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The Impact of Vitiligo on the Psychological State of Iraqi Patients

***Saad H. Salman*[1] *and Ameen Mohammed Atiyah*[2]**
[1]*Department of Medicine, College of Medicine, Ibn Sina University of Medical and Pharmaceutical Sciences, Baghdad, Iraq.*
[2]*Iraqi Ministry of Health, Baghdad Health Directorate \ Al-Karkh, Al-Furat General Hospital, Baghdad, Iraq.*

Abstract: **Background:** White spots of the skin can be resulted of melanin loss in vitiligo, a persistent skin disorder, where vitiligo has a substantial psychological impact on patients in addition to its medical effects, leading to anxiety, sadness, and a reduction in quality of life. **Aim:** The goal of our article is to evaluate the psychological well-being of vitiligo patients as a cross–sectional study as well as identify the risk factors during a 12-month follow-up period. **Methods:** In term of duration of 12 months follow - up, 100 patients with vitiligo participated as a cross-sectional study using a standardized questionnaire including psychological evaluations, such as the Vitiligo Impact Scale (VIS-22), Beck Depression Inventory (BDI-II), as well as the SF-36 Quality of Life questionnaire, which all gathered together with demographic data and clinical results. **Results:** The results indicated 40% of the patients had negative psychological repercussions and a significant positive relationship between higher scores of BDI-II and lower VASI scores ($r = -0.45$, $p < 0.001$), where females and individuals who had a BMI of 25 or more also showed higher odds of psychological distress. Due to that, the VIS-22 scores showed a significant negative impact on quality of life, particularly with regard to emotional well-being and social functioning. **Conclusion:** The current findings indicate the significant psychological toll that vitiligo sufferers endure, which vitiligo sufferers may have a higher overall quality of life if they are more aware of the condition and receive early psychosocial treatment.

Keywords: Vitiligo, Psychological State, Quality of Life, Anxiety, Depression, SF-36, and VIS-22, and BDI-II.

INTRODUCTION

Vitiligo is an acquired cutaneous disease with progressive depigmentation in patches due to selective destruction of melanocytes (Gupta, M. & Gupta, A., 2018), while it may occur in individuals of all races, the illness may have more serious social and psychological implications in darker-skinned patients due to the striking visual contrast of the white patches with their normal hue (Farahnik, B. *et al.*, 2018; Huggins, R. *et al.*, 2017), which the psychologic burden is also increased by social attitudes and stigmatization of skin conditions, leading to emotional distress, anxiety, and depression (Kim, J. *et al.*, 2020).

In terms of establishing dermatological disorders establish, vitiligo are highly correlated with low self-esteem and body image disturbances (Micali, G. *et al.*, 2013), where patients are frequently socially rejected and stigmatized, which can aggravate their psychological distress (Lee, A. *et al.*, 2019; Thomas, L. *et al.*, 2020). Also, the challenge of the treatment for a chronic and visible disease makes it imperative to understand the psychosocial features of vitiligo in depth (Alikhan, A. *et al.*, 2013; D'Angelo, S. *et al.*, 2017; Koo, J. *et al.*, 2013).

The aim of this study is to evaluate the mental state of vitiligo patients, the quality of life, and related factors in a 12-month follow-up.

PATIENTS AND METHODS

Study Design

A cross-sectional design was employed among 100 patients with vitiligo, who were 12-month volunteers from dermatology clinics. The study was approved ethically by the institutional review board, and informed consent was written and signed from all subjects.

Participants

Inclusion criteria were patients aged 18 years and older with a confirmed diagnosis of vitiligo. Exclusion criteria were patients with underlying autoimmune disorders, other dermatological conditions, or patients on psychotropic medication.

Data Collection

All participants underwent a formal interview in which demographic details (age, sex, BMI, smoking history, previous surgery, comorbidities, ASA class, education level, and income level) were documented. Clinical data related to vitiligo (type, duration, treatment response, and VASI scores) were collected from clinical records.

Assessments

Psychological evaluations included:

1. Vitiligo Impact Scale (VIS-22): Evaluates the psychological, social, and emotional effects of vitiligo.
2. Beck Depression Inventory (BDI-II): Assesses the degree of depression.
3. SF-36 Quality of Life Questionnaire: Assesses various dimensions of quality of life, e.g., physical and mental well-being.

***Corresponding Author:** Saad H. Salman

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STATISTICAL ANALYSIS

Statistical analysis was done using SPSS, version 22.0. Descriptive statistics were used to give an overview of the data, while logistic regression and Pearson correlation analyses examined relationships between variables.

RESULTS

Table 1: Demographic Characteristics

Characteristic	Value (n=100)
Age (mean ± SD)	36.5 ± 12.3
Sex (Male/Female)	45/55
BMI (mean ± SD)	24.9 ± 3.7
Smoking (Yes/No)	30/70
Previous Surgery (Yes/No)	15/85
Comorbidities (n, %)	Hypertension: 10%; Diabetes: 5%; Others: 10%
ASA Classifications (I/II/III)	70/25/5
Education Status (n, %)	Primary: 15%; Secondary: 40%; Tertiary: 45%
Monthly Income Status ($)	<500 $: 20%; 500 – 700 $: 50%; > 700: 30%

Table 2: Diagnoses Outcomes of Vitiligo Disease

Characteristic	Value (n=100)
Type of Vitiligo	Non-segmental: 70% Segmental: 30%
Duration of Disease (years)	5.2 ± 3.1
Response to Therapy (n, %)	Positive: 60% Negative: 40%
VASI Scores (mean ± SD)	5.0 ± 2.1

Table 3: Distribution Frequency of Symptoms in Patients with Vitiligo.

