QUALITY OF LIFE IN VITILIGO PATIENTS AND ITS RELATION TO VARIOUS VARIABLES IN DUHOK, KURDISTAN REGION, IRAQ

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ABSTRACT

Background: Background and aim: Studies, mainly in developed countries, have found a negative impact of the disease on the Quality of Life (QoL). This was affected by different socio-economic factors and by clinical aspects of the disease. The aim of the present study is to measure the impact of vitiligo on the QoL among patients and to investigate its relation to socio-demographic and clinical factors, in Duhok, Kurdistan Region, Iraq.

Patients and methods: A cross-sectional hospital-based study was conducted on 143 patients aged 16 years and above diagnosed to have vitiligo by a consultant dermatologist. All available patients to the investigator in the outpatient dermatology unit at a tertiary care hospital were asked to participate. An oral consent was obtained then a short questionnaire was filled for each patient regarding socio-demographic factors and clinical features of the disease. The QoL was estimated by using the Dermatology Life Quality Index (DLQI).

Results: The mean age ±SD was 31.85 ± 10.39 years of which 76 were males, and 67 were females. The mean DLQI score was 6.67 (±4.81SD). Only 13.3% reported no effect of the disease on their QoL while 39.9%, 16.8%, and 30.1% of patients reported that the disease has small, moderate and very large negative effect, respectively on their QoL. There were no significant differences between the mean DLQI scores and gender, job, type and duration of the disease and current treatment status. The QoL was significantly more negatively affected among younger patients, those with higher education, married women, patient with darker skin type, and patients with hands, arms and feet involvement and those with a negative family history of vitiligo.

Conclusion: The disease has a negative impact on the QoL in the majority of patients. The dermatologist should put an emphasis on the psychological problems of the disease among their patients during planning their future management course.

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Keywords: Vitiligo Patients, Dermatologist, Duhok, Kurdistan Region, Iraq.

Vitiligo is a common skin condition. It is pigmentary skin disorder with no physical impairment but with a significant psychological impact due to its disfiguring appearance. Globally the prevalence of the disease ranges from 0.4 to 2.0%. Several studies have shown that patient’s quality of life (QoL) is negatively affected by the disease. The majority of those studies, however, were conducted in developed countries, particularly in the U.S.A. and England. The Dermatology Life Quality Index (DLQI) has been widely used in vitiligo as a specific QoL instrument. This index showed that the QoL is affected by the disease. The negative impact has varied in different communities; and with different socio-demographic variables. There has been variation of the effect regarding gender and marital status. Some studies found no gender variation while others detected more impact on females than males. Similarly married were found to have lower QoL in some studies, while singles were found to be more affected than married in other studies. Generally the negative impact was more

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marked in young than in elderly, and patients with involvement of exposed sites. Moreover, depigmentation of dark skin people had enormous stigma than in white skin patients. The aim of this study is to assess the QoL of patients by using DLQI and to investigate its relation to socio-demographic and clinical factors, in Duhok, Kurdistan Region, Iraq.

PATIENTS AND METHODS
The study was approved by the scientific committee of Duhok college of Medicine. A cross-sectional study was conducted among patients attending the dermatology outpatient clinic of Azadi teaching hospital; during the period from 1st of January 2017 to 31st of March 2018. All available patients aged 16 years and above with at least one vitiligo patch of whatever type diagnosed by consultant dermatologist were approached and oral consent was obtained from them to participate in the study. A short questionnaire was arranged and filled by the investigator. The questionnaire included data about age, gender, marital status, job and education level. Also information was collected regarding type and duration of the disease, site involved, and treatment, type of patient skin and family history of the disease. The type of skin was classified according to the Fitzpatrick scale of classifying skin into six types according to the intensity of color from blond to dark. The quality of life was assessed by using the Arabic version of Dermatology Life Quality Index (DLQI). Assistant in understanding questions was given, if needed. The DLQI scoring used according to the manual as: 0–1: no effect 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.

