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The Impact of Vitiligo on the Psychological State of Iraqi Patients

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Abstract: Vitiligo is a severe skin disease resulting from the loss of melanin in the white patches of skin, leading to severe psychosocial distress. This study evaluated the quality of life outcomes and psychological outcomes of patients, as well as identified risk factors over a 12-month follow-up period, which our data were enrolled all 100 vitiligo patients participating in the study during the follow-up period as well as this current study used several questionnaires to assess psychological and quality of life outcomes for patients, including the Vitiligo Impact Scale (VIS-22), the Beck Depression Inventory (BDI-II), and the SF-36 Quality of Life Questionnaire. Moreover, our current study noticed that almost 40% of patients had experienced with negative psychological effects, alongside with a significant positive correlation between higher BDI-II scores and lower VASI scores, as well as female patients with a BMI of 25 or greater experienced more severe psychological distress, with higher VIS-22 scores causing psychological problems that impact patients' quality of life, bearing a significant burden on vitiligo patients, which due to that, our study showed that vitiligo patients have negative psychological outcomes that impair their quality of life, despite the study's observation of their high awareness of the disease and psychological treatment.

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

INTRODUCTION

Our study had presented a vitiligo as a skin disease characterized by a progressive loss of pigmentation into patches resulting from the selective destruction of melanocytes, that occurred through most communities of various ethnicities [Gupta, M. A., & Gupta, A. K. 2018], and caused into severe adverse effects for patients, particularly those with darker skin [Farahnik, B., *et al*., 2018], where these disparities were characterized by a sharp visual contrast between the white patches and the natural skin tone, which increases the psychosocial distress associated with skin diseases, resulting in emotional distress, anxiety, and depression. [Huggins, R. H., *et al*., 2017, Huggins, R. H., *et al*., 2017, Micali, G., *et al*., 2013, Lee, A. Y., *et al*., 2019]

In addition, this study indicated about vitiligo was also resulted into emotional and social problems including self-esteem and body image, leading some patients to frequently refuse to participate for fear of social stigma, which could exacerbate their psychological distress [Thomas, L., *et al*., 2020, Alikhan, A., & Felsten, L. M., 2013, D'Angelo, S., *et al*., 2017], where it is essential to understand the psychosocial characteristics of vitiligo patients [Koo, J., & Lee, S., 2013], along with this study aimed to evaluate the psychological outcomes and quality of life of vitiligo patients over a 12-month follow-up period.

PATIENTS AND METHODS

Our cross-sectional study enrolled 100 patients with vitiligo at hospitals in Baghdad, Iraq, through 12 - follow-up period, where patients aged 20–50 years were included in the study, and patients with hypertension, diabetes, and smokers were excluded, as well as patients with underlying immune disorders, other skin conditions, or those taking psychiatric medications were excluded.

In addition, all patient data were collected from the medical records of hospitals in Baghdad, Iraq, which all demographic and medical data were recorded, including age, sex, body mass index, smoking history, previous surgery, comorbidities, (ASA) class, educational level, and income level, further clinical parameters were also identified from hospital medical records of vitiligo patients, categorized by type, duration, response to treatment, and VASI scores.

Moreover, according to clinical assessments of the psychological and health aspects of vitiligo patients, both the psychological, social, and emotional aspects of vitiligo were assessed using the Vitiligo Impact Scale (VIS-22), depression scores were assessed using the Beck Depression Inventory-II (BDI-II), and physical and psychological aspects of quality of life were measured using the SF-36 questionnaire.

Based to statistical analysis of patient data, patient data were analyzed using SPSS, version 22.0,

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using descriptive statistics. Logistic regression data were also analyzed for study 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 the 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%
Skin Infections	25%
Other	15%

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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 found an 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), as well as these outcomes are in agreement with evidence for the adverse psychologic effects of vitiligo, including anxiety and impaired quality of life, along with our results also suggested that female patients and patients with increased body mass index (BMI) were the most vulnerable to these unfavorable psychological outcomes. [Chen, Y. F., *et al*., 2016, Lévy, J., *et al*., 2020]

Furthermore, some 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 [Tamburi, F., *et al*., 201, Ranjan, R., *et al*., 2021, Rohan, J., *et al*., 2014, Vallianou, N. G., *et al*., 2018, Tong, Y., *et al*., 2021, Fabi, S. G., *et al*., 2016]. Also, A Canadian study found that nearly 60% of patients with vitiligo experienced some degree of psychological distress, with females experiencing much higher levels of anxiety, further 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].

In addition, some younger patients had more emotional disturbances, which as shown by a USA study [Kuhl, A. V., *et al*., 2019], therefore our results are in accordance with French research [Kuhl, A. V., *et al*., 2019], results showed female patients demonstrated more social anxiety and emotional distress than males, [Pasricha, J. S., *et al*., 2018] some gender difference caused into pressure regarding beauty ideals, because females may be subjected to higher sensitivity towards skin appearance, into 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]

Also, the reduced SF-36 quality of life scores with increased levels of psychological distress in subjects was as would be expected from earlier work [Nunes, V. A., *et al*., 2019], some Japanese studies [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, as well as SF-36 data revealed that individuals had notable decreases in emotional well-being, social functioning, and vitality when they had higher VIS-22 scores, [Nunes, V. A., *et al*., 2019, Vojdani, S., & Zare-Mirakabadi, A. 2015, Fabbrocini, G., *et al*., 202, Shah, K., *et al*., 2017], where 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, as well as tackling both skin health and diet in the clinic could prove useful in controlling overall patient well-being.

CONCLUSIONS

Study's outcomes focused largely almost vitiligo had shown effect into psychological well- of patients which especially in women and those with high BMI, as well as each of sex and BMI, got significant roles in all psychological impacts, which underscores the importance of comprehensive care that shows physical as well as psychological facets of vitiligo.

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