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Re: Manuscript No. 10/09

"Impairment of Quality of Life Among Adults with Skin Disease in King Fahad Medical City, Saudi Arabia"

Dear Dr. Al-Hoqail,

We are pleased to inform you that your above-mentioned manuscript has been accepted and will be published in one of the next issues of the Journal. In due time, you will receive a galley proof copy of your manuscript. Thank you for submitting your manuscript for publishing in the *Journal of Family and Community Medicine*. We will be pleased to receive more contributions.

With best regards,

PROF. HASSAN BELLA
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Acceptance/rrk

Impairment of quality of life among adults with skin disease in

King Fahad Medical City, Saudi Arabia

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Abstract

Objectives: The objective of the study is assessment of life quality in patients with skin disease.

Subjects and Methods: A 6-month cross sectional study was conducted in the Dermatology Clinic at King Fahad Medical City, Riyadh, Kingdom of Saudi Arabia. The study sample was defined as consisting of all 297 clinic adult patients with dermatological conditions but without associated psychiatric disease. They completed a self-administered Arabic version of the Dermatology Life Quality Index questionnaire (DLQI), containing ten items. The data was analyzed according to disease, age and gender.

Results: The gender distribution of the study sample was 73% female and 27% male. The mean age was 29.4 years. The proportions of patients with various diagnoses were: sebaceous and apocrine gland disorders 31.3%, eczematous dermatitis 18.5%, cutaneous infections 13.5%, and pigmentary disorders 10.8%. The mean DLQI of all patients was 8.32. Patients with papulosquamous disorders recorded the highest mean DLQI score 15.28, followed by immunological disorders 11.11, eczematous dermatitis 9.55, and miscellaneous disorders 10.91. The mean DLQI was higher among females 9.02 than males 6.46. Age had no influence on the degree of impairment.

Conclusion: Measuring quality of life impairment in dermatologic patients is an important aspect of management. It allows clinicians to assess the extent and nature of the disability so that an appropriate management regimen can be implemented and its effectiveness can then be assessed.

Key words: Dermatology Life Quality Index, Impairment, Quality of life, Skin disease.

Introduction

Most dermatologic conditions do not imply a direct threat to life, but their chronic and incurable character has a powerful negative impact on the quality of life of afflicted patients.¹ Virtually all aspects of patients' lives can be affected. The financial burden of disease include direct medical costs, out-of-pocket expenses, lost productivity, and others beyond these.²

Patients may experience severe symptoms especially itching, pain and discomfort, and can have profound psychological disturbance. Social and physical activities including sports and work may be adversely affected because of reluctance to allow others to see their skin disease. Employers are concerned about the possible reaction of their customers to employees with skin disease.³ In extreme cases some teen age patients with acne commit suicide because of their skin appearance.⁴ At times some treatment modalities can worsen the quality of life because of the difficulties of using topical creams and ointments.³

Measuring the impact of dermatologic disease on quality of life is very useful for several reasons. It allows patients to express their feelings and appreciate their physicians' concerns. It improves doctor-patient communication. It also helps in disease management, including the risk/benefit assessment of alternative therapeutic interventions. Measurement of the quality of life can be used in clinical research as well as for political and financial purposes relating to the development of dermatology services. Quality of life measures may also be effectively used in auditing clinical activities.^{3,5,6}

Few studies have been carried out on the quality of life in patients with skin disease in developing countries⁷ and Saudi Arabia.⁸ The present study looks at the impact of skin disease on the quality of life among adult patients attending the dermatology outpatient clinics at King Fahad Medical City, Riyadh, Saudi Arabia. It is hoped that the results will help in assessing the impact of skin disease on the quality of life of patients and the possible interventions that can help to improve that quality.

Subjects and Methods

This is a cross sectional study conducted in the dermatology clinic at King Fahad Medical City, Riyadh, Kingdom of Saudi Arabia. The study subjects were all the adult patients aged 16 years and above not currently suffering from any psychiatric morbidity who attended the dermatology clinic during the period between 5th January and 30th June 2006.

