

Assessment of Quality of Life for Vitiligo Patients and Its Associated Factors: A Descriptive Study

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ABSTRACT

Background: Vitiligo, a chronic idiopathic skin disease characterized by the partial or total loss of melanocytes, leads to social stigmas, distress and psychological components that impair quality of life (QoL). **Aim:** This study aimed to assess the QoL among vitiligo patients and identify associated factors. **Research Design:** A descriptive research study design assessment was utilized. **Setting:** The study was conducted at dermatological outpatient clinics at El-Salam & Al-Hayat hospitals affiliated with the Egypt Health Care Authority in Port Said Government. **Sample:** The study included all (55) vitiligo patients undergoing ultraviolet therapy at the study setting. **Data Collection Tools:** Two tools were utilized: a self-administered questionnaire for vitiligo patients and a vitiligo patient's quality of life scale. **Results:** The study found that 32.7% of vitiligo patients were aged 18-<20, with 60.0% being female. Furthermore, 38.2% had secondary education, and 32.7% were employed. About 40.0% had a family history of vitiligo, and approximately 78.2% had been suffering from vitiligo for more than 12 months. Additionally, 81.8% had vitiligo on exposed area. The mean quality of life score was 2.93 ± 0.62 . **Conclusion:** The findings indicate that the majority of vitiligo patients in the study experienced impaired QoL. **Recommendations:** Developing an educational program for a patient with vitiligo based on their nutritional needs to improve their quality of life. Further research studies should focus on training nursing staff working with vitiligo patients to be highly knowledgeable in managing such patients and teaching them about lifestyle modifications to improve their QOL

Keywords: Associated factors, Quality of Life, Vitiligo patients.

INTRODUCTION

Melanin serves as the pigment for skin color, hair follicles and mucous membranes that primary determines skin, hair, and eye color. Vitiligo, is a multifactorial idiopathic pigmentary alteration of skin, that occur partial or completely, resulting in irregular white spots or well-defined ivory or chalky white patches that are flush with the skin surface. Managing vitiligo necessitates long-term care and adherence to specific lifestyle patterns (Bergqvist & Ezzedine 2021) ; (Frisoli, Essien, & Harris, 2020).

The causative factors of vitiligo remain undefined, with various theories proposed to elucidate its pathogenesis these theories including the biochemical cytotoxic, autoimmune, viral, intrinsic, genetic factors, neurological factors, oxidative stress, and melanocytorrhagy theories (Abd El-Razik, Ghanem, Mahran & Saleh, 2020). Although vitiligo isn't life threatening condition, it often induces significant emotional distress that may lead to depression or attempt suicide (Wang & Li 2021).

Clinically, vitiligo can manifest in three distinct forms: segmental, non-segmental, and mixed/unclassified. Non-segmental vitiligo (NSV) is the most common type, accounting for 80–90% of all cases. NSV presents as chronic depigmented white patches on the skin and hair follicles that are often bilateral, symmetric, and tend to enlarge and spread over time (Luo, Liu, Huang, & Zhao, 2020).

There are many subtypes encompasses at NSV, including focal, mucosal, acrofacial, generalized, universal, and mixed forms. Focal presents as a single patch, no segmental distribution, stable for two years or more, potentially indicating generalized vitiligo. Mucosal vitiligo multiple mucosal sites like oral cavity, buccal mucosa, and vagina. Acrofacial vitiligo predominantly involves patches on face, extremities, fingers, and periorbital regions (AL-smadi, Imran, Leite-Silva, & Mohammed, 2023).

Generalized manifests as sporadic patches that occur when over 80% of the body's surface experiences depigmentation. (Segmental vitiligo is characterized by unilateral white patches developing rapidly, with a lower prevalence and poor response to medical treatment. It primarily affects the face, trunk, extremities, and hair follicles. Unclassifiable or mixed vitiligo (MV) arises when both segmental (SV) and non-segmental (NSV) forms coexist (AL-smadi et al, 2023).

The vitiligo treatment modalities aim at achieving two primary goals: firstly, halting progression & stabilizing lesions, secondly, providing repigmentation. To enhance outcomes a combination of therapies is recommended (García et al., 2023). Current vitiligo treatments are ineffective with only 1–25% repigmentation. Moreover, Lesions on throat, face, mid-extremities are most responsive, whereas those in mouth and distal limbs more resistant to. (Leung, Lam, Leong, & Hon, 2021).

Many dermatological diseases can affect a patient's appearance, leading to significant social, emotional challenges that markedly impair the quality of life (QoL), especially when patients hold negative perceptions about their condition (Saeed, 2020). Vitiligo can cause cosmetic disfigurement, resulting in decrease QoL, employment difficulties, and psychosocial well-being challenges. Especially if lesions located on visible areas, or sensitive areas (Bibeau et al., 2022).

According to the World Health Organization (WHO), QoL pertains to the extent which individual is healthy, comfortable, capable of engaging in life events. Its defined as individuals' perceptions of their position in life within cultural and value of environment, as well as in relation to their goals, expectations, standards, and concerns (Sun, 2021). In dermatology, QoL is the patient's subjective evaluation of change resulting from skin disease (Sánchez, Salinas, Pedrero, García, & Cruz, 2017).

Recognizing that vitiligo is not just a skin condition but also a source of significant distress and stigmatization, it becomes crucial to address its psychological components to enhance patients' QOL (Axmedovich, Hamza & Latipov, 2021). Nurses play a pivotal role in educating patients about lifestyle modifications that can positively impact vitiligo management through physical activity, stress management, maintaining a well-balanced diet (Abd-El Mohsen & Mohamed, 2020).

