

Original Research Article

Sociodemographic determinants of dermatological diseases among paediatric patients attending clinics at the Federal Medical Centre, Umuahia, Abia State, Nigeria

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ABSTRACT

Background: Dermatological diseases are common among children in tropical regions, affecting physical, emotional, and social well-being. In Nigeria, limited attention is given to their socio-demographic determinants. This study aimed to evaluate the influence of socio-demographic factors on dermatological diseases among pediatric patients at the Federal Medical Centre, Umuahia.

Methods: A retrospective review was conducted from January 2020 to December 2022. All 491 pediatric patients aged 0-17 years with dermatological diagnoses and complete socio-demographic data were included. Data were obtained from clinic registers and analyzed using SPSS version 23. Chi-square tests were applied to assess associations, with $p < 0.05$ considered significant.

Results: Inflammatory skin disorders (37.9%), fungal infections (18.9%), and parasitic infections (13.8%) were most prevalent. Atopic dermatitis (18.5%) was the most common diagnosis. Age significantly influenced disease type: atopic dermatitis in infants, tinea capitis in school-age children, and acne in adolescents ($p < 0.001$). Socio-economic status and parental education were also significant ($p < 0.001$), with low-income children more affected by infectious dermatoses, while higher-income households presented more inflammatory conditions. Gender and residence showed no significant associations.

Conclusions: Socio-demographic factors strongly shape pediatric skin disease patterns. Targeted interventions and improved dermatological services are needed to reduce inequalities and enhance child health outcomes in the region.

Keywords: Atopic dermatitis, Fungal infections, Inflammatory dermatoses, Nigeria, Pediatric dermatology, Skin diseases, Socio-demographic factors

INTRODUCTION

Pediatric dermatology is a specialized branch of dermatology that focuses on the diagnosis, treatment, and prevention of skin diseases in infants, children, and adolescents.¹ Although dermatological diseases are common globally, their spectrum varies significantly

across regions, with particularly high prevalence in tropical areas, especially among pediatric populations.²⁻⁵ A review by the World Health Organization (WHO) reported a wide range in the prevalence of skin diseases in children, from 21% to 87%.⁶ Notably, the occurrence of common pediatric skin conditions tends to increase with age.⁴

Infancy, childhood, and adolescence are distinct neuropsychological developmental stages, each uniquely affected by changes in skin appearance.⁷ The visible nature of dermatological conditions can negatively impact a child's self-image and interpersonal relationships from an early age.⁸ These conditions may result in a range of profound consequences physical (e.g., compromised well-being), psychological (e.g., emotional distress), financial (e.g., treatment-related expenses), and social (e.g., school absenteeism).⁹ For example, in Nigeria, the prevalence of body dysmorphic disorder was 36% among dermatology patients, particularly those with facial conditions, and was strongly associated with anxiety and depression ($p<0.001$).¹⁰ Similarly, a European study involving adult acne patients, including adolescents, reported high rates of anxiety and depression, with 12.3% experiencing suicidal ideation related to their skin condition.¹¹

Pediatric skin diseases include a broad range of disorders: infectious (bacterial, viral, fungal, and parasitic), inflammatory (such as atopic dermatitis and psoriasis), and genetic or congenital conditions (e.g., hypo- and hyperpigmentation).¹²⁻¹⁵ Among these, infectious dermatoses are most commonly reported in children from low- and middle-income countries, while inflammatory dermatoses are more prevalent in high-income settings.¹⁶ Certain skin conditions such as lichen nitidus and hemangiomas are primarily seen in childhood, while others, like atopic dermatitis and scabies, occur in both adults and children but often manifest differently in younger patients.¹ Children differ significantly from adults in both the spectrum and management of skin diseases.¹ Their immature immune systems and increased exposure to subclinical infectious carriers in school and home environments make them more vulnerable to infections and infestations.¹⁷

In many cases, these conditions may go unnoticed or be improperly managed, leading to serious complications such as septicemia or renal failure.⁴ Low-income countries like Nigeria often lack the healthcare resources required to adequately respond to such conditions.¹⁶ Moreover, the role of socio-demographic factors in the etiology and management of skin diseases is frequently overlooked, contributing to suboptimal outcomes. Socio-demographic characteristics including age, sex, residential setting, parental occupation, education level, and socioeconomic status significantly influence the prevalence and types of skin diseases seen in children.¹⁸⁻²²

