

An Assessment of Skin Diseases in People and Their Quality of Life in Bundelkhand Region of Uttar Pradesh

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Abstract

Background: Skin diseases occur in all age groups in developed and developing countries. Various types of skin diseases are found worldwide and depend on factors like environment, surrounding ecology, dietary habits, socioeconomic status, mental health, and literacy. Health-related quality of life (HRQOL) improves after treatment or cure of the diseases.

Objectives: To estimate the pattern of skin disease. To find out the quality of life and association of skin disease with sociodemographic factors among patients.

Methods: This observational cross-sectional study was done in skin OPD at the tertiary care center, Banda district of Uttar Pradesh, India from May 2022 to July 2022. All patients who attended to skin OPD during study period were included in the study after taking informed verbal consent.

Results: Skin diseases had further divided in subcategories which were infectious conditions, pigmentary disorders, inflammatory dermatoses, miscellaneous skin conditions, benign tumor and other lesions with their percentage 44.8, 10.5, 28.6, 7.1, 2.9 and 6.2%, respectively in this study. Classes of DQLI where major portion of patients (49.52%) were in 'Small effect on patient's life' category. The relation of age, religion, education and member of household with history of skin disease were found to be highly statistically significant.

Conclusion: Infectious skin diseases were found more common in study area. Male populations were more commonly affected. Skin diseases were more common in age group of 18–60 years. Study participants showed no predominant effect on quality of life. But small effect class had major effect on participant's quality of life.

Keywords: Humans, Male, Quality of Life, Literacy, Developing Countries, Skin Diseases, Infectious, Religion, Neoplasms, Informed Consent, Habits.

INTRODUCTION

Skin covers all over the human body so it is the largest organ of the human body. Patterns and quantity of skin diseases depend upon factors like nutrition, sociocultural habit, topography and genetics, etc.^[1] Studies on the prevalence of skin diseases were more commonly done in community-level medical camps compared to hospital-based studies.^[1-4] Skin diseases occur in all age groups in developed and developing countries.^[5] Various types of skin diseases are

found worldwide and depend on factors like environment, surrounding ecology, dietary habits, socioeconomic status, mental health, and literacy.^[6,7] Skin diseases present with various symptoms, including itching, discomfort, pain,

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irritation on skin lesions, and loss of sensation. The skin lesions affecting both physically and psychological ultimately leading to significant deprivation in patient's health related quality of life.^[8-10] It is more common in lower socioeconomic populations because of limited access to health care.

From 1990 to 2017, skin disease and subcutaneous disease grew 46.8%.^[11] Skin diseases are divided into two major types infectious (bacterial, fungal or viral) and non-infectious, according to causes. Non-infectious skin diseases are generally of the following types - allergy, hypersensitivity, physical or chemical damage and autoimmune. Health-related quality of life (HRQoL) improves after treatment/cure of skin diseases.^[8,10,12] Mostly, transmissible skin diseases occur in low socioeconomic persons where overcrowding in the household is seen. But income, literacy and quality of home were not having much important for the transmission of skin diseases.^[13]

Skin diseases are not cured easily because it takes time for treatment. Cost of treatment is high. Low treatment demand and low compliance in developing countries are due to poor healthcare delivery systems.^[14]

The study was done to estimate the pattern of skin disease, quality of life and association of skin disease with sociodemographic factors among patients presenting to a tertiary care centre of the Bundelkhand region of Uttar Pradesh.

MATERIALS AND METHODS

This hospital-based cross-sectional study was done in skin OPD Government Medical College, Banda, a tertiary hospital in Bundelkhand, Uttar Pradesh, India from May 2022 to July 2022.

Inclusion Criteria

- Patients of age 18 years and above
- Who gave informed verbal consent for the study

Exclusion Criteria

- Patients age < 18 years
- HIV patient
- Diagnosis not confirmed
- Severely ill
- Those who didn't give informed verbal consent

Sample Size

All patients who came to skin OPD during study period as per inclusion and exclusion criteria.

Data Collection

First part of the questionnaire was related to the sociodemographic profile (age, gender, marital status, education, occupation etc.) followed by a diagnosis of disease of same patient. The second part of the questionnaire was taken using the Dermatology Life Quality Index (DLQI) 15 Hindi version to assess the impact of the disease and its treatment on the social and behavioral life of the patients.

Statistical Analysis

The data collected from the questionnaires was processed in MS Excel. While the statistical analysis was executed in IBM SPSS Statistics 23 software. Descriptive statistics were used for number and percentages. Association with the factors was tested for significance using the Chi-square test and $p < 0.05$ was considered statistically significant.

RESULTS

Table 1 shows skin diseases were categorized in infectious conditions, pigmentary disorders, inflammatory dermatoses, miscellaneous skin conditions, benign tumors and other lesions with their percentage 44.8, 10.5, 28.6, 7.1, 2.9 and 6.2%, respectively in this study. The most common infectious disease was of dermatophyte infections (81.9%) followed by scabies (10.7%). Only keloid was found in benign tumors.

Table 2 depicts class of DQLI where major portion of patients (49.5%) belong to 'Small effect on patient's life' followed by 'No effect at all on patient's life' (34.3%) and 'Moderate effect on a patient's life' (15.2%). Class 'Very large effect on a patient's life' and class 'extremely large effect on a patient's life' both had one patient.