Significance of the study

Vitiligo represents a global health concern, with estimated prevalence rates ranging from 0.1% to 8% of population, with approximately 100 million affected worldwide. In regions like the United States and Europe, the prevalence is 1%. However, in Egypt, the incidence of vitiligo is notably, ranging from 1.25% to 6% of total population. It's noteworthy that vitiligo manifests before age of 20 in 50% of patients, affecting both sexes equally (Abd-El Mohsen & Mohamed, 2020; Khatab et al.,2021).

Furthermore, vitiligo frequently exerts a significantly negative impact on social, psychological, physical of patients' lives vitiligo patients experience feelings of embarrassment, leading to low self-esteem, social isolation, stigmatization, depression. Consequently, patients may exhibit poor adherence to medical care, and occupational discrimination. and harboring misconceptions about contagion

Therefore, nurses assume a crucial role in assessing, planning, and implementing tailored care for each vitiligo patient. Future research should focus on developing standardized rating tools to aid nurses in assessing the personal impact of vitiligo on patients' lives (Khatab et al.,2021). As no studies on vitiligo have been conducted in Port Said City, there is a need for a study to assess vitiligo patients and its associated factors in this area.

AIM OF THE STUDY

The study aimed to assess the quality of life for vitiligo patients and its associated factors.

Research questions

- What is the quality of life of patients with vitiligo?
- What are associated factors that affect quality of life for vitiligo patients?

SUBJECTS AND METHOD

Research Design

A descriptive design was used to conduct this study.

Setting

The study took place at the dermatology outpatient clinic specializing in vitiligo patients undergoing ultraviolet therapy. This clinic operates within the Egypt Health Care Authority hospitals situated in Port Said Government. Specifically, the study included patients from two hospitals: El-Salam Hospital located in the Al-Sharq district and Al-Hayat Hospital situated in the Port Fouad district.

El-salam hospital at port said city which include dermatology outpatient clinic that consist of three rooms one of them is for administrative affaires, one is for examination and the other is for ultraviolet therapy.

Al-Hayat hospital at port Fouad which include dermatology outpatient clinic that consist of one large room that has part is for examination and the ultraviolet therapy is on the same room in private place covered with curtains.

Dermatology outpatient clinics at two pre-mentioned hospitals are worked for 6 days a week; Friday is the weak end and it working for 14 hours/day; morning shift is the main shift and started from 8:00 am till 3:00 pm, afternoon shift started from 3:00 am till 10:00 pm. Patients on ultraviolet radiation for treatment of vitiligo are receiving 3 sessions of radiation every week (day after day).

Sample size

The sample size will be determined by using the following equation (Dobson, 1984).

$$\text{Sample Size (n)} = \frac{Z^2}{\Delta^2} P (100 - P)$$

Where:

P: The expected prevalence of Vitiligo was 3.36% (Khatab et al.,2021).

Z: A percentile of standard normal distribution determined by 95% confidence level = 1.96

Δ : The width of the confidence interval = 5.

$$\text{Sample Size (n)} = \frac{1.96^2}{[5]^2} 3.36 \times (100 - 3.36) = 49.9 \approx 50 \text{ patients}$$

The calculated sample size will be 50 patients. Due to the design effects (1.25), the expected non-participating rate (10%).

- **The final sample size will be 55 patients.** The subjects in El-Salam Hospital dermatology department (35). The subjects in the Al-Hayat Hospital dermatology department (20).

SUBJECT

The study employed a purposive sampling method, which selected all 55 vitiligo patients undergoing ultraviolet therapy. Participants were chosen based on their accessibility to the specified study setting and adherence to specific inclusion criteria, including:

- Being vitiligo patients undergoing ultraviolet therapy.
- Falling within the age range of 18 to 65 years old.
- Having been diagnosed with vitiligo for a duration of 6 months or longer.
- Not being diagnosed with any other skin diseases apart from vitiligo.

Tools of Data Collection: - The study data were collected by using the following tools:

Tool (I): Self-Administered Questionnaire about Vitiligo Patient:

This tool was adopted in an Arabic language from (Abd El-Razik et al., 2020) to assess vitiligo patient's medical history, it was consisted of two parts, as follow:

Part 1: Vitiligo patient personal data

This part includes nine items that were used to collect the necessary data to assess the personal characteristics of the patient including age, gender, marital status, level of education, occupation, institute of employment, and place of residence.

Part 2: Vitiligo Patient medical history

This part includes 13 items that were used to assess vitiligo medical history including history of autoimmune diseases or other chronic medical conditions and treatment, family history of vitiligo, vitiligo disease duration, age at onset, body parts affected, exposed area involvement, disease activity, previous treatment history, prescribed current treatment, duration of treatment, the effectiveness of treatment.

Tool (II): Vitiligo Life Quality Assessment interview questionnaire index

The scale developed by Ay, Senol, & Yücelten (2013) offers a comprehensive approach to assessing the quality of life of patients with vitiligo. Comprising 25 questions, it delves into various facets of the condition's impact on individuals. Patients

are asked about experiences such as pain, irritation, or itching related to vitiligo, as well as feelings of embarrassment and discomfort when others stare at their condition. The questionnaire also explores coping mechanisms, such as the use of makeup to conceal vitiligo, and how clothing choices and self-esteem are influenced by the condition. By covering these diverse aspects, the scale provides valuable insights into the multifaceted ways in which vitiligo affects patients' daily lives and emotional well-being.

