

Assessment of quality of life in Saudi patients with vitiligo in a medical school in Qassim province, Saudi Arabia

Ahmad A. Al Robaee, MD.

ABSTRACT

Objectives: To determine the quality of life in Saudi patients with vitiligo and to detect the variables that could influence it by using the Dermatology Life Quality Index (DLQI).

Methods: One hundred and nine Saudi vitiligo patients were recruited from Qassim Medical College clinics between November 2004 and September 2006. We included 61 males, 48 females with an age range of 18 to 47 years, and a mean of 26.94 (SD±9.73) years. Quality of life was evaluated using DLQI questionnaire and related to variables as age, gender, marital status, and extent of cutaneous involvement.

Results: Family history of vitiligo in first degree relatives was positive in 27.5%. The mean DLQI for all cases was 14.72 (SD ±5.173) that showed no statistical difference between males and females. Patients on light therapy and with generalized vitiligo had significantly higher DLQI scores than patients on topical treatments and localized cutaneous involvement. Women are more embarrassed and self-conscious on the disease with more impairment of their social life, personal relationships, sexual activities, and more influenced in their choice of clothing than men.

Conclusions: Vitiligo is associated with severe impairment of quality of life among Saudi patients. Dermatologists should pay careful attention to the psychosocial impact of vitiligo in the patients' life. Involvement of psychologist and even psychiatrist should be an essential part in the management of these cases.

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From the Department of Dermatology, College of Medicine, Qassim University, Buraidah, Kingdom of Saudi Arabia.

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*Address correspondence and reprint request to: Dr. Ahmad A. Al Robaee
Department of Dermatology, College of Medicine, Qassim University,
PO Box 6655 Buraidah 51452, Kingdom of Saudi Arabia. Tél. +966
(6) 3800916 Fax. +966 (6) 3801228. E-mail: arobaee@gmail.com*

Vitiligo is an acquired, idiopathic pigmentary change of the skin. It is characterized by depigmented patches, and affects 1-2% of population. The causes of vitiligo are still unknown. However, immune, genetic, autocytotoxic, neural and biochemical theories have been proposed.¹⁻³ Vitiligo is disfiguring in all races, particularly more so in patients with darker skin because of strong contrast, and may lead to severe psychosocial difficulties. Patients with vitiligo can suffer from poor body images, low self-esteem, and severe social impairment especially when they have vitiligo on the exposed body sites, independently of degree of involvement.⁴⁻⁶ Vitiligo patients also suffer because of stigmatization and as such, it has a profound effect on the quality of life (QOL). The chronic nature of disease, long-term treatment, lack of uniform effective therapy and unpredictable course of disease is often distressing and demoralizing for patients. In 1994, Finlay and Khan⁷ described a tool specifically assess the QOL in patients with skin disease, and they name it as Dermatology Life Quality Index (DLQI). It is simple, and can be applied to a range of qualities impaired by skin diseases, consists of only 10 broad questions, and has a simple scoring system.^{7,8} The purpose of this study is to measure the QOL in Saudi patients with vitiligo using the DLQI.

Methods. The study was conducted prospectively at the Dermatology Clinics, Qassim Medical College and affiliated hospitals, Qassim University, Saudi Arabia from November 2004 to September 2006. We included adult patients (≥18 years) and excluded all patients with a history of psychiatric illnesses. Consent was obtained, and the nature of the study was explained in detailed to the patients before they were enrolled in the study. The QOL was assessed by using the Arabic version of Dermatology Life Quality Index (DLQI) questionnaire. We obtained permission from the University of Wales College of Medicine, Cardiff, United Kingdom to use the Arabic version of the DLQI questionnaire in this study. Dermatology Life Quality Index is simple and can be easily completed by the patients. It comprises of 10 questions and is classified into 6 categories that include symptoms and signs (questions 1 & 2), daily

activity (questions 3 & 4), leisure (questions 5 & 6), work and school (question 7), personal relationships (questions 8 & 9) and treatments (question 10). The scoring of each question is as follows: very much (score 3), a lot (score 2), a little (score 1), and not at all or not relevant (score 0). The DLQI is calculated by summing the score of each question resulting in a maximum of 30 and a minimum of zero. The higher the score, the more QOL is impaired.⁷ All patients were evaluated for age, gender, marital status and extent of cutaneous involvement (localized, >10% of body surface area (BSA) and generalized, more than 10% of BSA) and treatment modalities (topical corticosteroids or Narrow Band Ultraviolet B [NB-UVB] therapies). Parametric variables were analyzed using the student's t-test while non-parametric variables were analyzed using the Pearson's Chi-square. Significant level was kept at $p < 0.05$. All analyses were carried out using Statistical Package for Social Sciences, version 11.5 (SPSS version 11.5).

