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Beyond Pigment: Psychological shadows of vitiligo and their Impact on Quality of life

[1]Dr.Gurpreet Choudhary, [2]Dr.P. D Bansal, [3]Dr. Simrat Bhandal, [3]Dr. Ayush Bansal

[1]Junior resident, Department of Psychiatry, Guru Gobind Singh Medical College and Hospital, Faridkot, Punjab, India

[2] Professor & Head, Department of Psychiatry, Guru Gobind Singh Medical College and Hospital, Faridkot, Punjab, India

[3] MBBS, Guru Gobind Singh Medical College and Hospital, Faridkot, Punjab, India

Corresponding Author

Dr. P.D Bansal

Prof.& Head, Department of Psychiatry , Guru Gobind Singh Medical College and Hospital, Faridkot, Punjab, India

Abstract:

Introduction: Vitiligo is an acquired pigmentary disorder of unknown origin that poses not just cosmetic concerns but presents a major psychological burden due to its visible and chronic nature. It often leads to stigmatization, poor self-image, and psychiatric comorbidities like depression and anxiety. Despite the high psychological impact, there is a paucity of literature from North India assessing these mental health outcomes in vitiligo patients.

Objective: To assess the prevalence and severity of anxiety and depression in patients with vitiligo and explore its association with disease severity and quality of life (QOL).

Methods: A cross-sectional study was conducted on 40 vitiligo patients at a tertiary care hospital in North India. The Vitiligo Area Severity Index (VASI) was used to measure disease severity. The Hamilton Depression Rating Scale (HAM-D) and Hamilton Anxiety Rating Scale (HAM-A) were used for psychological assessments, and WHOQOL-BREF was used for evaluating QoL. Statistical analysis included descriptive data, Pearson correlations, and group comparisons.

Results: 50% of patients had mild depression, 30% moderate, and 5% severe. 62.5% had clinically significant anxiety symptoms. VASI showed a significant positive correlation with both HAM-A and HAM-D scores ($p < 0.05$) and a negative correlation with WHOQOL-BREF domains, especially psychological and social health. Unmarried participants had significantly higher levels of depression and anxiety than married ones ($p < 0.05$). No significant gender differences were noted.

Conclusion: Vitiligo significantly compromises psychological well-being and quality of life, especially in patients with greater disease severity. Routine mental health screening and a multidisciplinary treatment approach are strongly recommended for holistic care.

Keywords: Vitiligo, Depression, Anxiety, Quality of Life, Psychodermatology

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INTRODUCTION

Vitiligo is an acquired chronic skin disorder characterized by the destruction of melanocytes, resulting in depigmented macules and patches. Globally, it affects 0.06% to 2.28% of the population, with higher prevalence rates reported in India and other tropical countries due to increased visibility on darker skin [1,2]. Though non-contagious and physiologically benign, vitiligo is often psychologically debilitating.

The impact of vitiligo extends far beyond skin. In many cultures, particularly in South Asia, myths and misconceptions fuel the stigma associated with depigmentation. Patients are often subject to social rejection, discrimination in marriage, reduced job prospects, and isolation [3,4]. Studies have linked vitiligo with poor self-esteem, body image disturbance, social anxiety, depression, and even suicidal ideation [5–7].

Psychiatric comorbidities are frequently overlooked in dermatological practice. Evidence shows that up to

35% of dermatological patients experience psychological distress severe enough to require psychiatric intervention [8,9]. Despite this, mental health screening remains rare in routine dermatology clinics.

This study aims to fill this gap by assessing the psychological burden in vitiligo patients and examining the relationship between disease severity, psychiatric morbidity, and quality of life.

Materials and Methods

Study Design and Setting:

This was a hospital-based, cross-sectional observational study conducted in the Department of Psychiatry at Guru Gobind singh Medical College,Faridkot.

Sample and Recruitment:

A total of 40 patients clinically diagnosed with vitiligo by a dermatologist were enrolled using non-probability convenience sampling. All participants were aged ≥14 years and gave informed consent.

