

Spectrum of Skin Diseases and Their Seasonal Distribution: An Experience of the Outpatient Department of Community Based Medical College, Bangladesh (CBMC,B) Hospital

*Sarker S¹, Islam N², Mahi SR³

Abstract

Skin diseases constitute a major public health concern in Bangladesh, particularly in community based settings, where overcrowding, poor hygiene, and limited health awareness contribute to increased transmission of communicable dermatoses. Understanding the pattern and seasonal variation of skin diseases is essential for effective resource allocation and preventive strategies. A cross-sectional, descriptive study was conducted between January and December of 2025, to determine the spectrum of skin diseases and their seasonal distribution among the patients attending the Dermatology Outpatient Department (OPD) of Community Based Medical College,, Bangladesh (CBMC,B) Hospital, Mymensingh, Bangladesh. A total of 2733 patients were included through purposive sampling. Among them, the highest patient attendance was recorded in February (11.9%), followed by August (10.6%) and July (9.7%), while the lowest attendance was observed in March (5.9%). Scabies was the most prevalent disease, accounting for 1273 cases (46.6%), followed by tinea infection (21.2%), chronic dermatitis (11.2%), PSD (PE+ED) (5.0%), and acne vulgaris (4.2%). Other conditions such as urticaria (2.5%), psoriasis (1.5%), impetigo contagiosa (1.4%), melasma (0.8%), vitiligo (0.7%), herpes zoster (0.5%), pityriasis versicolor (0.5%), insect bite hypersensitivity (0.5%), wart (0.6%), chronic paronychia (0.6%), chickenpox (0.4%), keloid (0.3%), and miscellaneous disorders (1.3%) constituted smaller proportions. Infectious dermatoses (scabies, tinea infection, impetigo contagiosa, herpes zoster, chickenpox, pityriasis versicolor, and insect bite hypersensitivity) comprised 1932 cases (70.7%), while non-infectious dermatoses accounted for 801 cases (29.3%). The difference was statistically significant ($p < 0.001$). Seasonal analysis demonstrated that the highest number of cases were observed during the monsoon season (June–September), accounting for 1024 cases (37.5%), followed by winter (December–February) 711(26.0%), summer (March–May) 558(20.4%), and post-monsoon/autumn (October–November) 440(16.1%). Among infectious dermatoses, 825(42.7%) cases were observed during the monsoon months (June–September), followed by 501(26.0%) during winter (December–February), 358(18.5%) during summer (March–May), and 248(12.8%) during post-monsoon/autumn.

CBMJ 2026 July: Vol. 15 No. 02 P:156-162

Keywords: Bangladesh, dermatology practice, infectious dermatoses, skin diseases, seasonal variation

Introduction

Skin diseases are among the most prevalent health conditions worldwide and contribute substantially to global morbidity.¹ Recent Global Burden of Disease analyses have shown that skin and subcutaneous disorders remain leading causes of years lived with disability (YLDs), affecting populations across all age groups.² Although most dermatological conditions are not life-threatening, they significantly impair quality of life, psychological well-being, and work productivity.³ The epidemiology of skin diseases varies considerably depending on geographic, climatic, and socioeconomic factors.⁴ Tropical and subtropical countries experience a higher prevalence of infectious dermatoses due to heat, humidity, and overcrowding.⁵ Bangladesh, characterized by a dense population and humid climate, provides

favorable conditions for the transmission of communicable skin diseases.⁶ Poor sanitation, limited health awareness, and constrained access to dermatological care further contribute to the persistence of these conditions.⁷ Scabies and

1. *Dr. Susthir Sarker, Assistant Professor, Department of Dermatology & Venereology, Community Based Medical College, Bangladesh (CBMC,B) Hospital, Winnerpar, Mymensingh-2200.
2. Dr. Nahida Islam, Associate Professor & Head, Department of Dermatology & Venereology, Community Based Medical College, Bangladesh (CBMC,B) Hospital, Winnerpar, Mymensingh-2200.
3. Dr. Sabrina Rahman Mahi, Intern Doctor, Community Based Medical College, Bangladesh (CBMC,B) Hospital, Winnerpar, Mymensingh-2200.

