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ASSESSMENT OF PATTERN OF SKIN DISEASES AMONG PATIENTS ATTENDING OUT-PATIENT DERMATOLOGY CLINIC

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ABSTRACT

Background: The prevalence of skin diseases varies significantly and is influenced by factors such as geographical, socioeconomic status, climatic conditions, personal lifestyle choices, and intrinsic factors like gender, age, and genetic predisposition.

Aim and Objectives: The aim of the study was to assess the pattern of skin diseases both infective and non-infective diseases and to study their impact on quality life of patients attending out-patient dermatology clinic in Tirupati.

Methods: This is a prospective observational study conducted in a private outpatient dermatology clinic in Tirupati over a period of 3 months. Patient demographic details were obtained using questionnaires by directly interviewing patients.

Results: A total of 311 skin disease patients were included in the study population. In this study, majority of patients 248 (79.74%) were diagnosed with non-infective skin conditions, while 63 patients (20.26%) presented with infective skin diseases. Among the infective cases, fungal infections were the most common, accounting for 44 patients (69.84%), followed by impetigo and warts, each with 6 cases (9.52%), and scabies with 5 cases (7.94%). On the other hand, within the group of non-infective skin conditions, acne was the most prevalent, affecting 46 patients (18.55%). This was followed by dermatitis in 34 cases (13.71%), psoriasis and urticaria with 24 cases each (9.68%), and various other skin conditions reported in 30 patients (12.1%).

Conclusion: Based on the findings of the present study, non-infective skin diseases were found to be more prevalent than infective ones among patients in and around the Tirupati region. Among the 311 patients examined, 45.02% experienced a substantial degree of impairment in quality of life because of their dermatological condition.

Keywords: Acne, Dermatitis, Impetigo, Psoriasis, Scabies, Skin diseases, Vitiligo

Introduction:

The prevalence of skin diseases is notably higher in developing countries, encompassing a wide spectrum from mild conditions to more severe issues such as scabies, fungal infections, dermatitis, urticaria (hives), psoriasis, vitiligo, and acne. The occurrence and pattern of these disorders vary not only between countries but also within different regions of the same country. This variation is influenced by environmental conditions, genetic predispositions, hygiene practices, and cultural factors. Many dermatological conditions tend to be chronic in nature, requiring prolonged treatment

and management. As a result, they significantly affect individuals' quality of life, contributing to physical discomfort, social stigma, psychological distress, and financial burden [1,2].
The pattern of skin diseases in India is influenced by several variables, including geographic location, harsh weather conditions, malnutrition, poverty, overcrowding, lack of education, societal mores, and pre-existing medical disorders. Skin conditions can cause patients to experience severe emotional and psychological suffering that can even be worse than the physical effects [3,4].
Skin diseases indeed cause high morbidity, leading to significant chronic health burdens, while typically causing less mortality compared to other diseases. Most skin conditions are chronic and require prolonged treatment, which negatively impacts the quality of life by increasing psychological disorders like depression and anxiety [5,6].

Ignorance of the seriousness of skin diseases and improper medication can significantly worsen patient's health condition. Historically, prevention and management of skin diseases have received less attention because these diseases typically have low mortality rates. However, early identification of skin diseases is crucial, as it enables timely treatment, prevents the spread of communicable skin infections, and reduces the risk of progression to chronic conditions. Early detection also helps minimize the associated economic burden by avoiding more extensive and costly treatments in later stages [7-9].

There is a lack of scientifically documented studies on the pattern of skin diseases in both rural and urban areas of Tirupati. Hence, the primary objective of this study is to evaluate the pattern of skin disorders among patients visiting the outpatient dermatology clinic, assess their impact on quality of life, and identify the most common skin conditions prevalent in and around the Tirupati region.

Methodology:
It is a Prospective Observational study conducted in Dr. Madhav Reddy Skin Care, outpatient dermatology clinic, Tirupati, Andhra Pradesh, India. A total of 311 patients with skin diseases were included in the study for a period of 3 months. Patients with all dermal related issues and age >5 years were included in the study. Pregnant women and lactating mothers were excluded from the study. Data was collected by directly interviewing the patients. The quality of life in patients were assessed by Dermatology Life Quality Index (DLQI) score scale. The study protocol was approved by Institutional Ethics Committee, with approval number SPMVV/Acad/C1/ IX/2023. All the statistical analysis was conducted using SPSS software, version 20.0.

Results:
Out of 311 patients selected for the study, female patients were 169 (54.34%) and male patients were 142 (45.66%). The mean age was 29.94 ± 14.17 years for the female patients and 33.23 ± 17.50 years for the male patients. Patients with age groups of 17-30 years were 129 (41.48%) greater, followed by 31-45 Years 66 (21.22%), <16 Years 53 (17.04%), 46-60 Years50 (16.08%) and >61 Years 13(4.18%). The BMI category shows that majority of the patients were under normal BMI 167 (53.7%).

