Assessment of Quality of Life in Patients Reporting with Dermatological Conditions to a Primary Healthcare Setting in Goa, India

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ABSTRACT

Introduction: Patients reporting with skin ailments to primary healthcare settings are often referred to specialty centres either due to uncertainty in diagnosing skin conditions by the healthcare professionals or because of incomplete treatment offered to the patients at this level of healthcare. Objectives: 1.To assess the quality of life among adults reporting with skin diseases to a Primary healthcare setting. 2.To identify the types of skin diseases that required referral to specialty clinics.

Material and Methods: A cross-sectional study was conducted at an Urban Health Centre in Goa between July 2018 and September 2018 among 150 consenting patients aged 18 years and above reporting with skin ailments. Data were collected by administering a pre-tested semi-structured questionnaire and the Quality of Life was assessed using the Dermatology Life Quality Index. Data was summarised using frequencies and percentages for demographic characteristics, The DLQI was scored as per the method recommended by the developers. Chi-Square test was used to determine the association among study variables. A $P<0.05$ was considered statistically significant.

Results: Mean DLQI score in this study was 6.67 ± 4.147 indicating a small to moderate effect of skin diseases on patient's QoL. Mean DLQI score of Symptoms/Feelings domain was 2.94 ± 1.475 out of a maximum score of six, followed by domains like Daily activities (1.12 ± 1.197) and Work/School (1.06 ± 1.148) respectively.

Conclusion: A small to moderate impact on QoL was observed among patients with skin conditions. This study suggests a need for special training in the management of common skin diseases for healthcare professionals at primary healthcare settings, at the same time adding the necessary medications used for the treatment of these common skin conditions to the inventory of essential drugs maintained at this level of healthcare.

Keywords: Quality of Life, DLQI, Dermatology Life Quality Index, Skin Diseases, Primary Healthcare Setting.

INTRODUCTION

Patients with skin conditions may experience severe symptoms, such as itching, pain, and discomfort, that can have a profound psychological impact.[1] Although mortality rates are generally low, skin diseases may significantly affect the quality of life (QoL).[2]

Patients reporting with skin ailments to primary healthcare settings are often referred to specialty centres either due to uncertainty in diagnosing these skin conditions by the healthcare professionals or because of incomplete treatment offered to the patients at this level of healthcare.

Skin diseases can cause embarrassment, anxiety and depression in the affected patients which can lead to social isolation and absenteeism at school and work, thus a need was felt to assess the QoL in these patients which formed the main objective of the study, while the second objective was to identify the types of skin diseases that required referral to a tertiary level of healthcare. The QoL was assessed using the Dermatology Life Quality Index (DLQI).[3] No such data were available in the state of Goa prior to the start of this study, hence the justification for the study.

MATERIAL AND METHODS

After seeking approval from the Institutional Ethics Committee, a Primary healthcare facility-based Cross-Sectional study was conducted using convenience sampling method among 150 adult patients reporting with skin diseases to an Urban Health Centre(UHC) in Goa between July 2018 to September 2018. Informed written consent was obtained from the study participants before administering the questionnaire. All consenting adults aged 18 years and above, with signs and symptoms suggestive of skin diseases comprised the study population. Participants were interviewed to complete the DLQI questionnaire for the assessment of QoL. The DLQI is an easy to administer, dermatology specific questionnaire that assesses the impact of skin diseases on QoL of the patients and includes questions from six domains (Symptoms/ Feelings, Daily activities, Leisure, Work/School, Personal relationships, and Treatment) recalled during the preceding week. The scoring being based on five answer options (Very much, A lot, A little, Not at all and Not relevant), the overall score is calculated by adding the scores from each question, which can yield a score between 0 and 30, with higher scores representing a greater impact on QoL and vice versa. The validated English,

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Hindi version was provided by Department of Dermatology, Cardiff University, Cardiff, Wales, UK. The tool was declared reliable with an alpha value of 0.85.[4]

Skin diseases with uncertain diagnosis were referred to the nearby tertiary healthcare setting (Goa Medical College) for further management. The diagnosis along with the treatment details received at the tertiary hospital for the referred cases was verified.The responses were coded and analysed using IBM Statistical Package for Social Sciences (SPSS) version 14.0. Data was summarized using descriptive statistics with frequencies and percentages for demographic characteristics, The DLQI was scored as per the method recommended by the developers and the Chi- Square test to determine the association among study variables. A $P<0.05$ was considered statistically significant.

