

## Original article

# Quality of life in vitiligo patients

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**Abstract** *Background* Vitiligo has a considerable impact on Quality of Life (QOL), in a society, like ours with pigmented skin. Dermatology Life Quality Index (DLQI) is a simple and practical tool, which can be used to study the effect of any disease on QOL.

*Objectives* To assess the impact of vitiligo on QOL in our patients using DLQI and to correlate DLQI score with age, sex, marital status and sites of involvement.

*Patients and methods* One hundred patients (52 females and 48 males) of vitiligo were enrolled in the study. Using a ten item DLQI, translated into Urdu, patients were asked to indicate how their lives had been affected over the preceding week.

*Results* The mean DLQI score was 9.56 ranging from 0 to 29. The difference between mean DLQI score for males (8.17) and females (10.85) was statistically significant. Young females (n=40) had mean DLQI score of 11.2. Unmarried females (n=16) had greater impairment of QOL (mean DLQI score = 8.28). Patients with involvement of exposed sites of body scored (mean DLQI score= 11.03) higher than patients with disease on covered parts of body.

*Conclusions* The impact of vitiligo on QOL is greater on young and unmarried females with involvement of exposed parts of body.

*Key words* Vitiligo, DLQI, quality of life.

### Introduction

Vitiligo is a common pigmentary disorder characterized by white macules and patches. The incidence of vitiligo around the world is 2 – 3% in all races.<sup>1</sup> Although, vitiligo causes little physical handicap, it has devastating effect on QOL. These patients suffer from low self-esteem, poor body image, feeling of stigmatization and guilt. In extreme cases they have been rejected by those around them, leading to severe depression and suicidal tendencies.<sup>2,3</sup>

As ours is a pigmented race, vitiligo may lead to psychosocial disaster, particularly in skin phototype IV.<sup>1</sup> Widespread prejudices, ignorance and lack of scientific knowledge may all lead to considerable impact on QOL of those suffering from this disease.

In dermatological practice there are several indices to measure the extent of disability caused by skin diseases. Some of these are applicable to specific diseases such as psoriasis,<sup>4</sup> acne,<sup>5</sup> and eczema.<sup>6</sup> There are other scales which are applicable in a variety of skin conditions, e.g. the Dermatology Life Quality Index.<sup>7</sup>

In order to assess the impact of vitiligo on QOL in our society, a ten-item DLQI,

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translated into Urdu was used. It is a valid, simple and practical questionnaire designed to measure the disability caused by various skin conditions. It is the first study of its kind in Pakistan.

### **Patients and methods**

This study was conducted at the Department of Dermatology, Mayo Hospital, Lahore, from 1<sup>st</sup> September 1999 to 31<sup>st</sup> March, 2000. One hundred retrospective and prospective cases of vitiligo diagnosed clinically were enrolled in the study.

Patients of either sex, aged 15 years and above, who could themselves complete the Urdu version of DLQI, were included in the study.

All the relevant details regarding history, examination, type of vitiligo, sites of involvement were recorded on a pro forma.

The DLQI questionnaire consists of 10 questions covering six different domains of QOL: symptoms and feelings (questions 1, 2), daily activities (questions 3, 4), leisure (questions 5, 6), work/school (question 7), personal relationships (question 8, 9) and treatment (question 10).

Using the DLQI, patients were asked to indicate, on a scale, from 0-3, for each of ten items, how their lives have been affected over the preceding week. The maximum score was 30. The greater the score, the greater was the impairment of QOL.

Student's t test was used for comparison of means. A *p* value of <0.05 was considered significant.

### **Results**

One hundred patients, suffering from vitiligo were enrolled in the present study. There were 52 females and 48 males, their ages ranged between 15 and 58 years, with an average of 23.46 years. The mean DLQI score was 9.56 ranging from 0 to 29. The difference between mean DLQI score for males (8.17) and females (10.85) was statistically significant. The mean DLQI score was greater in younger patients of 15 to 25 years age group. Females (n=40, mean DLQI 11.2) scored higher than males (n=35, mean DLQI 8.55) in this age group. This difference was statistically significant ( $p < 0.05$ ) [Table 1].

Out of 100 patients, 17 males and 16 females were married. There was statistically significant difference between the mean DLQI score of unmarried females (11.58) as compared to married females (8.28) [Table 2].

Females with lesions on exposed parts of body scored highest of all (mean=13.08). There was statistically significant difference between the mean DLQI score of males with involvement of exposed and covered parts ( $p < 0.05$ ) and females with lesions on exposed and covered parts (Table 3).