Table 3 out of total 210 patients of skin diseases, 126 (60.0%) males and 84 females (40.0%) participated in this study. A chi-square test was performed to examine the relationship between sociodemographic factors and a history of skin disease (yes or no). The relation of age, religion, education and member of a household with a history of skin disease were highly statistically significant and their *p-values* were 0.002, 0.000, 0.000 and 0.000, respectively.

DISCUSSION

In India, hospital-based studies on skin prevalence were few compared to community-level studies. In this survey, the main focus was to detect pattern of skin disease, the quality of life affected by skin disease and the association of skin disease with sociodemographic factors.

Skin disease-related study was not done in Banda district, Chitrakoot dham mandal prior to this study. The percentage of skin diseases were relatively common in this area. Infectious skin diseases form bulk of diseases. The demand and treatment compliance were not good in the study area. India has varied geographical area so skin disease prevalence vary from 7.9 to 60%.^[16-19]

In this study, the relation of age, religion, education and member of household with history of skin disease were highly statistically significant and their *p-values* were 0.002, 0.000, 0.000 and 0.000, respectively. High prevalence of infectious skin disease among school children who had lived with > 3 (12.1%) crowding index was shown significant by Iraq, Khalifa KA *et al.*^[20] According to Saudi Arabia, Amin TT *et al.*,^[21] who had large family size that family had a predictor risk factor for some transmissible "skin infections" (pediculosis and tinea). Classes of DQLI where major portion of patients (49.5%)

Table 1: Distribution of skin diseases of study subjects

Disease	Number	Percentage
Infectious conditions	94	44.8
Dermatophyte infections	77	81.9%
Scabies	10	10.7%
Viral warts	2	2.1%
Herpes	3	3.2%
Leprosy	2	2.1%
Pigmentary disorders	22	10.5
Melasma	14	63.6%
Vitiligo	8	36.4%
Inflammatory dermatoses	60	28.6
Acne	38	63.3%
Folliculitis	3	5.0%
Allergic Contact dermatitis	19	31.7%
Miscellaneous skin conditions	15	7.1
Traumatic wound	2	13.3%
Stretch marks	13	86.7%
Benign tumors	6	2.9
Keloid	6	100%
Other lesions	13	6.2
Venous ulcer	5	38.5%
Psoriasis	8	61.5%

Table 2: Assessment of dermatology quality of life

Classes of DQLI	Number	Percentage
0-1 (No effect at all on patient's life)	72	34.3
2-5 (Small effect on patient's life)	104	49.5
6-10 (Moderate effect on a patient's life)	32	15.2
11-20 (Very large effect on a patient's life)	1	0.5
21-30 (Extremely large effect on a patient's life)	1	0.5

were belong to 'Small effect on patient's life' followed by 'No effect at all on patient's life' (34.3%) and 'Moderate effect on a patient's life' (15.2%). Class 'Very large effect on a patient's life' and class 'extremely large effect on a patient's life' both had one patient. Similar findings were found in study by C. Anirudh Jagannadh *et al.*^[22]

The primary health center doctors were first contact for patients needing skin disease-related advice and treatment. They had no proper training for the treatment and identification of skin disease.^[23] Proper training of doctors of primary health center based for skin related disease and referral pattern of skin disease is needed.^[24]

This data and statistical results will help in community based study and also help in health related policies.

Table 3: Association of sociodemographic factors with skin problem

Charac-teristics	Previous skin problems			Chi-Square	p-value
	Yes (%)	No (%)	Total (%)		
Age					
18-60 yrs	155 (86.1)	25 (13.9)	180 (100.0)	9.393	0.002
> 60 yrs	19 (63.3)	11 (36.7)	30 (100.0)		
Gender					
Male	103 (81.7)	23 (18.3)	126 (100.0)	0.274	0.60
Female	71 (84.5)	13 (15.5)	84 (100.0)		
Marital status					
Married	150 (83.3)	30 (16.7)	180 (100.0)	0.201	0.65
Unmarried	24 (80.0)	06 (20.0)	30 (100.0)		
Religion					
Hindu	147 (87.5)	21 (12.5)	168 (100.0)	12.748	<0.001
Others	27 (64.3)	15 (35.7)	42 (100.0)		
Education					
Illiterate	133 (90.5)	14 (9.5)	147 (100.0)	20.026	<0.001
Literate	41 (65.1)	22 (34.9)	63 (100.0)		
Occupation					
Farmer	99 (86.1)	16 (13.9)	115 (100.0)	1.867	0.17
Others	75 (78.9)	20 (21.1)	95 (100.0)		
Member in household					
≤ 4	63 (71.6)	25 (28.4)	88 (100.0)	13.535	<0.001
>4	111 (91.0)	11 (9.0)	122 (100.0)		

Ethical Approval

The Institutional Ethics Committee, RDMC/ 497A/2022 approved the study. Firstly the patient were explained about the study, the need of the study after which the researcher took verbal consent. The researcher asked open-ended questionnaire for the collection of sociodemographic data. The researcher completed the questionnaire for those patients who could not read or write.

CONCLUSION

Infectious skin disease was more common in the study population. Skin diseases included were dermatophyte infections, scabies, viral warts, herpes, leprosy, melasma, vitiligo, acne and folliculitis etc.

The majority of study participants had small effect on the quality of life.

RECOMMENDATION

Proper sanitation and hygiene should be maintained to reduce skin disease prevalence. Trained medical officer to identify skin diseases, treat them and properly counsel patients about skin diseases.

LIMITATIONS OF THE STUDY

This was a hospital-based cross-sectional study, and the study duration was only three months.

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CONFLICT OF INTEREST

None declared

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