e-ISSN: 0975-1556, p-ISSN:2820-2643
Available online on www.ijpcr.com
International Journal of Pharmaceutical and Clinical Research 2024; 16(3); 365-372

Original Research Article

A Prospective Study on Levels of Anxiety and Depression among Vitiligo Patients

K. Radha Raja Prabha[1], S. Karthik Raja[2], K. Preethi[3], Arun Kumar Jacob R[4], V.U. Karthikeyan[5]

[1,2]Associate professor, Dept: Dermatology, College: SMMCH&RI
[3] Senior Resident, Dept: Psychiatry, College: SMMCH&RI
[4]Senior Resident, Dept: Dermatology, College: SMMCH&RI
[5]Associate Professor, Dept: Psychiatry, College: SMMCH&RI

Received: 15-01-2024 / Revised: 20-02-2024 / Accepted: 05-03-2024
Corresponding Author: Dr. K. Alagammai
Conflict of interest: Nil

Abstract:
The skin is represented as the Mirror of the Mind which responds to both endogenous and exogenous stimuli. It senses and integrates environmental cues and transmits intrinsic conditions to the external world. Psychodermatology is a recent subfield of Psychosomatic Medicine which address the interaction between Mind (Psyche) and skin. The two disciplines are interconnected at the embryonal level by their origin from ectoderm and influenced by reciprocal action of neuroendocrine and immune systems.
Materials and Methods: This study done at Dept: Dermatology, College: SMMCH & RI.
Results: The sample population consists of 52.9% females and 47.1% males. Among that 70% had Nonsegmental (Generalized) vitiligo and 30% localized/segmental type. The duration of illness was <5 years in 81.4% of patients, 6-12 years in 12.9% of patients and in 5.7%, it was > 13 years. Among the study population 70% (49 patients) had psychiatric illness, among that most common psychiatric illness was major depressive disorder (n= 22) constituting 31.4%.
Conclusion: The study findings reveal, increased association of psychiatric illness in patients with. Major depression disorder is the most frequent psychiatric disorder seen in patients with vitiligo. Generalised vitiligo associated with increased psychiatric co morbidities.
Keywords: Anxiety, Depression, Vitiligo.

Introduction

The interaction between the Mind and the Skin have been accepted and skin is recognized as the organ of expression. The skin is represented as the Mirror of the Mind which responds to both endogenous and exogenous stimuli. It senses and integrates environmental cues and transmits intrinsic conditions tothe external world. Psychodermatology is a recent subfield of Psychosomatic Medicine which addresses the interaction between Mind (Psyche) and skin. The two disciplines are interconnected at the embryonal level by their origin from ectoderm and influenced by reciprocal action of neuroendocrine and immune systems [1,2]. The role of psychoneuroimmunology in causation, course, prognosis of psychocutaneous disorders is on focus in recent days. Dermatologist have realized the importance of Psychiatrist opinion for identification of psychological factors which are of prior concern in chronic intractable skin conditions like Vitiligo, Psoriasis, Eczema, Atopic dermatitis, Lichen planus, etc. Psychological stress leads to activation of the Hypothalomo Pituitary Axis which can result in undesirable aggravation of cutaneous disorders and thus stress act as a precipitating factor. Stress in dermatoses mentioned few decades before in eighties and early nineties by Cermack and Panconesi. [3,4]. Patients with cutaneous disorders face emotional problems like shame, distorted self-image and a reduced self-esteem. The impact on the individual depends on various factors which include the patient's Sociocultural background, demographic profile, personality of the patient, life stressors and how the disease is perceived by others in society. Most importantly it depends on the natural history of the illness and the psychological vulnerability of the patient, higher trait of anxiety may be one among the vulnerability factors [5,6]. It was reported that cutaneous disorders are common among persons who have an insufficiency in expressing their anger and hostility (Jublin et al, 1981). Stressis said to aggravate the dermatological condition in about 40-100 percent of the patients [7,8]. Psychiatric disorders have a high prevalence in patients with skin diseases. The prevalence of psychiatric comorbidities among patients with