#### *Patterns of handicap*

The mean difference in the scores of individual questions of DLQI for males and females is shown in Table 4. There was statistically significant difference in the mean DLQI scores of males and females in questions regarding embarrassment and self-consciousness,

**Table 1** Mean DLQI score in relationship to age and sex

Age (years)	Male		Female	
	n	Mean DLQI score	n	Mean DLQI score
15-25	35	8.55	40	11.3
26-35	7	7.86	8	8.38
36-45	2	8.00	4	8.00
46-55	3	7.67	-	-
56-65	1	6.00	-	-

**Table 2** Mean DLQI score in relationship to marital status

Sex	Married		Unmarried	
	n	Mean DLQI score	n	Mean DLQI score
Male	17	7.77	40	11.3
Female	16	8.28	36	11.58
Total	33	8.02	67	11.23

**Table 3** Mean DLQI score in relationship to site of involvement

Sex	Exposed		Unexposed	
	n	Mean DLQI score	n	Mean DLQI score
Male	32	8.98	16	4.93
Female	36	13.08	15	6.93
Total	69	11.03	31	5.93

**Table 4** Dermatology Life Quality Index - mean score of individual parameters

Questions	Dimensions of QOL	Mean score	
		Males	Females
1.	Symptoms	0.85	0.88†
2.	Embarrassment	2.23	2.84*
3.	Daily activities	0.38	0.65†
4.	Clothes	0.6	1.04*
5.	Social activities	0.9	1.33*
6.	Sports	0.25	0.17†
7.	Work/School	0.54	0.54†
8.	Relationships	1.23	2.42*
9.	Sexual problems	0.21	0.06†
10.	Treatment	0.98	0.92†
	<b>Total</b>	<b>8.17</b>	<b>10.85*</b>

\* p<0.05, † p>0.05

choice of clothes, social and leisure activities and problems with partner, close friends or relatives.

## Discussion

Quality of life questionnaires are used to highlight specific areas of patient's life affected by disease, so that appropriate clinical interventions are made to improve the patient's life quality. They may also identify patients who need extra support.

In the present study, DLQI was used to quantify handicap in 100 diagnosed cases of vitiligo. This is the first time that disability has been assessed rigorously in this disease in Pakistan. The mean DLQI score was 9.56, almost double the score reported by Kent and Al-Abadie (mean=4.82).<sup>8</sup>

The difference between mean DLQI score for females (mean=10.85) and males (mean=8.17) was statistically significant. In females of 15 to 25 years age and those who were unmarried DLQI score was greater. These results indicate, that young and unmarried females experience greater psychosocial handicap.

Females with lesions on exposed parts of body had greater impairment of QOL as compared to males with lesions on exposed parts. These findings are similar to that of Porter *et al.*<sup>9</sup> who reported that poorest overall adjustment is found among women, persons with visible lesions, young adults, blacks and single persons.

Our study revealed that vitiligo leads to more self-consciousness and embarrassment in females as compared to males. Avoidance of social interactions with close relatives and friends was more noticeable in females.

The effect of disease on choice of clothes was more noticeable in females. In most instances the respondents replied that they

could not wear short-sleeved dresses in social gatherings.

Besides being asymptomatic, physical activities such as sports, house-hold activities, work/school were affected very little as a result of vitiligo. Treatment of vitiligo caused no significant effect on QOL. These observations are same as reported by Papadopoulos *et al.*<sup>2</sup> that vitiligo is neither symptomatic nor physically incapacitating in any way.

Almost all the patients in the study reported that vitiligo does not lead to sexual difficulties with life partner. Due to social norms and values none of the patients mentioned any sexual difficulties with opposite sex.

The present study shows that DLQI can be used to assess the impact of vitiligo on QOL. However, with a disease such as vitiligo, which is not only difficult to treat, but also progresses, it may be important to recognize and deal with psychological and social consequences of the condition. Patients with high score may benefit from individual counseling and/or contact with psychologist.

### Conclusion

DLQI is a practical and simple tool, which can be used to evaluate and quantify the impact of vitiligo on QOL. The effect of vitiligo on QOL is greater in females than males, particularly young and unmarried and patients with lesions on exposed parts of body. Embarrassment, self-consciousness and avoidance of social interactions, as a result of disease are greater in females. Symptoms and physical disability are minimal as compared to psychosocial effects of disease.

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