Journal of Pakistan Association of Dermatologists.2023;**33(1)**:184-189.

Original Article

Understanding vitiligo as a psychosocial dilemma

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Abstract

Objective To assess the impact of vitiligo on psychosocial health of patients by applying Dermatology Life Quality Index (DLQI) score and to estimate the frequency of patients having significant effect of vitiligo on their life.

Methods This descriptive survey was conducted at the Department of Dermatology, Services Hospital, Lahore over six months. Physical examination of the patients was done and patients were asked to fill DLQI questionnaires in Urdu. Final scores were analysed and impact on psychological and social well-being of patients was noted. The higher the score, the more the quality of life impaired. Outcome variables i.e. mean DLQI score and frequency of significant effect on quality of life was recorded on proforma. Data was entered and analyzed using SPSS version 21.

Results The mean age of patients was 33.45±10.21 years. Out of 200, there were 91 (45.5%) males and 109 (54.5%) females. The mean duration of symptoms was 2.88±1.34 years. The mean DLQI score was 16.78±8.31. Out of 200, quality of life of 177 (88.5%) patients was significantly affected by vitiligo.

Conclusion Vitiligo profoundly effects daily life of majority of patients. The disease has a tremendous impact on everyday life and self-esteem of most of the patients.

Key words
Vitiligo, Quality of life, Psychosocial, Dermatology Life Quality Index (DLQI).

Introduction

Vitiligo is a frequently seen disorder of pigmentation in which the patients develop depigmented patches and macules. The worldwide incidence of vitiligo is around 2-3%. Vitiligo is not a disease causing physical disability but psychological impact of the disease is huge. It gives too much agony and feeling of guilt to the patients that they get suicidal ideation. The stigma attached to the disease leads to depression low self- esteem in patients.[1-3] The protracted duration of illness, lack of promising treatment modalities are devastating for the patients.[4] Since genetic, physical and psychological factors play their role in the pathogenesis of vitiligo, therefore, it may be regarded as a psychosomatic disorder.[5]

Combination of psychological norms, social ways and behaviours depicts the quality of life of a person. It is the degree of enjoyment and satisfaction experienced in everyday life, personal relationship, environment and social life. In order to measure and validate quality of life of patients, Finlay *et al.* proposed Dermatology Life Quality Index (DLQI) in 1994.[6] It is a simple and practical questionnaire having 10 questions each scored from 0 to 3. It

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has been used and applied in numerous studies on patients suffering from various diseases across the globe.[7]

A number of studies conducted worldwide have concluded that patients of vitiligo suffer from anxiety, depression, suicidal ideation and a number of other psychological disorders.[8,9]

The purpose behind this research was to assess whether vitiligo still has a significant damaging impact on psychosocial and cultural well-being of patients in our part of the world or not. With increasing awareness among masses in today's world ruled by social media, cosmetic disfigurement may be much more paralysing than physical disability. By knowing the enormity of the issue, Psychologists and Dermatologists can collaborate in reducing the misery of sufferers.

Patients and Methods

This cross sectional survey was conducted in the outpatient Department of Dermatology, Services Institute of Medical, Sciences/ Services hospital, Lahore. Duration of study was six months from 15th June to 15th December, 2021. After getting approval from Institutional Review Board, patients were selected by non-probability consecutive sampling. Patients of both genders and ages between 16 to 50 years, suffering from vitiligo diagnosed on history and clinical examination were enrolled after written informed consent. Patients excluded from the study were patients of skin diseases with hypo-pigmentation other than vitiligo like chemical leukoderma, mycosis fungoides, syphilis, leprosy, tuberous sclerosis, tinea versicolor or post inflammatory hypo-pigmentation. Patients having psychiatric illnesses or other chronic ailments which may affect quality of life for example, diabetes, autoimmune diseases, or those who couldn't fill the questionnaire adequately were also excluded.

After explaining objectives of the study to the patients, demographic information like name, age, sex, address and duration of the disease were obtained and recorded on a pre-designed proforma. Effect of vitiligo on quality of life was assessed using DLQI questionnaire Urdu version consisting of 10 questions. The patients were asked to indicate on a scale from 0-3 for each of 10 items, how their lives have been affected over the preceding weeks. The DLQI was calculated; the higher the score, the more quality of life was impaired. Outcome variables i-e mean DLQI score and frequency of significant effect on quality of life were also recorded on the pre-designed proforma.