Address of Correspondence:

Email: susthir32@gmail.com

superficial fungal infections have been reported as dominant dermatological problems in resource-limited settings.⁸ Dermatophytosis, in particular, has shown increasing prevalence in South Asia over recent years, raising concerns about antifungal resistance and recurrent infections.⁹ In addition to infectious dermatoses, non-infectious inflammatory conditions such as eczema and psoriasis also represent significant outpatient burdens.¹⁰ Acne vulgaris remains one of the most common dermatological conditions affecting adolescents and young adults globally.¹¹ Seasonal variation plays a crucial role in the distribution of skin diseases in tropical countries.¹² Increased humidity and rainfall during monsoon months facilitate fungal growth and enhance the transmission of parasitic infestations such as scabies.¹² Studies have demonstrated peaks of infectious dermatoses during warmer and wetter months, whereas certain inflammatory dermatoses may show less pronounced seasonal fluctuation.¹³ In Bangladesh, hospital-based dermatological studies have consistently shown that infectious dermatoses account for a substantial proportion of outpatient visits. However, updated data reflecting current disease trends and seasonal patterns in community-based tertiary institutions remain limited. Reliable epidemiological information is essential for effective healthcare planning, allocation of dermatological services, and implementation of targeted public health interventions.³ Community Based Medical College Hospitals play an important role in delivering dermatological care to both urban and rural populations. Understanding the prevailing spectrum of skin diseases in such settings provides insight into local disease burden and assists in developing preventive strategies tailored to environmental and socioeconomic contexts. Therefore, this study was undertaken to determine the spectrum of skin

diseases and their seasonal distribution among the patients attending the Dermatology Outpatient Department (OPD) of Community Based Medical College, Bangladesh (CBMC,B) Hospital, Mymensingh, Bangladesh, between January and December of 2025. The findings are expected to contribute to the existing evidence base and support context-specific dermatological health planning in Bangladesh.

Methods

This descriptive cross-sectional study was conducted in the Dermatology Outpatient Department of Community Based Medical College, Bangladesh (CBMC,B) Hospital, Mymensingh, Bangladesh, from January to December 2025. A total of 2733 patients who attended the outpatient department during the study period were included. The hospital serves both urban and rural populations, providing a representative overview of dermatological conditions in the surrounding community.

Inclusion criteria: All patients of any age and either sex presenting with dermatological complaints during the study period were eligible for inclusion. Patients who were clinically diagnosed with specific skin diseases and provided written informed consent were enrolled in the study.

Exclusion criteria: Patients with incomplete clinical records, those who declined consent, follow-up cases of previously registered patients during the same study period, and patients requiring emergency inpatient management were excluded from the study. Data was collected using a structured data collection sheet. Qualified dermatologists performed detailed history and clinical examinations. Diagnoses were made primarily on clinical grounds; relevant laboratory investigations were performed when

necessary to confirm specific conditions. Monthly patient attendance and disease categories were recorded systematically. Skin diseases were later grouped into infectious and non-infectious categories for analytical purposes. Collected data was scrutinized, compiled, coded to enter into Microsoft Excel and then analyzed using SPSS version 23.0. Descriptive statistics were expressed as frequency and percentage. Seasonal variation and categorical associations were assessed using the Chi-square test. A p-value of less than 0.05 was considered statistically significant.

The study was approved by the Ethical Review Committee of Community Based Medical College, Bangladesh (CBMC,B), Mymensingh, Bangladesh.

Results

Out of 2733 patients, the highest patient attendance was recorded in February (11.9%), followed by August (10.6%) and July (9.7%), while the lowest attendance was observed in March (5.9%) (Fig. 1). Among the diagnosed conditions, scabies was the most prevalent disease, accounting for 1273 cases (46.6%), followed by tinea infection (21.2%), chronic dermatitis (11.2%), PSD (PE+ED) (5.0%), and acne vulgaris (4.2%). Other conditions such as urticaria (2.5%), psoriasis (1.5%), impetigo contagiosa (1.4%), melasma (0.8%), vitiligo (0.7%), herpes zoster (0.5%), pityriasis versicolor (0.5%), insect bite hypersensitivity (0.5%), wart (0.6%), chronic paronychia (0.6%), chickenpox (0.4%), keloid (0.3%), and miscellaneous disorders (1.3%) constituted smaller proportions (Table-I). When grouped etiologically, infectious dermatoses (scabies, tinea infection, impetigo contagiosa, herpes zoster, chickenpox, pityriasis versicolor, and insect bite hypersensitivity) comprised 1932 cases (70.7%),

