QUALITY OF LIFE IN MALE AND FEMALE VITILIGO PATIENTS

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HOW TO CITE THIS ARTICLE:

Sharath Kumar BC, Sindhu S, Gopal MG, Ramesh M, Nandini AS, Namrata C Manjunath. "Quality of life in male and female vitiligo patients". Journal of Evolution of Medical and Dental Sciences 2013; Vol. 2, Issue 48, December 25; Page: 9315-9322.

ABSTRACT: BACKGROUND: Vitiligo is a common, acquired discoloration of the skin, characterized by well-circumscribed ivory or chalky white macules which are flush to the skin surface¹. It affects atleast 0.5-1% of the total population². It is commonly distributed in the peri-orificial areas, trunk, extensor surface of extremities, flexor wrists and axillae. It results from a cellular autoimmune phenomenon that causes destruction of melanocytes. **AIMS:** To compare the quality of life between vitiligo patients and healthy individuals and to compare the quality of life between males and females vitiligo patients. **MATERIALS AND METHODS:** A comparative study of Twenty eight patients with vitiligo attending the Out Patient Department of Skin and STD department at KIMS Hospital, Bangalore was done between April and May 2013. **RESULTS:** A total of 13 male patients, 15 female patients and 15 male controls and 15 female controls, all within the age group of 16-50 years were taken and their DLQI scores were tabulated and analysed as follows: The mean and standard deviation of scores for all patients is 5.14 ± 4.44 , and that for controls is 0. This shows higher impairment in quality of life for patients as compared to controls and the results are statistically significant (Z value=2.08 and p value<0.05). **CONCLUSION:** 1. Quality of life was impaired in vitiligo patients. 2. Among the patients, females had poorer quality of life. 3. Quality of life was more impaired in younger patients. 4. Impairment of quality of life was higher in unmarried patients than among married patients.

KEYWORDS: Vitiligo, quality of life.

INTRODUCTION: Vitiligo is a common, acquired discoloration of the skin, characterized by well-circumscribed ivory or chalky white macules which are flush to the skin surface. It affects atleast 0.5-1% of the total population². It is commonly distributed in the peri-orificial areas, trunk, extensor surface of extremities, flexor wrists and axillae. It results from a cellular autoimmune phenomenon that causes destruction of melanocytes. World Health Organization defines quality of life as "individuals' perceptions of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns."³ Chronic skin conditions can impact a patient's quality of life beyond just the skin⁴ because visibilities of the lesions significantly affect self-esteem and social relationships⁵. The intensity of impact of skin disease on an individual person is extremely variable, however, and depends on natural history of the disorder; the patient's demographic characteristics, personality, character, and value; the patient's life situation; and the attitudes of society⁶. Hence evaluation of quality of life is particularly relevant for dermatological diseases to understand the impact of the diseases and improve the quality of medical care. Thus, the importance of estimating the quality of life in vitiligo patients cannot be overstated. In order to achieve the same, it is important to obtain a patient-based measurement of quality of life. Hence, a widely validated questionnaire, the Dermatology Life Quality Index (DLQI) questionnaire designed by Finlay and Khan was used. This dermatology-specific

questionnaire is designed for use in adults, i.e., patients over 16 years of age. Moreover, it has the advantage of being short, easy to understand, and quick to complete; and it has also been used for several other skin disorders.

Vitiligo represents an emblematic case: often disfiguring located in visible areas and confused with leprosy. Commonly regarded as a harmless cosmetic problem, the importance of treating patients with vitiligo is often underestimated⁷. Although the disease does not produce direct physical impairment, it may considerably influence the psychological well-being of the patients. The disease burden includes stigmatization, depression, impaired quality of life, lack of self-confidence, embarrassment and self-consciousness². Severe depression has been known to lead to suicide attempts⁸. It is also known to have a major impact on the quality of life of family members of patients and often significantly impairs many aspects of their lives.⁹

To the best of my understanding, the knowledge about impairment of quality of life in vitiligo patients in India is limited and more so in South India. An attempt is made to throw light on the same by conducting a survey in a region in South India.

METHODS: Twenty eight patients with vitiligo attending the Out Patient Department of Skin and STD department at KIMS Hospital, Bangalore between April and May 2013, were informed about the nature of the project and were given the Dermatology Quality of Life Index questionnaire designed by Finlay and Khan. Permission to use the questionnaire was obtained from Dr. Finlay via e-mail. This dermatology-specific questionnaire is designed for use in adults, i.e., patients over 16 years of age. Moreover, it has the advantage of being short, easy to understand, and quick to complete; and it has also been used for several skin disorders.

Inclusion Criteria:

1. Cases: Patients in the age group of 16-50 with at least one white patch in the visible part of their body.
2. Controls: People who are not suffering from vitiligo

Exclusion Criteria:

1. Patients outside the age group of 16-50 years
2. Patients suffering from other dermatological diseases
3. Patients suffering from other systemic or psychiatric disorders

28 patients above the age of 16 years with at least one vitiligo patch of whatever type were included in this study. The patients were introduced to the subject of this study and informed about the personal nature of the questionnaire, and all those who give their consent were given the questionnaire to be completed and returned to the dermatologist during the visit.