RESULTS

In this study of 150 participants, the ages of the participants ranged from 18 to 85 years, with a mean of 35.93 years (SD = 13.643). Males outnumbered (72.0%) the females (28.0%) and most (68.7%) of the participants were married. Hindus constituted 64% of the study population followed by Muslims (24.0%) and about 65.4% of the participants had completed their middle school.Around 36% of the participants belonged to Middle Class followed by Upper Middle Class (33.3%) and Lower Middle Class (16.7%) as per Modified B.G. Prasad Socio-economic Classification. About 44.0%) of the participants had a normal Body Mass Index (18.5-22.9) followed by 26.7% in the Pre-Obese (25.0-29.9) and 16.7% in the Overweight (23.0-24.9) categories

Almost 34.7% of the patients gave history of physical contact with a person having skin disease while 26.7% of the patients reported contact with pet animals like dogs and cats during the preceding two weeks. Tinea Cruris was the most common skin condition (18.67%) followed by Tinea Corporis, Pityriasis Versicolor and Tinea Pedis (18%, 6.67% and 6.67% respectively) as shown in Table 1. Almost one-third (32.0%) of the patients were referred to the nearby tertiary healthcare setting for further management for skin conditions like Tinea Cruris, Tinea Corporis, Pyoderma and Furuncle which did not improve on treatment at the UHC.

The overall mean DLQI score of the participants in this study was 6.67 ± 4.147 indicating a small (41.3%) to moderate effect (33.3%) of skin diseases on patient's QoL as shown in Table 2. The skin diseases with higher DLQI scores were Tinea Cruris (mean = 9.54 ± 4.168), Pyoderma (mean 9.33 ± 5.610), Furuncle (mean = 8.50 ± 4.175), Keloid (mean = 8.50 ± 6.364) and Pityriasis Versicolor (mean = 7.50 ± 4.453) as shown in Table 3. Males had higher mean DLQI score (mean

Diagnosis	Males		Females		Total	
	No.	%	No.	%	No.	%
Tinea Cruris	24	16.00	4	2.67	28	18.67
Tinea Corporis	10	6.67	17	11.33	27	18.00
Pityriasis Versicolor	8	5.33	2	1.33	10	6.67
Tinea Pedis	9	6.00	1	0.67	10	6.67
Allergic Urticaria	7	4.67	2	1.33	9	6.00
Furuncle	8	5.33	0	0.00	8	5.33
Intertrigo	6	4.00	2	1.33	8	5.33
Scabies	4	2.67	3	2.00	7	4.67
Tinea Faciei	4	2.67	2	1.33	6	4.00
Pyoderma	6	4.00	0	0.00	6	4.00
Folliculitis	5	3.33	0	0.00	5	3.33
Contact Dermatitis	3	2.00	1	0.67	4	2.67
Exfoliative Keratolysis	2	1.33	1	0.67	3	2.00
Vitiligo	1	0.67	2	1.33	3	2.00
Viral Warts	2	1.33	0	0.00	2	1.33
Keloid	1	0.67	1	0.67	2	1.33
Eczema	2	1.33	0	0.00	2	1.33
Others*	6	4.00	4	2.67	10	6.67
Total	108	72.00	42	28.00	150	100.00

*(Corn Foot, Herpes Labialis, Lichen Planus, Melanoma, Onychomycosis, Miliaria Rubra, Telogen Effluvium, Tinea Capitis, Tinea Manus, Tinea Unguium)

Table-1: Frequency distribution of various dermatological conditions in the study population

Scores	Severity banding	No.	%
0-1	No effect at all on patient's life	9	6.0
2-5	Small effect on patient's life	62	41.3
6-10	Moderate effect on patient's life	50	33.3
11-20	Large effect on patient's life	29	19.4

*There were none in the "Very large effect" category.

Table-2: Severity banding of skin diseases on the Quality of Life of the study participants