dermatological disorders is said to range from 25 to 43 percent (Picardi et al 2001, Humphreys et al 1998) [7,8]. Vitiligo is a Psychocutaneous disorder of Multifactorial etiology characterized by white macules and patches in skin and mucosa which have unpredictable course with remission and exacerbation which can lead to psychosocial distress and social stigmatization thereby affecting functionality of patient [9].Vitiligo provoke Negative Emotion like Shame, Embarrassment, lack of Confidence, low Self-esteem, Social phobia, Dysthymia, Sleep disturbances, Adjustment Disorders, Anxiety, Depression, Suicidality and greatly affects patients quality of life [10,11]. Vitiligo can be associated with high Psychiatric co morbidities as high as 79.2% as reported in an Indian study [12]. The importance of Emotional and psychological factors have been emphasized recently to involved in incidence, progression, remission andrelapse of Vitiligo[13]. Thus psychiatric conditions could potentially add to the burden of this disorder. As some of vitiligo patients with psychiatric problems may not be aware of their own illness and if it could have been undiagnosed, the association may be further stronger. These psychiatric co-morbidities have a direct effect on the treatment seeking behavior, compliance and hence the overall outcome of the patients. Therefore, identifying these Psychiatric manifestations earlier and treatment of the same will greatly reduce the disease process of Vitiligo and also willimprove the quality of life in these patients. Therefore, we aimed at studying theImpact of vitiligo on psychiatric manifestations and thereby bringing an awareness into this area.

Materials and Methods

Inclusion Criteria: Patients diagnosed as cases of Vitiligo by Dermatologist as per ICD-10 Criteria (L80).

Age group: Vitiligo Patient between 18 to 65 years of agePatients who gave consent for the Study.

Exclusion Criteria

Patients with Mental Retardation and DeliriumPatients who have previous psychiatric illness.

Patients who have other autoimmune diseases like Systemic Lupus Erythematosus, Cutaneous Lupus erythematosus and other comorbid dermatological diseases.

Methodology

A sample of 70 consecutive patients with an established diagnosis of Vitiligo, attending the Dermatological outpatient department were selected for the study. Patients diagnosed with vitiligo by ICD 10 criteria were examined by Psychiatrists was evaluated using DSM 5 criteria for Psychiatric disorders and then HADS (Hospital Anxiety and Depression scale) was administered to find the Anxiety and depression. All the patients were then administered with Rosenberg self-esteem scale, and then disease severity is calculated with VASI (Vitiligo area scoring index).

Statistical Design

Statistical design was formulated using the data collected as above, for each of the scales and socio-demographic variables. Statistical analysis was done using SPSS (Statistical Package for Social Studies) trial version 22. The central values and dispersion were calculated. In comparison of the data for categorical variables chi-square and for numerical variables student t test were used.

Results

Table 1: Showing Socio demographic Variables of the Sample Population

S. No.	Variable		Cases (N = 70) n	Percentage
1	Age	<35	24	34.3
		36-50	27	38.6
		51 and above	19	27.1
2	Sex	Male	33	47.1
		Female	37	52.9
3	Marital	Married	43	61.4
	status	Unmarried	15	21.4
		Widow/Separated/Divorce	12	17.1
4	Socio-	Lower	6	8.6
	economic	Upper Lower	48	68.6
	status	Lower Middle	16	22.9
5	Religion	Hindu	64	91.4
		Non-Hindu	6	8.6

From Table 1, it is inferred that majority (38.6%) of the sample population belongs to the age group between 36 to 50 years. The samplepopulation consists of 52.9% females and 47.1% males. 61.4% were married and 21.4% unmarried. 17.1% were single (widow/separated/divorced). Majority (68.6%)

belong to the Upper Lower socioeconomic group. Majority of sample population were Hindus 91.4% and 8.6% Non-Hindus (Christians/Muslims/others).