The subjects completed a translated, validated, pre-tested Arabic version of the English version of the Dermatology Life Quality Index (DLQI) to measure the effect of skin disorders on the quality of patients' lives.⁹ The DLQI questionnaire is simple and brief containing ten questions, each with four possible answers scored 0 to 3 and covering the last seven days of the patient's life. The DLQI is calculated as the sum of these scores, up to a maximum possible value of 30. The higher the total score is, the greater the impact of the disease. The ten questions are attributes relating to different aspects of the patient's life, and are grouped in the following categories: physical symptoms such as pain (1), feelings such as embarrassment (2), everyday

activities (3 and 4), leisure (5 and 6), work and school (7), personal relationship (8 and 9) and therapy (10). The detailed definitions of these attributes are found in the source cited above.

The skin diagnoses were classified in ten categories: 1) papulosquamous disorders, 2) connective tissue & immunological disorders, 3) eczematous dermatitis, 4) sebaceous and apocrine gland disorders, 5) disorders of hair follicles and related disorders, 6) cutaneous infections, 7) pigmentary disorders, and 8) miscellaneous (sexually transmitted diseases, tumors, etc).

Participation in the study was totally voluntary. The investigator explained the purpose of the research and how the survey was to be conducted. The subjects were then asked to immediately fill out the questionnaire in the presence of trained Arabic-speaking nurses to help those who might face difficulties in understanding the questionnaire. Confidentiality was maintained throughout the study and subjects were assured that results would be used only for the stated scientific research purposes.

Data collected were checked for completeness and consistency. They were then entered in a personal computer and were analyzed using the Statistical Package for Social Sciences (SPSS) version 10.0.¹⁰ Means with 95% confidence intervals were computed. Associations between and among variables were explored using the Student t test statistic, the chi square statistic, with Yate's correction, analysis of variance, and bivariate correlations.

Results

A total of 297 patients participated in the study, 80 (27%) males and 217 (73%) females. Their mean age was 29.4 +.7 years with minimum 16 and maximum 71 years. The majority, 71.8%, were aged 21-40 years.

Table 1 shows proportions of diagnoses and DLQI scores. The most frequent diagnoses were: sebaceous and apocrine gland disorders 31.3%, eczematous dermatitis 18.5%, cutaneous infections 13.1%, and papulosquamous disorders 4.7%. The mean DLQL score was 8.3 and the median score was 6. The scores in order of magnitude for the main diagnoses were: papulosquamous, connective tissue disorders, immunological disorders, and pigmentary disorders.

Table 2 compares DLQL scores of males and females for various attributes/aspects of impairment. Females had significantly higher total scores and also significantly higher scores for 7 out of 10 attributes. There was no significant difference on the remaining attributes.

Table 3 shows DLQI scores by age group. There was no significant relation between age and total DLQI score.

Table 1: Means of DLQL Scores in Different Dermatological Diseases by Sex.

Disease category	Male (n=80)		Female (n=217)		Both		
	No	%	No	%	No	%	Mean DLQI
Sebaceous & apocrine Gland disorder	19	23.8	74	34.1	93	31.3	7.7+1
Eczematous Dermatitis	13	16.3	42	19.4	55	18.5	9.6 + 7
Cutaneous Infection	15	18.8	24	11.1	39	13.1	6.5 + 6.9
Pigmented Disorders	10	12.5	22	10.1	32	10.8	6 + 5.3
Disorders of Hair Follicles & related disorders	7	8.8	16	7.4	23	7.7	7.4 + 8.8
Connective Tissue and Immunological Disorders	2	2.5	16	7.4	18	6.1	11.1 + 9.2
Papulosquamous Disorders	5	6.3	9	4.1	14	4.7	15.3 + 5.2
Miscellaneous	9	11.3	14	6.4	23	7.7	8.6 + 5.9
Total	80	100	217	100	297	100	8.32 ± 7.07