For instance, overcrowding and poor sanitation are known to facilitate the spread of infections like scabies and fungal skin conditions. In Umuahia, both the number of persons per room and bathing frequency were identified as significant risk factors.¹⁸ Scabies, in particular, has a high prevalence in tropical developing countries where overcrowding supports rapid transmission and healthcare access is limited.¹⁶ In Port

Harcourt, lack of water in the household ($p=0.013$), bathing less than twice daily ($p=0.001$), and sharing personal items ($p<0.001$) were all linked to increased skin disease prevalence.¹⁹

Malnutrition, more common in low-income households, is associated with an increased risk of various skin infections, referred to as nutritional dermatoses.²³ In southern Nigeria, children from lower socioeconomic backgrounds were found to have a higher prevalence of skin conditions.¹⁹ Similarly, low parental education can lead to poor hygiene practices and delayed medical consultations, worsening disease outcomes. A study in Nepal found that lower maternal educational status significantly increased the risk of infectious dermatoses in children ($p=0.025$).²²

In Nigeria, the burden of pediatric dermatological conditions is often underestimated due to underreporting and poor health-seeking behaviors. For example, in Jos, patients frequently sought treatment from non-specialist providers such as patent medicine vendors and traditional healers, often resorting to inappropriate medications like steroids.²⁴ Although skin diseases are commonly encountered in pediatric outpatient clinics, they are frequently neglected in health planning and resource allocation. Most studies on dermatological conditions in Nigeria focus on adults or combine adult and pediatric populations, leading to a lack of data specific to children. Furthermore, there is limited research on the socio-demographic determinants of pediatric skin diseases in clinical settings, particularly in southeastern Nigeria. This study aims to bridge that gap by examining how factors such as age, sex, residential area, parental education, and socioeconomic status influence the types and frequencies of skin diseases among children attending dermatology clinics. The findings are expected to provide evidence-based data that will inform healthcare policy, improve clinical outcomes, and reduce the burden of dermatological diseases among children in the region.

METHODS

Study design and setting

This was a retrospective descriptive review conducted at the Federal Medical Centre (FMC), Umuahia, Abia State, Nigeria. FMC Umuahia is a tertiary healthcare institution that serves as a referral center for primary and secondary healthcare facilities within Abia State and neighboring regions. The hospital conducts weekly dermatology outpatient clinics, receiving referrals from various departments, including pediatrics and general outpatient units.

Study duration

The study covered a three-year period from January 2020 to December 2022.

Study population

The study population consisted of all pediatric patients aged 0-17 years who were diagnosed with dermatological conditions at the Federal Medical Centre, Umuahia. Only patients with complete socio-demographic and clinical data were eligible.

Sample size determination

Since this was a retrospective review, no formal sample size calculation was performed. Instead, all 491 eligible cases documented during the study period were included. In total, 491 patients met the inclusion criteria and were analyzed.

Sampling technique

A consecutive sampling technique was employed, whereby all eligible cases recorded in the dermatology clinic registers during the study period were included.

Ethical approval

Ethical approval was obtained from the Health Research Ethics Committee (HREC) of the Federal Medical Centre, Umuahia, Abia State (Ethical Review Number: FMC/QEH/G.596/Vol.10/890). Permission was also obtained from the Heads of the Dermatology and Pediatrics Departments to access clinic registers and patient records. All data were handled with strict confidentiality, and no personal identifiers were used during analysis or reporting. The study adhered to the ethical principles outlined in the Declaration of Helsinki for research involving human subjects.

Informed consent

Informed consent was not applicable due to the retrospective nature of the study.

Data collection

Data for this study were obtained through a retrospective review of the pediatric dermatology outpatient clinic registers at the Federal Medical Centre (FMC), Umuahia, Abia State, Nigeria. The review covered a three-year period from January 2020 to December 2022 and included all pediatric patients aged 0 to 17 years who presented with dermatological conditions during this timeframe.

