



ORIGINAL ARTICLE

Novel trends of frequency, demographics and clinical presentation of skin disorders in only public hospital in south of Lahore: A Descriptive observational study over 1 year.

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ABSTRACT... Objective: To study the pattern of skin diseases in our population with respect to different age groups, gender and seasonal variations. **Study Design:** Observational Retrospective study. **Setting:** Department of Dermatology, Lahore General Hospital, a tertiary care referral hospital situated in second big city of Pakistan i.e Lahore. **Period:** July 2021 to June 2022. **Methods:** A total of 65284 patients presenting to skin OPD were studied. Demographic details were noted and diagnosis was made after detailed history, examination and appropriate investigations like scraping or smears. Data was analyzed for various age groups, gender distribution and effect of variables on diagnosis. **Results:** Out of 65284 patients, 38 %were male & 62% were female. Most of the patients (43%) were in age group of 21-40 years. Scabies was the most prevalent dermatosis and affected 27% of study population. Three most common dermatosis were tinea, scabies and acne. The maximum number of dermatosis was seen in the months of summer. **Conclusion:** Infectious diseases pose a major burden to skin health of most of the population suffering from dermatological problem. Fungal infections and scabies are treatable but very common diseases contributing in burden of dermatological disorder in population presenting to hospitals.

Key words: Skin Diseases, Scabies, Tinea.

INTRODUCTION

The burden of skin diseases is significant worldwide, contributing to considerable morbidity and affecting the quality of life. In developing countries like Pakistan, skin disorders represent a major public health concern, particularly in underserved populations. Public hospitals in urban areas often serve as the primary point of healthcare for individuals from diverse socio-economic backgrounds. Understanding the epidemiology and clinical patterns of skin diseases in such settings is crucial for devising effective healthcare policies and resource allocation.

The spectrum of skin diseases fluctuates based on the season, geographical regions, and even within different areas of the same country.¹ Similarly, it also differs according to the many environment, socio economic factor and racial

factors.² A study in Scotland showed that 14 % of all consultations in primary healthcare were related to skin diseases.³ Skin disorders have less apparent morbidity but can cause high mobility. Moreover, cutaneous manifestations are act as a window to internal status of patient. Therefore, early detection of skin disease is important not just to treat patient but also to prevent spread of communicable disease.

Lahore, the capital city of Punjab, is one of the most populous cities in Pakistan and has a diverse population. However, there is limited data on the prevalence and characteristics of skin disorders in the southern region of Lahore, particularly in public healthcare facilities that cater to the economically disadvantaged. Previous studies in other regions of Pakistan have highlighted the prevalence of skin conditions such as eczema,

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acne, and infectious diseases like scabies and fungal infections, which are influenced by factors such as climate, hygiene, and socio-economic status.^{4,5}

Knowledge about incidence and pattern of skin disease in any community can help in improving education of common public, their nutritional status and also in improving sanitary measures.¹ The burden of skin diseases, as revealed by various studies, can significantly impact public health initiatives and policy development. Skin diseases are particularly prevalent in developing countries. Spectrum of these diseases range from acne and scabies to life threatening disorders like toxic epidermal necrolysis & purpura fulminans.⁶

This study aims to elaborate the patterns of skin diseases in population of south of Lahore with respect to different age groups, gender and seasonal variation over a one-year period. The findings of this study will provide valuable insights for healthcare providers and policymakers to improve dermatological services in similar settings.

METHODS

This was an observational study conducted in department of dermatology at Lahore General Hospital, a tertiary care referral hospital situated in second big city of Pakistan i.e Lahore.

Study was carried out after approval of Hospital Ethical committee (07/23/27-01-23) from July 2021 to June 2022. All patients presenting to outpatient department (OPD) for having skin problem were included in study. Diagnosis was made by consultant dermatologist based on detailed history, clinical presentation and appropriate investigations like scaring for fungus/mite, Tzanck smear, LD body smear and skin biopsy. Patients of all ages were included in study but patients were divided into various groups i.e: 0-20 years, 20-40 years, 41-60 years and >50 years.

The diagnoses were grouped into categories like Infestations, infections, acne, eczema, psoriasis, drug reactions, alopecia, vitiligo, urticarial,

keratinization disorders, blistering disorders and autoimmune disorders. Diagnosis which didn't fit into these categories were classified as miscellaneous. The diseases were also classified according to four seasons namely spring summer, winter & autumn. Different patterns of skin disorders in these patients were noted with their demographic details.

Data was entered, tabulated in SPSS and descriptive analysis was done using variables (mean & percentage). Different dermatoses with seasonal variation were compared. Frequency & percentages were calculated for qualitative variables like gender and diagnosis.