Data were entered and analysed using SPSS version 21. Variables like age, gender and DLQI score were noted. Mean±standard deviation was used for presenting score of DLQI and age. Qualitative variables like gender and significant effect on quality of life in terms of frequency and percentages were calculated. Data were stratified for age, gender, duration of disease, educational and economic status to address the effect modifiers. Post-stratification chi square test was applied for significant effects and t-test for mean DLQI scores considering p-value ≤ 0.05 as significant.

The DLQI questionnaire comprises of 10 questions, divided into 6 groups, involving feelings, daily activities, professional and leisure activities, relationships and treatment related problems. Each question may have four responses varying in severity from 0 to 3. The final score is the sum of scores of all the questions, ranging from 0 to 30. Greater the score more impaired will be daily life. The final score is graded as follows: 0-1= no impact, 2-5= minimal impact, 6-10= modest impact, 11-20= very huge impact, and 21-30= extremely huge

impact on quality of life of patients.[10]

Results

During the study duration, 200 patients suffering from vitiligo were included. The mean DLQI score was 16.78±8.31. Quality of life of 177 (88.5%) patients was significantly affected by vitiligo. There were 91 (45.5%) males and 109 (54.5%) females. 77 (38.5%) patients were married while 123 (61.5%) were unmarried. There were 36 (18%) students, 57 (28.5%) housewives, 50 (25%) labourers while 57 (28.5%) were business men or doing office work. The mean duration of symptoms was 2.88±1.34 years. As far as education status was concerned, 53 (26.5%) were illiterate, 58 (29%) were educated till primary, 50 (25%) till middle pass, while 39 (19.5%) had done matric or above. Out of 200, 66 (33%) patients belonged to lower socioeconomic class, 71 (35.5%) belonged to middle class, 63 (31.5%) were upper class.

Data was stratified for age of patients. Among teenagers (16-19 years), the mean DLQI score was 16.00±7.81. Significant impact on quality of life was noted in 20 (90.9%). Among patients aged 20-35 years, the mean DLQI score was 16.76±8.68. Significant impact was noted in 83 (87.4%) cases. In patients aged 36-50 years, the mean DLQI score was 17.00±8.09, while 74 (89.2%) cases had significant impact on quality of life. The difference was insignificant (p>0.05).

Data was stratified with regard to gender of patients. In males, the mean DLQI score was 16.56±7.82. Significant impact on life was noted in 81 (89.0%) cases. Among females, the mean DLQI score was 16.95±8.66. Significant impact was noted in 86 (88.1%) cases. The difference was insignificant (p>0.05).

Regarding marital status of patients, among married patients, the mean DLQI score was 18.27±8.22. Clinically significant impact was noted in 72 (93.5%) cases Among unmarried patients, the mean DLQI score was 15.84±8.27. Significant impact was noted in 105 (85.4%) cases. The difference was significant (p<0.05).

Data was stratified for occupation of patients. Among students, the mean DLQI score was 16.06±7.77 and significant impact was noted in 32 (88.9%) cases. Among housewives, mean DLQI was 17.75±9.05 and significant impact was noted in 50 (87.7%) cases. Among labourers, mean was 16.36±8.09 and significant impact was noted in 44 (88.0%). Among businessmen or office workers, mean was 16.61±8.20m and significant impact was noted in 51 (89.5%) cases. The difference was insignificant (p>0.05).

Regarding duration of disease, among patients having disease for <3 years, the mean DLQI score was 17.81±8.54 and significant impact was noted in 71 (89.9%) cases. Among patients having disease for ≥3 years, the mean DLQI score was 16.10±8.13 and significant impact was noted in 106 (87.6%) cases. The difference was insignificant (p>0.05).

Similarly data were stratified for educational status and socioeconomic status of patients. No significant association was found among these (p>0.05).

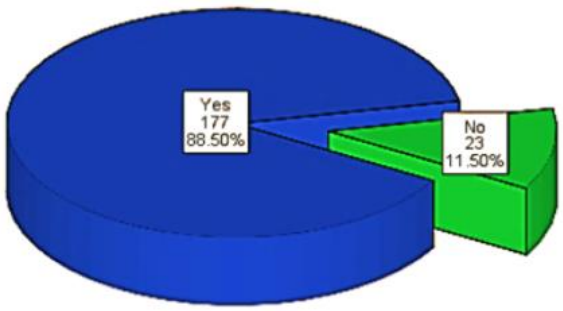

Figure 1 Distribution of significant effect on quality of life of patients.

Table 1 Stratification regarding effect modifiers.

