



A Study of Quality of Life in Patients with Vitiligo in A Tertiary Care Centre in Marathwada Region

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Abstract

Introduction: Vitiligo is an acquired idiopathic skin disorder characterized by loss of inherited complexion of skin and mucosa resulting in white patches. Although there is no physical impairment, vitiligo may significantly affect quality of life and psychological well-being. Unpredictable course of vitiligo and uncertainty of treatment make patients more vulnerable to hopelessness and depression.

Aim: To assess the quality of life and level of depression in patients suffering from vitiligo and its relation to various demographic and clinical parameters.

Material and methods: A cross-sectional observational study, consisting 92 patients diagnosed as vitiligo, was carried out in outpatient department of Dermatology in a tertiary care centre, Aurangabad, Marathwada region. After noting demographic and clinical parameters, patients were asked to fill Vitiligo Impact Scale (VIS) and interviewed with Hamilton Depression Rating Scale (HAM-D) questionnaires. Mean VIS and HAM-D scores were compared with various demographic and clinical variables. Statistical analysis was done using SPSS20.

Results: Our study revealed that younger and middle age patients suffered from more depression and had higher impact on quality of life. Women in general had greater impact on quality of life and level of depression. Education plays an important role in alleviating anxiety associated with disease. Generalized and progressive vitiligo was more distressing for patients.

Conclusion: Objective scoring systems such as VIS and HAM-D should be used routinely to measure impairment of quality of life and to assess level of depression. These findings should be incorporated into therapeutic decision-making.

Keywords: vitiligo; quality of life; vitiligo impact scale; depression; hamilton depression rating scale.

Introduction

Vitiligo is an acquired idiopathic skin disorder characterized by loss of inherited complexion of skin and mucosa resulting in white patches. It affects around 1%–2% of the world population without any race predilection. The highest incidence is documented in the Indian subcontinent followed by Mexico and Japan.[1] In India, Gujarat has 8.8% prevalence of vitiligo which is the highest in the world.[2] In nearly half of the cases of vitiligo, the usual age of onset is before 20 years.[3] In most studies, peak incidence is reported between 18 and 21 years and up to 30% patients have a positive family history.[4]

The psychosocial fabric of developing countries is dissimilar to developed countries. The stigma associated with hypopigmentation or depigmentation is more severe in colored races inhabiting most of the developing world.[5][6] In India, where religious sentiments run high among people, those who suffer from vitiligo have more social problems than in any other country. Women are considered unsuitable of marriage and who develop vitiligo after marriage have marital problems perhaps ending in divorce.[7] In younger people, the "selfie-generation", body image becomes quite an important and uncompromising aspect of one's life. Vitiligo patients suffer from low self-esteem, lack of assertiveness, rejection and feeling of shame, guilt, lack or loss of job.



We studied the impact of vitiligo in the region of Marathwada, which is composed of rural as well as urban population of different ethnicity, religion, culture and economic background.

Aim:

To assess the quality of life (QoL) and level of depression in patients suffering from vitiligo and its relation to various demographic and clinical parameters.

Material and methods:

A cross-sectional observational study was conducted in outpatient department of Dermatology, tertiary care centre, Aurangabad, Marathwada region, over 2 years after obtaining approval from ethical committee of the institution. (No. MGM-ECRHS/2020/100) 92 patients diagnosed as vitiligo that consisted old as well as new cases were enrolled in the study. Patients aged 18 years and above and who were able to read and write were included and patients who were on medication of pre-existing psychiatric condition were excluded. Written consents were taken in the language they understand.

Demographic and clinical profile was noted in a specifically designed proforma. They were asked to fill Vitiligo Impact Scale (VIS) questionnaire which is based on "Vitiligo Impact Scale-22" (VIS-22) with added question concerning marital issue, question 21, whether in-laws knew about patient's condition before marriage. It is an authenticated and reliable vitiligo specific QoL instrument.[8] All patients were interviewed using Hamilton Depression Rating Scale (HAM-D), which is in public domain. It is a widely accepted tool for determining a patient's level of depression.[9]

Mean VIS and HAM-D scores were compared with various demographic and clinical variables. Quantitative data were expressed in form of Mean±SD. Unpaired t-test and ANOVA were used for comparison. p-value of <0.05 was considered to be statistically significant. All statistical analysis was done by using SPSS20.

Results:

In this study we compared demographic variables i.e age, gender, marital status, education, occupation, family history and clinical variables i.e site, duration, age at onset, type, subtype, progression of vitiligo to VIS and HAM-D scores.

