



Pattern of Skin Disorders in General Outpatient Clinic, Irrua Specialist Teaching Hospital

Adewuyi Bolanle Toyin^{1,2}, Adewuyi Gbolagade Morufu^{3,4} and Obasanmi Susan¹

¹Department of Family Medicine, Irrua Specialist Teaching Hospital, Edo State, Nigeria

²Department of Family Medicine, Ambrose Alli University, Ekpoma,

³Department of Medical Microbiology & Parasitology, Ambrose Alli University, Ekpoma,

⁴Department of Medical Microbiology & Parasitology, Irrua Specialist Teaching Hospital, Edo State, Nigeria

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*Corresponding author: Adewuyi Gbolagade Morufu

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Abstract

Original Research Article

Introduction: The occurrence of various skin diseases is linked to certain geographical, racial, environmental and socioeconomic factors. There are also seasonal skin disorders that are regularly observed for many centuries. A change in temperature, humidity, ultraviolet rays, wind and atmospheric pollen allergens also influences the pattern of skin diseases. The study aimed to determine the pattern of skin diseases and the association of sociodemographic and clinical factors with the common skin diseases in the study area.

Methods: A retrospective study was conducted on all the patients with skin diseases who attended the outpatient Department of Family Medicine during a span of one year. A thorough medical history with detailed cutaneous examination and needful investigations were carried out on every patient.

Results: A total of 82 patients with skin diseases presented to outpatient clinic of the Department of Family Medicine from 1st April 2024 to 31st March 2025. These comprised of 34 males, and 48 females. Most patients (86.59%) belonged to the age group of 20 -50 years. Out of the 82 cases, Dermatophytosis were the most common skin diseases seen, affecting 40.7% (33) patients, followed by Scabies 23.20% (19), Acne Vulgaris 11.0% (9), Herpes zoster 8.53% (7), Psoriasis 4.87% (4), lichen planus 3.66% (3), Vitiligo 1.22% (1), Neurofibromatosis 1.22% (1), Eczema 1.22% (1), others 4.87% (4). Infectious skin diseases are significantly common among patients with low economic status, HIV and Diabetes mellitus; while non-infectious skin diseases are commoner among elites.

Conclusion: Fungal infections were the most common skin diseases seen in our study. This may be attributed to the upsurge of cases recalcitrant to the available antifungal drugs and also due to the application of topical steroids. Scabies was the second most prevalent skin disease observed. In the present scenario, physicians are facing challenges to combat these diseases which are a burden not only to the individual but to the nation as a whole.

Keywords: Skin, diseases, outpatient.



Introduction

Awareness and knowledge of skin diseases are generally low across all levels of society.¹ This delays diagnosis and treatment; coupled with lack of routine surveillance, burden of skin diseases are underestimated, especially in hard-to reach communities.¹ Skin diseases though often underestimated, yet contribute heavily to comorbidities like depression and anxiety.¹ Skin disorders, acute or chronic can have a significant impact on patients' quality of life, causing physical, social, emotional and financial problems for individuals and their families.^{2,3} The importance of skin health is often underrated because of the chronic, non-life threatening nature of most skin diseases.³ However, the resulting morbidity and discomfort associated with these skin conditions are among the chief reasons people seek medical care.^{3,4}

Skin disorders represent approximately 24% of why people visit healthcare professionals.¹ Skin diseases represent a massive global health burden, with over 4.69 billion cases reported in 2021, accounting for 1.56% of global disability – adjusted life years (DALYs).¹ They are leading cause of non-fatal health loss, consistently ranking among the top causes of disability worldwide due to conditions like dermatitis, acne and infections.¹ Skin diseases ranks 7th globally as a cause of disability, primarily driven by years lived with disability (YLDs) rather than mortality worldwide.¹ The total number of new cases and DALYs has increased steadily, with acne and chronic conditions like pressure ulcers (decubitus ulcer) rising significantly between 1990 and 2021.¹ The burden is highest among children (0-4 years) and in low-middle sociodemographic index (SDI) regions, with high infection rate like Africa.^{1, 5} In developed countries, it has been estimated that one in three patients presents with a dermatological complaint at any point in time. In the U.S.A., approximately 6%

of outpatient visits are for dermatological diseases and non-dermatologists treat a high percentage of these patients^{6,7}. Skin disease is one of the most common presentations clinicians encounter in daily practice. They account for more than 10% of a general practitioners workload and 6% outpatient referrals.^{2,5,6}