Scoring system

It was made up of 25 questions that responded by a four-point Likert scale (1-4). Each question of it presented as 1= "never", 2="sometimes", 3="often", and 4 =" all the time". The vitiligo life quality is calculated by summing the score of each question resulting in a maximum of 100 and a minimum of 0. The higher score showed a poorer quality of life.

Content validity of the study tool

For **Tool (I)** Self-Administered Questionnaire about Vitiligo Patient, the content validity was assessed by five experts from Assiut University. This panel included three medical-surgical nursing specialists and two other medical field experts. They assessed the instruments for clarity, comprehensiveness, understandability, applicability to administrative tasks, and overall competence. Based on their review, minor revisions were implemented (as described in the original article).

For **Tool (II)** Vitiligo patient's QoL Scale: The vitiligo life quality index (VLQI) was correlated with the dermatology life quality index (DLQI) indicating convergent validity $r = 0.77$ (as in original article).

Tools Reliability

- Reliability for **Tool (I)** Self-Administered Questionnaire about Vitiligo Patient: was assessed by examining its internal consistency (Cronbach's alpha (α) coefficient). It showed a very good level of reliability ($r=0.758$).
- Reliability for **Tool (II)** Vitiligo patient's QOL Scale: Cronbach's alpha (α) coefficient was determined as 0.92 among the patients of vitiligo. This strong

internal consistency suggests that the scale effectively measures the QoL among individuals affected by vitiligo.

Pilot Study

Before commencing the data collection phase, a pilot study was conducted involving 10% of the total vitiligo patients, comprising 6 individuals randomly selected from the aforementioned setting. The pilot study spanned two consecutive weeks and aimed to assess the applicability and clarity of the questionnaire. Additionally, it served to identify any potential issues or obstacles that could impede data collection. The primary objectives included testing the comprehensibility of the questionnaire and estimating the time required for completion. Despite the pilot study, no modifications were made to the tools used. Importantly, participants involved in the pilot study were subsequently included in the final study sample, ensuring their representation in the research process.

Field Work

To recruit participants and gather data for the study, hospitals within Port Said Government were visited, and data collection took place during patients' waiting times before or after their appointments. The study sample was recruited after preparing the tool, the researcher met with eligible patients, introduced the study's purpose, and obtained their consent to participate. Subsequently, the researcher conducted interviews with the patients, received them questionnaire designed to evaluate their medical history, QOL, and its associated factors, the researcher reading each item or question from the data collection sheet aloud. Patients were then asked to provide their responses in writing. Each data collection session lasted approximately 30 minutes. For patients who were unable to read or write, the researcher filled out the questionnaire form on their behalf. Confidentiality of all collected information was strictly maintained throughout the study. Following the completion of data collection, patients were thanked and acknowledged by the researchers for their valuable contributions to the study.

The study was carried out for vitiligo patients on ultraviolet therapy at the dermatology outpatient clinics affiliated to in Elsalam & Elhayah hospitals in Port Said city. The subjects in El-salam hospital dermatology department were 35 patients. this hospital is visited for two days per week specifically on Saturday and Thursday from the

beginning of the morning shift to the end afternoon shift for four continuous months. The subjects in Al-Hayat hospital dermatology department were 20 patients and this hospital is visited for two days per week specifically on Saturday and Thursday from the beginning of the morning shift to the end afternoon shift for two continuous months. The total time for two hospitals that cover data collection period spanned six months, from the first of June 2022 until the end of November 2023.

III. Administrative Design

Before initiating the study, preliminary official permission was sought from the relevant authorities. An official letter, detailing the study's objectives, was issued by the dean of the Faculty of Nursing at Port Said University to the director of the Egypt Health Care Authority in Port Said, seeking approval to conduct the research. Subsequently, permission was obtained from the director of each study setting where data collection would take place. Prior to the commencement of the initial interview, informed oral consent was obtained from every participant involved in the study. This ensured that participants fully understood the purpose of the study, their involvement in it, and the potential implications of their participation. This ethical practice underscores the importance of respecting participants' autonomy and ensuring their willingness to take part in the research.

Ethical Consideration

Ethical approval for the study was obtained from the Scientific Research Ethics Committee at the Faculty of Nursing, Port Said University, with reference number NUR (6/8/2023) (28). Throughout the study, ethical considerations were carefully observed to ensure the protection of participants' rights and welfare. Directors of the hospitals involved were informed about the study's aim and purpose, and their permission was obtained before initiating data collection within their facilities. Additionally, participants were provided with a concise explanation of the study's objectives and procedures, including assurances that any information gathered would be treated confidentially and used solely for research purposes. Importantly, participants were informed of their right to withdraw from the study at any point if they so desired, without facing any consequences. This provision emphasized the principle of voluntary participation and respected participants' autonomy in deciding their involvement in the research. These

ethical measures were implemented to uphold the integrity and ethical standards of the study while prioritizing the well-being and rights of the participants.