RESULTS

A total of 66201 patients presented in outpatient department. Out of them, 65284 patients were excluded as they didn't fulfill inclusion criteria. So 65284 were evaluated. Out of these 65284 patients 62 % were female and 38 % were male. Male to female ratio was 1:1.6. Age range was 0-87 years. 47 % were of age was $27.55 \pm$ years. Majority (47%) of patients belonged to age group of 21-40 years.

Among 65284 total cases, scabies was the most common skin disease seen which affected 27 % of total patients (n=18076). Description of scabies in relation to gender and age distribution is shown in Table-III.

The three most common dermatoses were scabies in 15%, acne in 12% and Tinea in 11%. Figure 3 shows details about other dermatosis in addition to commonly seen dermatosis. Most common dermatoses in female was acne while large number of male presented with tinea corporis.

The maximum number of dermatosis was seen in summer and autumn whereas winter had the lower number. On comparing three common dermatoses, acne and fungal infections were more seen in summer and spring while scabies cases were more in winter. Seasonal distribution is seen in Figure-2.

Dermatophytosis was the most commonly seen infection and included tinea cruris, tinea capitis (more in age less than 20 years) and Pityriasis versicolor.

Most common bacterial infection was impetigo (1.5%) while viral warts was most common among viral infections (3%). Total infectious dermatoses were 31,388 (49%). Among autoimmune blistering disorders, pemphigus vulgaris was seen in 76% cases, Pemphigus foliaceus was seen in 20% cases. 80% cases of alopecia were of alopecia areata. Rest of alopecia cases were of androgenetic alopecia (10%) and scarring alopecia (10%). Among psoriasis cases, 52% were of psoriasis vulgaris, 10% each of pustular psoriasis and guttate psoriasis, nail psoriasis 5%, erythrodermic psoriasis 5%, sebopsoriasis 13% and palmoplantar psoriasis 05%. 35% cases of lichen planus were of widespread variety and 30% of Lichen planus /LE overlap and 11% of oral

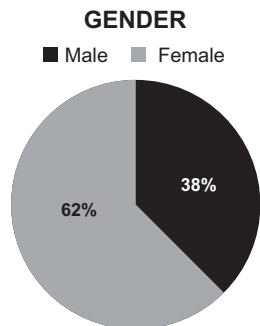


Figure-1. Gender distribution

LP.

Age	Number	Percentage
0-6	5364	8.216408308
7-12	5428	8.314441517
13-20	11520	17.64597757
21-40	30800	47.17848171
41-60	10380	15.89976104
61-80	1552	2.377305312
80>	240	0.367624533
Total	65284	100

Table-I. Various age groups of study

City	Number	Percentage
Lahore district	63325	97%
Kasur district	652	1%
Nankana district	492	0.75%
Sheikhupura district	60	0.25%
Outside Lahore division	652	1%

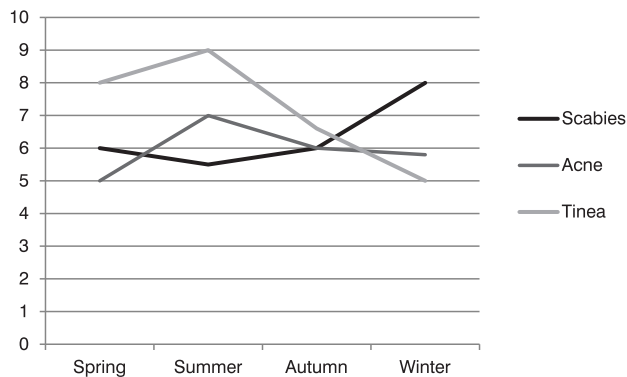


Figure-2. Seasonal pattern of common dermatoses

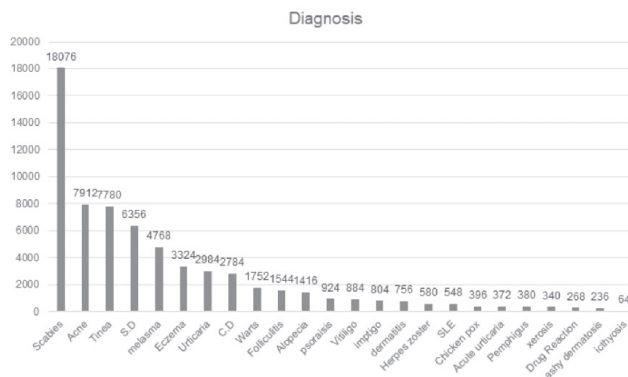


Figure-3. Pattern of various dermatoses

Table-II. Residence wise distribution of cases

Age	Gender		Total
	Female	Male	
<15	2547	2281	4828
15-45	6751	3297	10048
>45	1942	1258	3200
Total	11240	6836	18076