Accurate diagnosis of a particular skin disease can be a challenging task, mainly because, Skin disorders may represent a primarily skin disease, like Marjolin's ulcer and Dermatophytosis or a cutaneous manifestation of a systemic or remote disease, like syphilis, HIV et cetera. Other reasons for the diagnostic puzzle may include: First, there are numerous kinds of dermatoses; nearly 3000 are recorded in literatures. Secondly, the complex manifestations of the diseases are also major challenge for doctors. Morphological differences in the appearance of skin lesions directly influence the diagnosis mainly as there can be relatively poor contrast between different skin diseases, which cannot be distinguished without considerable experience.^{4,5} Finally, for different skin diseases, the lesions can be overly similar to be distinguished using only visual information. Different diseases can have similar manifestations and the same disease can have different manifestations in different people, body parts, and disease periods.^{4,5} Globally, identifying the pattern of skin diseases is increasingly becoming important. The pattern of skin disorders in the community vary in several countries and regions based on various factors such as age, gender, exposure to skin irritants, occupation, level of education, development of the health care system, infrastructures, sanitation, nutrition, cultural and religious practices, as well as climatic factors.^{1,2} For instance, the pattern of skin diseases seen in developing countries compared to the developed countries showed that, while infections were rampant in low and medium

income countries (LMIC); malignant and premalignant diseases of the skin were the most common conditions in the High income countries.¹ Influenced by the living environment, areas with reduced economic development and poverty are more prone to skin disease.^{4,5} The high cost of treatment, repeated illness occurrences, and delays in treatment influence healthy survival and social development.

With dedicated focus of the World health Assembly on skin diseases, it is now very expedient for clinicians and health facilities to identify the common skin disorders in their areas, patterns of presentations, seasonal variations as well as clinical and sociodemographic factors associated with them. This is to facilitate prompt diagnosis and treatment of the skin disorders and the underlining conditions. The aim of this study is to identify the common skin disorders in the study area and the associated factors determining the frequency and patterns of manifestations in outpatients' clinics. It is hoped that this may help to improve the education of primary health care providers by focusing on diagnosis and treatment of the most common of cutaneous diseases. This pattern of skin diseases will serves as an index of community development, quality of care provision and guide healthcare resources allocation to skin disorders.

METHODOLOGY

Materials and Methods

This was a retrospective study reviewing all outpatients with skin disorders at the Department of Family Medicine of Irrua Specialist Teaching Hospital, Irrua; a tertiary care centre in Southern Nigeria from 1st April 2024 to 31st March 2025. Data were extracted from the Outpatient registers of the department and patients' case notes. The diseases were categorized. The frequency of the common skin disorders were tabulated according to gender and age distribution. Different patterns of skin disorders in association with other sociodemographic and clinical conditions were

noted and compared using the data from other studies. Statistical analysis was done using SPSS version 22.0.

RESULT

A total of 82 patients presented with skin diseases to outpatient clinic of the Department of Family Medicine of Irrua Specialist Teaching Hospital, Irrua from 1st April 2024 to 31st March 2025. They comprised of 34 males, and 48 females. Out of the 82 cases, Dermatophytosis (fungal infections) were the most common skin diseases seen, affecting 40.7% (33) patients, followed by Scabies 23.20% (19), Acne Vulgaris 11.0% (9), Herpes zoster 8.53% (7), Psoriasis 4.87% (4), lichen planus 3.66% (3), Vitiligo 1.22% (1), Neurofibromatosis 1.22% (1), Eczema 1.22%(1), others 4.87% (4). Dermatophytosis and Acne vulgaris were significantly commoner in women than men. (Table 1) Most patients belonged to the age group of 26-50 years. (Table2) A number of patients have multiple skin disorders, especially, combinations of infectious skin diseases. HIV and Diabetes mellitus had statistically significant association with Dermatophytosis and Herpes zoster. (Table 3) The unemployed had only infectious skin diseases, while noninfectious skin lesions like vitiligo and neurofibromatosis were seen only among civil servants. Similarly, farmers, traders, artisans, students and apprentices had predominantly infectious skin diseases. (Table 4)

DISCUSSION

Adequate knowledge of incidences and prevalence of diseases found most commonly in a population helps to initiate proper health plans, judiciously allocate resources and provide appropriate healthcare services in accordance with the needs of the people. The pattern of skin diseases in a community is useful in designing public health intervention programmes that address these identifiable and treatable causes of morbidity.