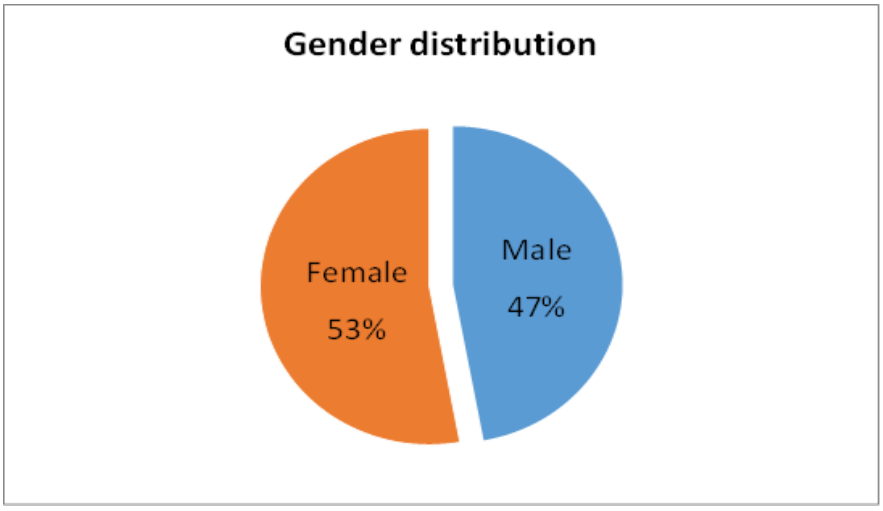

Chart 1: Shows gender distribution in patients with Vitiligo

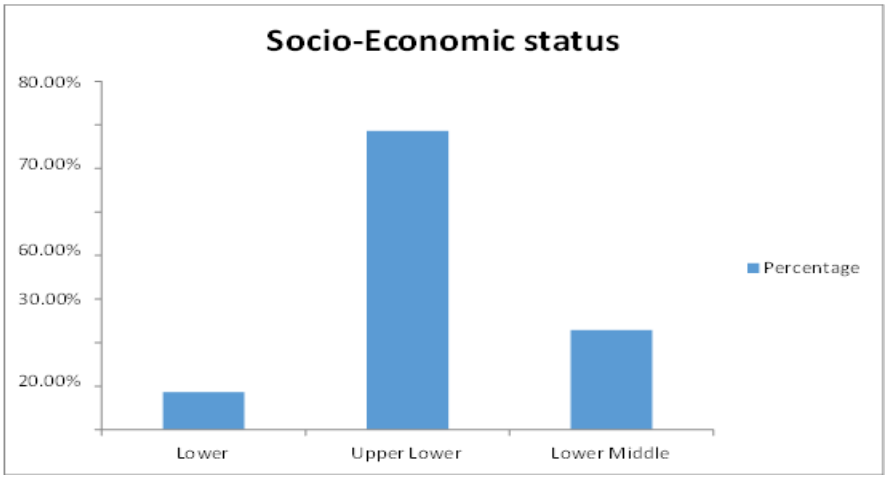

Chart 2: Shows distribution of Socioeconomic Status of patients with vitiligo

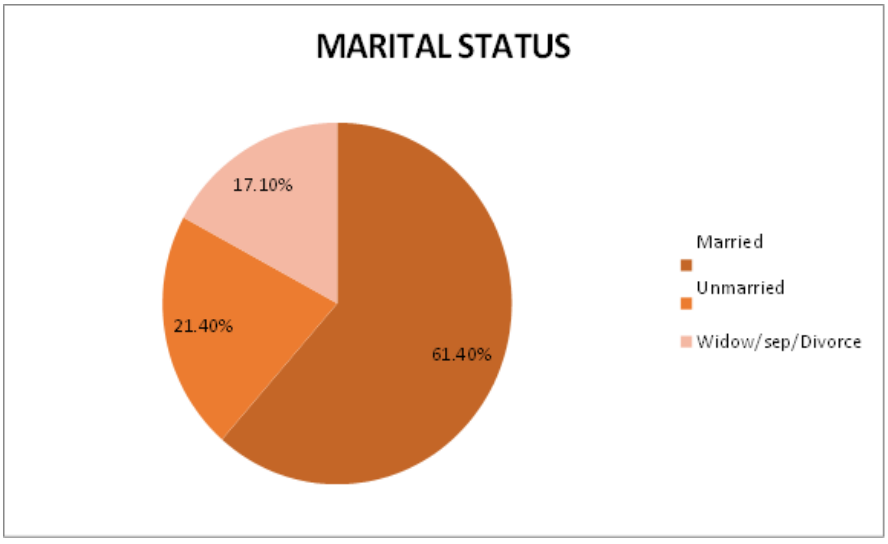

Chart 3: Show marital status in patients with Vitiligo.

Table 2: Showing Frequency Distribution of Dermatological Illness Variables

S. No.	Variable		Cases (N=70) N	Percentage
1.	Type of vitiligo	Generalized Localised	49 21	70 30
2	Duration ofillness (Years)	<3 4-6 7 and above	41 18 11	58.6 25.7 15.7
3.	Course type	Progressive	23	32.9
		Regressive	9	12.9
		Stationary	25	35.7
		Remission and		
		Exacerbation	13	18.6

Table 2 shows the frequency distribution of the type of Vitiligo, and duration of illness and course among the patients. From the table, we see that 70% of the sample had Nonsegmental (Generalized) vitiligo and 30% localized/segmental type. The duration of illness was <5 years in 81.4% of patients, 6-12 years in 12.9% of patients and in 5.7%, it was > 13 years. The type was 35.7% stationary, 32.9% progressive, 18.6% Remission andexacerbation and 12.9% in Regressive type.