Table-III. Scabies distribution according to gender and age

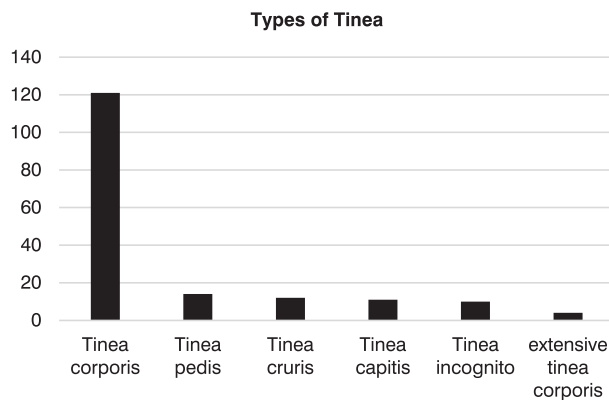
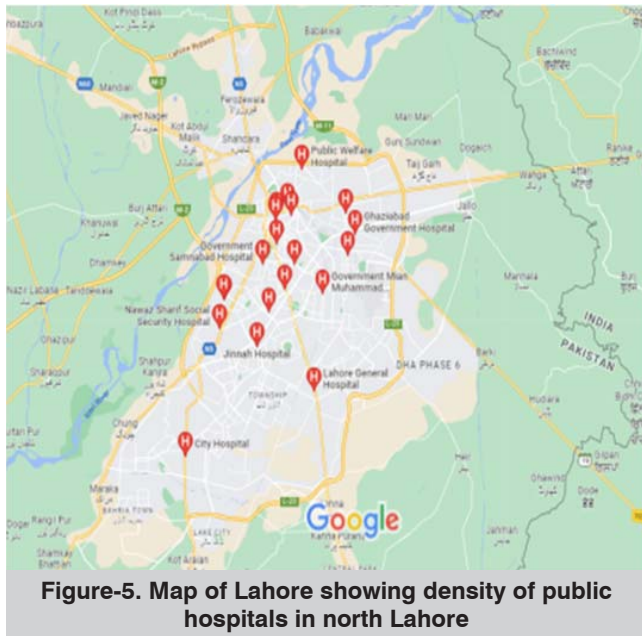


Figure-4. Distribution of various types of tinea



DISCUSSION

Knowledge of pattern and incidence of skin disorders in certain population is a prerequisite for designing clinical services. Skin problems are generally the most common diseases seen in primary care setting all over the globe.⁷

Lahore General Hospital is a 1600 bedded tertiary care hospital located in South of Lahore which is 3rd big city of Pakistan and capital of Punjab province. It caters patients from whole south of Lahore division because it is the only public tertiary care hospital located in south of Lahore. Moreover, patients from Kasur and Nankana districts which are parts of Lahore division also visit Lahore General Hospital. Therefore, the annual turnover of its patients in outpatient department is 99, 500 patients per year. This study was done to get an insight about pattern of different dermatoses in population of south of Lahore & to look on seasonal trends and prevalence in different age groups.

Scabies was the most common dermatosis (15%) overall in our study. These results differ from local study conducted in North Lahore where most common dermatosis seen was eczema (72%).¹ This shows variation in the demographic and socioeconomic characteristics of our study population. Poor environmental hygiene and

overcrowding may account of higher incidence of scabies and infections in our study population which belonged to whole South of Lahore and also from Kasur district.

Scabies when stratified with gender showed predominance of females as compared to males, this may be due to relatively more encounter or repeated exposure by their children or family members. More female population and their low Immunity may also be the contributing factors. These results are comparable to other studies.^{1,5} Age stratification with scabies showed maximum number of cases in age range of 15 -45 years which out of total 65,284 patients comprised the largest group of population in our study. This may be due to their more active lifestyle or their more exposure to environmental factors.

Fungal infections were most common type among infectious dermatosis at rate which are comparable to studies done in India and Nepal.^{8,9} Tinea corporis was most prevalent among all types of tinea and it was of recurrent type in many cases. This shows resistance in dermatophytes to treatment and various host factors also lead to widespread forms of tinea.

Seasonal trend of tinea corporis showed maximum cases during summer season which means fungal infections get worse during summer due to sweating, living or working in closed or poor ventilated rooms, hot, humid climate and poor hygiene status, etc. Scabies was the most common dermatosis in winter season which may be due to dryness and shared living practices.

CONCLUSION

Infectious diseases pose a major burden to skin health of most of the population suffering from dermatological problem. Fungal infections and scabies are treatable but very common diseases contributing in burden of dermatological disorder in population presenting to hospitals.

RECOMMENDATIONS

Further studies on factors predisposing to higher prevalence of infestations like scabies should be done in our territory to prevent its burden

on economy. Moreover, we also recommend a search for adherence to antifungal treatments so as to prevent threatened epidemic like situation of dermatophytosis in our population.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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No.	Author(s) Full Name	Contribution to the paper	Author(s) Signature
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2	Faizaan Asghar	Data Collection.	
3	Hira Tariq	Data Analysis.	