The clinic registers routinely recorded essential patient details at the time of consultation. For each eligible patient, the following socio-demographic information was extracted: age (later categorized into infancy [0-2 years], preschool period [3-5 years], school-age [6-11 years], and adolescence [12-17 years]), gender, religion, and tribe. Additional data on the patient's residential area,

parental educational level, and parental occupation were also collected as documented in the registers.

Diagnoses of dermatological conditions were primarily made on clinical grounds by consultant dermatologists. These diagnoses were based on comprehensive history-taking and physical examination. In instances where clinical ambiguity existed, laboratory investigations were carried out to aid diagnostic confirmation. Only patients with complete and clearly documented socio-demographic and diagnostic information were included in the final analysis.

Data analysis

Data were entered into Microsoft Excel and analyzed using the Statistical Package for the Social Sciences (SPSS) version 23. Descriptive statistics (frequencies and percentages) were used to summarize the distribution of dermatological conditions. Associations between socio-demographic variables (such as age, sex, parental education and occupation, and residence) and specific skin diseases were assessed using the Chi-square test. A p-value of <0.05 was considered statistically significant.

RESULTS

A total of 491 pediatric patients were included in the study, with ages ranging from infancy to adolescence. The mean age of the study population was 5.89 ± 5.3 years. Age distribution showed that infants (0-2 years) constituted the largest group (39.7%), followed by school-age children (6-11 years, 26.3%), adolescents (12-17 years, 18.5%), and preschool children (3-5 years, 15.5%). Gender distribution was nearly equal, with males accounting for 50.3% and females 49.7% of the population. All patients identified as Christians, and the vast majority were of Igbo ethnicity (96.5%), reflecting the dominant ethnic group in the region. A higher proportion of patients resided in urban areas (68.6%) compared to rural settings (31.4%). Regarding socio-economic status, 71.1% of patients came from middle-class households, 28.3% from high-income families, and only 0.6% from low-income households. Parental education levels were relatively high, with 72.7% of fathers and 77.2% of mothers having attained tertiary education (Table 1).

The most commonly diagnosed dermatological condition was atopic dermatitis (18.5%), followed by scabies (14.3%), cutaneous candidiasis (5.9%), tinea capitis (5.7%), and papular urticaria (5.5%). Other conditions included pityriasis rosea, viral warts, impetigo, and vitiligo. Less common diagnoses included autoimmune disorders (e.g., cutaneous lupus erythematosus), pigmentary abnormalities (e.g., oculocutaneous albinism), genodermatoses (e.g., epidermolysis bullosa), and vascular lesions (e.g., hemangiomas). Infectious and inflammatory skin diseases were the most frequently encountered categories (Table 2).

Table 1: Socio-demographic characteristics of pediatric patients (n=491).

Variable	Category	Frequency (N)	Percentage (%)
Age group (years)	0-2 (Infancy)	195	39.7
	3-5 (Preschool)	76	15.5
	6-11 (School-age)	129	26.3
	12-17 (Adolescence)	91	18.5
	Mean age ($\pm$ SD)	—	5.89 $\pm$ 5.3
Gender	Male	247	50.3
	Female	244	49.7
Religion	Christianity	491	100.0
Ethnicity	Igbo	474	96.5
	Other (Yoruba, Hausa, Efik, etc.)	17	3.5
Residential area	Urban	337	68.6
	Rural	154	31.4
Father's education	Tertiary	357	72.7
	Secondary	110	22.4
	Primary	8	1.6
	Nil (No father)	16	3.3
Father's occupation	Civil servant	170	34.6
	Trader	132	26.9
	Professional	76	15.5
	Other (incl. artisan, unemployed)	113	23.0
Mother's education	Tertiary	379	77.2
	Secondary	91	18.5
	Primary	10	2.0
	Nil (No mother)	11	2.2
Mother's occupation	Civil servant	156	31.8
	Trader	125	25.5
	Professional	98	20.0
	Other (incl. artisan,unemployed)	112	22.8
Socio-economic class	Middle	349	71.1
	High	139	28.3
	Low	3	0.6
Household educational level	Tertiary	416	84.7
	Secondary	70	14.3
	Primary	5	1.0

*= Individuals were only without one parent (father or mother) and not both.

Table 2: Prevalence of dermatological diseases among pediatric patients (n=491).