Demographic variables: Age group of 36-45 years had maximum VIS score (17.55) and HAM-D score (7.45), which was statistically significant ($p < 0.05$). (Table 1) Study revealed female patients ($n=54$) had VIS score (12.96) and HAM-D score (5.50) more than male patients (VIS= 10.79, HAM-D= 3.53). (Table 2) VIS score of single males ($n=15$, VIS=13.73) and females ($n=12$, VIS=14.58) was higher as compared to married males ($n=23$, VIS=8.87) and females ($n=42$, VIS=12.5). HAM-D scores of single males and females were 3.8 and 4.75 and married males and females were 3.34 and 5.71, respectively. More depression was found in women who were married. There was no statistically significant relationship between education level and VIS/HAM-D scores but mean HAM-D score (5.488) was more in less educated patients. Housewives ($n=23$) had maximum VIS score (14.57) and

HAM-D score (7.26). Farmers ($n=18$), students ($n=16$) and patients with jobs ($n=30$) had mean VIS scores of 8.78, 11.94 and 12.10 respectively. Amongst them, working patients had higher HAM-D score (4.83). Retired patients had the lowest VIS (5.25) and HAM-D (1.50) scores. Mean VIS and HAM-D score of patients with positive family history ($n=18$) was 14.44 and 4.96 respectively, more than patients with negative family history but no statistical significance was observed.

Clinical variables: In our study, site of vitiginous patches had no significant relationship with VIS and HAM-D scores. As duration of vitiligo increased, VIS and HAM-D scores increased as well. But the relationship was not significant ($p > 0.05$). Decreasing trends of VIS and HAM-D scores were seen with increasing age of onset of vitiligo which were statistically significant ($p < 0.05$). Patients with generalized vitiligo ($n=51$) had mean VIS score of 14.12 and HAM-D score of 5.43, which were more than localized vitiligo, but statistically insignificant ($p > 0.05$). (Table 3) Mean VIS score of acro-facial vitiligo was 18.75 which was more than other variants. Mean HAM-D score of vitiligo vulgaris (5.59) was more than other subtypes. No statistically significant relationship was observed between vitiligo subtypes ($p > 0.05$). Mean VIS score of stable vitiligo (13.66) was more than active vitiligo (11.09) and mean HAM-D score of active vitiligo (4.96) was more than stable vitiligo (4.23). No statistical significance was observed ($p > 0.05$). (Table 4)

Age-group (in years)	VIS score			HAM-D score		
	n	Mean	SD	n	Mean	SD
18-25	27	14.37	10.07	27	4.44	4.38
26-35	26	12.42	8.71	26	5.65	4.17
36-45	11	17.55	12.94	11	7.45	5.68
46-55	11	8.55	7.74	11	3.82	3.74
56-65	07	7.29	11.94	07	1.43	0.98
66-75	10	6.10	4.86	10	3.00	2.40
F-value	2.466			2.619		
p-value	0.039			0.030		

Table 1: Comparison of VIS score and HAM-D score according to age-groups

Gender	VIS score			HAM-D score		
	n	Mean	SD	n	Mean	SD
Male	38	10.79	10.56	38	3.53	3.83
Female	54	12.96	9.49	54	5.50	4.44
t-value	1.032			2.220		
P-value	0.305			0.029		

Table 2: Comparison of VIS score and HAM-D score according to gender



Type of vitiligo	VIS score			HAM-D score		
	n	Mean	SD	n	Mean	SD
Generalized	51	14.12	10.98	51	5.43	4.79
Localized	38	9.50	7.99	38	3.76	3.45
Lip-tip	03	9.67	8.14	03	3.67	3.21
F-value	2.518			1.764		
p-value	0.086			0.177		

Table 3: Comparison of VIS score and HAM-D score according to type of vitiligo

Progression	VIS score			HAM-D score		
	n	Mean	SD	n	Mean	SD
Yes	57	11.09	7.99	57	4.96	4.58
No	35	13.66	12.46	35	4.23	3.78
t-value	1.206			0.798		
p-value	0.231			0.427		

Table 4: Comparison of VIS score and HAM-D score according to progression of vitiligo

Discussion:

Vitiligo may significantly affect psychosocial well-being of patients. They are subjected to social stigma and excluded from cultural and religious activities. Vitiligo patients face tremendous trauma to their psych and self-respect.

