Study of Quality of life (QoL) of Patients with Common Skin Diseases

Mohd Shaigan[1], Uzma Eram[2], Sameena Ahmad[3], Anees Ahmad[4], Salman Khalil[5]

[1]Assistant Professor, Department of Community Medicine, Venkateshwar Institute of Medical Sciences, Gajraula, [2]Associate Professor in the Department of Community Medicine, JN Medical College, AMU, Aligarh, [3]Senior Resident, Department of Community Medicine, JN Medical College, AMU, Aligarh, [4]Professor, Department of Community Medicine, JN Medical College, AMU, Aligarh, [5]Associate Professor, Department of Community Medicine, JN Medical College, AMU, Aligarh.

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Abstract

The pattern of skin diseases varies from one country to another. In particular, in India, where customs, religions, languages, climate and socioeconomic conditions vary across different parts of the country.It is very important to measure the impact of dermatologic disease on the quality of life. 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 dermatological services. Quality of life measures may also be effectively used in auditing clinical activities.

This study was conducted in the field practice areas of the Urban and Rural Health Centres, Department of Community Medicine, Jawaharlal Nehru Medical College, Aligarh Muslim University, Aligarh, Uttar Pradesh. It was community based and cross- sectional study. The study period was one year i.e. from June 2016 to May 2017. *Inclusion criteria*: All individuals of the household. *Exclusion Criteria*: All who did not gave consent. *Sampling Method*: Systematic random sampling with Population Proportionate to Size (PPS) was used to draw sample size. Ethical clearance was obtained from ethical committee, JNMC, AMU, Aligarh. Informed verbal consent was taken from each subject before interview(Copy of ethical committee is attached).

Results reported that the overall mean QoL Indices score of the study population, the mean for the urban and rural population is almost equal. There was overall moderate effect on quality of life of both males and females in the study population. There was significant moderate effect on quality of life of patients in the older age groups (most affected-51-60yr, followed by 41-50yr, 31-40yr, and 19-30yr) compared to the age group 6-10 years.

Measuring the impairment of the quality of life in dermatology 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 assessed.

Key Words: skin diseases, quality of life, rural, urban

Introduction

The pattern of skin diseases varies from one country to another. In particular, in India, where customs, religions, languages, climate and socioeconomic conditions vary across different parts of the country. Due to lack of education, patients may not report for treatment of the skin disease. Up to 80% of the populace suffering from skin problems may not seek medical help. Knowledge of this hidden

Corresponding Author: Uzma Eram, Associate Professor in the Department of Community Medicine, JN Medical College, AMU, Aligarh.

section of population is important as it can affect the delivery of health care[1].

It is very important to measure the impact of dermatologic disease on the quality of life.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 dermatological services. Quality of life measures may also be effectively used in auditing clinical activities[2].

Material and Methods

This study was conducted in the field practice areas of the Urban and Rural Health Centres, Department of Community Medicine, Jawaharlal Nehru Medical College, Aligarh Muslim University, Aligarh, Uttar Pradesh. It was community based and cross- sectional study.The study period was one year i.e. from June 2016 to May 2017.

Inclusion criteria: All individuals of the household.

Exclusion Criteria: All who did not gave consent.

Sampling Method: Systematic random sampling with Population Proportionate to Size (PPS) was used to draw sample size.

Sample size calculation:

$n = Z^2p\ (100- p)/l^2$

$n = (1.96)^2p(100- p)/l^2$,

$n \sim 4pq/l^2$

$q = 100- p$

p= prevalence of common skin disease(s) found in the pilot study

The sample size was calculated on the basis of pilot study conducted on 50 household each in RHTC and UHTC. As per pilot study, the prevalence of common skin diseases in registered areas of RHTC and UHTC came out to be 20% and 17% respectively.

Sample size calculation:

$n = Z^2p\ (100- p)/l^2$

l=(absolute allowable error)=2% at 95% confidence interval

Substituting the values for **RHTC**

$(1.96)^2p(100- p)/l^2= 4* 20(100- 20)/2^2$

$= 1600$

Substituting the values for **UHTC**

$(1.96)^2p(100- p)/l^2= 4* 17(100- 17)/2^2$

$=1411$

≈ 1420

Applying PPS for both RHTC and UHTC

- Data was entered and managed in SPSS-20 (Statistical Package of Social Science). For descriptive purpose frequency and percentage were used.
- To test associations chi square test, independent t test and one way ANOVA was applied.P value <0.05 was considered significant

Ethical clearance was obtained from ethical committee, JNMC, AMU, Aligarh. Informed verbal consent was taken from each subject before interview(Copy of ethical committee is attached).

Dermatological Life Quality Index/Children's Dermatological Life Quality Index questionnaire

10 item questionnaire with response score range from 0(min) to 3(max) for each item.