In the analysis of correlation with different variable, the scoring was combined into 2 categories as small/ no effect and moderate/ large effect. The statistical package for social sciences (SPSS), version 24 was used for data entry and analysis. Data was summarized using percentages and counting for categorical variables, the mean and standard deviation for continues variables. The $X^2$ and Fisher exact test, when indicated, were used for assessing statistical differences between proportions, and P-value ≤0.05 was considered significant.

RESULTS
Table 1 shows that out of the 143 patients included in the study 76 were males and 67 were females. About three quarter aged less than 40 years, with more than one third were in the age group 21-30 years. The mean age was 31.85 years (± 10.39SD); with an age range of 16-59 years.

| Age in years | Male | Female | Total |
|--------------|------|--------|-------|
|              | No.  | %      | No.   | %    | No.   | %    |
| ≤ 20         | 16   | 21.1   | 8     | 11.9 | 24    | 16.8 |
| 21 – 30      | 27   | 35.5   | 26    | 38.8 | 53    | 37.1 |
| 31 – 40      | 18   | 23.7   | 16    | 23.9 | 34    | 23.8 |
| ≥41          | 15   | 19.7   | 17    | 25.4 | 32    | 22.4 |
| Total        | 76   | 100.0  | 67    | 100.0| 143   | 100.0|

P = 0.499
The study found that the mean DLQI score was 6.67 (±4.81 SD). Table 2 shows that in 13.3 %, 39.9 %, 16.8%, and 30.1 % of patients the disease has either no effect, small, moderate and very large effect respectively on their QoL. None of the patients reported an extremely large effect of vitiligo on QoL.

Table 2. Distribution of the patients according to DLQI scores

| DLQI scores          | No. | %   |
|----------------------|-----|-----|
| No effect (0-1)      | 19  | 13.3|
| Small effect (2-5)   | 57  | 39.9|
| Moderate effect (6-10)| 24  | 16.8|
| Very large effect (11-20) | 43  | 30.1|
| Extremely large effect | 0  | 0.0 |
| Total                | 143 | 100.0|

Table 3 reveals that the moderate to severe negative effect on the patient's QoL was significantly higher among younger in comparison to older patients, singles in comparison to married women, and among those with secondary and higher education in comparison to patients with low education. Table 3 also shows that gender and job have no significant effect on QoL among vitiligo patients.

| Socio-demographic factors | No to small effect | Moderate to large effect | Total no. | P   |
|---------------------------|-------------------|--------------------------|-----------|-----|
| Age in years              |                   |                          |           |     |
| ≤ 20                      | 6                 | 25.0                     | 18        | 75.0| 24  |
| 21 – 30                   | 33                | 62.3                     | 20        | 37.7| 53  |
| 31 – 40                   | 16                | 47.1                     | 18        | 52.9| 34  |
| ≥41                       | 21                | 65.6                     | 11        | 34.4| 32  |
| Sex                       |                   |                          |           |     |     |
| Male                      | 38                | 50.0                     | 38        | 50.0| 76  |
| Female                    | 38                | 56.7                     | 29        | 43.3| 67  |
| Job                       |                   |                          |           |     |     |
| Not employed              | 41                | 47.7                     | 45        | 52.3| 86  |
| Employed                  | 35                | 61.4                     | 22        | 38.6| 57  |
| Education                 |                   |                          |           |     |     |
| Illiterate                | 12                | 75.0                     | 4         | 25.0| 16  |
| Primary                   | 25                | 73.5                     | 9         | 26.5| 34  |
| Secondary                 | 24                | 38.1                     | 39        | 61.9| 63  |
| University & above        | 15                | 50.0                     | 15        | 50.0| 30  |
| Marital status            |                   |                          |           |     |     |
| Single                    | 9                 | 15.8                     | 48        | 84.2| 57  |
| Married                   | 64                | 77.1                     | 19        | 22.9| 83  |
| Widowed                   | 3                 | 100.0                    | 0         | 0.0 | 3   |
| Total                     | 76                | 53.1                     | 67        | 46.9| 143 |

Table 4 shows significantly more QoL impairment among patients with dark skin in comparison to those with fair skin type. Also the negative impact on the QoL was more significant among those with hands, arms and feet involvement in comparison to those with no involvement. No such significant association was observed regarding involvement of the face. Table 4 also reveals that impairment of QoL was significantly higher among patient with no family history of the disease. Finally table
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4 also shows no significant differences in QoL regarding treatment status, duration and type of the disease.