Statistical analysis

Data entry and statistical analysis were conducted using the Statistical Package for the Social Sciences (SPSS) version 24.0. Descriptive statistics, including frequencies and percentages, were utilized to present qualitative variables, while means and standard deviations were used for quantitative variables. To compare qualitative categorical variables, the chi-square test was employed. In cases where more than 20% of the cells had an expected count of less than five, the Fisher Exact test or Monte Carlo correction for the chi-square test was applied. The level of significance (p-value) was set at ≤ 0.05 to determine statistical significance. Results with p-values equal to or less than 0.05 were considered statistically significant, indicating a meaningful relationship or difference between variables under investigation. These analytical methods helped interpret the data effectively and draw valid conclusions from the study findings.

RESULTS

Table (1) illustrates that 32.7% of the vitiligo patients were under 20 years old, with a Mean \pm SD of 33.67 ± 15.98 . Additionally, approximately 60.0% of the study group comprised females, with 50.9% of them being single. In terms of education, 38.2% had secondary education, 7.3% possessed high middle (technical) education, and 32.7% were employed. Moreover, 83.6% hailed from rural areas. Regarding monthly income, the highest percentage (72.7%) of the studied patients reported having sufficient income.

Table (2) depicts the distribution of studied patients according to their medical history. It shows that 92.7% of the studied vitiligo patients did not have any autoimmune disease. Concerning family history, 40.0% developed vitiligo, and among those, 77.3% had a first-degree family member with vitiligo. Additionally, approximately 78.2% of the studied patients had been suffering from vitiligo for more than 12 months. Regarding the affected area, 81.8% had an exposed affected area, with the most affected sites being the face (62.2%), hands (71.1%), and feet/foot (53.3%). Moreover, about 70.9% of them did not have quickly spreading vitiligo.

furthermore, this table shows that 81.8% of studied vitiligo patients had tried previous treatment methods for vitiligo, 93.3 % of them used local ointment treatment, while 2.2% of studied patients used a combination of all therapies. and only about 10.9 % of those patients suffered side effects from previous treatment. As regards current treatment, the result portrayed that 89.1% of patients are using phototherapy in addition to local ointment /lubricant, while 10.9% of patients are using phototherapy only. About 43.6 % of studied patients had used their current treatment method for more than 12 months. While 27.3% of studied patients suffer from side effects from this current treatment method.

Table (3) outlines the findings regarding patients' concerns and anxieties related to vitiligo. It indicates that 27.3% of patients experienced all-time pain, irritation, or itching, while 92.7% expressed constant concern about vitiligo spreading to other body parts. Additionally, 90.9% reported being consistently anxious about vitiligo being permanent, and 89.1% expressed ongoing worries about their children potentially inheriting vitiligo.

Table (4) presents insights into the challenges faced by vitiligo patients in their daily lives. It indicates that 90.9% of the studied vitiligo patients experienced constant difficulty in keeping up with vitiligo therapy, often due to spending too much time or money. Moreover, 12.7% reported persistent avoidance of physical contact with others because of vitiligo. Additionally, the table illustrates that 58.2% had ongoing challenges with their vacation plans, school or work, and leisure activities due to vitiligo (58.2%, 58.2%, and 56.4% respectively). Furthermore, 69.1% of patients experienced continual difficulty with sun exposure or protection due to their vitiligo.

Table (5) displays the total quality of life percentage scores for studied patients with vitiligo, which averaged $64.46 \pm 20.82\%$. Additionally, the mean quality of life score was calculated at 2.93 ± 0.62 .

Table (6) presents the relationship between personal characteristics and the total mean scores of quality of life among studied vitiligo patients. The analysis indicates that there was no significant relationship observed regarding family history of vitiligo, disease duration, and affected exposed body areas ($p=0.844$, $p=0.271$, and $p=0.337$ respectively).

Table (1): Distribution of the studied vitiligo patients according to their personal characteristics (n = 55)

Items	No.	%
Age		
18-<20	18	32.7
20-<35	14	25.5
35-<50	8	14.5
≥50	15	27.3
Mean ± SD	15.98±33.67	
Sex		
Male	22	40.0
Female	33	60.0
Marital status		
Single	28	50.9
Married	21	38.2
Divorced	2	3.6
Widowed	4	7.3
level of education		
Illiterate	8	14.5
Secondary education	21	38.2
Middle Education	11	20.0
High middle (technical) education	4	7.3
University education	11	20.0
Occupational status		
Working	18	32.7
Not working	37	67.3
Place of residence		
Rural	46	83.6
Urban	9	16.4
Family income		
Not enough	40	72.7
Enough	15	27.3

Table (2): Distribution of the studied vitiligo patients according to their medical history (n = 55)

Items	No.	%
History of auto-immune disease		
Yes	2	3.6
No	51	92.7
Don't know	2	3.6
Family history of vitiligo disease		
Yes	22	40.0
No	33	60.0
The degree of consanguinity with the patient (n = 22)		
1 st degree	17	77.3
2 nd degree	4	18.2
3 rd degree	1	4.5
Duration of vitiligo disease		
6 months	6	10.9
6 to 12 months	6	10.9
More than 12 months	43	78.2
Exposed body areas affected by vitiligo		
Yes#	45	81.8
- Face	28	62.2
- Hand	32	71.1
- Feet/foot	24	53.3
No	10	18.2
Vitiligo disease quickly grows and spreads		
Yes	16	29.1
No	39	70.9
Previous treatment methods for vitiligo disease		
Yes	45	81.8
No	10	18.2
These methods are # (n = 45)		
Oral corticosteroid treatment to stop disease progress	34	75.6
Local ointment treatment	42	93.3
Phototherapy treatment	10	22.2
Local chemical treatment	9	20.0
All of the above	1	2.2
Side effects for previous treatment		
Yes	6	10.9
No	49	89.1
Current treatment for vitiligo		
Phototherapy treatment using ultraviolet rays only	6	10.9
Phototherapy treatment using ultraviolet rays in addition to local ointment /lubricant	49	89.1
Duration for this treatment method		
6 months	16	29.1
6 to 12 months	15	27.3
more than 12 months	24	43.6
Side effects for current treatment		
Yes	15	27.3
No	40	72.7