The educational status of the patients visiting the clinic was literate patients 178 (57.23 %) followed by college going 55 (17.68%) and school going 47 (15.11%) students compared to illiterates 31 (9.97%). Based on occupation, it was found that students 103 (33.12%) were more affected with skin diseases followed by 88 (28.3%) working patients compared to others. The prevalence is common in both married 160 (51.45%) and unmarried 151 (48.55%) patients. From the study it was found that 248 (79.74%) patients were having non-infective skin diseases while 63(20.26%) patients were having infective skin diseases [Table-1].

Table-1: Demographic details and disease type of patients			
Characteristics		**Frequency (n)**	**Percent (%)**
Gender	Female	169	54.34
	Male	142	45.66
Age Group	<16 Years	53	17.04
	17-30 Years	129	41.48
	31-45 Years	66	21.22
	46-60 Years	50	16.08
	>61 Years	13	4.18
BMI Category	Under weight	70	22.51
	Normal	167	53.70
	Over weight	54	17.36
	Obesity	20	6.43
Education Status	Literates	178	57.23
	Illiterates	31	9.97
	School going	47	15.11
	College going	55	17.68
Occupation	Job	88	28.30
	Student	103	33.12
	House wife	69	22.19
	Farming	34	10.93
	Business	17	5.47
Marital Status	Married	160	51.45
	Unmarried	151	48.55
Types of Skin Diseases	Infective Skin Diseases	63	20.26
	Non-Infective Skin Diseases	248	79.74

Among the infective skin diseases, fungal infections were the most observed, accounting for 44 cases (69.84%). *Tinea corporis* was the most prevalent subtype of fungal infection, found in 23 cases (52.27%). Other conditions such as impetigo and warts each reported were 6 (9.52%), while remaining infections made up 3.17%, as illustrated in **Figures 1a and 1b.**

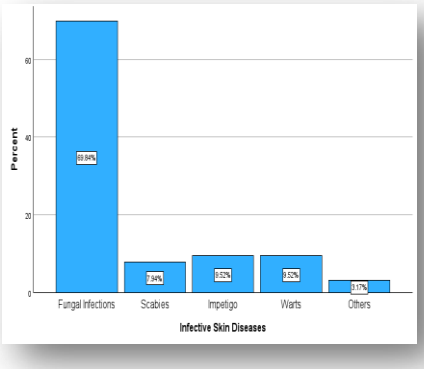

Figure 1a: Distribution of different infective skin diseases among patients

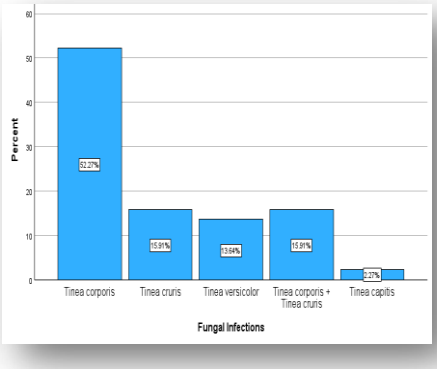

Figure 1b: Distribution of fungal infections among patients

Out of 311 patients, 248 (79.74%) were diagnosed with non-infective skin conditions. Among these, acne cases were more affecting 46 (18.55%) patients, followed by dermatitis 34 (13.71%), vitiligo 31(12.5%), both urticaria and psoriasis cases, each reported in 24 patients (9.68%), with other conditions occurring less frequently [Table 2].

Table-2: Distribution of Non-Infective Skin Diseases among Patients		
Non-infective skin diseases	**Frequency (n)**	**Percent (%)**
Acne	46	18.55
Dermatitis	34	13.71
Urticaria	24	9.68
Psoriasis	24	9.68
Vitiligo	31	12.50
Lichen planus	18	7.26
Alopecia	16	6.45
Melasma	6	2.42
Hair fall	7	2.82
Dandruff	5	2.02
Allergy	7	2.82
Other Infective skin diseases	30	12.10

Among patients with dermatitis, atopic dermatitis (also known as eczema) was the most frequently observed, accounting for 18 cases (52.94%), followed by airborne contact dermatitis with 11 cases (32.35%). In psoriasis cases, palmoplantar psoriasis was the most common subtype, recorded in 12 patients (50%) [Table 3]. The other less frequently observed non infective skin diseases in patients were represented in the table 4.