Table 4. Relation between the effect on patients’ QoL and clinical factors

| Clinical factor       | DLQI                        | Total no. | P     |
|-----------------------|-----------------------------|-----------|-------|
|                       | No to low effect | Moderate to severe effect |         |       |
|                       | No. | %   | No. | %   |         | <0.001 |
| Skin type*            |     |      |     |      |         |        |
| 2                     | 7   | 63.6 | 4   | 36.4 | 11      |        |
| 3                     | 29  | 37.7 | 48  | 62.3 | 77      | <0.001 |
| 4                     | 36  | 70.6 | 15  | 29.4 | 51      |        |
| 5                     | 4   | 100.0| 0   | 0.0  | 4       | <0.001 |
| Duration              |     |      |     |      |         |        |
| <1 year               | 27  | 50.0 | 27  | 50.0 | 54      |        |
| 1- <5 years           | 33  | 64.7 | 18  | 35.3 | 51      | 0.090  |
| 5+ years              | 16  | 42.1 | 22  | 57.9 | 38      |        |
| Faces involved.       |     |      |     |      |         |        |
| Yes                   | 57  | 58.8 | 40  | 41.2 | 97      | 0.051  |
| No                    | 19  | 41.3 | 27  | 58.7 | 46      |        |
| Hands involved.       |     |      |     |      |         |        |
| Yes                   | 40  | 43.5 | 52  | 56.5 | 92      | 0.002  |
| No                    | 36  | 70.6 | 15  | 29.4 | 51      |        |
| Arms involved.        |     |      |     |      |         |        |
| Yes                   | 12  | 37.5 | 20  | 62.5 | 32      | 0.044  |
| No                    | 64  | 57.7 | 47  | 42.3 | 111     |        |
| Feet involved.        |     |      |     |      |         |        |
| Yes                   | 9   | 19.1 | 38  | 80.9 | 47      | <0.001 |
| No                    | 67  | 69.8 | 29  | 30.2 | 96      |        |
| Family history        |     |      |     |      |         |        |
| Yes                   | 27  | 96.4 | 1   | 3.6  | 28      | <0.001 |
| No                    | 49  | 42.6 | 66  | 57.4 | 115     |        |
| Type of vitiligo      |     |      |     |      |         |        |
| Generalized           | 34  | 54.8 | 28  | 45.2 | 62      | <0.001 |
| Focal                 | 34  | 52.3 | 31  | 47.7 | 65      | 0.153  |
| Segmental             | 0   | 0.0  | 4   | 100.0| 4       |        |
| Acrofacial            | 8   | 66.7 | 4   | 33.3 | 12      |        |
| Current treatment     |     |      |     |      |         |        |
| Yes                   | 31  | 50.8 | 30  | 49.2 | 61      | 0.631  |
| No                    | 45  | 54.9 | 37  | 45.1 | 82      |        |
| Total                 | 76  | 53.1 | 67  | 46.9 | 143     |        |

* Skin types 1 and 6 were not seen among participants

DISCUSSION:
Vitiligo is an idiopathic acquired, depigmentary disorder of the skin. The disease has no physical impairment but is cosmetically disfiguring leading to stigma and psychological problems in daily life; particularly in dark skin patients.13 The negative impact on the QoL has been attributed to lack of effective treatment, chronic and unpredictable course and chronicity of the disease. Several studies all over the world showed that vitiligo has a negative effect on the QoL14,15, and lower self-esteem and high prevalence of psychiatric morbidity as compared to the normal populations.7,16

The majority of studies on QoL in vitiligo have been conducted in developed countries, mainly in Britain and the USA with a limited number in developing countries2,7. Different methods have been used to measure the QoL among patients. The DLQI tool, which was developed in 1994, has been used in 80 countries for more than 40 different skin conditions. It can be simply conducted within a short period and has been proven to be one of the most
specific QoL instruments which have been widely used in vitiligo. Moreover a strong correlation was found between the scores of the total Vitiligo specific QoL (VitiQoL) and DLQI15,17-19.  