Dermatological Condition	Frequency (N)	Percentage (%)
Atopic dermatitis	91	18.5
Scabies	70	14.3
Cutaneous candidiasis	29	5.9
Tinea capitis	28	5.7
Papular urticaria	27	5.5
Viral warts	13	2.6
Pityriasis rosea	12	2.4
Impetigo (including bullous)	12	2.4
Acne vulgaris	10	2.0
Vitiligo	11	2.2
Psoriasis	7	1.4
Seborrheic dermatitis	9	1.8
Hand and foot dermatitis	12	2.4

Continued.

Dermatological Condition	Frequency (N)	Percentage (%)
Other*	151	30.7
Total	491	100.0

*Other includes rare conditions such as epidermolysis bullosa, hemangiomas, lupus erythematosus, lichen planus, molluscum contagiosum, hyperkeratosis, albinism, and more. Atopic dermatitis was the most common skin condition, accounting for nearly 1 in 5 cases. Scabies and fungal infections (cutaneous candidiasis, tinea capitis) represented a significant portion of infectious skin diseases. A broad range of other less common inflammatory, infectious, pigmentary, and genetic conditions made up the remaining 30.7%

Table 3: Classification of pediatric dermatological diseases by etiological category.

Etiological category	Examples of diagnoses	Frequency (N)	Percentage (%)
Inflammatory skin disorders	Atopic dermatitis, seborrheic dermatitis, contact dermatitis, papular urticaria, psoriasis, lichen planus, pompholyx, lupus, scleroderma	186	37.9
Fungal infections	Tinea capitis, tinea corporis, pityriasis versicolor, cutaneous candidiasis, fungal dermatitis	93	18.9
Parasitic infections	Scabies, cutaneous larva migrans	68	13.8
Viral infections	Molluscum contagiosum, viral warts, varicella, herpes zoster, viral exanthem	28	5.7
Bacterial infections	Impetigo, furunculosis, carbuncle, skin sepsis	28	5.7
Pigmentary disorders	Vitiligo, dermal melanocytosis, oculocutaneous albinism	15	3.1
Benign tumors and growths	Hemangioma, keloid, pyogenic granuloma, neurofibromatosis, benign melanocytic naevus	31	6.3
Genodermatoses	Epidermolysis bullosa, congenital blistering disorders	2	0.4
Hair and nail disorders	Alopecia areata, onychomycosis	10	2.0
Acne and related disorders	Acne vulgaris, acneiform eruptions	10	2.0
Non-specific dermatoses	Pityriasis rosea, nappy dermatitis, miliaria, hyperkeratosis, Stevens-Johnson syndrome	20	4.1
Total	–	491	100.0

Table 4: Number of skin diseases per patient by socio-demographic variables (n=491).

Variable	Category	One disease N (%)	Two diseases N (%)	Chi-square (χ^2)	df	P value	Significance
Age group (in years)	Infancy	149 (76.4)	46 (23.6)	3.608	3	0.307	Not significant
	Preschool	58 (76.3)	18 (23.7)				
	School-age	87 (67.4)	42 (32.6)				
	Adolescence	66 (72.5)	25 (27.5)				
Gender	Female	181 (74.2)	63 (25.8)	0.184	1	0.668	Not significant
	Male	179 (72.5)	68 (27.5)				
Residential area	Rural	121 (78.6)	33 (21.4)	3.163	1	0.075	Borderline
	Urban	239 (70.9)	98 (29.1)				
Socio-economic class	High	87 (62.6)	52 (37.4)	12.190	2	0.002	Significant
	Middle/low*	273 (77.6)	79 (22.4)				
Parental education level	Primary/secondary	60 (80.0)	15 (20.0)	2.019	2	0.364	Not significant
	Tertiary	300 (72.1)	116 (27.9)				

*Low (n=3) combined with Middle due to small sample

Table 5: Association between skin disease type and socio-demographic variables (n=491).

Socio-demographic variable	Chi-square (χ^2)	df	P value	Interpretation
Age group (in years)	362.185	177	0.000	Significant association
Gender	75.116	59	0.077	Not significant
Residential area	59.312	59	0.464	Not significant
Socio-economic class	185.503	118	0.000	Significant association
Parental education level	361.180	118	0.000	Significant association

Table 6: Association between diagnosis category and socio-demographic characteristics (n=491).