This study showed that women presents more with skin diseases at outpatient clinics than men

(Table 1). This may be because women are generally more predisposed to certain types of skin diseases and disorders than men. The differences are multifactorial, stemming from sex hormones: Estrogen directly influence immune response and skin structure;⁹ Female skin generally has a higher surface pH and lower serum production (leading to higher sensitivity/dryness). Furthermore, women have higher skin awareness and seek medical care more often for skin issues, particularly when young.⁹ Skin diseases and disorders are mainly in the young and early middle age groups, 25-50years (Table 2). This coincides with the reproductive age group, when priority is given to appearance, and it's the active service period, characterized with financial independence and independent decision making on health needs. However, this modal age range is contrary to findings in other studies where skin disorders were commonly in older adults, particularly those above 70years.⁸

Skin infections (Dermatophytosis, Scabies, Acne vulgaris and Herpes zoster) were the commonest skin disorder in this study. This is similar to other studies from rural communities in Iran and Tanzania where Infectious skin diseases, especially Dermatophytosis were the commonest¹. Fungal infections were the most prevalent (40.7%), followed by scabies (23.2%) and acne vulgaris (10.97%). The higher prevalence of fungal infections aligns with global trends, particularly in tropical and subtropical regions, where humidity and poor hygiene contribute to their spread.⁷A 2023 study in India reported similar findings, with dermatophytosis dominating outpatient dermatology visits.⁷Another study which is comparable to this study was done by Ayanlowo et al in Lagos, which also had Fungal infections as the most commonly diagnosed skin infections seen in the patients but this was done amongst children aged 18 years and below compared to this study done amongst adults.⁵ This called for the need of public health interventions to improve sanitation and antifungal stewardship.

Scabies accounted for nearly a quarter of cases (23.17%), reflecting its resurgence in crowded

or low-resource settings. Recent outbreaks have been linked to antimicrobial resistance and delayed diagnosis¹⁰. The high proportion in this study suggests potential gaps in community health education or access to scabicides, as highlighted in a 2024 WHO report on neglected tropical skin diseases¹¹.

Acne vulgaris being commoner amongst females, primarily affecting younger age groups, was consistent with other studies linking it to hormonal changes and lifestyle factors like diet and stress^{9,12}. The lower prevalence of psoriasis (4.87%) compared to global estimates (~2–3%) may reflect underdiagnosis in primary care or regional variability¹³. Lichen planus and rarer conditions like neurofibromatosis were infrequent, mirroring their epidemiological patterns¹⁴.

Most studies regarding pattern of skin disorders in Nigeria are hospital based where infections have been replaced by eczematous dermatitis as the most common skin disorder. These hospital based studies are mainly from urban settings, as different from this study which was carried out in a rural setting, though hospital based, where the population dynamics differ from the urban setting and influence the pattern of skin diseases seen.

Although this study was carried out in a tertiary institution, the predominant pattern of skin disease was of the infectious classification, however the aetiology was different: where ours was predominantly of a fungal aetiology, others were mainly of bacterial origin. Improvement in the standard of living, education of the general public, as well as improvement in the environmental sanitation and good nutritious food may help in reducing the frequency of skin diseases in rural communities. Although our study population is small, and may not be a true reflection of rural communities in Nigeria; nevertheless the major skin disorder was infectious which is similar to studies from other rural parts of the country. The implication of these findings are that infections still remain the major causes of skin disorder in rural communities in Nigeria where basic

infrastructure and amenities such as water and electricity are lacking, and number of is limited. These skin disorders which are mainly infectious in origin, are easily treatable. The knowledge of the incidence and pattern of skin diseases in our environment would help healthcare policymakers and providers to appropriately plan and execute policies that will result in improved access to specialist care and training of healthcare providers in all rural communities. In addition, there should be regular preventive health education programs at the community level.

A cross-sectional study in Bangladesh among children, ages 13 – 18 years, had more females in the study compared to males as in this study. The study revealed scabies as the highest infective skin disorder with prevalence of 13.75%, followed by Tinea which was 12.25%.¹⁵ This was in contrast to this study. However most of the studies were done amongst children and predisposing factors to these conditions ranges from illiteracy, poor socioeconomic status and climate.