The mean age of the patients was 31.85 years. This was similar to other studies5.  

The mean DLQI score was 6.18. This is relatively similar to a study conducted in India (6.86) and Belgium (4.95) 4,10, but lower than that found in Saudi Arabia(14.72) and Iran(8.16) 8,9. This is because QoL is an index with several dimensions affected by socio-cultural and behavioral factors. This is why it is always essential to measure QoL in different societies.  

The study found that vitiligo affected the QoL in 86.7% of patients with only 13.3 % reported no negative effect on their QoL. About 39.9% reported small effect and 16.8 % and 30.1% indicated that the disease had moderate and very large negative effect; while the extremely large effect was not detected among patients. A cross-sectional hospital-based study conducted in India on 100 patients similarly showed that 84% of the vitiligo patients had some effect on their QoL; with 47% suffered moderate to very large effect; 10 Other studies found relatively similar results7.  

The study found that unmarried women had a significantly higher negative impact on their QoL in comparison to married women. Similar results have been reported in India, and authors suggested that it might be due to the concern that this might affect their marriage pathway10.  

The study found no significant differences on QoL between males and females patients. Similar results have been found in other studies8,10. This might indicates that both genders are concerned about the impact of vitiligo on their QoL.  

The negative impact on the QoL was significantly higher among dark skin in comparison to light skin patients and among those with involvement of exposed parts of the body. Similar results have been found in other studies.  

A positive family history was found in about 20% of cases. Relatively similar results were reported in Turkey and Saudi Arabia. The study found that patients with positive family history had significantly less effect on the QoL in comparison with those with no family history of vitiligo. This is because social stigma might be milder if other family members are affected.  

There was a significantly higher DLQI scores among patients with secondary and higher education in comparison to those with lower education. This might be due to more concern about the general look among educated persons. Similar results were reported in Saudi Arabia20.  

In conclusion, and despite being a hospital based study, the results indicated clearly that vitiligo has a negative impact on the QoL in the majority of patients. This should carry a message to dermatologist to put more emphasis on the psychological problems as part of their future management plan.  

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بپشکی: فرگولنی دیارکردیه، ب تابیهت ل وولانیت بیشکفته کو کارپینکره کا نریتین ل سیرن هنو خوشان همیه ل سیر
باشتریا زیاتی (QOL) ثوئی چنین همگراردی کومه لیه و تابوری بین همه جور و لاَهی تین تخته بندی پین
نی خوشانی کارپینکره.

تارمانی زیاتی (QOL) دنافهاه هنو خوشان داده‌وندن د به‌وندیا ویدا
ب هواگردی کومه لیه و دیمودرگه و تخته بندی ل دهکه همیه کوردستانی و عراق.

نةخوشان و ریک: فرگولنی ب به‌رفه ماهی کرین پیش ب ابئیت نی خوشانی ل سیر ۱۴۰ هنو خوشان کو ته‌مه نی وان
دانیره ۱۶ سالیه و پیه ل بوو. توشیبیا وان ب به‌کووی زاپایی راوتکاریا نی خوشانی پیستی هانه دمست
نیشانکره. داکرز زاهمی نی خوشانی برده‌ستی فرگولنی ل مه‌کیا نی خوشانی پیستی ل نی خوشانیلی، فیک‌بیریا
سیاکی د پشنکری. رزامنه نینا زارمه هانه و ورگرتن. پاشی راکرگرتنیا کورت بو هسر نی خوشانی که هانه پرکن
لدور هواگردی کومه لیه و دیمودرگه و ساخته‌تین تخته بندی یا نی خوشانی QOL هانه همسانگدن بکاربینن
نیشان‌دیرو بیشتری زیاتی بو ته‌خوشان پیستی (DLQ1).