Inclusion Criteria

Diagnosed cases of vitiligo (any subtype)
Age 14 years and above
Willingness to participate and give informed consent

Exclusion Criteria

Current or past psychiatric illness other than depression or anxiety
Intellectual disability or cognitive impairment
Substance use disorders
Chronic medical illnesses (e.g., uncontrolled diabetes, cardiac, renal, or thyroid disorders)

Tools Used

Hamilton Depression Rating Scale (HAM-D) [7]
Hamilton Anxiety Rating Scale (HAM-A) [8]
Vitiligo Area Severity Index (VASI) for disease extent
WHOQOL-BREF for quality of life assessment

Data Collection and Analysis

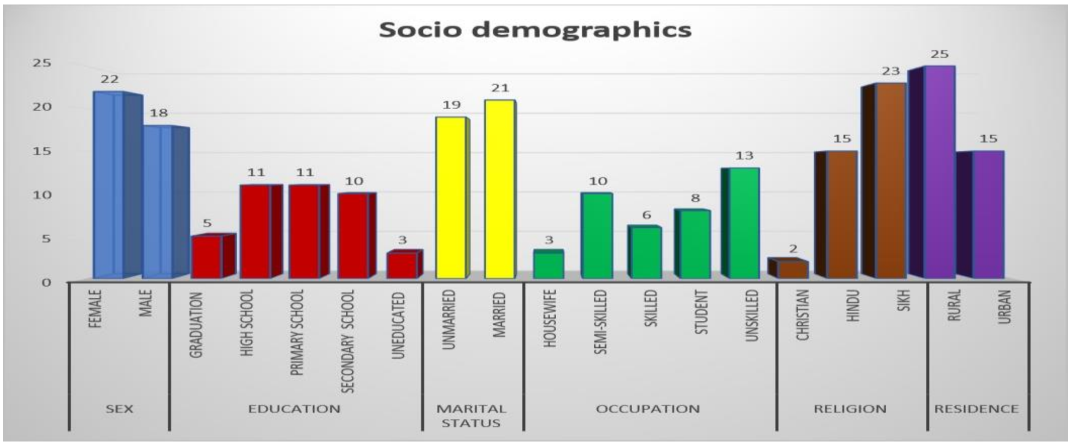
Sociodemographic and clinical data were collected through structured interviews. The severity of vitiligo was scored using VASI. HAM-A and HAM-D were used to assess anxiety and depression levels. WHOQOL-BREF assessed QoL across four domains.

Data were analyzed using SPSS version [Insert Version]. Descriptive statistics were calculated. Pearson correlation was used to evaluate relationships among variables. Group comparisons were made using t-tests or ANOVA. A p-value <0.05 was considered statistically significant.

Results

Demographic Profile:

In the study population,Most of the participants were of age between 14–55 years; mean = 28.3 ± 9.7 years.Majority were females 22 (55%), 18 males (45%).Most of participants,62.5% were from rural background while 37.5% were from urban. Majority participants,52.5% were married,while 47.5% were unmarried.Upto 27.5% had studied up to secondary school;while 12.5% were graduate.The maximum number of participants were unskilled workers, with 13 out of 40. Out of the 40 study subjects, 23 were Sikh, 15 were Hindu, and 2 were Christian.No significant findings were observed in the study population based on the socio-demographic profile. (FIGURE 1)



(FIGURE: 1)

Psychiatric Co-morbities and correlations:

In the present study,20 patients out of 40 had mild depression, 12 had moderate depression, and 2 patients had severe depression, while the remaining 6 had no depression at all, according to the Hamilton Depression Rating Scale (HAM-D).

25 patients had mild to moderate anxiety, 10 had mild anxiety, and 5 had moderate to severe anxiety, according to the Hamilton Anxiety Rating Scale.(figure 2)

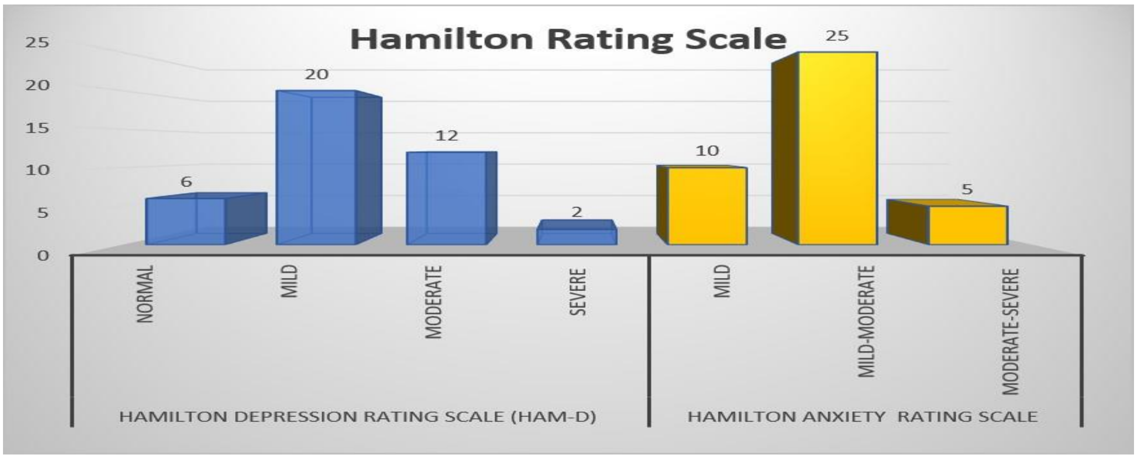


Figure: 2

The table 1 below , shows the comparison of quality of life and VASI score in different grades of the Hamilton Depression Rating Scale. A highly significant association ($p < 0.001$) was observed between quality of life and depression severity, and a significant association was seen with respect to VASI ($p < 0.05$). This implies that as the severity of VASI increases, the severity of depression also increases, while the quality of life decreases.