Ethical committee clearance for the above study was obtained from the Institutional Ethical Committee.

The 28 patients included in the study were informed about the nature of the study and were given the DLQI questionnaire to be filled up and returned. The questionnaire consists of 10 questions, each question with 4 possible answers having scores from 0 to 3.

- 0 - Not at all/ Not relevant
- 1 - A little
- 2 - A lot
- 3 - Very much

The DLQI score was calculated by summing the scores of all the questions, resulting in a maximum of 30 and a minimum of 0. The higher the DLQI score, more impaired is the quality of life. Interpretation of the scores is as follows:

- 0 – 1: no effect at all on patient's life
- 2 – 5: small effect on patient's life
- 6 – 10: moderate effect on patient's life
- 11 – 20: very large effect on patient's life
- 21 – 30: extremely large effect on patient's life

Other survey details about demographic data, including age, gender, marital status, place of residency, educational level, and disease duration, were also taken from the patients. These values were tabulated and appropriate statistical analysis was done.

Statistical analysis: The Statistical software SPSS 17.0 was used for the analysis of the data and Microsoft word and Excel have been used to generate tables. The DLQI scores were described by mean and standard deviation for cases and controls, and among cases, for different genders, age groups, marital status and disease duration.

RESULTS: A total of 13 male patients, 15 female patients and 15 male controls and 15 female controls, all within the age group of 16-50 years were taken and their DLQI scores were tabulated and analysed as follows.

Table 1 shows the DLQI scores of male and female vitiligo patients and Table 2 shows the DLQI scores of controls. The mean and standard deviation of scores for all patients is 5.14 ± 4.44 , and that for controls is 0. This shows higher impairment in quality of life for patients as compared to controls and the results are statistically significant (Z value=2.08 and p value<0.05).

Among the patients, the mean and standard deviation of DLQI scores for males was 2.84 ± 2.60 and that for females was 7.13 ± 4.7 . The impairment in quality of life was greater among females than males. The results are statistically significant (Z value=3.4 and p value< 0.001).

Table 3 shows the distribution of male and female patients based on age groups and the corresponding DLQI scores. In the age group of 11-20, the score of male patients was 2 ± 0 . In the age group of 21-30, the DLQI scores of male patients was 2.8 ± 1.92 and that of female patients was 9.25 ± 5.39 . In the age group of 31-40, the DLQI scores of male patients was 4 ± 0 and that of female patients was 5.5 ± 2.12 . In the age group of 41-50, the DLQI scores of male patients was 2.6 ± 3.97 and that of female patients was 4.4 ± 2.60 .

Table 4 shows the distribution of male and female patients based on marital status. Married males had a DLQI score of 2.66 ± 1.75 and married females had a DLQI score of 6.30 ± 4.30 . Unmarried males had a DLQI score of 3.0 ± 3.3 and unmarried females had a DLQI score of 12.5 ± 4.94 . Table 5 shows the distribution of male and female patients based on the duration of illness. Male patients suffering from vitiligo for less than 5 years had a DLQI score of 3.33 ± 3.07 , while female patients suffering from vitiligo for less than 5 years had a DLQI score of 7.2 ± 4.84 . Male patients suffering from vitiligo for the past 5-10 years had a DLQI score of 2.25 ± 2.62 , while female patients suffering from vitiligo for the past 5-10 years had a DLQI score of 5.0 ± 0 . Male patients suffering from vitiligo for >10 years had a DLQI score of 2.66 ± 2.30 while female patients suffering from vitiligo for more than 10 years had a DLQI score of 8.33 ± 6.65 .

DISCUSSION: The dermatological quality of life was significantly impaired among vitiligo sufferers, and more so among the female patients. Younger age, unmarried marital status and duration of disease seemed to play a role in determining the quality of life. Younger patients in the age group of 21-30 years among both males and females showed a higher impairment in the quality of life. Unmarried males and females were more affected than married patients. Females suffering from a longer time showed poorer quality of life whereas males suffering for a shorter duration showed poorer quality of life. In all categories, females showed a higher impairment in quality of life. However, it is to be noted that the above study was conducted on a small group of patients and a study on a larger group may have revealed more accurate results.

The above results are consistent with the results obtained from most of the other studies conducted all over the world. Belhadjali et al in their study 'vitiligo and quality of life: a case-control study' noted that quality of life was significantly impaired in patients, and to a greater extent in women¹⁰. Pahwa P et al in the study 'the psychosocial impact of vitiligo in Indian patients' noted that the problems were perceived to be more severe in women¹¹. Chan MF et al noted that females aged less than 50 years and having 5+ years of illness were significant risk factors for depression in their study 'Investigating factors associated with depression of vitiligo patients in Singapore'¹². The study 'Cumulative life course impairment in vitiligo' by Krüger C et al revealed that older patients or those with a disease onset later in life adjust better to this chronic skin disorder and that they are less socially avoidant². Few other studies conducted all over the world revealed different results. Ingordo V et al's study 'Dermatology Life Quality Index score in vitiligo patients: a pilot study among young Italian males' revealed no impact of vitiligo on the quality of life of Italian males¹³. Wong SM et al's survey 'Quality of life among Malaysian patients with vitiligo' showed that the highest mean DLQI was seen in the patient age group aged 30-59 years¹⁴.