Table 2: Comparison between Males and Females' Dermatology Life Quality Index Scores

Question	Attribute	Males		Females		Total		P Value
		x	SD	x	SD	x	SD	
1	Physical Symptoms	1.2	1.1	1.9	1.2	1.5	1.2	< 0.05
2	Feelings	1.2	1.2	1.6	1.2	1.5	1.2	< 0.05
3	Daily routines	0.6	0.9	0.7	1.0	0.7	1.0	> 0.05
4	Clothing	0.7	1.1	1.0	1.1	0.9	1.1	< 0.05
5	Social and Leisure	0.6	1.0	0.9	1.0	0.8	1.0	< 0.05
6	Sports and Exercise	0.5	1.0	0.4	0.9	0.5	0.9	> 0.05
7	Work and Study	0.4	0.9	0.6	1.0	0.6	0.9	< 0.05
8	Personal Relationship	0.4	0.8	0.6	1.0	0.6	0.9	< 0.05
9	Sexual Relationship	0.5	0.9	0.9	1.1	0.7	1.0	< 0.05
10	Treatment	0.5	1.0	0.8	1.1	0.7	1.1	> 0.05
Total Score		6.5	7.4	9.0	6.8	8.3	7.1	< 0.05

Table 3: Relationship between DLQL Scores and age group

Age Group*	No.	%	DLQI Score	
			X	SD
< 20	38	13.1	8.71	7.52
21 – 30	167	57.4	8.05	6.73
31 – 40	42	14.4	7.69	7.48
41 – 50	26	8.9	7.81	7.69
> 50	18	6.2	12.17	6.82
Total	291	100%		

* Data on age was missing for 6 patients

Analysis of variance between the different groups: $F = 1.55$, $P > 0.05$.

Spearman's rank correlation between the age and DLQI score $r = 0.0971$, $P > 0.05$

Discussion

Finlay and Khan along with other researchers have developed, used, and validated the DLQI for measuring and comparing disability in a variety of common dermatological conditions in different populations and settings.¹¹⁻¹⁷ This study revealed high levels of dermatological disability among the studied subjects. The mean DLQI score for all patients was 8.42. The item with the highest score among new patients was item 1 (pain), while that among treated patients was item 4 (clothes choice). These findings are higher than those reported by Harlow et. al.¹⁸ who found that the overall DLQI score was 7.4 ± 5.7 . This is not unexpected as their patients were primary care patients and ours are patients attending a tertiary health care facility and are likely to be suffering from more severe disease compared with subjects from general dermatology clinics or the community. Papulosquamous disorders and connective tissue & immunological disorders were the more disabling conditions (scores of 15.3 ± 5.2 and 11.1 ± 9.2 respectively). Unpleasant symptoms and feeling of embarrassment and self-consciousness were the most important items causing the distress. In some studies the itchy sensations had the highest mean DLQI score translating into the highest negative impact on the quality of life.^{2,19}

The disability suffered by female patients was significantly more than that suffered by males, the mean \pm SD total DLQI Scores were 9.0 ± 6.8 and 6.5 ± 7.4 respectively. This finding is in conformity with findings of international studies which reported higher DLQI for females.²⁰⁻²² Other studies found higher DLQI for males.²³ A study conducted in the Qassim province of Central Saudi Arabia²⁴ found no significant gender differences in quality of life in patient with vitiligo, a skin disease, in agreement with some international studies which reported that gender did not have a major impact on quality of life.^{11,25} Gender differences, however, were not consistent in all studies. These differences may be due to differences in populations, sampling methods, settings of study and spectrum of diseases studied.