Variable	Category	Inflammatory N (%)	Fungal N (%)	Parasitic N (%)	Other N (%)*	Total N (%)	χ^2	df	P value	Significance
Age group (years)	Infancy	73 (37.4)	38 (19.5)	30 (15.4)	54 (27.7)	195 (100.0)	92.039	33	0.000	Significant
	Preschool	19 (25.0)	16 (21.1)	14 (18.4)	27 (35.5)	76 (100.0)				
	School-age	58 (45.0)	25 (19.4)	13 (10.1)	33 (25.6)	129 (100.0)				
	Adolescence	36 (39.6)	14 (15.4)	11 (12.1)	30 (33.0)	91 (100.0)				

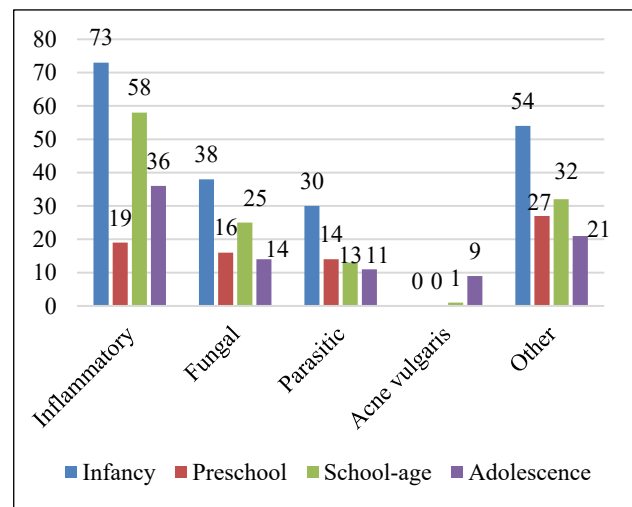
When grouped etiologically, inflammatory skin disorders were the most prevalent, accounting for 37.9% of all diagnoses. Fungal infections followed at 18.9%, and parasitic infections (primarily scabies) accounted for 13.8%. Viral skin infections comprised 5.7%, while pigmentary disorders and benign tumors accounted for 3.1% and 6.3%, respectively. Non-specific dermatoses (such as nappy rash, pityriasis rosea, and miliaria) contributed 4.1% to the total disease burden (Table 3).

The majority of patients (73.3%) had a single dermatological diagnosis, while 26.7% presented with two concurrent conditions. School-aged children were more likely to have multiple diagnoses compared to other age groups, although this association was not statistically significant ($p=0.307$). Similarly, no significant association was found between the number of skin conditions and gender ($p = 0.668$) or parental education ($p=0.364$). However, a statistically significant association was observed between the number of skin diseases and socio-economic class ($p=0.002$) children from higher socio-economic backgrounds were more likely to present with multiple conditions (Table 4).

Chi-square analysis revealed a strong and statistically significant association between age group and specific skin diseases ($\chi^2=362.185$, $p<0.001$) (Table 5).

Gender was not significantly associated with any specific dermatological condition ($p=0.077$), although some patterns were observed. Similarly, the place of residence urban versus rural did not have a statistically significant influence on the type of diagnosis ($p=0.464$). However, children residing in urban areas showed a slightly higher frequency of atopic dermatitis and papular urticaria compared to those in rural areas. In contrast, socio-economic status and parental education showed significant associations with specific skin diseases. Children from middle- and low-income households were more frequently diagnosed with scabies and other parasitic skin infections, while those from high-income families more commonly presented with inflammatory skin conditions and acneiform eruptions. The relationship between socio-economic class and type of dermatological disease was statistically significant ($\chi^2=185.503$, $p<0.001$). Furthermore, children whose parents had

attained tertiary education were more likely to present with atopic dermatitis and fungal infections ($p<0.001$) (Figure 1).

**Figure 1: Skin diagnosis by age.**

When dermatological conditions were grouped into broader etiological categories, only age group showed a statistically significant association ($\chi^2=92.039$, $p<0.001$). Inflammatory skin disorders were most common among infants (37.4%) and adolescents (39.6%), while fungal infections were most prevalent in school-aged children (19.4%) (Table 6).