Results. One hundred and nine Saudi vitiligo patients were recruited to the study. The age range was 18-47 years (mean \pm SD, 26.94 \pm 9.73). Sixty-one were males and 48 were females. Family history of vitiligo in first degree relatives was positive in 27.5% of patients, and this was positive in 50% of female and 9.8% of male patients ($p < 0.005$). The mean DLQI score for total cases was 14.72 (SD \pm 5.173). The mean \pm SD DLQI for males was 14.89 \pm 5.59 and females was 14.5 \pm 4.63 ($p > 0.05$). Dermatology Life Quality Index was higher in patients with generalized vitiligo than in patients with localized one, 16.11 (SD \pm 4.96) versus 13.73 (SD \pm 5.12) ($p < 0.05$). Patients on light therapy had more impairment of their QOL than those on

topical treatments, DLQI was 17.1 \pm (SD \pm 4.69) and 11.8 \pm (SD \pm 4.15) ($p < 0.001$). **Table 1** shows the mean DLQI related to demographic variables. Married males have significantly higher DLQI scores than married females ($p < 0.05$) whereas singles showed no significant difference between males and females. Moreover, male cases with generalized form showed higher significant values than females ($p < 0.005$) whereas the localized form showed no significant difference ($p > 0.05$). There was no significant difference between males and females regarding topical or light treatment. **Table 2** summarizes the distribution of cases related to DLQI parameters and **Table 3** shows the comparison of mean scores for male and female patients based on DLQI questionnaire. Vitiligo was asymptomatic in most of vitiligo patients (79.8%). Regarding the feelings, 85 cases (77.9%) of surveyed patients had a lot or very much embarrassment because of their disease. It appears to be more higher in women than in men ($p < 0.005$). Most of patients had no effect of vitiligo on their daily activities such as shopping or gardening. Almost half of females (50%) had very much effect of vitiligo on the type of clothes they choice, and this was not a problem in males patients ($p < 0.05$). Sixty-one patients had a lot or very much impairment of their social life. This was more in females than males ($p < 0.001$). None of the female patients reported any effect of vitiligo on their sport activities. However, 70.5% of male patients were tried to restrict their sport activity because of vitiligo ($p < 0.001$). Two third of patients had impairment of their job or study, however males had more impairment in these activity than females ($p < 0.005$). Most patients (61.4%) had no problems regarding their personal relationships with families or friends. However, females had more problems in their relationships than males ($p < 0.001$). Thirty-eight percent of patients had trouble

Table 1 - Mean Dermatology Life Quality Index related to gender, marital status, disease type and treatment modalities of studied vitiligo patients.

Variables	Male (n=61)		Female (n=48)		P-value
	n	mean \pm SD	n	mean \pm SD	
Total	61	14.8 \pm 5.6	48	14.5 \pm 4.6	>0.05
<i>Marital status</i>					
Married	25	18.8 \pm 4.9	25	15.1 \pm 5.1	<0.05
Single	36	12.2 \pm 4.8	23	13.9 \pm 4.1	>0.05
<i>Type of vitiligo</i>					
Localized	45	13.5 \pm 5.3	19	14.32 \pm 4.7	>0.05
Generalized	16	18.8 \pm 4.4	29	14.62 \pm 4.7	<0.005
<i>Treatment</i>					
Topical	31	12.3 \pm 4.7	18	11.0 \pm 2.9	>0.05
Light	30	17.6 \pm 5.2	30	16.6 \pm 4.2	>0.05

Localized - less than 10% of body surface area (BSA), Generalized - more than 10% of BSA, Topical - Topical corticosteroids, Light - Narrow band ultraviolet B

Table 2 - Distribution of cases related to Dermatology Life Quality Index parameters.

Parameters	Number of reponse (%)			
	Score 0	Score 1	Score 2	Score 3
Symptoms	87 (79.8)	21 (19.3)	1 (0.9)	0 (0)
Feelings	6 (5.5)	18 (16.5)	43 (39.4)	42 (38.5)
Shopping	36 (33)	37 (33.9)	18 (16.5)	18 (16.5)
Clothes	13 (11.9)	24 (22)	36 (33)	36 (33)
Social	18 (16.5)	30 (27.5)	49 (45)	12 (11)
Sport	60 (55)	6 (5.5)	25 (22.9)	18 (16.5)
Working or studying	18 (16.5)	19 (17.4)	48 (44)	24 (22)
Relationships	37 (33.9)	30 (27.5)	24 (22)	18 (16.5)
Sexual	63 (57.8)	4 (3.7)	37 (33.9)	5 (4.6)
Treatment	18 (16.5)	37 (33.9)	36 (33)	18 (16.5)

0 - Not at All or Not relevant 1 - A little 2 - A lot and 3 - Very much

Table 3 - Comparison of mean scores for male and female vitiligo patients based on Dermatology Life Quality Index questionnaire.

