 54% male patients (approx. ½ male population) had also scored < 15 on RSES scale indicating low self esteem, While 12% male patients had scored 15-25 on RSES scale which indicate normal self esteem and Rest 18% male patients scored >25 on RSES scale which indicate high self esteem.

Score on rosenberg self esteem scale	Female (N=33)	Male (N=67)
<15(Low Esteem)	23(70%)	36(54%)
15– 25 (Normal)	4(12%)	25(37%)
>25(High Esteem)	6(18%)	6(9%)
x <sup>2</sup> = 7.36, P = 0.025, d/f = 2, Significant		
<b>Table-1:</b> Distribution showing relation of self steem with gender difference According To Rosenberg self esteem scale (RSES)		

Table-2 shows distribution correlation between Rosenberg self esteem scale (RSES) scores and body areas of de-pigmentation. It was evident that 44 patient had de-pigmentation only on exposed areas, 3 patients had de-pigmentation only on covered areas while Rest 53 vitiligo patients had de-pigmentation on both exposed and covered body parts. It was evident that 59 patients had score < 15 on RSES scale indicating low self esteem, among them 28 (47%) had vitiligo spots on both body areas, 29 (50%) had vitiligo spots only on exposed body parts and 2 (3%) patients had only on covered body areas respectively. While 29 patients had score 15-25 on RSES scale which indicate normal self esteem had respective figures 17 (59%), 11 (38%) and 1 (3%) and Rest 12 patients scored >25 on RSES scale which indicate high self esteem and their respective figures were 8 (67%), 4 (33%) patients. The difference among these three groups were statistically highly significant (P<0.00001), i.e. vitiligo patients significantly had low self esteem in whom vitiligo patch was on the exposed body areas of patients.

Table-3 describes the quality of life of both groups as evaluated through WHOQOL – BREF. It is evident that mean score (0 – 100) in the study group in physical, psychological, social relationship and environmental domain was 50.43, 45.70, 48.41 and 53.01 while in the control group it was 76.09, 72.93, 79.02 and 66.36 respectively. Domain scores of both the groups were in descending order for physical, psychological, social relationship and environmental domain. The QOL scores in all the domains were significantly higher in control group as compared to study group with mean score 197.55 vs 294.58.

**DISCUSSION**

It was seen that lowering of self-esteem and self-confidence of vitiligo patient’s was related to age of onset of disease and chronicity of disease. Childhood-onset vitiligo was found to be correlated with important psychosocial trauma and leads to negative self-esteem. With the increasing significance of consultation liaison psychiatry, we also have to focus on psychosocial management of such chronic dermatological illness. More awareness is being created among physicians and evidence of effective treatment for psychiatric disorder is reducing the negative attitudes towards psychiatric disorders.

This study was undertaken to find correlation between different

Score on rosenberg self esteem scale	On exposed areas	On covered areas	On both areas	Total (N=100)
<15(Low Esteem)	29 (50%)	2 (3%)	28(47%)	59
15– 25 (Normal)	11 (38%)	1 (3%)	17(59%)	29
>25(High Esteem)	4(33%)	0(0%)	8(67%)	12
x <sup>2</sup> = 45.99, P < 0.00001, d/f = 4, Highly Significant				
<b>Table-2:</b> Distribution According To Rosenberg self esteem scale (RSES)				

Domains for Quality of life	Mean score and S.D.(±)		Unpaired t test		
	Study Group	Control Group	T score	P value	Significance
Physical	50.43±27.23	76.09±8.61	-7.719	<0.00001	Highly significant
Psychological	45.70±32.09	72.93±12.69	-6.821	<0.00001	Highly significant
Social relationship	48.41±35.91	79.02±12.61	-6.967	<0.00001	Highly significant
Environmental	53.01±28.92	66.36±11.19	-3.719	<0.00040	Significant
Total	197.55±120.75	294.58±34.44	-6.622	<0.0001	Highly significant
<b>Table-3:</b> Distribution According to Quality of life by WHOQOL – BREF’s Scale					