نه جام: ناهندا ته‌من کی ۳۱،۸۵ هسلبول (I) ژوان ۷۶ ره‌گاه ۷۰ نی و ۶۷ ره‌گاهیمی.
تیپ‌تیپینی نیشان‌دیرو QOL (۱۰,۳۹ SP) تینی (SD ۴,۸۱ ±۱) کو نی خوشانی چ کارپینکر نینن ل
سیر QOL ل ۱۳,۳/٪ که ه‌مشت هسندی کو مه‌به‌هی نی خوشانی کارپینکر چا
یچ ویتامین بهره‌دار با دانیره زاپایی ای (DLQ1) ل چ جیجاریا نیشانکره ناهندا ته‌مون دنافه
تنیکرايی (PLQ1) و رگنی و نرگراندریا نی خوشانی و حاله‌نی قاره‌سکرکنویکه، کارپینکر
ب شیوه‌نی نرگران دانیره هی نی خوشانی بو قاک یچ ویتامین. ژاون درای
وقل زاپایی و نی خوشانی توئیه جوره‌که ی دیپستی نریتی بویی وله هی نی خوشانی کارزنده دنکر زاپایوی دست و
پیشک و نه‌توینی مزدیبها خیزانی یا نریتی ز به‌کووی همیه.

دهره‌نهجم: نه‌هی نی خوشانی کارپینکر نی نریتی همیه ل سیر
QOL د به‌کووای پاژریا هنو خوشان. پیش‌بین‌هی نو‌داردنیا
نه‌خوشانی پیستی نکره‌یز ل سیر تاریخ‌نی دوهوونی پیتی نی خوشانی دنافهاه نی خوشانی وان ل دمی پلانتن دانایی بو
چاروسه‌کره.
الخلاصة

جودة الحياة لدى مرضى البهاق وعلاقتها بالعوامل الاجتماعية والديموغرافية والسريرية في دهوك، إقليم كوردستان-العراق

خلفية البحث: وجدت الدراسات، وخاصة في البلدان المتقدمة، تأثيرًا سلبيًا على المرض على جودة الحياة (QoL). وقد تأثر ذلك بالعوامل الاجتماعية والاقتصادية المختلفة والجوانب السريرية للمرض. الهدف من هذه الدراسة هو قياس تأثير البهاق على QoL بين المرضى والتحقيق في علاقته بالعوامل الاجتماعية والديموغرافية والسريرية في دهوك، إقليم كوردستان العراق.

المريض والطرق: أجريت دراسة مستعرضة مستندة إلى المستشفى على 143 مريضًا تتراوح أعمارهم بين 16 عامًا وما فوق تم تشخيص إصابتهم بالبهاق من قبل استشاري الأمراض الجلدية. طُلب من جميع المرضى المتاحين للباحث في وحدة الأمراض الجلدية الخارجية في مستشفى الرعاية الثالثة المشاركة. تم الحصول على موافقة شفهية ثم تم ملء استبيان قصير لكل مريض بشأن العوامل الاجتماعية والديموغرافية والسمات السريرية للمريض. تم تقدير QoL باستخدام مؤشر جودة الحياة للأمراض الجلدية (DLQI).

نتائج: كان متوسط العمر 31.85 سنة (± 10.39)، منها 76 من الذكور، و67 من الإناث. كان معدل مؤشر QoL، بينما أبلغ 39.9% و16.8% من المرضى أن هذا المرض له تأثير سلبي صغير، معدل وكبير جدا، على التوالي في QoL. 30.1% من المرضى أن هذا المرض له تأثير سلبي صغير، معدل وكبير جدا، على التوالي في QoL. فرد QoL ذات دلالة إحصائية بين معدل QoL والدعاية، والوظيفة، ونوع ومدة المرض وحالة العلاج الحالية. تأثر بشكل سلبي دالة إحصائية بين المرضى الأصغر سنًا، أولئك الذين حصلوا على تعليم عالٍ، والنساء المتزوجات، والمرضى المصابون من الجلد الغامض، والمرضى الذين يعانون من اصابات اليد واليد والقدم والقدم والذين لديهم تاريخ عائلي سببي من البهاق.

الاستنتاجات: هذا المرض له تأثير سلبي على QoL في غالبية المرضى. يجب على طبيب الأمراض الجلدية التركيز على المشكلات النفسية للمرض بين مرضىهم أثناء التخطيط للعلاج.