while non-infectious dermatoses accounted for 801 cases (29.3%). The difference was statistically significant ($p < 0.001$) (Table-II). Seasonal analysis demonstrated that the highest number of cases occurred during the monsoon season (June–September), accounting for 1024 cases (37.5%), followed by winter (December–February) with 711 cases (26.0%), summer (March–May) with 558 cases (20.4%), and post-monsoon/autumn (October–November) with 440 cases (16.1%) (Table-III). Among infectious dermatoses, 825(42.7%) cases were observed during the monsoon months (June–September), followed by 501(26.0%) during winter (December–February), 358(18.5%) during summer (March–May), and 248(12.8%) during post-monsoon (Table-IV). Scabies cases showed marked clustering during monsoon months, while tinea infections peaked in August and September. However, chronic dermatitis showed relatively uniform distribution throughout the year without sharp seasonal fluctuation.

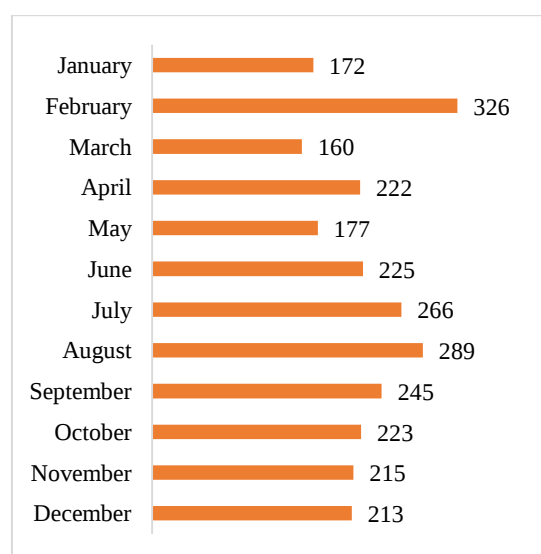


Fig. 1: Month-wise distribution of the Dermatology OPD patients from January to December, 2025 (n=2733)

Table-I: Distribution of patients according to disease spectrum (n=2733)

Skin diseases	Frequency	Percentage
Scabies	1273	46.6
Tinea infection	579	21.2
Chronic dermatitis	306	11.2
PSD (PE+ED)	136	5.0
Acne vulgaris	115	4.2
Urticaria	67	2.5
Psoriasis	40	1.5
Impetigo contagiosa	37	1.4
Others (combined)*	180	6.6

*=Including vitiligo, melasma, herpes zoster, chickenpox, pityriasis versicolor, insect bite hypersensitivity, wart, chronic paronychia, keloid, and miscellaneous.

Table-II: Etiological grouping of the skin diseases

Category	Frequency	Percentage
Infectious dermatoses	1932	70.7
Non-infectious dermatoses	801	29.3
p-value	<0.001 ^S	

Chi-square test was applied; S=significant.

Table-III: Seasonal distribution of the Dermatology OPD patients (n=2733)

Variables	Frequency	Percentage
Monsoon (June – September)	1024	37.5
Post-monsoon/autumn (October – November)	440	16.1
Winter (December – February)	711	26.0
Summer (March – May)	558	20.4

Table-IV: Seasonal distribution of the infectious dermatoses (n=1932)

Variables	Frequency	Percentage
Monsoon (June – September)	825	42.7
Post-monsoon/autumn (October – November)	248	12.8
Winter (December – February)	501	26.0
Summer (March – May)	358	18.5

Discussion

The present study demonstrated that infectious dermatoses constituted the overwhelming majority (70.7%) of outpatient cases, with scabies alone accounting for 46.6% of total diagnoses. This predominance aligns with earlier reports indicating that communicable skin diseases remain a major public health problem in low- and middle-income countries.¹⁴ Overcrowding, poverty, and limited access to hygiene facilities are well-recognized drivers of scabies transmission, particularly in tropical settings.¹⁵ The exceptionally high burden of scabies observed in this study may reflect close interpersonal contact, shared bedding, and inadequate sanitation practices common in densely populated communities.¹⁶ Superficial fungal infections (tinea infections) constituted 21.2% of total cases, making them the second most common diagnosis. Similar rising trends of dermatophytosis have been reported across South Asia in recent years.¹⁷ Climatic conditions characterized by heat and humidity, combined with inappropriate use of topical steroid–antifungal combinations, have been implicated in the persistence and recurrence of these infections.¹⁸ The predominance of fungal infections during humid months in the present study further supports

