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Prevalence of skin disease among adolescent girls and their impact on quality of life

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Abstract

Introduction: Skin diseases are significant health concerns that can impose a substantial psychological and emotional strain on individuals, potentially surpassing the physical consequences. Adolescence is a pivotal period in biophysical development; consequently, the progression of self-esteem, self-confidence, and social engagement may be adversely affected by skin conditions that occur during this time. The purpose of this research was to determine the prevalence, pattern, and impact of cutaneous diseases on the quality of life of adolescents.

Materials and Methods: We gathered 1648 young girls between the ages of 10 and 16 from ten schools that were close to a tertiary care facility. The attending physician documented the severity of the skin illness. The impact of skin conditions on their quality of life was evaluated using the dermatological life quality index (DLQI) questionnaire.

Results: Among the total cases 832 (50.48%) had skin diseases, of them 464 participants had two or more than 2 skin diseases. pediculosis (57.09%) was the most common skin condition, followed by pityriasis alba (34.62%), seborrhoeic dermatitis (26.56%), acne (23.32%), pyoderma (11.78%), scabies (10.45%), and Ichthyosis (7.21%).

Conclusion: Adolescence is a pivotal phase that marks the transition from childhood to adulthood. In order to prevent visible skin conditions and a decrease in self-confidence, it is necessary to adequately manage numerous dermatological illnesses.

Keywords: Dermatology life quality index (DLQI) questionnaire, adolescent girls, skin infections, prevalence

Introduction

Adolescence is often acknowledged as a crucial period in the development of an individual's biological, psychological, and social aspects, characterised by the enhancement of abilities related to self-control, autonomy, and self-assurance. Health issues may further worsen this situation, especially when it comes to skin illness, since it adds the extra weight of harming one's appearance during a time when their self-image is already fragile ^[1, 2]. Adolescent individuals often have skin disorders, with acne vulgaris being particularly prevalent. According to the Global Burden of Disease research, this disease affects almost 85% of young adults aged 12-25 in both urban and rural settings ^[3]. Skin illnesses may have a substantial influence on the social, psychological, and physical elements of an individual's life, resulting in a decrease in their overall quality of life ^[4]. Dermatoses exhibit a range of patterns and presentations, with eczemas being the prevailing skin ailment in industrialised nations, whereas infections and infestations are more prevalent in underdeveloped nations ^[5]. The prevalence of paediatric dermatological problems is steadily rising; however, it receives less attention compared to systemic illnesses in children. The occurrence of skin diseases in children is more common in rural settings than in urban ones due to many variables. The incidence and distribution of skin illnesses have been seen to differ based on socio-economic and cultural variables that influence hygiene practices and the tendency to seek treatment ^[6]. Adolescent self-esteem may be quickly undermined when a prominent skin disease attracts unwanted attention from peers. Due to their significant proportion of the Indian population, adolescents experience a notable decline in their health-related quality of life, resulting in

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enormous physical and psychological morbidity. The objective of this research was to evaluate the prevalence, distribution, and effect of skin disorders on the quality of life of teenage pupils.

Material and Methods

This cross-sectional research was undertaken in the Department of Community Medicine, Madha Medical College and Research Centre, Chennai, Tamilnadu from June 2015 to July 2016. We recruited 1648 young adolescent females, aged 10-16 years, from 10 schools situated surrounding a tertiary care hospital. Adolescent females who demonstrated comprehension of the research protocol, adherence to the study instructions, and willingness to participate were included in the study. Students who were unavailable for screening on the day of the visit and unwilling to participate were omitted. Parents, guardians, or class teachers were required to provide written informed

permission. The study protocol underwent a thorough assessment and received approval from the institutional ethics committee.

A concise chronicle of skin complaints and a meticulous inspection of the skin, hair, and nails were conducted in a private setting with appropriate illumination. A clinical diagnosis was made based on the patient's medical history and physical examination. The attending physician documented skin features, including the severity of the skin illness. The impact of skin illnesses on individuals' quality of life was evaluated and interviewed using a dermatological life quality index (DLQI) questionnaire [7]. The statistical analysis for the research was conducted using the SPSS version 29.0. Demographic data was represented using descriptive statistics, in the form of frequency and percentages.