		Age (years)			*Total*	*Chi-Square Test*	*p-value*
		16-19	20-35	*36-50*			
Significant effect	Yes	20 (90.9%)	83 (87.4%)	74 (89.2%)	177 (88.5%)	0.280	0.869
	No	2 (9.1%)	12 (12.6%)	9 (10.8%)	23 (11.5%)		
Total		22 (100.0%)	95 (100.0%)	83 (100.0%)	200 (100.0%)		
		Gender			*Total*		
		Male	*Female*				
Significant effect	Yes	81 (89.0%)	96 (88.1%)		177 (88.5%)	0.043	0.836
	No	10 (11.0%)	13 (11.9%)		23 (11.5%)		
Total		91 (100.0%)	109 (100.0%)		200 (100.0%)		
		Marital status			*Total*		
		Married	*Unmarried*				
Significant effect	Yes	72 (93.5%)	105 (85.4%)		177 (88.5%)	3.083	0.079
	No	5 (6.5%)	18 (14.6%)		23 (11.5%)		
Total		77 (100.0%)	123 (100.0%)		200 (100.0%)		
		Occupation					
		Student	*Housewife*	*Labor*	*Business/ office work*	*Total*	
Significant effect	Yes	32 (88.9%)	50 (87.7%)	44 (88.0%)	51 (89.5%)	177 (88.5%)	0.105	0.991
	No	4 (11.1%)	7 (12.3%)	6 (12.0%)	6 (10.5%)	23 (11.5%)		
Total		36 (100.0%)	57 (100.0%)	50 (100.0%)	57 (100%)	200 (100.0%)		
		Duration of disease				*Total*		
		<3 years		*≥3-5 years*				
Significant effect	Yes	71 (89.9%)		106 (87.6%)		177 (88.5%)	0.242	0.623
	No	8 (10.1%)		15 (12.4%)		23 (11.5%)		
Total		79 (100.0%)		121 (100.0%)		200 (100.0%)		
		Education						
		Illiterate	*Primary*	*Middle*	*Matric or above*	*Total*		
Significant effect	Yes	46 (86.8%)	51 (87.9%)	48 (96.0%)	32 (82.1%)	177 (88.5%)	4.527	0.210
	No	7 (13.2%)	7 (12.1%)	2 (4.0%)	7 (17.9%)	23 (11.5%)		
Total		53 (100.0%)	58 (100.0%)	50 (100.0%)	39 (100%)	200 (100.0%)		
		Socioeconomic status				*Total*		
		Low	*Middle*	*High*				
Significant effect	Yes	61 (92.4%)	58 (81.7%)	58 (92.1%)		177 (88.5%)	5.020	0.081
	No	5 (7.6%)	13 (18.3%)	5 (7.9%)		23 (11.5%)		
Total		66 (100.0%)	71 (100.0%)	63 (100.0%)		200 (100.0%)		

Discussion

Vitiligo is a multifactorial disorder characterized by the loss of functional melanocytes. Multiple mechanisms have been proposed for melanocyte destruction in vitiligo; leading to formation of white patches.[11] Strong stigma associated with the disease, its chronic nature, and cosmetic disfigurement often cause distress to patients and may affect the quality of life.[12]

It has been observed that quality of life was more effected in patients belonging to Asian Subcontinent than in European countries, where standard of living is high and people have fairer skin.[13] Our study also proves this concept where the mean DLQI score was 16.78±8.31 and quality of life of 177 (88.5%) patients was significantly affected by the disease. This was higher than most of the studies done previously.[14-16] Mean age of the patients was 33.45±10.21 years, which is comparable to studies done previously.[14,15]

In a study in Nepal, the mean DLQI score was 4, indicating little impact on quality of life. They

found significant effect of duration of disease on DLQI score ($p<0.05$). There was no significant effect of gender or type of vitiligo noted on quality of life.[12] We noticed a much higher impact of the disease, however, no significant effect of any effect modifier was noted (p-value >0.5). Mishra *et al.*[17] reported results that were similar to ours probably due to similarities in cultural and ethnic values. In a Belgian study, a mean DLQI score of 4.95 was reported. This can be attributed to differences in race, ethnicity and skin type between the two populations.

Despite increasing awareness and advancement in treatment modalities across the world, vitiligo is still considered a curse and a thing to be ashamed of in Pakistan. This can be attributed to lack of education and knowledge about the disease along with psychosocial stigma attached to the disease.[18] These issues can significantly impair the psychosocial life of patients especially women and young girls..

Conclusion

We observed significantly high majority of patients who had immense impact of vitiligo on their quality of life. These findings of quality of life will now help in improving patient care and treatment strategies as it can indicate the need for supportive or psychological intervention and for making better health care policies.

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