Most studies measured QoL of patients with vitiligo using Dermatology Life Quality Index (DLQI) questionnaire.[10][11][12][13][14] In those, mean DLQI score was 6-10, which suggests moderate effect on QoL of the patients. Very few studies used Vitiligo Impact Scale (VIS) as a measuring tool. Studies done by Patvekar et al, Gupta et al and Kota et al had mean VIS score of 24.8, 32.57 and 16.37 respectively.[15][16][17] In our study mean VIS score was 12.07 which suggests mild impact on QoL. In studies conducted by Sangma LN et al and Iniyani S et al, mean HAM-D scores were 8.45 and 9.23 respectively.[13][18] In our study mean HAM-D score was 4.68 which suggests no depression according to scoring system. We tried to correlate different demographic and clinical variables with mean VIS and HAM-D scores.

Patients aged less than or equal to 45 years, had more impairment of QoL than older patients. In the study done by Kota RS et al, age category 18-30 years had mean VIS score of 18.29, which was similar to our findings.[17] This result might suggest that patients of younger age groups (18-25 years) are more concerned about their appearance as they desire social acceptance, make friends, participate in various activities and need for job or life-partner. Reason for higher VIS score in middle age (36-45 years) may be related to job security, fear of stigmatization or even social acceptance of their children. In general, patients aged less than or equal to 45 years, had higher HAM-D score, which was statistically significant ($p=0.030$). Middle age group patients

suffer from more depression comparatively. It might be because they have unmet needs of being equally respected in occupational or social relationships.

Female patients suffer from high emotional burden and have strong impact on QoL. Unmarried patients had more impairment of QoL. It might be because of the difficulty of finding suitors for marriage. Married patients have less impaired QoL, may be because of the security provided by marriage. The results were in contrast with the study done by Dolatshahi M et al, in which married women had poorer QoL.[11] Married women had higher VIS scores compared to married men. It might be because of the discrimination they face from their spouses and in-laws. Mean HAM-D score of married women (5.71) was higher than married men (3.34). It suggests that despite having a companion for sharing their feelings, women still suffer from emotional liability. More depression was found in less educated patients. This underlines the importance of education. Educated patients might understand the nature of the disease better. Hence, they might be less worried about the consequences. More impairment of QoL and more depression was found in patients with positive family history. It could be because they might have observed the unpredictable nature of vitiligo, continuous treatment, follow-ups and uncertainty of prognosis.

Large effect on QoL and mild depression was observed in one patient who was unemployed. Loss or lack of job produces multitude of problems such as financial, leisure, etc. Unemployment severely impacts QoL, although larger studies may provide more information about unemployed status and QoL. Mean VIS score of housewives was 14.57 which was maximum in the groups. This result suggests poorer QoL in women who were not working, just managing family. It might be because of the discrimination they face from their spouses and in-laws. They may experience stigmatization when visiting markets, shops, meeting neighbors or strangers. Retired patients had least affected QoL (5.25). Mean HAM-D score of housewives was 7.26, which was statistically significant ($p=0.003$). Level of depression was less in retired people (1.50).

Mean duration of vitiligo in our study was 4.73 years. Study showed increasing trend of VIS and HAM-D scores with longer duration. Although not significant, it might suggest that as time passes, patients feel more helpless due to unsuccessful treatments. Mean age of onset in our study was 32.7 years. Patients with onset of disease in middle age (30-44 years) were found to have greater impact of QoL and were more depressed than others.

Patients who have extensive involvement of body had poorer QoL. The study conducted by Hedayat K et al showed similar results.[19] Patients with generalized vitiligo had more psychiatric morbidity than localized disease. These findings are consistent with a study done by Iniyani S et al. [18]

Impact on QoL was more in patients with acro-facial subtype than other variants. It might be because of lower number of patients in this category (4.35%). The study done by Patvekar MA et al showed patients with vitiligo vulgaris had more impairment on QoL.[15]

More impairment of QoL was observed in patients with stable vitiligo, consistent with the study by Kota RS et al.[17] The study conducted by Dolatshahi M et al showed significant correlation of



active disease and QoL.[11] More depression was observed in patients with active vitiligo. The worry of progression of lesions and development of new lesions at other sites, perhaps acts as negative stimulus hence, more psychiatric morbidity.

Conclusion:

Our study highlights that vitiligo patients with specific demographic and clinical variables are at a higher risk for developing poor QoL as well as depression. Young and middle age-group, unmarried women and positive family history had a higher impact on QoL. Level of depression in married woman and patients with positive family history was more. Duration, type and activity of vitiligo were among the clinical parameters that found importance in our study. Due care should be taken by a dermatologist to manage not just the disease itself but patients' psychiatric illness also. Proper counselling and referral to a psychiatrist is always helpful. Poor QoL and emotional distress may in turn exacerbate the disease, forming a vicious cycle. Quick questionnaire form such as Vitiligo Impact Scale and a short interview by the clinician about patient's mental health give us valuable insight into patient's world.