environmental influence on disease occurrence.¹⁹ Chronic dermatitis accounted for 11.2% of cases, consistent with the growing burden of inflammatory dermatoses globally.²⁰ Urbanization, exposure to irritants, and lifestyle changes have been associated with increasing cases of eczema and contact dermatitis.²¹ Acne vulgaris (4.2%) was observed primarily among adolescents and young adults, reflecting global epidemiological patterns.²² Although acne does not pose a major infectious risk, its psychosocial impact remains substantial and warrants attention in outpatient dermatology services. Seasonal variation was clearly evident in this study, with the highest patient attendance during the monsoon season (37.5%). Infectious dermatoses showed significant clustering in humid months ($p < 0.001$). Seasonal peaks of scabies and fungal infections have been documented in tropical countries, where increased humidity enhances mite survival and fungal proliferation.²³ Similar findings were reported in regional studies, emphasizing the influence of climatic variability on dermatological morbidity.²⁴ The high proportion of patients from lower socioeconomic backgrounds observed in this study further supports the established association between poverty and communicable skin diseases.¹⁵ Limited health literacy and delayed treatment-seeking behavior may contribute to prolonged disease transmission within households.¹⁶ Strengthening community-based awareness programs and improving sanitation infrastructure could play a vital role in reducing disease burden. Compared with hospital-based studies conducted in neighboring countries, the overall dominance of infectious dermatoses in the present study appears higher.^{17,20} This difference may be attributed to the community-based nature of the study setting, which serves a large rural population where communicable

conditions remain prevalent. Additionally, the use of purposive sampling may have captured a higher proportion of symptomatic infectious cases. The findings of this study have important public health implications. The predominance of scabies and dermatophytosis highlights the need for mass awareness campaigns, early diagnosis, and standardized treatment protocols. Implementation of school-based screening programs and community hygiene interventions may substantially reduce transmission rates.²³ Moreover, anticipating seasonal surges could help healthcare administrators allocate adequate resources during high-incidence months. Despite its strengths, this study has certain limitations. Being a single-center study, the findings may not fully represent national prevalence patterns. Diagnoses were primarily clinical, which may introduce diagnostic bias. Nevertheless, the large sample size and year-long data collection provide a comprehensive overview of prevailing dermatological conditions in this community-based hospital setting.

Overall, this study reinforces the continuing dominance of infectious dermatoses in Bangladesh and underscores the need for integrated preventive strategies combining clinical management with public health interventions. Targeted seasonal preparedness and socioeconomic upliftment may significantly reduce the dermatological disease burden in similar settings.²⁵

This study was conducted at a single center with a purposive sampling technique, potentially limiting the generalizability of findings. The absence of histopathological confirmation for all diagnoses may have introduced classification bias. Seasonal data collection over a single year also restricts long-term trend analysis.

Conclusion

Infectious dermatoses, particularly scabies and tinea infections, dominate the disease burden at this community-based hospital, with a significant peak during the monsoon season. This highlights a critical need for targeted public health interventions. Strengthening community awareness regarding hygiene, ensuring early diagnosis, and implementing effective prevention strategies are essential to mitigate the impact of these communicable skin diseases in Bangladesh. Community-based health education programs should promote hygiene and early treatment of skin diseases. Seasonal forecasting can guide pre-monsoon resource allocation for scabies and fungal infections. Integrating dermatological care into primary health services is crucial for reducing the burden of communicable dermatoses in Bangladesh.