Variables	Males n=61	Females n=48	P-value
Symptoms	0.13	0.31	<0.05
Feelings	1.9	2.38	<0.005
Shopping	1.39	0.88	<0.05
Clothes	1.67	2.13	<0.05
Social	1.21	1.88	<0.001
Sport	1.8	0.0	<0.001
Working or studying	1.98	1.38	<0.005
Relationships	0.89	1.63	<0.001
Sexual	0.69	1.06	NS
Treatment	1.49	1.5	NS

Scores were calculated as follows: Very much (scored 3), a lot (scored 2), a little (scored 1), and not at all or not relevant (scored 0) NS - non-significant

in the sexual activity with their partners, and women had more sexual impairment than men, although non-significant. Half of patients noticed no or little difficulty with treatments with no significant difference between male and female cases ($p>0.05$).

Discussion. Vitiligo is a common skin disease with a prevalence of 1-2%. The course of the disease is not predictable, and it is often associated with periods of remission and exacerbation. The clinical severity of a patient's vitiligo may not be a good indicator of a subsequent downturn in their QOL or psychologic well-being. Therefore, it might lead to severe psychosocial impairments.^{4,5} Quality of life measurements can be used to compare disability between different dermatoses, or to assess the degree of handicap of patients with dermatoses against those with other illnesses.^{8,9} Several

disease specific measures have been described in dermatology to assess the QOL in patients with skin diseases, and one of them is DLQI.¹⁰ The mean DLQI in this study (14.72) is the highest score reported in English literature. Kent and al-Abadie¹¹ reported a score of 4.82 in a study of 614 patients in UK. A mean DLQI score of 4.95 was observed by Ongena et al¹² in their study that evaluated the life quality of 119 Belgian vitiligo patients. Aghaei et al¹³ mentioned a mean of 7.05 in their study that assessed the QOL of 70 Iranian patients with vitiligo. Finlay and Khan⁷ obtained a mean score of 7.3 in their study that evaluated the DLQI of different skin diseases in U.K. Parsad et al¹⁴ observed that the mean DQLI was 10.67 in a study that assessed QOL in 150 Indian vitiligo patients. High DLQI score obtained in this study as compared to other studies may be due to many factors. The vitiligo is considered as an

infectious skin disease by many people in our society and they avoid contact with the vitiligo patients. This results in social isolation of the patients with vitiligo. Another factor which makes the vitiligo patient as a social outcast is the common belief in our society that vitiligo is an inherited skin disorder. This causes many people to avoid marrying vitiligo sufferers. Both these factors can seriously impair the social life of vitiligo patients especially the females. These 2 factors were also observed by Al Robaee and Al Zolibani in a recent study done on Qassim population to know people's beliefs about vitiligo (unpublished data).

There was no statistical difference between total males and females concerning DLQI scores. Borimnejad et al¹⁵ found that female patients with vitiligo had higher DLQI scores than men in a study conducted on 77 Iranian patients. Ongenae et al¹² reported that female patients with vitiligo experienced scientifically lower QOL than males with vitiligo. However, Kent and al-Abadie¹¹ and Parsad et al¹⁴ found no relationship between DLQI and gender in their studies. More impairment in the QOL was observed in generalized vitiligo as compared to localized one in this study. The lack of this observation in other studies¹⁴ may be explained by the fact that our study population had darker skins making vitiligo more obvious especially in the exposed areas. As generalized vitiligo is easily visible as compared to localized variety, its presence can create more concern in the patient's mind, given our social background regarding vitiligo. Severe impairment of QOL in patients with extensive cutaneous involvement and in those on light therapy may lead to cessation of light therapy, persistence, chronicity of vitiligo and more impairment of QOL. We found that patients with positive family history of vitiligo had lower DLQI scores than patients without family history of vitiligo. This might be explained by the fact that patients with family history of vitiligo may be psychologically supported by their relatives. Ongenae et al¹² did not observe any association between family history and DLQI scores. This study showed that women are more embarrassed and self-conscious about the disease, have more impairment of their social life and personal relationships, and are more influenced in their choice of clothing than men. Ongenae et al¹² observed similar results. We noticed men (as opposed to women) had more impairment in sport activity and work or study. Probably this is because women in our society have limited sport activities and usually perform their activities at home or in closed places. We observed that women had more impairment of their sexual relationship than men did. Borimnejad et al¹⁵ and Porter et al¹⁶ have found similar results in their study.

In conclusion, this study reveals severe impairment in vitiligo patients and their DLQI has the highest score reported so far in the literature. Men and women had similar impairment of their QOL. Type of treatments

and extent of cutaneous involvement could influence the impairment of life quality in patients with vitiligo. Dermatologists should pay more attention towards the psychosocial impact of vitiligo in the patients' life, and treat it appropriately with the best available modalities. It is desirable to deal with psychological components of this disease to improve their QOL. Involvement of psychologist and even psychiatrist in special cases is an important part in the management of vitiligo. Vitiligo support group should be in each society and all vitiligo patients should be encouraged to join these groups.

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