Limitation:

- Patient's satisfaction with various treatment modalities could not be measured and that aspect of QoL could not be derived.
- This study did not include healthy control group. So, accurate estimation of QoL of vitiligo patients over healthy people could not be made.

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References:

1. Alikhan A, Felsten LM, Daly M, Petronic-Rosic V. Vitiligo: A comprehensive overview part I. Introduction, epidemiology, quality of life, diagnosis, differential diagnosis, associations, histopathology, etiology, and work-up. *J Am Acad Dermatol.* 2011;65:473-91.
2. Dwivedi M, Laddha NC, Shajil EM, Shah BJ, Begum R. The ACE gene I/D polymorphism is not associated with generalized vitiligo susceptibility in Gujarat population. *Pigment Cell Melanoma Res.* 2008;21:407-8.
3. Iacovelli P, Sinagra JL, Vidolin AP, Marenda S, Capitano B, Leone G, et al. Relevance of thyroiditis and of other autoimmune diseases in children with vitiligo. *Dermatology.* 2005;210:26-30.
4. Behl PN, Agarwal A, Srivastava G. Etiopathogenesis of vitiligo: Are we dealing with an environmental disorder? *Indian J Dermatol Venereol Leprol.* 1999;65:161-7.
5. Handa S, Kaur I. Vitiligo: clinical findings in 1436 patients. *J Dermatol.* 1999;26:653-7.
6. Mattoo SK, Handa S, Kaur I, Gupta N, Malhotra R. Psychiatric morbidity in vitiligo: prevalence and correlates in India. *J Eur Acad Dermatol Venereol.* 2002;16(6):573-8.
7. Dogra S, Kanwar AJ. Skin diseases: psychological and social consequences. *Indian J Dermatol.* 2002;47:197-201.
8. Krishna GS, Ramam M, Mehta M, Sreenivas V, Sharma VK, Khandpur S. Vitiligo impact scale: An instrument to assess the psychosocial burden of vitiligo. *Indian J Dermatol Venereol Leprol.* 2013;79(2):205.
9. Hamilton M. A rating scale for depression. *Journal of Neurology, Neurosurgery and Psychiatry.* 1960;23:56-62.
10. Noor SM, Khurshid K, Mahmood T, Haroon TS. Quality of life in vitiligo patients. *J Pak Assoc Dermatol.* 2004;14(2):55-8.
11. Dolatshahi M, Ghazi P, Feizy V, Hemami MR. Life quality assessment among patients with vitiligo: Comparison of married and single patients in Iran. *Indian J Dermatol Venereol Leprol.* 2008;74:700.
12. Mishra N, Rastogi MK, Gahalaut P, Agrawal S. Dermatology specific quality of life in vitiligo patients and its relation with various variables: A hospital based cross-sectional study. *J Clin Diagn Res.* 2014;8(6):YC01.
13. Sangma LN, Nath J, Bhagabati D. Quality of life and psychological morbidity in vitiligo patients: A study in a teaching hospital from north-east India. *Indian J Dermatol.* 2015;60:142-6.
14. Sawant N.S., Vanjari N.A., Khopkar U. Gender differences in depression, coping, stigma, and quality of life in patients of vitiligo. *Dermatol Res Pract* 2019; 2019:6879412.
15. Patvekar MA, Deo KS, Verma S, Kothari P, Gupta A. Quality of life in vitiligo: Relationship to clinical severity and demographic data. *Pigment Int* 2017;4:104-8.
16. Gupta V, Sreenivas V, Mehta M, Ramam M. What do Vitiligo Impact Scale-22 scores mean? Studying the clinical interpretation of scores using an anchor-based approach. *British Journal of Dermatology.* 2019;180(3):580-5.
17. Kota RS, Vora RV, Varma JR, Kota SK, Patel TM, Ganjiwale J. Study on assessment of quality of life and depression in patients of vitiligo. *Indian Dermatol Online J* 2019;10:153-7.
18. Iniyan S, Kumar V. Research Paper Psychiatric Morbidity, Depression and Anxiety in Psoriasis and Vitiligo Patients in Comparison With General Medical Patients.
19. Hedayat K, Karbakhsh M, Ghiasi M, Goodarzi A, Fakour Y, Akbari Z, et al. Quality of life in patients with vitiligo: a cross-sectional study based on Vitiligo Quality of Life index (VitiQoL). *Health and quality of life outcomes.* 2016;14(1):86.