It is noteworthy that chronic immunosuppressive conditions like HIV and Diabetes mellitus predisposes patients to skin disorders. This is well stated in literatures, revealing higher incidence of skin diseases in

immunosuppressed.^{16, 17} Hence, HIV, Diabetes mellitus patients and others with immunosuppression should be reviewed for possible skin diseases, even when it is not part of their presenting complaints.

CONCLUSION

Primary care physicians should have the working knowledge to handle the most common skin diseases in order to facilitate the management of common dermatological problems and to recognize those cases that require further referral. This may decrease the rate of hospital visits and reduce costs. Studies similar to ours will help confirm the most common conditions seen in dermatology and will provide the guidelines for the type of skin disorders that should be incorporated into the training program of Family Physicians. Despite the fact that skin disease is often associated with less expensive diagnostic and therapeutic procedures and limited mortality, skin disorders are a leading cause of disability in the society⁶. The pattern of skin diseases is, among other parameters, an index of community development and of quality of the provided care. An effort to improve primary care and alleviate the burden on hospital care should be the target of a health policy.

Table 1: Frequency and Statistical Significance of Gender Distribution of Skin Disorders Among Outpatients in ISTH, Irrua

DISEASES	FREQUENCY (PERCENTAGE)	MALE	FEMALE	CHI SQUARE	P-VALUE (P = <0.05)
DERMATOPHYTOSIS	33 (40.24%)	12	21	15.12	0.03
SCABIES	19 (23.17%)	10	9	23.15	2.12
ACNE VULGARIS	9 (10.97%)	3	6	5.417	0.00
HERPES ZOOSTER	7 (8.54%)	3	4	34.77	2.11
PSORIASIS	4 (4.88%)	2	2	31.23	3.09

LICHEN PLANUS	3 (3.66%)	1	2	4.334	0.12
VITILIGO	1 (1.22%)	1	0	6.125	0.11
NEUROFIBROMATOSIS	1 (1.22%)	0	1	5.112	0.12
ECZEMA	1 (1.22%)	0	1	5.112	0.12
OTHERS	4 (4.88%)	2	2	31.23	3.09
TOTAL	82 (100%)	34 (41.46%)	48 (58.54%)	34.42	2.21

Table 2: Frequency Table of Age Distribution of Skin Disorders in Outpatients in ISTH, Irrua

AGE GROUPS	FREQUENCY	PERCENTAGE (%)
16 -20	2	2.44
21- 25	5	6.10
26 -30	10	12.20
31 -35	15	18.29
36 - 40	17	20.73
41 - 45	14	17.07
46 - 50	10	12.20
51 - 55	2	2.44
56 - 60	3	3.66
61 - 65	3	3.66
65 -70	1	1.21
TOTAL	82	100%

Table 3: Frequency Distribution of Associated Clinical Conditions in Outpatients with Skin Disorders in ISTH, Irrua

CLINICAL CONDITIONS	SKIN DISODERS	MALE	FEMALE	TOTAL	Chi square	P-value
MULTIPLE SKIN DISORDERS	Dermatophytosis + Herpes zoster	1	2	3	32.91	0.312

	Dermatophytosis + Acne vulgaris	2	6	8		
	Scabies + Eczema	0	1	1		
HIV COINFECTION					13.62	0.022
	Dermatophytosis	0	3	3		
	Herpes zoster	1	1	2		
COMORBIDITY WITH DIABETES MELLITUS	Dermatophytosis	1	6	7	1.356	0.001
	Herpes zoster	0	2	2		

Table 4: Occupational Distribution of the Skin Disorders

Occupational of patients	Skin disorders	Frequency
Farmers	Dermatophytosis, Scabies Eczema, Scabies, Lichen planus, psoriasis	30
Traders	Dermatophytosis, Herpes zooster, Eczema, psoriasis	14
Apprentice And Students	Dermatophytosis, Herpes zooster, Eczema, Scabies, Drug reactions	12
Civil Servants	Vitiligo, Neurofibromatosis, drug reaction and contact dermatitis	6
Artisans	Dermatophytosis, Scabies, Herpes zooster, Eczema, Lichen planus	12
Unemployed	Dermatophytosis, Scabies, Herpes zooster, Eczema	8
TOTAL		82 (100.00%)

CONTRIBUTIONS OF AUTHORS:

Adewuyi Bolanle Toyin conceived the idea and conceptualized the study. Adewuyi Gbolagade Morufu together with Bolanle was involved in literature search, development of Research

proposal, data collection and analysis, and writing of manuscript for publication. Obasanmi Susan was involved in data generation and data extraction as a clinician who attended to the patients.