#: More than one answer

Table (3): Distribution of the studied Vitiligo patient according to their quality-of-life (n = 55)

Items	Never		Sometimes		Often		All the time	
	No.	%	No.	%	No.	%	No.	%
Do you have								
Pain, irritation, or itching due to vitiligo	27	49.1	3	5.5	10	18.2	15	27.3
Feeling embarrassed or insecure due to your appearance with vitiligo	12	21.8	1	1.8	8	14.5	34	61.8
Feeling uneasy about others staring at your vitiligo	11	20.0	1	1.8	9	16.4	34	61.8
Using make-up to conceal vitiligo?	40	72.7	4	7.3	1	1.8	10	18.2
Using clothing specifically to cover up vitiligo	18	32.7	0	0.0	4	7.3	33	60.0
Low self-esteem because of vitiligo	9	16.4	0	0.0	5	9.1	41	74.5
Feeling not wanting others to see your vitiligo	6	10.9	1	1.8	3	5.5	45	81.8
Concerning vitiligo spreading to other body parts	2	3.6	1	1.8	1	1.8	51	92.7
Concern about skin cancer due to vitiligo	7	12.7	1	1.8	1	1.8	46	83.6
Anxiety as vitiligo is permanent	1	1.8	2	3.6	2	3.6	50	90.9
Worried that your children might inherit vitiligo from you	3	5.5	2	3.6	1	1.8	49	89.1
Uncomfortable feeling when looking in the mirror due to vitiligo	9	16.4	2	3.6	4	7.3	40	72.7
Stayed away from crowded areas due to vitiligo	19	34.5	3	5.5	16	29.1	17	30.9

Table (4): Distribution of the studied Vitiligo patients according to their quality-of-life (n = 55) Continue,

Items	Never		Sometimes		Often		All the time	
	No.	%	No.	%	No.	%	No.	%
Do you have								
Difficulty with sun exposure or protection due to your vitiligo	8	14.5	2	3.6	7	12.7	38	69.1
Vitiligo affected your vacation plans	13	23.6	2	3.6	8	14.5	32	58.2
Impact on what you do in your free time, your activities, and hobbies	17	30.9	1	1.8	6	10.9	31	56.4
Any challenges at school or work due to vitiligo	19	34.5	2	3.6	2	3.6	32	58.2
Any uncomfortable feeling by a question about vitiligo	7	12.7	2	3.6	3	5.5	43	78.2
Feeling isolated due to vitiligo	34	61.8	4	7.3	4	7.3	13	23.6
Issues with your partner due to vitiligo (n = 21)	9	42.9	1	4.8	3	14.3	8	38.1
Avoid physical contact with others due to vitiligo	40	72.7	0	0.0	8	14.5	7	12.7
Family issues due to vitiligo	38	69.1	0	0.0	5	9.1	12	21.8
Uneasy feelings about sharing personal items with the household due to vitiligo	37	67.3	3	5.5	2	3.6	13	23.6
Difficulty keeping up with vitiligo therapy	1	1.8	2	3.6	2	3.6	50	90.9
Problems in sexual relations due to vitiligo (n = 21)	11	52.4	0	0.0	2	9.5	8	38.1

Table (5): Total quality of life percent among studied vitiligo patients (n = 55)

Total quality of life	Average	% Score
Min. – Max.	1.39 – 3.96	13.04 – 98.55
Mean ± SD.	2.93 ± 0.62	64.46 ± 20.82

SD: Standard deviation

Table (6): Relation between personal characteristics and total score of studied vitiligo patients' quality of life (n = 55)

Items	Mean ± SD.	Test of sig.
Sex		t (p)
Male	59.91 ± 23.73	1.335 (0.188)
Female	67.50 ± 18.39	
Age		F (p)
18-<20	58.53 ± 25.95	0.805 (0.497)
20-<35	68.18 ± 19.91	
35-<50	69.72 ± 17.18	
≥50	65.30 ± 16.22	
Marital status		F (p)
Single	61.44 ± 25.11	1.039 (0.383)
Married	66.41 ± 14.35	
Divorced	86.96 ± 0.0	
Widowed	64.13 ± 17.45	
Level of education		F (p)
Illiterate	73.20 ± 13.32	1.020 (0.406)
Secondary education	60.95 ± 24.71	
Middle Education	71.41 ± 11.42	
High middle (technical) education	61.22 ± 25.59	
University education	59.05 ± 22.16	
Occupational status		t (p)
Working	67.52 ± 14.83	0.877 (0.385)
Don't work	62.98 ± 23.22	
Family income		F (p)
Less than enough	67.55 ± 18.07	1.565 (0.134)
Enough	56.23 ± 25.74	
Enough and saving	–	
Family members of vitiligo disease		t (p)
Yes	63.78 ± 18.74	0.198 (0.844)
No	64.92 ± 22.37	
Don't know	–	
Duration of suffering from vitiligo		F (p)
6 months	63.61 ± 17.27	1.337 (0.271)
6 to 12 months	77.48 ± 17.68	
More than 12 months	62.76 ± 21.38	
Affected exposed body areas		t (p)
Yes	63.18 ± 20.07	0.968 (0.337)
No	70.23 ± 24.19	

SD: Standard deviation

t: Student t-test

F: F for One way ANOVA test

p: p-value for comparing between different categories.