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Diagnosis	Total		DLQI	DLQI Males	DLQI Females
	No.	%	Mean (SD)	Mean (SD)	Mean (SD)
Tinea Cruris	28	18.67	9.54 (4.168)	9.63 (4.179)	9.00 (4.690)
Tinea Corporis	27	18.00	5.96 (3.568)	5.90 (4.954)	6.00 (7.778)
Pityriasis Versicolor	10	6.67	7.50 (4.453)	8.50 (4.440)	3.50 (0.707)
Tinea Pedis	10	6.67	6.50 (3.629)	7.00 (3.464)	2.00 (0.000)
Allergic Urticaria	9	6.00	4.78 (4.236)	5.86 (4.180)	1.00 (1.414)
Furuncle	8	5.33	8.50 (4.175)	8.50 (4.175)	-
Intertrigo	8	5.33	4.88 (4.581)	3.67 (4.179)	8.50 (4.949)
Scabies	7	4.67	7.14 (2.193)	7.75 (2.630)	6.33 (1.527)
Tinea Faciei	6	4.00	4.17 (3.971)	3.00 (0.816)	6.50 (7.778)
Pyoderma	6	4.00	9.33 (5.610)	9.33 (5.610)	-
Folliculitis	5	3.33	4.80 (2.950)	4.80 (2.950)	-
Contact Dermatitis	4	2.67	7.25 (3.775)	9.00 (1.732)	2.00 (0.000)
Exfoliative Keratolysis	3	2.00	5.33 (3.055)	4.00 (2.828)	8.00 (0.000)
Vitiligo	3	2.00	1.67 (2.082)	1.00 (0.000)	2.00 (2.828)
Viral Warts	2	1.33	5.50 (0.707)	5.50 (0.707)	-
Keloid	2	1.33	8.50 (6.364)	4.00 (0.000)	13.00 (0.000)
Eczema	2	1.33	5.50 (3.536)	5.50 (3.536)	-
Others*	10	6.67	3.90 (1.663)	3.83 (1.472)	4.00 (2.160)
Total	150	100.00	6.67 (4.147)	7.04 (4.302)	5.74 (3.602)
*(Corn Foot, Herpes Labialis, Lichen Planus, Melanoma, Onychomycosis, Miliaria Rubra, Telogen Effluvium, Tinea Capitis, Tinea Manus, Tinea Unguium)					

Table-3: Distribution of skin diseases and mean DLQI scores according to gender

Domains	Males	Females	Mean Score (SD)
	Mean (SD)	Mean (SD)	
Symptoms/Feelings	3.06 (1.480)	2.62 (1.430)	2.94 (1.475)
Daily activities	1.05 (1.198)	1.28 (1.195)	1.12 (1.197)
Leisure	0.82 (0.925)	0.76 (0.759)	0.80 (0.880)
Work/School	1.26 (1.194)	0.55 (0.832)	1.06 (1.148)
Personal relationships	0.38 (0.719)	0.14 (0.417)	0.31 (0.656)
Treatment	0.45 (0.617)	0.45 (0.404)	0.44 (0.629)

Table-4: Mean scores in different Domains of DLQI questionnaire

= 7.04 ± 4.302) in comparison to females (mean = 5.74 ± 3.602). In males the skin diseases like Tinea Cruris (mean = 9.63 ± 4.179), Pyoderma (mean = 9.33 ± 5.610), Contact Dermatitis (mean = 9.00 ± 1.732), Furuncle (mean = 8.50 ± 4.175) and Pityriasis Versicolor (mean = 8.50 ± 4.440) had a greater impact on the quality of life whereas skin conditions like Keloid (mean = 13.00 ± 0.000), Tinea Cruris (mean = 9.00 ± 4.690), Intertrigo (mean = 8.50 ± 4.949), Tinea Faciei (mean = 6.50 ± 7.778) and Scabies (mean = 6.33 ± 1.527) scored a higher DLQI in females.

Of the various domains of DLQI questionnaire, mean DLQI score for Symptoms/feelings scored 2.94 ± 1.475 out of a maximum score of six followed by domains like Daily activities (1.12 ± 1.197) and Work/school (1.06 ± 1.148) respectively as shown in Table 4. Males had higher mean DLQI scores in Domains like Symptoms/feelings, Leisure, Work/school and Personal relationship, while females had higher mean DLQI score in Daily activities domain, mean DLQI scores for the treatment domain was more or less equal among both sexes. Age was significantly (p = 0.007) associated with patient's quality of life, younger the patient greater was the impact on the quality of life, while other factors like socio-economic status, marital status, education,

occupation, religion and BMI did not have any significant association with patient's quality of life due to the presence of skin diseases

DISCUSSION

In the present study, almost one third (33.3%) of the patients were in the age group of 21-30 years, a finding consistent with studies carried out in similar study settings in India by Renuka A et al[5] and Joel JJ et al[6], whereas in studies conducted by Baur B et al[7] and Ahmed G et al[8], the commonly affected age groups ranged between 15-24 and 18-40 years respectively.

Mean DLQI score of the patients in this study is 6.67 ± 4.147 indicating a small to moderate effect of skin diseases on patient's QoL. This finding is similar to that obtained in another study carried out by Sangeetha T et al[9] in India, as well as in other countries by Al-Hoqail IA et al[10], and Tejada CD et al[11] with scores ranging from 6.73 to 8.32.This study found higher mean DLQI scores for patients who were younger in age, probably because, younger individuals were more frequently affected by physical symptoms like itching and pain along with embarrassment caused by skin lesions at their school and work. This finding was consistent with

the study done by Tejada CD et al.[11] The mean DLQI score for male patients was significantly more (7.04 ± 4.302) than female patients (5.74 ± 3.603). This could be because, males are more commonly engaged in occupational activity compared to females, thus affected by physical symptoms.