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CONFLICTS OF INTEREST:

There is no conflict of interest.

REFERENCE

1. The Global burden of Disease Study 2021 (GBD Study 2021) data according to Oxford Academic. <https://academic.oup.com> (accessed on 27th March, 2026)
2. Akinkungbe AO, Amira CO, Ozoh OB, Fasanmade O and Bandele E. Pattern of skin disorders in a rural community in South-west Nigeria. *The Nig Health J*. 2016; 2(16). Doi: <https://doi.org/10.60787/tnhj.v16i2.251>
3. Zhang B, Luo Y, Zhou X et al. Opportunities and challenges: Classification of Skin Disease Based on Deep Learning. *Chin J Mech. Eng* 2021;34(112). <https://doi.org/10.1186/s10033-021-00629-5>
4. Krishnan S, Almheiri K. Pattern of skin disease at a Dermatology Center: A retrospective study. 2024 CUREUS 16(7): e65259. DOI 10.7759/cureus.65259
5. Ayanlowo O, Puddicombe O, Gold-Olufadi S. Pattern of skin diseases amongst children attending a dermatology Clinic in Lagos, Nigeria. *Pan Afr Med J*.2018; 29:6-9
6. Chaiyamahapurk S. Prevalence and Pattern of Diseases of The Skin and Subcutaneous Tissue in a Primary care Area in Thailand.*Thailand Siriraj Med J* 2021; 73(6):357-362.
7. Verma SB, Vasani R. Emerging challenges in dermatophytosis: A clinical-mycological study from Western India. **Mycoses**. 2023;66(3):210–8.
8. Suvi-Paivikki Sinikumpu, Jari Jokelainen, Anna K. Haarala, Maija-Helena Keranen, Sirkka Keinanen-Kiukaaniemi, Laura Huilaja. The High Prevalence of Skin Diseases in Adults Aged 70 and older. *Journal of the America Geriatrics Society* volume 68, issue 11 /pp. 2565 – 2571. <https://doi.org/10.1111/jgs.16706>
9. W Chen, M Mempel, C Traidl-Hofmann, S Al Khusael, J Ring. Gender aspects in Skin diseases. *J. Eur Acad Dermatol Venerol*. 2010: vol 24, Issue 12/ pp. 1378-1385. <https://doi.org/10.1111/j.1468-3033.2010.03668.x>
10. Symvoulakis EK, Krasagakis K, Komninos ID, Kastrinakis I, Philalithis A, Tosca AD. Primary care and pattern of skin Disease in a Meditaranean Island. *BMC Fam Pract*. 2006Jan 31;7:6. Doi:10.1186/1471-2296-7-6. PMID:16448566; PMC1402299.
11. World Health Organization. *Scabies and other ectoparasites: WHO strategic framework for integrated control*. Geneva: WHO; 2024
12. Tan JK, Bhate K. A global perspective on the epidemiology of Acne; *Br J Dermatol*. 2015 Jul;172 Suppl 1:3-12. doi: 10.1111/bjd.13462. PMID: 25597339.
13. Griffiths CEM, Armstrong AW, Gudjonsson JE, Barker JNWN. Psoriasis. *Lancet*. 2021 Apr 3;397 (10281):1301-1315. doi: 10.1016/S0140-6736(20)32549-6. PMID: 33812489.
14. Le Cleach L, Chosidow O. Clinical practice. Lichen planus. *N Engl J Med*. 2012 Feb 23;366(8):723-32. doi: 10.1056/NEJMcp1103641. PMID: 22356325
15. Sattar A, Sumsuzzoha SM, Zaman S, Das AK. The pattern of Skin Diseases in Patients Attending OPD of Dermatology and Venerology in a Tertiary Care Hospital in Bangladesh. *Annals of Int Med and Dental Res*. 2022; 8(5): 270-277.
16. McLelland J, Rees A, Williams G, Chu T. The incidence of immunosuppression-

related skin disease in long-term transplant patients. *Transplantation*. 1988 Dec;46(6): 871-4. Doi:10.1097/00007890-198812000-00016. PMID:3061083.

17. Edwards E, Yosipovitch G. Skin manifestations of Diabetes Mellitus. In:

Feingold KR, Alder RA, Ahmed SF, et al., editors. *Endotext* [Internet]. South Dartmouth (MA): MDText.com, Inc.; 2000-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK481900/>