Symptoms	Frequency, %
Patchy loss of skin color	93%
Premature whitening or graying of the hair on your scalp	40%
Loss of color in the tissues	36%
Itching	30%

Table 4: Laboratory Outcomes of Patients.

Laboratory Test	Value (Mean ± SD)
Hemoglobin (g/dL)	13.5 ± 1.2
Serum Vitamin D (ng/mL)	20.0 ± 8.0
Thyroid Function (TSH, μIU/mL)	2.5 ± 1.1

Table 5: Prevalence of Vitiligo Impact Scale (VIS-22) Assessment.

VIS-22 Score (mean ± SD)	Value (n=100)
Overall Score	50.3 ± 12.5

Table 6: Prevalence of Beck Depression Inventory Assessment (BDI-II)

BDI-II Score (mean ± SD)	Value (n=100)
Overall Score	16.2 ± 7.1

Table 7: Assessment of Health Quality of Life Using SF-36 Questionnaire.

SF-36 Component	Score (mean ± SD)
Physical Function	75.0 ± 15.0
Role Physical	70.0 ± 10.0
Mental Health	64.0 ± 16.0
Role Emotional	68.0 ± 14.0
Vitality	56.0 ± 12.0

Table 8: Distribution of Complications of Vitiligo on Patients

Complications (n, %)	Value
Psychological Issues	40%

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Skin Infections	25%
Other	15%

Table 9: Logistic Regression Analysis of Risk Factors Effect on Patients.

Risk Factor	**Odds Ratio (OR)**	**95% CI**
Age > 30	2.5	1.2 - 5.0
BMI > 25	1.8	1.1 - 3.1
Female Sex	1.4	1.1 - 2. for all risk of depression shown

Table 10: Chi-Square Test Analysis.

Variable	**Chi-Square Value**	**p-value**
Education vs. BDI scores	10.5	0.001
Sex vs. VASI scores	5.3	0.021

Table 11: Pearson's Correlation Outcomes.

Variable Pair	**Correlation Coefficient (r)**	**p-value**
VASI scores & BDI-II scores	-0.45	<0.001
SF-36 Mental Health & VIS-22	0.40	0.002

DISCUSSION

The present study provides excellent insight into the psychologic impact of vitiligo, with 40% of the patients reporting high levels of psychologic distress as measured by elevated scores on the Beck Depression Inventory (BDI-II). Our findings are in agreement with evidence for the adverse psychologic effects of vitiligo, including anxiety and impaired quality of life. Besides, our results also suggested that female patients and patients with increased body mass index (BMI) are most vulnerable to these unfavorable psychological outcomes (Chen, Y. *et al*., 2016; Lévy, J. *et al*., 2020).

(Tamburi, F. *et al*., 2018; Ranjan, R. *et al*., 2021; Rohan, J. *et al*., 2014; Vallianou, N. G. *et al*., 2018; Tong, Y. *et al*., 2021) Earlier studies have consistently reported the psychosocial effects of vitiligo, since vitiligo patients have been found to exhibit greater depression and anxiety than the general population (Fabi, S. G. *et al*., 2016). A German study found that nearly 60% of patients with vitiligo experienced some degree of psychological distress, with females experiencing much higher levels of anxiety. Our findings—documenting a 40% prevalence of psychological disturbances—while lower, still indicate that vitiligo is of considerable psychological significance (Reyes, M. *et al*., 2014). Younger patients or those with extensive disease may also have more emotional disturbances, as shown by a USA study (Kuhl, A. V. *et al*., 2019). For gender disparities, our results are in accordance with French research (Wu, W. *et al*., 2017), whose results showed female patients demonstrated more social anxiety and emotional distress than males (Pasricha, J. S. *et al*., 2018). Such gender difference is said to be caused by pressure regarding beauty ideals, because females may be subjected to higher sensitivity towards skin appearance. The massive psychological burden imposed by outward diseases like vitiligo confirms the importance of incorporating gender-sensitive solutions within the planning and treatment (Cortina, M. *et al*., 2020).

The correlation of reduced SF-36 quality of life scores with increased levels of psychological distress in subjects is as would be expected from earlier work (Nunes, V. A. *et al*., 2019). Earlier reports (Ibbotson, S. H. *et al*., 2013; Ghosh, S. *et al*., 2015) had demonstrated that vitiligo exerts its major effects on both the emotional and physical aspects of quality of life, consistent with the complex nature of these negative effects. Our own SF-36 data revealed that individuals had notable decreases in emotional well-being, social functioning, and vitality when they had higher VIS-22 scores.

Curiously, our own work discovered that the correlation between elevated BMI and distress was significant, which means that an individual who might already experience body image difficulty due to obesity might experience yet more distress for their condition via vitiligo (Nunes, V. A. *et al*., 2019; Vojdani, S. & Zare-Mirakabadi, A., 2015; Fabbrocini, G. *et al*., 2020; Shah, K. *et al*., 2017). This finding is partly endorsed by a Chinese study (Zubaidi, A. *et al*., 2021), where obese patients presenting with outward signs of disease were found to evidence greater psychosocial impairment. Tackling both skin health and diet in the clinic could prove useful in controlling overall patient well-being.

CONCLUSIONS

In conclusion, our findings emphasize that vitiligo has a profound impact on the psychological well-being of patients, particularly in women and those with elevated BMI. The results indicate that demographic factors, such as sex and BMI, play significant roles in these psychological impacts. This underscores the importance of comprehensive care that considers physical as well as psychological facets of vitiligo. Longitudinal effects and the efficacy of psychosocial treatments should be explored in future studies to further meet the overall demands of those with vitiligo.

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