body areas of de-pigmentation with the self-esteem of vitiligo patients. We also made comparative assessment of self esteem impairment in females and male. To assess self esteem standard scale was used. It was a semi structured interview and all available information including patient information, informant's information was used to decide severity of impaired self esteem. The result of distribution of comparative impairment of self esteem between male and female that approx.  $\frac{3}{4}$  population of female and approx.  $\frac{1}{2}$  male population indicating low self esteem which was supported by Wang X et al<sup>4</sup> who found that Men affected more than women (0.71% vs. 0.45%,  $p < 0.01$ ). On the contrary Hita Shah et al<sup>3</sup> in their study on 365 patients found that females (68.4%) were affected more than males (31.6%) in a ratio of 2.1:1. However Handa and Kaur<sup>7</sup>, Lu T et al<sup>8</sup> and most of the researchers reported that males and females affected with almost equal frequency. The reason why females outnumbered males in some studies seemed presumably due to the fact that social stigma and marital concerns prompted women to seek early consultation.

On studying association between self esteem and body area of de-pigmentation, it was observed that difference among these three groups were statistically highly significant ( $P < 0.00001$ ), i.e. vitiligo patients significantly had low self-esteem in whom vitiligo patch was on the exposed body areas of patients. Our findings were supported by finding of Özlem Devrim Balaban et al<sup>9</sup>, Podaralla Ramakrishna et al<sup>10</sup> which report lower self-esteem in vitiligo patients compared to lighter skinned individuals. Childhood-onset vitiligo was found to be correlated with important psychosocial trauma leading to negative self-esteem. It is showing that more the vitiligo on the exposed body areas of patients lower the self esteem, that is self esteem inversely proportional to the vitiligo area on exposed body areas.

Impact on different domains of life which affect overall quality of life in vitiligo patient was also studied. Though there are generic as well as disease specific instrument available to assess QOL, WHOQOL-BREF was used in this study. This scale measures QOL and it's easy to administer. It has been used in a variety of medical conditions. This instrument has minimum possible confounding influence on socio-cultural differences.

Quality of life is "the subjective satisfaction expressed or experienced by an individual in his physical, mental and social situations". Various measures both generic as well as disease specific have been used to assess QOL. The different domains of quality of life which were analysed, include the following: Physical health, Physiological well-being, Social relations and Environment. We had taken total of every domain and grand total of all domains for analysis. On tabulation we found that domain scores of both the groups were in descending order for physical, psychological, social relationship and environmental domain. The QOL scores in all the domains were significantly lower in study group as compared to control group with mean score 197.55 vs 294.58. So quality of life was significantly worst for all the domains in study group. This finding was comparable to previous study done by Sangma LN et. al,<sup>11</sup> who showed that Quality of life (QOL) in vitiligo patients declined more severely, and there was more incidence of depression compared to the control group. These changes were critical for the psychosocial life of the affected people. Similar results had drawn by Mishra N et. al.<sup>12</sup>

## CONCLUSION

It can be inferred that vitiligo patients have low self esteem and confidence. Vitiligo generates psychological distress and disrupts the social relationship, which creates a vicious stress-vitiligo cycle. Results in this study indicated that majority of vitiligo patients had low self esteem, which was significantly impaired in patients having vitiligo on exposed areas. Vitiligo affects QOL in majority of vitiligo patients and such patients require more sympathetic attitude from a dermatologist and society.

In view of the lack of too much studies in our country concerning impaired self esteem and quality of life in Vitiligo, our attempt to have a close look at self esteem and quality of life in a reasonable sample of Vitiligo patients may serve a platform for future research.

## Limitations of the study

This study was a point prevalence study and it included all cases from Government hospital located in an urban centre, hence the results cannot be generalized. So a prospective study with a large sample from different centres and also considering rural population may be carried out to explore psychiatric morbidity of different population affected by vitiligo. Similarly effect of treatment of vitiligo on psychiatric morbidity was not taken in to consideration in this study. Therefore a case-control prospective study should be planned, which may demonstrate improvement in standard of living, if any after successful treatment of vitiligo.

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