DISCUSSION

Prevalence

This study identified inflammatory skin disorders (e.g., atopic dermatitis, papular urticaria), fungal infections (e.g., cutaneous candidiasis, tinea capitis), and parasitic infections (primarily scabies) as the most common dermatological conditions among pediatric patients, with prevalence rates of 37.9%, 18.8%, and 13.8%, respectively. These findings are consistent with previous studies across Nigeria and other countries. At the University of Port Harcourt Teaching Hospital (UPTH), for instance, a prevalence of 16.3% was reported among school-aged children, with papular urticaria, scabies,

atopic dermatitis, and dermatophyte infections being the most frequently diagnosed conditions.²⁵ Similarly, a study in Kano recorded a 24.7% prevalence of skin disorders among pediatric patients, with tinea capitis emerging as the most common diagnosis.²⁶ In Lagos, a retrospective review conducted at Lagos University Teaching Hospital (LUTH) between 2004 and 2016 revealed that infections (26.1%), eczematous conditions (24.9%), and infestations (13.6%) constituted the leading diagnostic categories, with atopic dermatitis as the most prevalent individual condition.²⁷ Beyond Nigeria, similar patterns have been observed. In Ethiopia, eczematous dermatitis (23.9%) and bacterial infections (21.3%) were predominant among pediatric patients attending a referral hospital in Wolaita Sodo.²⁸ A study in Benghazi, Libya, also reported infections (42%) and eczemas (32.4%) as the leading dermatoses in children.²⁹ These consistent findings across regions underscore the global burden of infectious and eczematous dermatoses in pediatric populations, largely driven by environmental factors, hygiene practices, and socioeconomic conditions.

Age

Age showed a statistically significant association with both specific dermatological diagnoses ($p < 0.001$) and broader disease categories ($p < 0.001$). Atopic dermatitis was most commonly observed in infants (28.7%), tinea capitis was more frequent among school-aged children (11.6%), and acne vulgaris was predominantly seen in adolescents (9.9%). These results suggest that dermatological conditions in children are age-dependent, a finding supported by multiple studies. In Lagos, Nigeria, eczematous disorders particularly atopic dermatitis were most prevalent among children under five years.²⁷ A study in Basrah, Iraq, similarly found that the prevalence of atopic dermatitis was highest among infants (40.7%) compared to older age groups.³⁰ Conversely, adolescents more commonly presented with acne and disorders of the sweat and sebaceous glands.^{27,31} Research from Kano, Nigeria, also highlighted tinea capitis as significantly more prevalent among school-aged children, while miliaria was more common in those under two years.³² These trends may be explained by differences in immune system maturity, hormonal changes during puberty, genetic predisposition, and varying levels of environmental exposure.³³

Gender

Although this study did not find a statistically significant association between gender and specific dermatological diagnoses ($p = 0.077$), some patterns were evident. Males showed a higher prevalence of atopic dermatitis (21.1%) and tinea capitis (7.3%), whereas females more frequently presented with vitiligo (4.1%) and hand and foot dermatitis (4.1%). Gender differences in the occurrence of skin disorders have been documented in other studies as well. In Sagamu, Nigeria, male sex was associated with a higher risk of skin infections (OR = 2.0,

CI = 1.36-2.94), while in Port Harcourt, male gender was a significant predictor of skin diseases ($p = 0.001$).^{20,19} Studies from Saudi Arabia and Gujarat, India, also found a higher prevalence of transmissible conditions such as pediculosis and fungal infections among males.^{21,34} However, some dermatoses, particularly pigmentary disorders, have been observed more frequently in females.³⁵ These disparities may be attributable to differences in personal hygiene, exposure to environmental pathogens, and gender-specific behaviors. For instance, boys often engage in more outdoor activities and may have lower hygiene supervision, especially under the age of five, when adult oversight is more critical for maintaining cleanliness.³⁶