The relationship between age and the impairment caused by skin disease was studied. It was found that DLQI Scores did not vary significantly with age (table 3). These results are in conformity with the findings of Harlow et. al.¹⁸ Linnet and Jemee,¹⁷ Poon et. al.¹³ who stated that there was no significant correlation between age and DLQI Score in patients with skin diseases. Other studies, however, reported that some diseases younger patients suffered the greatest impairment in quality of life.²⁴

Measuring quality of life impairment in dermatologic patients can become an important aspect of management. This explains why during the last decade there has been a gradual increase in the international use of the DLQI. The brevity and simplicity of use of the DLQI have resulted in its popularity both in clinical practice and in research.²⁶ The use of a quality of life index allows clinicians to assess the extent and nature of disability suffered, so that an appropriate management regimen can be implemented. Clinicians might gain an insight into the degree of impairment experienced and therefore the resulting treatment decisions made might be more focused on the patient's preferences and priorities.²⁷ The effectiveness of these regimens can then be estimated by using the quality of life index after treatment.

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قصور جودة الحياة لدى البالغين المصابين بأمراض جلدية في مدينة الملك فهد الطبية، المملكة العربية السعودية.

Ibrahim A. Al-Hoqail, MD Dean , College of Medicine King Fahad Medical City. Associate Professor of Dermatology. King Saud University P.O.Box 59046, Riyadh 11525 E-mail: dermapath@yahoo.com	الباحثون: إبراهيم عبد الرحمن الحقييل عميد كلية الطب مدينة الملك فهد الطبية أستاذ الأمراض الجلدية المشارك جامعة الملك سعود ص.ب.59046 الرياض 115
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ملخص الدراسة

الأهداف:- أعدت هذه الدراسة لتقييم طبيعة ومدى العجز في الأنواع المختلفة من الحالات الجلدية وتحليلها مع المرض الجلدي والعمر والجنس.

طريقة البحث:- أجريت هذه الدراسة في قسم الأمراض الجلدية في مدينة الملك فهد الطبية بمدينة الرياض – المملكة العربية السعودية. خلال الفترة من 5 يناير حتى 30 يونيو . 2006 وشملت الدراسة 297 مريض بالغ من المترددين على العيادة الخارجية من الجنسين – وطلب منهم تعبئة إستبيان يحتوي على عشرة أسئلة تقيس جودة الحياة في الأمراض الجلدية ، كما يحتوي على إستبيان البيانات الشخصية.

النتائج:- بلغ مجموع من قامو بتعبئة الإستبيان 297 حالة ، كان % 73.1 منهم نساء ، ومتوسط عمرهم 29.42 سنة. وحوالي ثلث الحالات (% 31.3) كانوا يعانون من أمراض في الغدد الزهامية و المفترزه .وكانت اكزيما الجلد 10.8 % على ، % 13.1 ، % والعوى الجلدية ، وتغيرات لون الجلد من أكثر الأمراض شيوعاً بين الحالات (18.5 التوالي .) وأظهرت الدراسة ان متوسط مقياس جودة الحياة لدى عينة الدراسة . 8.32 وسجل المصابون بأمراض الحطاطي الحرشفي أعلى مؤشر ، تبعهم المصابون بأمراض النسيج الضام و أمراض جهاز المناعة والأمراض 9.55 على التوالي .(وكان متوسط مقياس جودة الحياة ، 10.91 ، 11.11 ، المتنوعة ، ثم اكزيما الجلد 15.28) 6.46 على التوالي .(وكانت الأعراض الغير مرضية والإحساس بالإحراج ، أعلى في الإناث عنه في الذكور 9.02) و الوعي الذاتي هي أهم أوجه الضرر العجز (، وليس للعمر تأثير على درجة العجز التي عانوا منها.

الخلاصة:- تشير هذه الدراسة إلى أن قياس تضرر جودة الحياة لدى مرضى الأمراض الجلدية من الجوانب المهمة في العلاج .فهي تساعد الأطباء في تقدير مدى وطبيعة العجز ، ومن ثم يطبقون نظام العلاج المناسب ويستطيعون تقييم فعاليته.

مفاتيح الكلمات:- مدى اس جودة الحياة لدى مرضى الأمراض الجلدية ، العجز ، جودة الحياة ، أمراض الجلد.