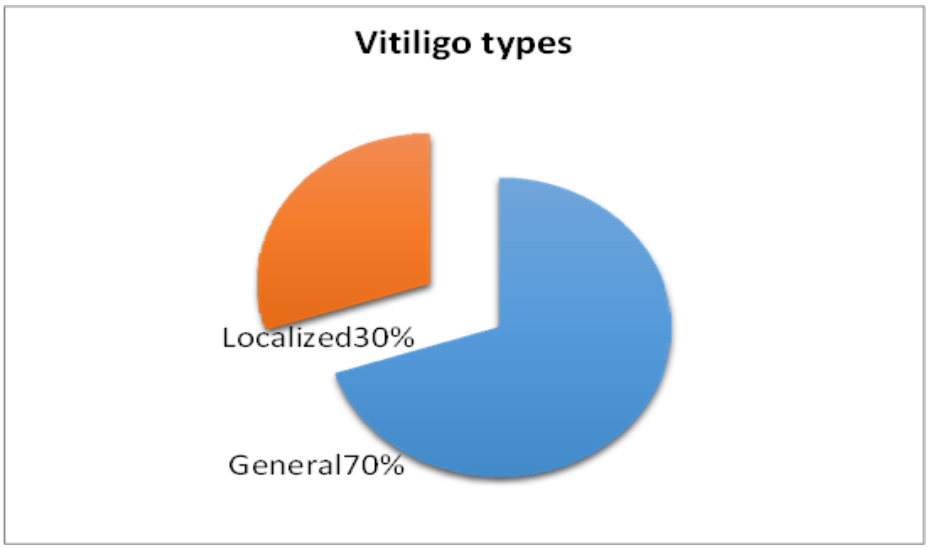

Chart 4: Showing frequency of Major types of Vitiligo

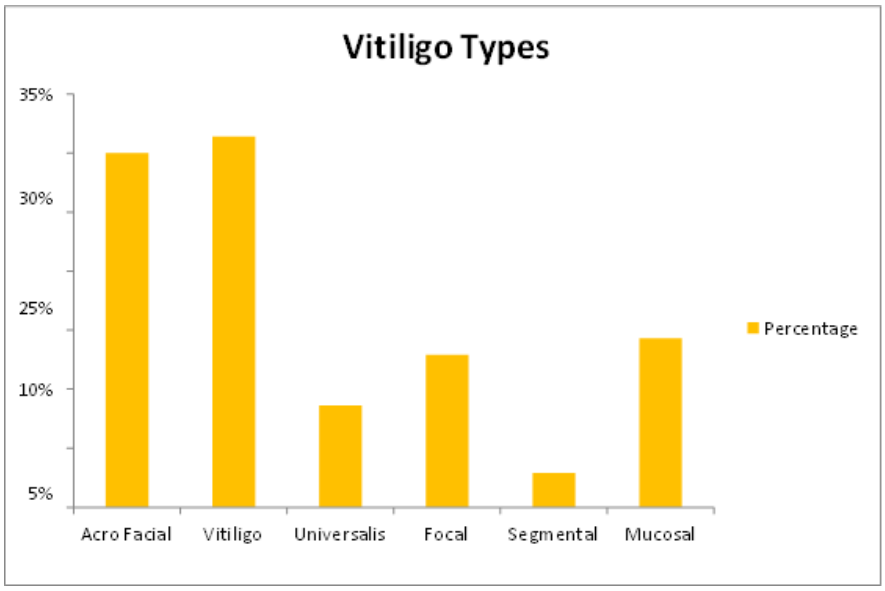

Chart 5: Shows distribution of subtypes of Vitiligo

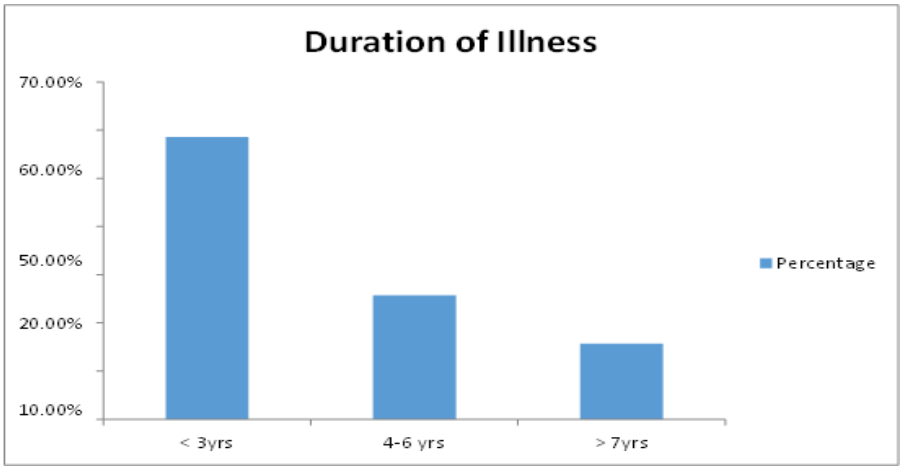

CHART 6: Shows distribution of Duration of illness in patients withVitiligo

Table 3: Showing Frequency of Psychiatric Morbidity Among Patients with Vitiligo.

S.No	PsychiatricMorbidity	Cases (N=70) n	Percentage (%)
1	Present	49	70.0
2	Absent	21	30.0