Table-3: Distribution of Different Types of Dermatitis and Psoriasis among Patients			
Skin Diseases		**Frequency (n)**	**Percent (%)**
Dermatitis	Atopic dermatitis (eczema)	18	52.94
	Airborne-contact dermatitis	11	32.35
	Disseminated dermatitis	3	8.82
	Phyto photo dermatitis	2	5.88
Psoriasis	Palmoplantar psoriasis	12	50.0
	Scalp psoriasis	4	16.67
	Psoriasis vulgaris	8	33.33

Table-4: Distribution of other Non-Infective Skin Diseases		
Other non-infective skin diseases	**Frequency (n)**	**Percent (%)**
Hirsutism	4	13.33
Lichen sclerosus	3	10.0
Lichenified plaques	2	6.67
Hair loss + Dandruff	3	10.0
Keratosis pilaris	4	13.33
Hypo pigmentation	2	6.67
Facial dark spots	2	6.67
Aphthous stomatitis	1	3.33
Syringoma	1	3.33
Chronic bacterial prostatitis	1	3.33
Canities	1	3.33
Mouth colouration	1	3.33
Intertrigo	1	3.33
Polymorphic light eruption	1	3.33
Post surgery burn	1	3.33
Keratolysis exfoliative	1	3.33
Folliculitis	1	3.33

Assessment of quality of life in patients with skin diseases using the Dermatology Life Quality Index (DLQI) score revealed that 45.02% of patients experienced a very high level of impairment day to day life. Additionally, 28.94% were moderately impaired, 25.72% had mild impairment, and only 0.32% reported no impact on their quality of life [Figure 2].

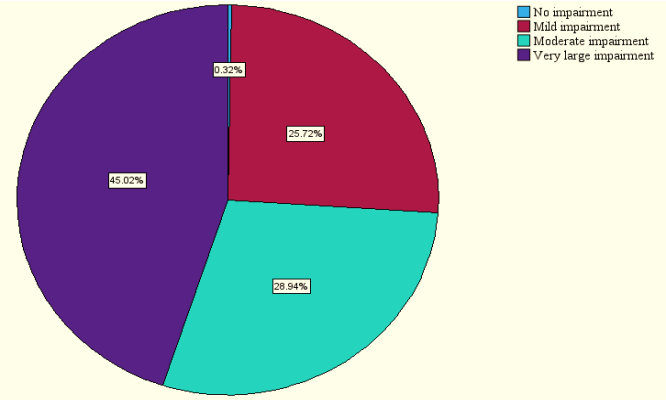

Figure 2: Quality of life impaired in patients

Discussion:

In the present study, among 311 patients, a higher proportion were female (54.34%) compared to male patients (45.66%). The greater prevalence of skin diseases among females may be attributed to factors such as hormonal fluctuations, delayed treatment, stress, and limited self-care, particularly among housewives. These findings are consistent with the study conducted by Abdus Sattar et al., (2022) [10].

The age group patients between 17–30-years were affected more, accounting for 129 individuals (41.48%). Among all patients, students were the most affected group (33.12%). This higher prevalence may be linked to hormonal changes during adolescence, increased stress levels, exposure to environmental pollutants, frequent use of cosmetics, and lifestyle-related factors.

In the current study, it was observed that non infective diseases are high in rural (136) patients compared to urban (112) and the infective skin disease cases are nearly similar in rural (31) and urban (32) with p value of 0.42. Moreover, the BMI status of patients visiting the clinic revealed that 167 individuals (53.7%) had a normal BMI, suggesting that BMI might have a limited role in the development of skin diseases.

The prevalence of non-infective skin diseases in patients (79.74%) were more compared to patients with infective skin diseases (20.26%). This data is supported by similar studies conducted by Pandey et al., 2017; Abdus Sattar et al., 2022. However, Memon et al., 2011 conducted a study which differs from the current study, stating that the infectious skin diseases were more common compared to non-infectious diseases [11]. This might be due different regions within a country and other factors like environmental, genetics, hygiene standards, and social practices [1,2].

Our study observed that fungal infections accounted for the majority (69.84%) of all infectious skin diseases, aligning with the findings of Hanamant Bobade et al., 2021, and Anita Sanker et al., 2023 [12,13]. Among the fungal infections, Tinea corporis was the most prevalent, affecting 52.27% of the patients.

In the present study, acne was the most observed non-infective skin condition, affecting 18.55% of patients, followed by dermatitis (13.71%), psoriasis (9.68%), and urticaria (9.68%). Among all the dermatitis patients, atopic dermatitis (52.94%) was more frequently observed. Similarly, in the psoriasis patient's palmoplantar psoriasis (50%) cases were observed.

From the Dermatology Life Quality Index (DLQI) score, majority of the patients (45.02%) have impairment in the quality of life due to skin diseases. These findings were similar to the studies

conducted by Wootton et al., 2018; Yaman Wallid Kassab et al., 2019 [14,15] emphasizing the need to enhance both public and healthcare professionals' awareness regarding the impact and seriousness of dermatological conditions.

Conclusion:

Our study revealed that skin diseases were common among females compared to males, this might be due to hormonal changes and their lifestyle. The age group of 17-30 years are found to be more vulnerable to skin diseases. Fungal infections are frequently observed followed by acne, atopic dermatitis, vitiligo, urticaria and psoriasis in the patients. Both rural and urban populations were similarly affected with skin diseases. Moreover, the BMI findings indicated that its influence on skin diseases was minimal. The findings of the study indicate that skin diseases significantly impact patients quality of life, highlighting the need for increased awareness regarding their prevention and management. Early diagnosis, maintaining proper hygiene, managing stress, and timely treatment may help reduce the severity and progression of skin conditions.

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