DISCUSSION

Vitiligo, an idiopathic chronic autoimmune depigmentation disorder, that is manifested by the destruction of melanocytes, resulting in visible skin depigmentation that altering the patient's appearance. Despite, vitiligo is not life-threatening condition, vitiligo is highly prevalent, affecting 0.5-2% of the global population. Moreover, its impact extends beyond physical symptoms, often leading to significant psychological distress such as low self-esteem, anxiety, depression, social phobia, and social stigma, as well as discrimination and significant impairment in QoL especially when exposed body areas are affected (Al-Shammari et al., 2021).

The primary objective of the study was to evaluate the QoL of individuals living with vitiligo and identify associated factors influencing their well-being. The findings of the study delve into the various dimensions of QoL in the context of vitiligo and shed light on the factors that contribute to its impairment. By centering on the assessment of QoL and its associated determinants, the study offers valuable insights into the multifaceted impact of vitiligo on individuals' lives, paving the way for targeted interventions and support strategies aimed at enhancing their overall well-being and QoL.

In regarding to the quality of life (QOL) of the studied patients, the findings of the present study revealed several significant factors. The majority of vitiligo patients expressed at all-time were feeling not wanting other to see their vitiligo sites, concerning about vitiligo spreading to other body parts, concerned about skin cancer due to vitiligo, anxious over the permanence of vitiligo, and worried that the possibility of their children inheriting the disease. And also, the majority of studied vitiligo patients reported difficulty in adhering to vitiligo therapy. These findings underscore the multifaceted impact of vitiligo on patients' daily lives and psychological well-being, highlighting the importance of comprehensive support and tailored interventions to address their concerns and enhance their overall quality of life.

The researcher's explanation this may be justified because of vitiligo disease is a chronic skin disorder that reduce the patients' beauty as it affects skin appearance that determines patients' body image that resulting in psychological and emotional stress. Also, patients with vitiligo may complain that society doesn't accept them because the appearance and experienced anxiety and embarrassment when meeting strangers or

starting new relationship that cause deep effects on the private and social life, cause social malfunction and shame in social interaction. So they felt fear that vitiligo being permanent or fear that their children may inherit. Also, vitiligo is considered a challenged disease that is more expensive in time and money in treatment and the progress of treatment is more slowly. As majority of studied vitiligo patients were suffered from vitiligo and seek for treatment for more than 6 months.

The current study isn't in the same way with other study of (Khatab et al.,2021) who conducted a study of the Quality of Life of Patients with Vitiligo conducted in Egypt as it revealed that 37% of patients were at all-time concerned about vitiligo spreading to other body parts, 29% did not want others to see their vitiligo sites, 24%were concerned about skin cancer, 17%were anxious that vitiligo is become permanent, 8%worried that their children inherit vitiligo disease and 16% difficulty keeping up with vitiligo therapy due to its very expensive in treatment and need too much money.

This result was in accordance with a study named Psychosocial Status and Quality of Life among Vitiligo Patients by Bader, Ahmed, and Essayed (2023) who indicated that 58% of the studied patients had low level of self-esteem. 52% had ad moderate negative body image. 50% had moderate level of social problems.

These results emphasized that More than two-thirds of the participants had at all-time had difficulties with sun exposure or protection due to their vitiligo. Additionally, more than three quarter of vitiligo patients expressed discomfort by question about vitiligo. Moreover, more than half of the studied patients at all-time had vitiligo effect on their vacation plan & had challenges at school or work due to vitiligo& had an impact on what they do on their free time and hobbies. The results further highlighted pervasive influence of vitiligo on many domains of patients' lives, emphasizing the need for holistic support and interventions to address the complex psychosocial implications and enhance patients' overall well-being.

This can be rationalized from researcher's explanation as it is very difficult to avoid sun exposure due to the most harmful time of sun rays from 9 am to 4 pm that very difficult to be avoided as it considered the peak time. Moreover, those patient choose not to be involved in many activities such as vacation plan, practicing a favorite hobbies or play due to fear of sun light that may affect the vitiligo spreading. as well as due to

vitiligo cause negative feeling, stigmatization, feelings of embarrassment, low self-esteem and social isolation due to loss of self-confidence fear of feeling criticism Furthermore, there were more than two third of studied vitiligo patients were not working because of many challenges in school or work environment. As, people may not accept and refuse to deal with them.

The comparison with previous studies highlights the variability in experiences and perceptions of vitiligo patients across different cultural and geographical contexts. The current study isn't supported by the study of Khatab et al., (2021) in a studying of study of the Quality of Life of Patients with Vitiligo conducted in Egypt as it concluded that 46% of his studied patients sometimes had difficulty with sun exposure, 49% of his studied patient sometimes had challenges at their school or work. Furthermore, the current study result was also the opposite of Topal et al., (2016) who studied the Knowledge, beliefs, and perceptions of Turkish vitiligo patients regarding their condition which conducted in Turkey and indicated that 91% and 80% of the vitiligo did not have a serious impact on their school performance and their social relationships, work, or school activities respectively.