Table 3 shows the frequency of psychiatric illness in patients with Vitiligo. Among the 70-sample population taken up for study 49 patients (70%)had one or the other psychiatric illness and 21(30%) of the patients had no psychiatric illness.

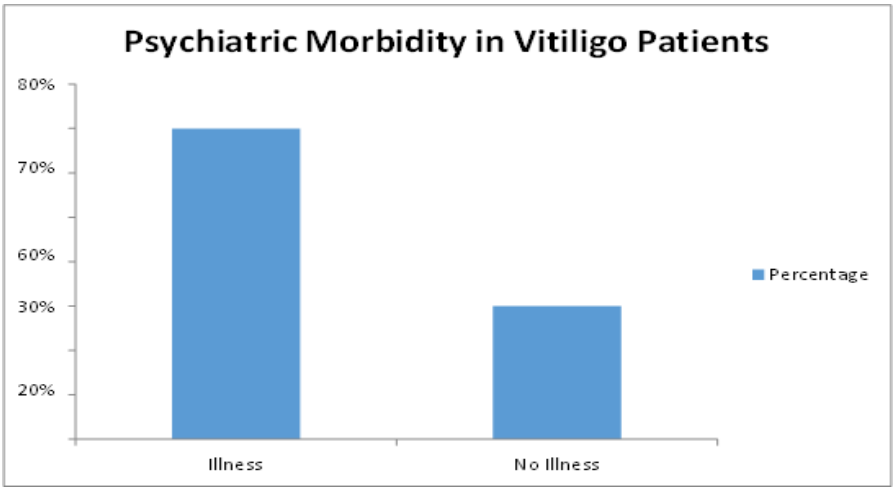

Chart 7: Shows distribution of Psychiatric morbidity in patients with Vitiligo

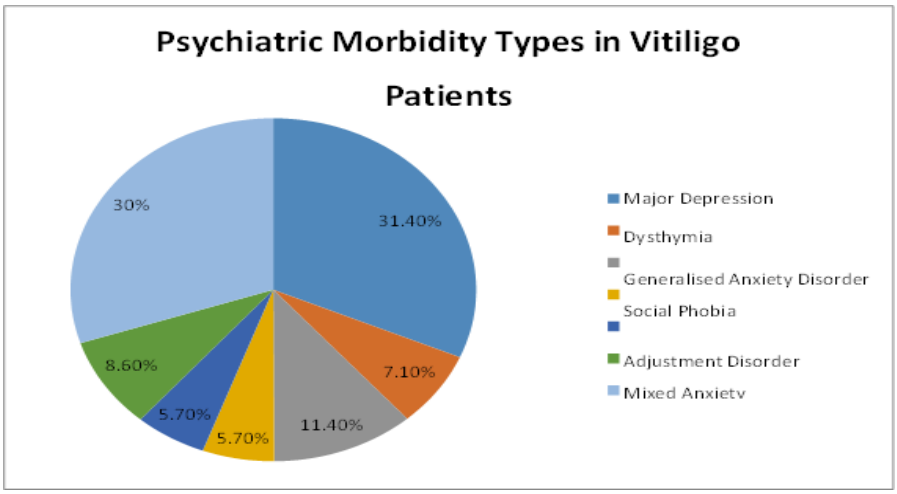

Chart 8: Shows distribution of various psychiatric comorbidity inpatient of vitiligo