Cumulative scoring for individual subject graded as

GRADE I 0-1 (NO EFFECT ON PATIENT LIFE)

GRADE II 2-5 (SMALL EFFECT ON PATIENT LIFE)

GRADE III 6-10 (MODERATE EFFECT ON PATIENT LIFE)

GRADE IV 11-20 (VERY LARGE EFFECT ON PATIENT LIFE)

GRADE V 21-30 (EXTREMELY LARGE EFFECT ON PATIENT LIFE)

Results

Table 1: QoL Index mean score comparison with area

AREA	QoL indices score	
	Mean	S.D
Urban	5.78	3.55
Rural	6.17	3.13
t value= -1.48 df=661 p = 0.14		

Table 2: Gender wise association of DLQI/CDLQI score.

DLQI	Urban		Rural	
	Male	Female	Male	Female
Mean	5.55	5.99	5.96	6.38
S.D	3.27	3.77	2.99	3.26
t value = -1.00, df = 269, p = 0.317			t value = -1.35, df = 391, p=0.179	

Table 3: Association of QoL indices score with age.

Age (Years)	Urban		Rural	
	Mean	S.D	Mean	S.D
6-10	4.39	2.14	4.52	2.59
11-18	5.59	3.13	5.84	3.21
19-30	6.24	3.59	6.51	3.13
31-40	5.88	4.44	6.43	2.47
41-50	5.00	1.86	6.73	3.66
51-60	6.50	4.56	7.48	3.16
<60	9.50	6.59	5.93	3.81
f = 2.953, df = 6, p = 0.008			f = 3.419, df = 6, p=0.003	

Discussion

Table 1: shows the overall mean QoL Indices score of the study population, the mean for the urban and rural population is almost equal i.e. 5.55 ± 3.66 (Mean ± S.D) for urban and 5.72 ± 3.39 (Mean ± S.D) for rural, depicting moderate effect on the overall quality of life (QoL) of population in both the areas. No statistically significant difference was observed for the rural and urban mean scoring of QoL indices in the study area. The mean score was observed in other studies as; Astudy[3] evaluated the impact of psoriasis on the quality of life in patients with psoriasis. It was reported that the mean DLQI score was 8.95 ± 8.48 (Mean ± SD).

Another study[4] found theprevalence of skin diseases in the hilly population of Nepal and reported the mean DLQI score to be 10.7 ±3.2 (range 7-19), indicative of a very large impact on QoL.

Cross-sectional study conducted in Saudi Arabia[2]observed aoverall mean DLQI of 8.32 ± 7.1 (Mean ± S.D), shows a moderate impact on quality of life among patients affected with dermatological conditions.

The DLQI mean (SD) score was 6.5 (5.6) in the study population of a study[5].

Dermatology Life Quality Index (DLQI) questionnaire was used in Iranian patients with vitiligo in a study[6] andreported DLQI scores ranged from 0 to 24 (mean ± SD, 7.05 ± 5.13), showing an overall moderate impact of skin diseases in the study population.

From table 2, it was observed that in urban population, the mean scores of QoL indices for males was 5.55 ± 3.27 (Mean ± S.D) and for females it was

5.99 ± 3.77 (Mean ± S.D) while in rural population it was 5.96 ± 2.99 (Mean ± S.D) for males and 6.38 ± 3.26 (Mean ± S.D). It can be inferred that there was overall moderate effect on quality of life of both males and females in the study population.

Other study[2] observed a significant difference of DLQI mean with sex of the population and reported it to be among females (9.02) than males (6.46).

Table 3 shows that lowest mean QoL indices score in urban population i.e.

4.39 ± 2.14 (Mean ± S.D) was observed for 6-10 years group and highest i.e. 9.50 ± 6.59 (Mean ± S.D). The difference of the mean between different age groups appeared to be significant. On further analysis by applying post hoc test, significance was observed between age groups i.e. 6-10 years compared to 11-18 years, 41-50 years and > 60 years. this shows that in urban area the patients of older age had poor quality of life as compared to younger ones.

The mean of the rural area was also found to be lowest i.e. 4.52 ± 6.59 (Mean ± S.D) in the age group 6-10 years but the highest QoL indices mean score i.e. 7.48 ± 6.59 (Mean ± S.D) was observed in the age group 51-60 years. The difference in the means of

different age group came out be significant in rural population also. On post hoc test analysis the mean QoL indices score was found to be significantly less for 6-10 years group compared to 19-30 years, 31-40 years, 41-50 years, and 51-60 years age groups. This clearly depicts that there was significant moderate effect on quality of life of patients in the older age groups (most affected-51-60yr, followed by 41-50yr, 31-40yr, and 19-30yr) compared to the age group 6-10 years.

This can be attributed to the fact that children are less bothered about their illness and looks compared to adults who are more sensitized for their looks and also concerned what others may think about skin problems they have.

As far as variation of mean QoL indices with age is concerned in other studies, Mishra et al[7] in their study on 100 patients of vitiligo did not find any significant correlation with age.

Same was observed in the study of Al-Hoqail,[2] that age had no influence on the degree of impairment in patients affected with skin diseases in Saudi Arabia.

Recommendation

Measuring the impairment of the quality of life in dermatology 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 assessed. Improvement in the environmental conditions by community participation can bring down the morbidity profile. Proper education should be given.

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