Residence

No statistically significant association was found between place of residence and dermatological disease type in this study ($p = 0.464$). One possible explanation is the urban location of the Federal Medical Centre, which likely attracts a larger number of urban residents 337 urban versus 154 rural participants potentially masking subtle differences in disease distribution. Furthermore, the socioeconomic and hygiene-related disparities between urban and rural settings may be narrowing in this study population. Nevertheless, studies from other regions have demonstrated contrasting findings. For example, in Saudi Arabia, transmissible dermatoses such as pediculosis were more prevalent in rural areas, while non-transmissible conditions showed no significant urban-rural variation.²¹ In Enugu, Nigeria, a rural clinic predominantly served patients from nearby rural communities, revealing distinct patterns of disease distribution.³⁷ Similarly, in Andhra Pradesh, India, a higher prevalence of infections and infestations was observed in rural populations, attributed to limited hygiene facilities and healthcare access.³⁸ These findings suggest that while residential location may not be a significant factor in all contexts, it remains relevant in settings with pronounced socioeconomic or infrastructural disparities.

Socioeconomic status

This study revealed a significant relationship between socioeconomic status and the type of dermatological condition ($p < 0.001$). Children from higher socioeconomic backgrounds were more likely to present with multiple dermatological diagnoses (37.4%) compared to those from middle or lower-income families (22.4%), a difference that was also statistically significant ($p = 0.002$). These findings are consistent with other studies. In Port Harcourt, low socioeconomic status was strongly associated with a higher prevalence of skin diseases ($p < 0.001$).¹⁹ In Nepal, children from lower socioeconomic backgrounds were at greater risk of developing infectious dermatoses, and a study in Ethiopia found that higher household income and educational attainment were inversely associated with the prevalence

of skin infections.^{39,40} Similarly, research in China reported that higher parental socioeconomic status was linked to an increased prevalence of atopic dermatitis and chronic spontaneous urticaria, while tinea infections were more common among children from lower socioeconomic backgrounds.⁴¹

These findings suggest that while poverty remains a key driver of infectious skin diseases, inflammatory conditions such as atopic dermatitis may be more frequently diagnosed among higher-income groups. The higher rate of multiple diagnoses in these groups may reflect better health-seeking behavior, increased healthcare access, and more frequent or thorough clinical evaluations.

Parental education

Parental education level also showed a statistically significant association with dermatological disease type ($p < 0.001$). Children whose parents had tertiary education were more frequently diagnosed with inflammatory and viral skin conditions, possibly reflecting better health awareness, early symptom recognition, and timely presentation to healthcare facilities. In Al Hassa, Saudi Arabia, higher maternal education was linked to a lower prevalence of pediculosis and fungal infections, while in Nepal, lower maternal education was associated with a higher risk of infectious dermatoses ($p = 0.025$).^{21,22} Parental awareness and attitudes toward healthcare utilization are also critical. In Umuahia, 67.4% of parents were reported to seek care outside formal hospital settings due to factors such as cost and prolonged waiting times, indicating that limited education may delay appropriate diagnosis and treatment.¹⁸

This study was conducted in a single tertiary health facility, which may limit the generalizability of the findings to other settings. The cross-sectional design also prevents causal inferences.

Additionally, certain socio-demographic variables, such as overcrowding or personal hygiene practices, were not evaluated, which may have provided more insight into the patterns observed.

CONCLUSION

This study highlights the significant influence of socio-demographic factors particularly age, socio-economic status and parental educational level on the pattern and distribution of dermatological diseases among pediatric patients in Umuahia, Abia State. While gender and residence did not show strong statistical associations, children from low-income households and those whose parents had lower educational attainment were more commonly affected by infectious and parasitic skin conditions. Conversely, non-infectious and inflammatory dermatoses were more prevalent among children from higher socio-economic backgrounds. These findings

emphasize the need for context-specific interventions and underline the broader impact of social determinants on child health in dermatology.

Recommendations

Public health efforts should prioritize low-income communities by implementing health education programs that promote hygiene and the early recognition of skin diseases. The government and relevant stakeholders are encouraged to strengthen school health initiatives and incorporate routine skin screening for children, particularly in underserved areas. Dermatology awareness campaigns should also be adapted to suit varying literacy levels, ensuring that caregivers—especially those with limited education—can understand and apply the information. Lastly, future studies with broader geographic coverage and longitudinal designs are recommended to validate and expand upon these findings.

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