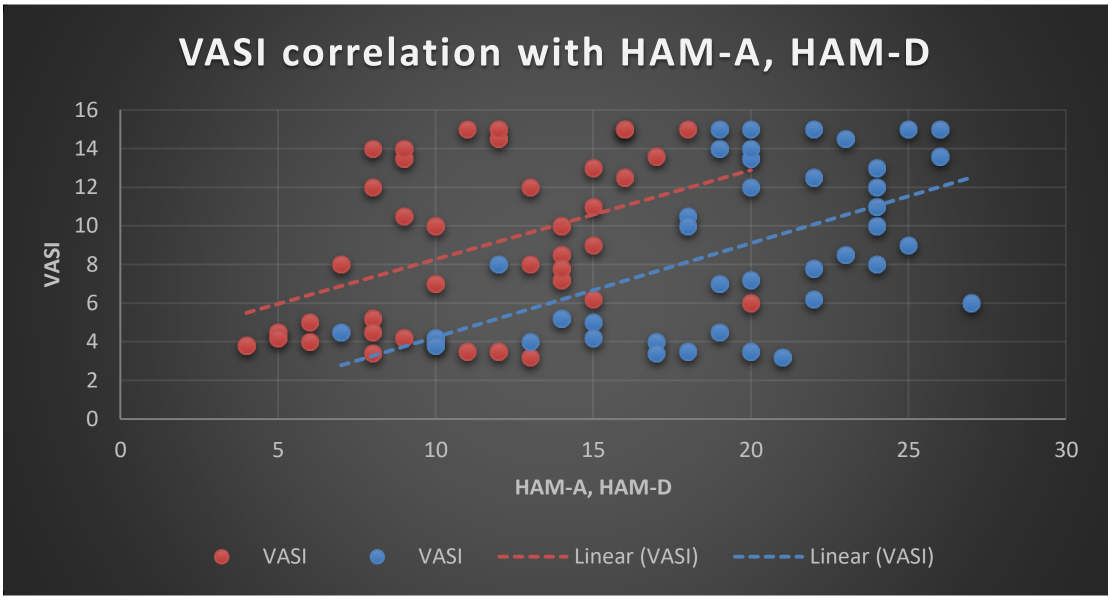
HAM-D									F-value	P-value
	mean	SD	Mean	SD	Mean	SD	Mean	SD		
VASI	4.92	1.57	8.85	4.63	10.73	3.06	10.50	6.36	3.00	0.04
Overall perception of QOL	4.00	0.00	3.30	0.47	2.83	0.58	2.50	0.71	9.48	<0.001
Overall perception of health	4.00	0.00	3.20	0.52	2.42	0.52	3.00	0.00	15.76	<0.002
Physical health	15.48	0.41	14.72	0.81	12.82	1.42	12.50	0.71	14.69	<0.003
Psychological	15.68	0.59	14.55	0.76	13.36	1.24	11.75	0.35	14.50	<0.004
Social relationships	15.23	0.98	13.94	0.88	12.74	1.23	10.85	1.20	13.52	<0.005
Environment	16.12	0.62	15.19	0.71	14.24	0.91	13.00	0.00	13.30	<0.006

Table :1

As shown in table 2, the comparison of quality of life and VASI score in different grades of the Hamilton Anxiety Rating Scale (HAM-A). A highly significant association was observed between quality of life and anxiety severity, and a significant association was seen with respect to VASI.
This implies that as the severity of the VASI score increases, the severity of anxiety also increases, while the quality of life decreases. This holds true for both HAM-A and HAM-D.