Table 4: Showing the Type of Psychiatric Morbidity among Patients withVitiligo

S.No	Psychiatric Morbidity	Cases (N=70) n	Percentage(%)
1	Major Depressive Disorder	22	31.4
2	Dysthymic Disorder	5	7.1
3	Generalized Anxiety Disorder	8	11.4
4	Social Phobia	4	5.7
5	Adjustment Disorder	4	5.7
6	Mixed Anxiety and Depressivedisorder	6	8.6
5	No Illness	21	30

Table 4 showing the distribution of various psychiatric illnesses among patients with Vitiligo. Among the 49 patients who had psychiatric illness the most common psychiatric illness was major depressive disorder (n= 22) constituting 31.4% followed by generalized anxiety disorder (n=8) constituting 11.4%, dysthymic disorder 7.1%, social phobia and adjustment disorder 5.7% each and Mixed anxiety and depressive disorder 8.6% the remaining 21(30%) patients had no psychiatric illness.

Table 5: Showing Frequency Distribution of HADS/Rosenberg /VASI Scoresin Patients with Vitiligo

S. No.	Variable		n (N=70)	Percentage
1.	HADS - A	Normal	19	27.1
		Border line	20	28.6
		Cases	31	44.3
2.	HADS – D	Normal	22	31.4
		Border line	14	20
		Cases	34	48.6
3.	Rosenberg	<15 Low SE	39	55.7
	Inference	>15 Normal	31	44.3
4.	VASI score	Mild	41	58.6
		Moderate	17	24.3
		Severe	12	17.1

Table 5 show the frequency and percentage scores of variables in the sample population. With respect to HADS score 48.6% for depression and 44.3% for anxiety. Patients with Psychiatric illness were about 70%, no illness group 30%. Among psychiatric Manifestations Major depression contribute more 31.4%. Rosenbergs Self-esteem score 55.7% score for low self-esteem. Majority of the sample population 58.6% score for mild category in VASI score.

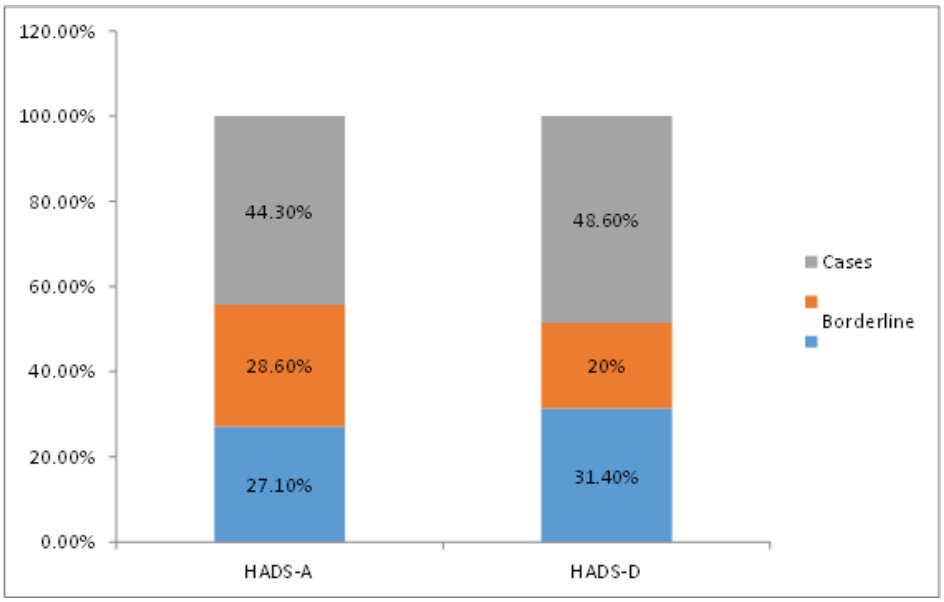

Chart 9: Shows comparison of HADS scores in Vitiligo patients

Table 6: showing socio demographic variables of patients with and withoutpsychiatric morbidity

S. No.	Variables		Cases (N=70)	Psychiatric Morbidity		χ^2
				Present (N=49)	Absent (N=21)	
1	Age	<35	24	15	9	
		36-50	27	20	7	0.613
		>51	19	14	5	
2	Sex	Male	33	22	11	
		Female	37	27	10	0.609
3	Marital status	Married	43	32	11	
		Unmarried	15	9	6	0.555
		Widow/separated/ divorce	12	8	4	
4	Socio-economic status	Lower	6	4	2	
		Upper lower	48	35	13	0.721
		Lower Middle	16	16	6	

Table 6 The above table shows the comparison of socio demographic variables among the Vitiligo patients with and without psychiatric comorbidity. None of the variable has significant relationship with Psychiatric morbidity.