References

1. Hay RJ, Johns NE, Williams HC, Bolliger IW, Dellavalle RP, Margolis DJ, et al. The global burden of skin disease in 2010: an analysis of the prevalence and impact of skin conditions. *J Invest Dermatol*. 2014;134(6):1527-34.
2. Karimkhani C, Boyers LN, Prescott L, Welch V, Delamere FM, Nasser M, et al. Global burden of skin disease as reflected in Cochrane Database of Systematic Reviews. *JAMA Dermatol*. 2014;150(9):945-51.
3. Silverberg JI. Public health burden and epidemiology of Atopic Dermatitis. *Dermatologic clinics*. 2017;35(3):283-9.
4. Langan SM, Williams HC. Clinical Features and Diagnostic Criteria of Atopic Dermatitis. In: Hoeger P, Kinsler V, Yan A, Harper J, Oranje A, Bodemer C, et al. eds. *Harper's Textbook of Pediatric Dermatology*. Oxford, UK: John Wiley & Sons Ltd.; 2020.
5. Ugbomoiko US, Oyedele SA, Babamale OA, Heukelbach J. Scabies in resource-poor communities in Nasarawa state, Nigeria: epidemiology, clinical features and factors associated with infestation. *Trop Med Infect Dis*. 2018;3(2):59.
6. Giesey RL, Mehrmal S, Uppal P, Delost ME, Delost GR. Dermatoses of the world: Burden of skin disease and associated socioeconomic status in the world. *J Am Acad Dermatol*. 2021;84(2):556-9.
7. Brans R, Schröder-Kraft C, Skudlik C, John SM, Geier J. Tertiary prevention of occupational skin diseases: prevalence of allergic contact dermatitis and pattern of patch test results. *Contact Dermatitis*. 2019;80(1):35-44.
8. Engelman D, Fuller LC, Steer AC, International Alliance for the Control of Scabies Delphi panel. Consensus criteria for the diagnosis of scabies: a Delphi study of international experts. *PLoS Neglect Trop Dis*. 2018;12(5):e0006549.
9. Verma S, Madhu R. The great Indian epidemic of superficial dermatophytosis: an appraisal. *Ind J Dermatol*. 2017;62(3):227-36.
10. Ehrlich A, Kostecki J, Olkaba H. Trends in dermatology practices and the implications for the workforce. *J Am Acad Dermatol*. 2017;77(4):746-52.
11. Tan JK, Bhate K. A global perspective on the epidemiology of acne. *Br J Dermatol*. 2015;172(S1):3-12.
12. Barman N, Borgohain A, Kundu SS, Kumar NVPK. Seasonal variation of mountain-valley wind circulation and surface layer parameters over the mountainous terrain of the northeastern region of India. *Theor Appl Climatol*. 2021;143(3):1501-12.
13. Del Bino S, Bernerd F. Variations in skin colour and the biological consequences of ultraviolet radiation exposure. *Br J Dermatol*. 2013;169(S 3):33-40.
14. Romani L, Steer AC, Whitfield MJ, Kaldor JM. Prevalence of scabies and impetigo worldwide: a systematic review. *Lancet Infect Dis*. 2015;15(8):960-7.

15. Engelman D, Cantey PT, Marks M, Solomon AW, Chang AY, Chosidow O, et al. The public health control of scabies: priorities for research and action. *Lancet*. 2019;394(10192):81-92.
16. Chandler DJ, Fuller LC. A review of scabies: an infestation more than skin deep. *Dermatology*. 2019;235(2):79-90.
17. Dogra S, Uprety S. The menace of chronic and recurrent dermatophytosis in India: Is the problem deeper than we perceive?. *Ind Dermatol Online J*. 2016;7(2):73-6.
18. Bishnoi A, Vinay K, Dogra S. Emergence of recalcitrant dermatophytosis in India. *Lancet Infect Dis*. 2018;18(3):250-1.
19. Nenoff P, Krüger C, Ginter-Hanselmayer G, Tietz HJ. Mycology – an update. Part 1: Dermatomycoses: causative agents, epidemiology and pathogenesis. *J Dtsch Dermatol Ges*. 2014;12(3):188-209.
20. Drucker AM, Wang AR, Li WQ, Sevetson E, Block JK, Qureshi AA. The burden of atopic dermatitis: summary of a report for the National Eczema Association. *J Invest Dermatol*. 2017;137(1):26-30.
21. Thyssen JP, McFadden JP, Kimber I. The multiple factors affecting the association between atopic dermatitis and contact sensitization. *Allergy*. 2014;69(1):28-36.
22. Heng AH, Chew FT. Systematic review of the epidemiology of acne vulgaris. *Sci Rep*. 2020;10(1):5754.
23. Marks M, McVernon J, McCarthy JS, Enbiale W, Hanna C, Chosidow O, et al. Diagnostics to support the control of scabies – development of two target product profiles. *PLoS Neglect Trop Dis*. 2022;16(8):e0010556.
24. Kumari KU, Yadav NP, Luqman S. Promising essential oils/plant extracts in the prevention and treatment of dandruff pathogenesis. *Curr Top Med Chem*. 2022;22(13):1104-33.
25. May P, Bowen A, Tong S, Steer A, Prince S, Andrews R, et al. Protocol for the systematic review of the prevention, treatment and public health management of impetigo, scabies and fungal skin infections in resource-limited settings. *Syst Rev*. 2016;5(1):162.