A statistically significant difference was found in the Symptoms/feelings (p = 0.031) and Work/school (p = 0.002),domains with higher scores in males as compared to females which could be due to differences in the nature of work and social roles in both genders with men being more concerned with skin conditions that affected their job performance while women were more concerned about what the skin conditions did to their appearance[11] this finding is consistent with the study done by Tejada CD et al[11] Interestingly these skin conditions had little impact on Leisure domain in both genders. When compared with specific skin diseases, there was a difference in mean DLQI for Keloid, among both sexes which could be due to greater concern by females because of its potential to cause permanent scarring,whereas, men had a higher mean DLQI score for Contact dermatitis compared to females probably because of interference with performing one's duties at work due to itching and pain.[11]

Of the 48 patients who were referred to the tertiary healthcare setting, in almost half the number (47.9%), the skin conditions had a large effect on their life. Although the diagnosis remained unchanged for the majority (93.8%) of the referred patients, there was however a change in the choice of medication prescribed from the next generation category of drugs at the tertiary healthcare setting.

The difference in the types of common diseases found in this study versus other studies could be due to the fact that patients with other skin conditions from the locality may be reporting directly to the tertiary health care facilty hence did not feature in our study.

CONCLUSION

A small to moderate impact on QoL was observed among patients with skin conditions. This study suggests a need for special training in the management of common skin diseases for healthcare professionals at primary healthcare settings, at the same time adding the required medications used for the treatment of these common skin conditions to the inventory of essential drugs maintained at this level of healthcare. The results of this study highlight the need to use the DLQI questionnaire routinely for patients reporting with skin diseases which can guide decisions at the level of primary healthcare settings regarding referral for skin diseases to speciality centres.

Limitations

Considering fewer number of cases in each of the diseases in this study, the results need to be interpreted with caution. This could have been a multicentric study enrolling more participants from each of the Primary Health Care settings in the state to have adequate numbers from each of the skin conditions analysed so as to use the appropriate measures of central tendency (Median) for a meaningful interpretation of the study findings.

REFERENCES

1. Finlay AY. Quality of life indices. Indian J Dermatol Venerol Leprol. 2004;70:143–48.
2. Hay R, Bendeck SE, Chen S, et al. Skin diseases. In: Jamison DT, Breman JG, Measham AR, editors. Disease control priorities in developing countries. 2nd edition. New York: Oxford University Press; 2006;707–22.
3. Finlay AY, Khan G. Dermatology Life Quality Index (DLQI)-a simple practical measure for routine clinical use. Clin Exp Dermatol. 1994;19:210-6.
4. [accessed online https://www.cardiff.ac.uk/medicine/resources/quality-of-life-questionnaires/dermatology-life-quality-index, 24th. June 2019]
5. Ghafoor R, Saleem F, Iqbal Q, Hassali MA, Hashmi FK, Anwar M, et al. Quality of Life in Patients with Skin Diseases Attending a Public Healthcare Institute of Quetta City, Pakistan. J Pharm Pract Community Med 2018;4:16–20.
6. Renuka A, Purandare CS, Suresh K, Kulkarni AP. Study of Pattern of skin diseases among patients attending OPD of Dermatology, Venereology & Leprosy Department at Bharati Vidhyapeeth Deemed University Medical College & Hospital, Sangli. Int J Healthc Biomed Res. 2016;4:30–4.
7. Joel JJ, Jose N, Shastry CS. Patterns of Skin Disease and Prescribing Trends in Rural India. Sch Acad J Pharm. 2013;2:304–9.
8. Baur B, Sarkar J, Manna N, Bandyopadhyay L. The Pattern of Dermatological Disorders among Patients Attending the Skin O.P.D of A Tertiary Care Hospital in Kolkata. J Dent Med Sci. 2013;3:4–9.
9. Ahmed G, Mishra DK. A hospital-based observational study on the frequency of different skin diseases and patterns of topical steroid misuse. Indian J Drugs Dermatol 2018;4:67-72.
10. Sangeetha T, Raghu MT, Nataraj GR, Kumar SV, Krishna SY, Johnson FJ, et al. Assessment of prescribing pattern and quality of life of dermatology patients by using dermatology quality life index. Int J Res Dermatol 2017;3:272-6.
11. Al-Hoqail IA. Impairment of quality of life among adults with skin disease in King Fahad Medical City, Saudi Arabia. J Family Community Med 2009;16:105-9.
12. Tejada CD, Mendoza-Sassi RA, Almeida Jr HL, Figueiredo PN, Tejada VF. Impact on the quality of life of dermatological patients in southern Brazil. An Bras Dermatol 2011;86:1113-21.