The discrepancies between studies underscore the importance of considering cultural, social, and environmental factors when assessing the impact of vitiligo on patients' lives. It also highlights the need for tailored interventions and support strategies that address the unique challenges faced by vitiligo patients in diverse settings. Collaborative efforts involving healthcare providers, policymakers, and community stakeholders are essential to promote inclusivity, raise awareness, and improve the quality of life for individuals living with vitiligo.

Also, this study concludes that more than two-thirds of studied vitiligo patients had never had used make-up to conceal vitiligo, and about slightly less than half of studied vitiligo patients had never suffered pain, irritation, or itching due to vitiligo. it was mirrored in this current study that slightly less than three quarter of studied patients with vitiligo never avoided physical contact with others. Also, about more than two third of studied vitiligo patients never had feeling of isolated due to vitiligo, never had family issues due to vitiligo, never had uneasy feeling about sharing personal items with the household due to vitiligo.

From the researcher's point of view, it may be due to vitiligo being a challenging disease that alter the one's beauty so, vitiligo patient tries various options to conceal its appearance such as using makeup or special clothes which unfortunately seem to be effective so many vitiligo patients do not use this option as if failed to cover the affected parts. In some cases, when melanin is destroyed, some level of pain may be felt. those patients may be support and acceptance from their partners, relatives and their whole family, Also, half of studied vitiligo patients were single.

This finding of the current study was supported and went in the same line with Sampogna et al., (2008). In studying of "Identification of categories at risk for high quality of life impairment in patients with vitiligo" who revealed that about 34% had felling of embarrassment and 28% were had felling of shame and 28% having social life affected. Also, this study was in accordance with a study by (Khatab et al.,2021) on "Quality of Life of Patients with Vitiligo" conducted in Egypt as it presented that 77% of studied patients never using make-up to conceal vitiligo.

On the other hand this study was opposite with a study conducted by Bassiouny et al., (2021) that done in Egypt which concluded that 60% of cases were used different methods of cosmetic camouflage to cover and conceal their vitiligo site without experiencing appearance-related anxiety, but it depending on choosing a good quality, waterproof cosmetic camouflage product, with matched color to patient's skin through mixing different shades and finally the treatment outcomes seems to be unsatisfying and temporary.

It was mirrored in this current study that slightly less than three-quarters of studied patients with vitiligo never avoided physical contact with others. Also, more than two-thirds of studied vitiligo patients never had feelings of isolation due to vitiligo, never had family issues due to vitiligo, never had uneasy feelings about sharing personal items with the household due to vitiligo and never had problems in sexual relations due to vitiligo. From the researcher's explanation, those patients may be supported and accepted by their partners, relatives, and their whole family, thus making those patients satisfied and accept their disease.

This finding of current study is agreed with study "Developing and Implementing Nursing Guidelines to Improve Lifestyle Pattern for Vitiligo Patients" that conducted at

Egypt by Abd El-Razik et al., (2020) as this study adduced that 47.5% of patients were absolutely had feeling of isolation due to vitiligo Also, Baidya, &Rakesh (2021) who conducted a study named Assessment of quality of life in vitiligo patients attending a tertiary care hospital - A cross sectional study and he revealed that there was association between psychological impairment due to vitiligo and QoL as it presented that 78.94% of vitiligo patients who were suffering from psychological symptoms such as feeling of inferiority regarding their appearance, fear of social rejection, embarrassment for self and family, and low self-esteem had negative impact on QoL.

Moreover, the current study result was in accordance with Zubair & Hamzavi (2019) who explained that the patient with vitiligo had poor quality of life due to Appearance of their skin condition, self-image, and pathological alteration can have psychological and physiological consequences on their management and life. While the study of Abd El-Razik et al., (2020) supported with current result in some point explained that about 10.0% of patients were absolutely maintain good relationship with other and disagree in point that 0% absolutely had family problems. This current result was in the same vein with Hammam, Yasien, & Algharably (2019). In studying Effect of vitiligo area scoring index on the quality of life in patients with vitiligo. That concluded that no significance relationship was seen between skin vitiligo condition and any sexual difficulties.

In the light of the total Quality of life among the studied vitiligo patients, it was portrayed in the present study that indicated a high effect on patients' lives.it may be due to the major impact of vitiligo disease in all life events activities and its interference with psychological, emotional, social and working life.

The study is supported by other study named of "Beliefs and perceptions of Arab vitiligo patients regarding their condition". at Kingdom of Saudi Arabia by AlGhamdi (2010) who stated that a significant proportion of patients with vitiligo reported that their illness had a major impact on their lives and that it affected the way others see them, in addition, this is in congruence with Al-Shammari et al., (2021) who performed a study in the Kingdom of Saudi Arabia named "Quality of Life in vitiligo patients in central Saudi Arabia" and revealed that the mean DLQI score was 5.64 ± 5.2 SD, which indicates a high effect on patients' life. Also, the presented study was go in the same way with Silpa-Archa, et al, (2020) which study Relationship between depression and quality of life

among vitiligo patients: a self-assessment questionnaire-based study and indicated that DLQI score of 7.46 which represented a moderate effect on patients' QoL.

The current results are supported and go in line with another study of Axmedovich, et al, (2021) who conduct a study named "to assess the impact of vitiligo patients' quality of life using the dermatological quality of life index questionnaire in combination therapy" in Uzbekistan who revealed that the mean of QOL value was 11.4 ± 2.07 , which indicating strong influence of vitiligo disease on the life of the patient.