HAM-A	Mild(n=10)		Mild-Moderate(n=25)		Moderate-Severe(n=5)		F-value	P-value
	Mean	SD	Mean	SD	Mean	SD		
VASI	4.63	1.30	10.06	3.91	11.72	4.04	10.56	<0.001
Overall perception of QOL	3.80	0.42	3.16	0.47	2.40	0.55	15.45	<0.001
Overall perception of health	3.80	0.42	2.92	0.57	2.40	0.55	14.15	<0.001
Physical health	15.43	0.40	13.92	1.44	12.74	0.56	9.78	<0.001
Psychological	15.20	0.86	14.11	1.17	12.84	1.35	7.72	0.002
Social relationships	14.75	1.00	13.52	1.25	11.88	1.11	10.10	<0.001
Environment	15.89	0.60	14.75	0.91	13.94	1.16	9.67	<0.001

Table 2



Marital Status (Table 4)					t-value	p-value
	Mean	SD	Mean	SD		
HAM-D	14.11	2.66	8.90	3.19	5.61	<0.001**
HAM-A	22.58	2.84	16.90	4.56	4.77	<0.001**
Overall perception of QOL	3.00	0.58	3.43	0.60	-2.30	0.027*
Overall perception of health	2.74	0.56	3.38	0.67	-3.30	0.002*
Physical health	13.61	1.34	14.65	1.35	-2.44	0.019*
Psychological	13.59	1.34	14.80	0.98	-3.21	0.003*
Social relationships	13.07	1.51	14.12	1.18	-2.43	0.02*
Environment	14.45	1.06	15.37	0.86	-2.96	0.005*
VASI	9.70	4.46	8.19	4.02	1.12	0.267

Figure 3 shows correlation of HAM-A and HAM-D with VASI. Positive moderate correlation was seen between the variables which implies that as the VASI increases depression and anxiety also increases. This correlation was statistically significant.

Table 3 and 4 shows the comparison of depression , anxiety, VASI and quality of life with respect to gender and marital status.

Unmarried individuals showed significantly higher HAM-D (mean = 17.2) and HAM-A scores (mean = 18.9) than married participants (HAM-D = 12.4; HAM-A = 13.6); $p < 0.05$.
On comparing married and unmarried individuals we found that unmarried cases had more depression and anxiety and have lower quality of life as compared to married cases .
No significant difference was seen with respect to gender .

Sex (Table 3)	**Female(n=22)**		**Male(n=18)**		**t-value**	**p-value**
	Mean	**SD**	**Mean**	**SD**		
HAM-D	**11.36**	**3.92**	**11.39**	**4.05**	**-0.02**	**0.984**
HAM-A	**19.95**	**4.56**	**19.17**	**5.08**	**0.511**	**0.613**
Overall perception of QOL	**3.32**	**0.72**	**3.11**	**0.47**	**1.096**	**0.28**
Overall perception of health	**3.14**	**0.71**	**3.00**	**0.69**	**0.616**	**0.542**
Physical health	**14.27**	**1.37**	**14.01**	**1.52**	**0.576**	**0.568**
Psychological	**14.26**	**1.15**	**14.18**	**1.50**	**0.166**	**0.87**
Social relationships	**13.59**	**1.54**	**13.66**	**1.33**	**-0.165**	**0.87**
Environment	**15.05**	**1.09**	**14.79**	**1.03**	**0.778**	**0.441**
VASI	**8.53**	**4.27**	**9.37**	**4.29**	**-0.621**	**0.538**

Discussion

This study highlights the profound psychological burden experienced by patients with vitiligo, a condition traditionally approached as a dermatological disorder but now increasingly recognized for its psychosocial implications. Our findings support and extend existing literature by demonstrating high levels of depression and anxiety among vitiligo patients, with direct correlations to disease severity (as measured by VASI) and compromised quality of life, particularly in the psychological and social domains.

1. Psychological Morbidity in Vitiligo

Depression was found in 85% of participants, and 87.5% exhibited clinically relevant anxiety symptoms. These findings are consistent with previous studies that report psychiatric comorbidity in over one-third of dermatological patients [Gupta & Gupta, 2003; Papadopoulos et al., 1999]. Vitiligo, though not life-threatening, exerts a heavy emotional toll due to its visibility, chronic nature, and the unpredictability of lesion spread [Krüger & Schallreuter, 2012]. The association between visible lesions and psychological symptoms has been explained by the "disfigurement-stigma" model, which posits that visibly different individuals are at greater risk for social rejection, lowered self-esteem, and internalized shame [Porter et al., 1986]

2. Correlation with Disease Severity (VASI)

Our study found a statistically significant positive correlation between VASI scores and both depression (r = 0.53) and anxiety (r = 0.48). This aligns with research by Benny et al. (2021) and Abhilasha et al. (2022), where greater disease extent predicted more severe psychological symptoms. It is hypothesized that patients with larger areas of depigmentation, particularly on exposed body parts, experience greater social anxiety, avoidance behaviors, and emotional distress. These findings reinforce the concept of "lesion visibility" as a key variable in psychodermatology research.