Impairment of quality of life among patients as observed in the current study may likely be due to concerns regarding the nature of the disease, its contagiousness and its probable association with systemic illnesses. Stigmatization and fear of social isolation also add to the impact on quality of life. Fear regarding the hereditary nature of vitiligo and the risk of offsprings acquiring the disease is also prevalent. Concerns and worries of the patients' family members about the condition also add to the mental trauma experienced by the patient, further hampering the quality of life. The larger impact on quality of life in females and younger patients could be due to the higher concern among them regarding their appearance and the potential impact on their marital status. It is therefore essential to provide proper counselling understanding the psyche of the patient in addition to providing appropriate treatment, to mitigate the impact of vitiligo on quality of life.

CONCLUSION:

1. Quality of life was impaired in vitiligo patients
2. Among the patients, females had poorer quality of life
3. Quality of life was more impaired in younger patients
4. Impairment of quality of life was higher in unmarried patients than among married patients.

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ORIGINAL ARTICLE

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Sl. No.	DLQI scores of male patients	DLQI scores of female patients
1	0	5
2	2	5
3	4	9
4	4	5
5	4	13
6	3	4
7	5	16
8	0	0
9	9	5
10	0	7
11	0	4
12	4	4

ORIGINAL ARTICLE

13	2	17
14		7
15		6

TABLE 1: The DLQI scores of male and female vitiligo patients

Sl. No.	DLQI scores of male controls	DLQI scores of female Controls
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	0	0
12	0	0
13	0	0
14	0	0
15	0	0

TABLE 2: The DLQI scores of male and female controls

AGE GROUPS (in years)	No. of male patients	DLQI scores of male patients	No. of female patients	DLQI scores of female Patients
11-20	1	2 ±0	0	
21-30	5	2.8 ±1.92	8	9.25 ±5.39
31-40	2	4 ±0	2	5.5 ±2.12
41-50	5	2.6 ±3.97	5	4.4 ±2.60

TABLE 3: The distribution of male and female patients based on age groups and the corresponding DLQI scores

ORIGINAL ARTICLE

GROUPS	No. of male patients	DLQI scores of male patients	No. of female patients	DLQI scores of female patients
Married	6	2.66±1.75	13	6.30±4.30
Unmarried	7	3.0±3.33	2	12.5±4.94

TABLE 4: The distribution of male and female patients based on marital status

DURATION	No. of male patients	DLQI scores of male patients	No. of female patients	DLQI scores of female patients
<5 years	6	3.33±3.07	10	7.2±4.84
5-10 years	4	2.25±2.62	2	5.0±0
>10 years	3	2.66±2.30	3	8.33±6.65

TABLE 5: The distribution of male and female patients based on the duration of illness

QUESTIONNAIRE:

DERMATOLOGY LIFE QUALITY INDEX (DLQI)

Hospital No: Date:

Name: Score:

Address: Diagnosis:

The aim of this questionnaire is to measure how much your skin problem has affected your life OVER THE LAST WEEK. Please tick (✓) one box for each question.

- Over the last week, how itchy, sore, painful or stinging has your skin been?

Very much	☐
A lot	☐
A little	☐
Not at all	☐
- Over the last week, how embarrassed or self-conscious have you been because of your skin?

Very much	☐
A lot	☐
A little	☐
Not at all	☐
- Over the last week, how much has your skin interfered with you going shopping or looking after your home or garden?

Very much	☐
A lot	☐
A little	☐
Not at all	☐
- Over the last week, how much has your skin influenced the clothes you wear?

Very much	☐
A lot	☐
A little	☐
Not at all	☐
- Over the last week, how much has your skin affected any social or leisure activities?

Very much	☐
A lot	☐
A little	☐
Not at all	☐
- Over the last week, how much has your skin made it difficult for you to do any sport?

Very much	☐
A lot	☐
A little	☐
Not at all	☐
- Over the last week, has your skin prevented you from working or studying?

Yes	☐
No	☐
- If "No", over the last week how much has your skin been a problem at work or studying?

A lot	☐
A little	☐
Not at all	☐
- Over the last week, how much has your skin created problems with your partner or any of your close friends or relatives?

Very much	☐
A lot	☐
A little	☐
Not at all	☐
- Over the last week, how much has your skin caused any sexual difficulties?

Very much	☐
A lot	☐
A little	☐
Not at all	☐
- Over the last week, how much of a problem has the treatment for your skin been, for example by making your home messy, or by taking up time?

Very much	☐
A lot	☐
A little	☐
Not at all	☐

Please check you have answered EVERY question. Thank you.

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ORIGINAL ARTICLE

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Date of Submission: 31/10/2013.
Date of Peer Review: 02/11/2013.
Date of Acceptance: 20/11/2013.
Date of Publishing: 26/11/2013.