Finally, the findings of this study revealed that there were no significant relations between personal characteristics of studied patients with vitiligo and their quality of life as regarded to their sex, occupation, level of education, and marital status duration and their family history. This result is agreed with Gardner (2019) in studying of " Psychosocial effects of vitiligo" which stated that there was no correlation between vitiligo quality of life and family history, Moreover, the result of this study suggested that vitiligo impairs all aspects of life so the nurse should put all aspects of physical, social, and psychological conditions of patient in her plan of care patient with vitiligo to improve their progress of disease and life as well.

Also, these results disagreement by Sawant, Vanjari, & Khopkar, (2019) who explained that family history encourages patients to become worried about their children as they might inherit vitiligo too and indicated that there was a significant positive correlation between a family history of disease and quality of life". Also, Gardner (2019) was in disagreement with current result who reported that there was a significant correlation between the duration of the disease and patients' quality of life. They explained that the long duration of the disease could probably be attributed to its slow progression and poor disease outcome.

CONCLUSION

Based on the results of the present study, the following can be concluded:

The findings of this study reveal significant challenges faced by vitiligo patients, particularly in relation to their quality of life and employment status. The majority of vitiligo patients experienced impaired quality of life, likely due to the psychosocial impact of the condition, which can include feelings of embarrassment, low self-esteem,

and social isolation. The study also highlights the substantial impact of vitiligo on employment, with more than two-thirds of patients reporting unemployment. This underscores the difficulties faced by individuals with visible skin conditions in the workplace, including potential discrimination and stigma.

Furthermore, a notable proportion of vitiligo patients reported a family history of the condition, suggesting a potential genetic component to the disease. This finding aligns with existing research indicating that vitiligo can have a hereditary basis. The study also indicates that many vitiligo patients had affected areas of exposed skin and had been undergoing treatment, including phototherapy and local ointment/lubricant, for an extended period of time (more than 6 months). This highlights the chronic nature of vitiligo and the challenges associated with managing the condition over the long term.

Interestingly, the study found no association between personal characteristics and quality of life among vitiligo patients. While this finding may appear surprising, it underscores the complex and multifactorial nature of quality of life outcomes in individuals with vitiligo, which can be influenced by a range of factors including psychological, social, and environmental variables. Overall, the findings of this study provide valuable insights into the lived experiences of individuals with vitiligo and underscore the importance of comprehensive support and interventions to address the physical, psychological, and social aspects of the condition.

RECOMMENDATION

Based on the findings of the current study, the following recommendations are suggested:

- Further research studies towards age groups less than 18 years to improve their QOL.
- Developing an educational program for a patient with vitiligo based on their nutritional needs to improve their quality of life.

Further research studies on nursing staff working with vitiligo patients must be trained to be highly knowledgeable in the management of such patients and teach them about lifestyle modifications to improve their QOL.

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تقييم جودة الحياة لمرضى الربو والعوامل المرتبطة به: دراسة وصفية

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الخلاصة

يعتبر الربو مرض جلدي مزمن ليس له سبب محدد و يتميز بفقدان جزئي أو كلي للخلايا الصبغية، ولكنه قد يسبب التأثيرات النفسية خطيرة ممكن أن تؤدي الي العزلة الاجتماعية والاكتئاب التي قد يخفض من جودة الحياة لدي مرضي الربو . هذا وقد هدفت هذه الدراسة إلى تقييم جودة الحياة بين مرضى الربو وتحديد العوامل المرتبطة بها. وقد تم استخدام تقييم تصميم بحثي وصفي في هذه الدراسة وقد أجريت الدراسة في العيادات الخارجية للأمراض الجلدية بمستشفيات السلام والحياة التابعة لهيئة الرعاية الصحية المصرية ببورسعيد وقد تضمنت الدراسة جميع مرضى الربو الخاضعين للعلاج بالأشعة فوق البنفسجية والبالغ عددهم (55) وقد تم استخدام أداتين في هذه الدراسة لجمع البيانات وهم : استبيان شخصي لمرضى الربو واستبيان لقياس جودة حياتهم وقد أوضحت النتائج في هذه الدراسة أن 32.7% من مرضى الربو تتراوح أعمارهم بين 18 إلى أقل من 20 سنة، منهم 60.0% من الإناث. علاوة على ذلك، حصل 38.2% على تعليم ثانوي، و32.7% يعملون. حوالي 40.0% منهم لديهم تاريخ عائلي للإصابة بالربو، وحوالي 78.2% كانوا يعانون من الربو لأكثر من 12 شهرًا. بالإضافة إلى ذلك، 81.8% أصيبوا بالربو في المنطقة المكشوفة. كان متوسط درجة جودة الحياة 2.93 ± 0.62 . تشير النتائج إلى أن غالبية مرضى الربو في الدراسة يعانون من ضعف جودة الحياة. زقد أوصت الدراسة بضرورة تطبيق و تطوير برنامج تعليمي لمرضى الربو يلبي ويغطي احتياجاته الغذائية لتحسين نوعية حياته. وكذلك ضرورة تدريب التمريض الذي يعمل مع مرضى الربو ليكونوا على دراية عالية هؤلاء المرضى وتعليمهم حول تعديلات نمط الحياة لتحسين جودة الحياة لديهم.

الكلمات المرشدة: العوامل المصاحبة، جودة الحياة، مرضى الربو.