3. Impact on Quality of Life

The inverse correlation between VASI scores and WHOQOL-BREF scores, especially in the psychological (r = -0.61) and social (r = -0.55) domains, highlights the multidimensional burden of vitiligo. Our results are comparable to studies by Ongenae et al. (2006) and Parsad et al. (2003), where patients reported significant disruptions in interpersonal relationships, work performance, and emotional well-being. Notably, physical health domains were less affected, suggesting that emotional and social repercussions outweigh somatic limitations in vitiligo.

4. Sociodemographic Influences

Interestingly, marital status was significantly associated with psychological morbidity in our cohort. Unmarried individuals reported higher depression and anxiety levels, potentially due to societal emphasis on physical appearance in marital prospects—especially within conservative or traditional communities. This is in contrast with some previous findings (e.g., Pahwa et al., 2013), suggesting that the psychosocial impact of vitiligo may be moderated by cultural context, familial expectations, and social support structures.

Gender, on the other hand, was not significantly associated with mental health outcomes in our sample. While some literature suggests higher emotional vulnerability in women due to societal beauty norms [Picardi et al., 2001], our data indicate that both genders are equally susceptible, possibly due to the gender-neutral nature of the stigma surrounding visible skin conditions.

5. Clinical Implications

These findings have several clinical implications. First, vitiligo management must move beyond topical or immunological therapies to include mental health screening, psychoeducation, and counseling. Second, early identification of at-risk groups—especially patients with severe VASI scores or unmarried individuals—can aid in tailored interventions. Third, dermatologists should receive basic training in recognizing psychological distress or have access to in-clinic mental health professionals.

Moreover, the integration of support groups, cognitive behavioral therapy (CBT), and mindfulness-based interventions has shown promising results in improving self-esteem and reducing depressive symptoms in patients with disfiguring conditions [Gupta et al., 2003; Mazereeuw-Hautier et al., 2010].

In sum, vitiligo is not merely a cosmetic concern but a condition that leaves “psychological shadows,” as our title metaphorically suggests. Its burden is borne not only on the skin but in the mind and heart of the patient. Recognizing and addressing this dual impact is essential for holistic and humane patient care.

Conclusion

Vitiligo is not just a dermatological disorder—it is a psychosocial condition with far-reaching implications. Our findings emphasize the need for routine psychological assessment in dermatological settings. Integrated care involving dermatologists, psychiatrists, and counselors can enhance patient outcomes and quality of life. Its burden is borne not only on the skin but in the mind and heart of the patient. Recognizing and addressing this dual impact is essential for holistic and humane patient care.

Limitations

Small sample size
Cross-sectional design limits causal inference
Single-center study

Recommendations

Include mental health screening tools in dermatology OPDs
Train dermatologists in basic psychiatric triage
Conduct multicentric, longitudinal studies with larger samples

References

1. Kruger C, Schallreuter KU. Int J Dermatol. 2012;51:1206–1212.
2. 2. Ongenae K, Van Geel N, Naeyaert JM. J Eur Acad Dermatol Venereol. 2006;20(1):1–8.
3. Mattoo SK, Handa S, Kaur I, Gupta N, Malhotra R. Indian J Dermatol. 2002;47:2–6.
4. Picardi A, Pasquini P. Psychosomatics. 2001;42(4):320–326.
5. Cotterill JA. Dermatol Clin. 1996;14(3):413–7.
6. Papadopoulos L, Bor R, Legg C. Br J Med Psychol. 1999;72(Pt 3):385–396.
7. Porter J, Beuf A, Nordlund JJ, Lerner A. J Am Acad Dermatol. 1986;15:220–224.
8. Gupta MA, Gupta AK. Am J Clin Dermatol. 2003;4(12):833–842.
9. Picardi A, Abeni D, Melchi CF. Br J Dermatol. 2001;144:1010–1015.
10. Hamilton M. J Neurol Neurosurg Psychiatry. 1960;23:56–62.
11. Hamilton M. Br J Med Psychol. 1959;32:50–55.
12. Abhilasha P, Selvam VP, Lakshmanamoorthy T et al. Arch Psychiatry Res. 2022;58:231–242.
13. Benny D, Makkuni S et al. J Dermatol Dermatol Surg. 2021;25(2):114–118.
14. [10:09 pm, 23/7/2025] GC: 14. Ongenae K et al. J Eur Acad Dermatol Venereol. 2006;20:1–8.
15. Pahwa P, Mehta M et al. Indian J Dermatol Venereol Leprol. 2013;79:679–85.
16. Parsad D, Pandhi R, Dogra S. Indian J Dermatol Venereol Leprol. 2003;69:295–297.