Table 7: Comparing Prevalence of Psychiatric Morbidity and GenderDistribution Between Types of Vitiligo

S. No.	Variable		Vitiligo Type		χ^2
			Generalised n (N =49)	Localised n (N=21)	
1	Psychiatric Morbidity	Present	38	11	4.435*
		Absent	11	10	p-value = 0.035
2	Sex	Male	28	5	6.555*
		Female	21	16	p-value = 0.010

*=P<0.05

Table 7 infer that the prevalence of Psychiatric morbidity is significantlyhigher in Generalized (Non-segmental Vitiligo) than localized type. With respect to gender the patients have significant difference between sex, that it infers there is higher prevalence of generalized vitiligo with vitiligo male patients than female patients.

Discussion

This study was done to know the Impact of Vitiligo on Psychiatric Manifestations and to assess the frequency and pattern of psychiatric illness in patients with vitiligo and to assess the relationship of Psychiatric illness and life Stressors. In addition, Self-esteem was assessed in all the patients. We selected 70 patients of Vitiligo who were attending the Dermatologyoutpatient Department based on the eligibility criteria and they were assessed using Hospital Anxiety and Depression scale, Rosenberg Self-esteem scale, Quality of life Among scale and Vitiligo area scoring index was used. Among the patients in the sample, the age distribution was, 34.3% of patients below 35 years, 38.6% were between the age of 36 to 50 years, 27.1% belonged to the age group of above 51 years.47.1% of the population were males and 52.9% were females. Many of the patients around 61.4 % were married,21.4% of the patients wereunmarried and 17.1% were separated/ widow/ divorced. On analyzing the socio-economic status of the patients, a majority of the patients, 68.6% belonged to Upper Lower Socioeconomic status, 22.9% belonged to Lower Middle socioeconomic status and 8.6% belonged to Lower socioeconomic status. Among the total sample of patients, 70% were suffering from Nonsegmental type/Generalized type, 30% suffering from Localized/Segmental type of vitiligo. Among the subtypes of Non segmental Vitiligo patients 30% were Acro facial, 31.4% vitiligo vulgaris, 8.6% belong to universalis type. In localized variant mucosal type were around 14.3%, focal 12.9% and segmental least common 2.9%. The type of course Progressive was 32.9%, Stationary around 35.7%, patients under remission and exacerbation was 18.6% and Regressive course type seen in 12.9% of total sample. The duration of illness of the samplepopulation is as follows -majority were in less than 3years about 58.6%, between 4 to 6 years around 25.7%, and 15.7% in above 11 years. The severity of Vitiligo was assessed by using the Vitiligo Area Severity Index. Among the 70 patients, majority had mild severity 58.6%, moderate around 24.3% and12% of patients had severe Vitiligo. Our study findings like the following study done by Daniel and Sivanesan: DLQI and Psychiatric Morbidity in 200 Vitiligo Patients. In theabove study there were 122 (61%) patients with generalized vitiligo, 36 (18%) had acro-facial vitiligo, only 2 (1%) patients with segmental vitiligo, and 40 (20%) had localized vitiligo [13,14]. This contrasted with a study from Tunisia, where generalized vitiligo was present in 37.5%, acrofacial in 12.5%, andlocalized type in 25% of the study population [15]. A study from South India reported that generalized vitiligo was present in 48%, acrofacial type in 22.7%, and localized type in 16% and segmental type in 13.3%.20 31 (15.5%) of the patients had

family history of vitiligo. This contrasted with the study done by Gopal et al [16], the prevalence was found to be 36%. 172 (86%) patients had vitiligo involving the uncovered areas in the body. This was similar to Akremet al [17]., study from Tunisia, where vitiligo in the uncovered areas was seen in 78.33% of the population. Borimnejad et al [18], from Iran reported location of vitiligo lesions over the visible areas in 53(76.4%) patients. In our study, we found that, among the 70 Vitiligo patients, 49 patients were suffering from psychiatric comorbidity, amounting to a proportion of 70%. Our study supported by a study done by Ramakrishnan et all,2014 [12] reported 79.2% of psychiatric comorbidities. Among the 70 patients of Vitiligo nearly 49 patients (70%) had one or the other psychiatric illness and 21(30%) of the patients had no psychiatric illness. Among the 49 patients who had psychiatric illness the most common psychiatric illness was major depression constituting 31.4% followed by generalized anxiety disorder constituting 11.4%, mixed anxiety 8.6%, dysthymia 7.1% adjustment disorder and social phobia 5.7 % each. This is similar to an Indian study which reveals the prevalence of depressive episode (22%) and dysthymia (9%) in vitiligo (Matoo SK,Handa et al,2001) [11] but it reported Adjustment disorder 56% in contrast to our study. In another recent study in patients with vitiligo, by Garg S & Sarkar R,(2014) [19] reports Dysthymia (7–9%), depression (10%), depressive episode (18–22%), sleep disturbance (20%), suicidal thoughts (10%), anxiety (3.3%) and suicidal attempts (3.3%). Though finding with other study is similar with depression and anxiety disorder with our study. This study also reports 3.3% of suicide attempt but our study did not find any suicide attempts in the study population.

Conclusion

The study finds there is an increased association of psychiatric illness in patients with vitiligo. The study findings reveal no difference in gender was found in prevalence of psychiatric illness among the patients with Vitiligo. Major depression disorder is the most frequent psychiatric disorder seen in patients with vitiligo. Longer duration of generalized vitiligo is associated with increased prevalence ofpsychiatric illness. The high prevalence of one or other psychiatric illness among vitiligo patients stress the need for combined biopsychosocial approach in managing vitiligo patients.

References

1. Koblenzer CS. Psychosomatic concepts in dermatology. Arch Dermatol 1983; 119:501-512.
2. Mercan S, Altunay Kıvaç İ. Psychodermatology: a collaboration between psychiatry and dermatology. Turkish Journal of Psychiatry 2006; 17:305-313.
3. Cermak T. [Psyche and skin 9author's transl)]. Wien Klin Wochenschr.1980;92:641-650.
4. Panconesi E. Stress and skin diseases: psychosomatic dermatology. Clin Dermatol.1984;2: viiivxiv
5. Ginsburg IH. The psychosocial impact of skin disease: an overview. Dermatol Clin. 1996; 14:473–484.
6. Laihinen A. Psychosomatic aspects in dermatoses. Ann Clin Res.1987; 19:147–14 97.
7. Picardi A, Abeni D. Stressful life events and skin diseases: disentangling evidence from myth. Psychother Psychosom. 2001; 70:118–36.
8. Humphreys F, Humphreys MS. Psychiatric morbidity and skin disease:What dermatologists think they see? Br J Dermatol 1998; 139: 679–681.
9. Silvan M. The psychological aspects of vitiligo. Cutis 2004; 73:163-167.
10. Mattoo SK, Handa S, Kaur I, Gupta N, Malhotra R. Psychiatric morbidity in vitiligo:prevalence and correlates in India. J Eur AcadDermatol Venereol 2002.
11. Mattoo SK, Handa S, Kaur I, Gupta N, Malhotra R. Psychiatric morbidity in vitiligo and psoriasis: A comparative study from India. J Dermatol 2001; 28:424-32.
12. Ramakrishna P, Rajni T. Psychiatric morbidity and quality of life in vitiligo patients. Indian J Psychol Med 2014; 36:302-3.
13. Chan MF, Chua TL, Goh BK, Aw CW, Thng TG, Lee SM. Investigating factors associated with depression of vitiligo patients in Singapore. J Clin Nurs. 2012;21(11-12):1614–21
14. Daniel SJ, Sivanesan AR. Dermatological Quality of Life and Psychiatric Morbidity Among 200 Vitiligo Patients. Int J Sci Stud 20 17;5(3):86-92.
15. Mason CP, Gowkrodger DJ. Vitiligo presentation in adults. Clin Exp Dermatol 2005; 30:344-5.
16. Gopal KV, Rama Rao GR, Kumar YH, Appa Rao MV, Vasudev P; Srikant. Vitiligo: A part of a systemic autoimmune process. Indian J Dermatol Venereol Leprol 2007; 73:162-5.
17. Akrem J, Baroudi A, Aichi T, Houch F, Hamdaoui MH. Profile of vitiligo in the south of Tunisia. Int J Dermatol 2008; 47:670-4.
18. Borimnejad L, Parsa Yekta Z, Nikbakht-Nasrabadi A, Firooz A. Quality of life with vitiligo: Comparison of male and female Muslim patients in Iran. Gend Med 2006; 3:124-30
19. Slominski A, Pisarchik A, Zbytek B, Tobin DJ, Kauser S, Wortsman J. Functional activity of serotoninergic and melatoninergic systems expressed in the skin. J Cell Physiol 2003;196: 144-53.