Results

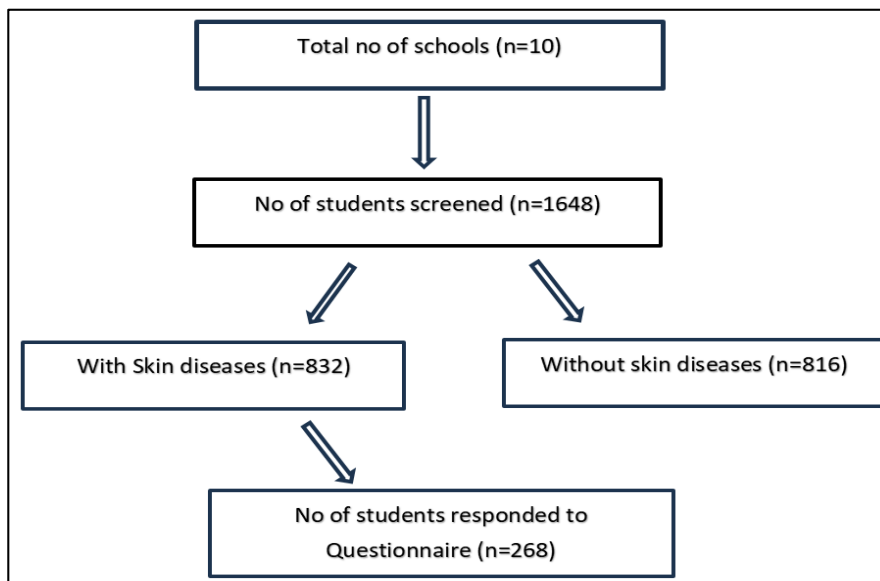


Fig 1: Schematic representation of details of student participation.

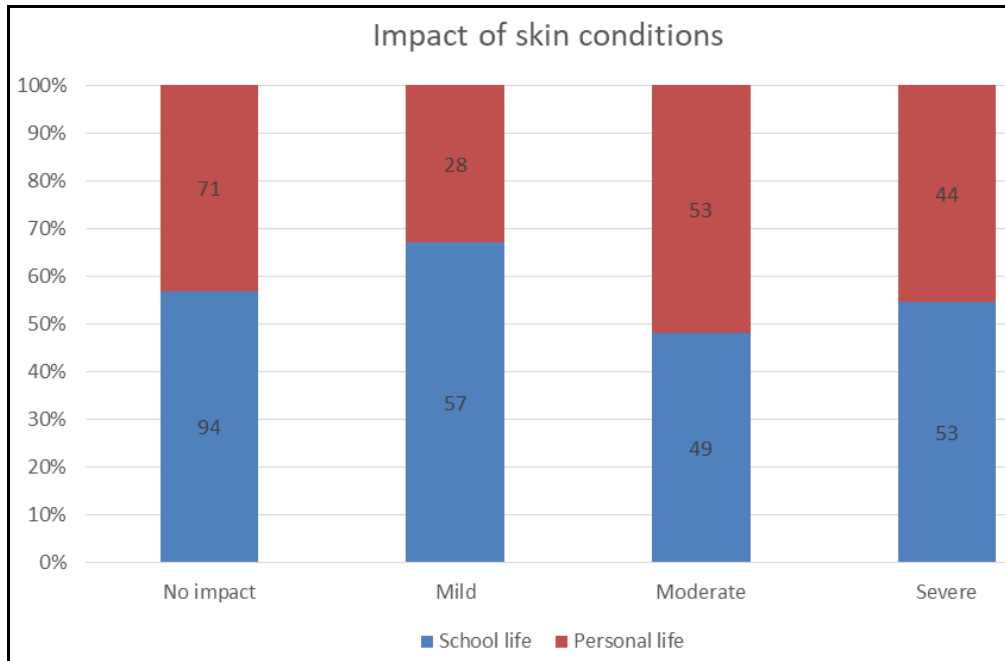
In 10 schools 1648 students between 10-16 years of age were covered and screened. Among the total cases 832 (50.48%) had skin diseases, of them 268 (25.92%) were responded to questionnaire (Figure 1).

Table 1: Demographic and clinical characteristics of study participants

Demographic data	Total no of students (n=832)	
	Frequency	Percentage
Age (In years)		
10-13	387	46.51%
14-16	445	53.48%
Residence		
Urban	594	71.40%
Rural	238	28.60%
Dermatoses		
Present	572	68.75%
Absent	260	31.25%
Status of infectious skin disease		
Present	668	80.28%
Absent	164	19.72%

Table 2: Frequency of skin diseases among adolescent students

Skin disease	Number of affected	(n=832)
		Point prevalence
Chronic hand & foot eczema	20	2.40%
Pityriasis alba	288	34.62%
Papular dermatitis	40	4.80%
Seborrheic dermatitis	221	26.56%
Pyoderma	98	11.78%
psoriasis	18	2.1%
Acne	194	23.32%
Viral infections	19	2.28%
Scabies	87	10.45%
Pediculosis	475	57.09%
Tinea	34	40.86%
Ichthyosis	60	7.21%
Burns	04	0.048%
Vitiligo	04	0.048%
Pruritus	09	0.108%



Graph 1: Impact of skin conditions on personal and school life.

A mean score of 13.8 ± 1.92 on the DLQI in 268 pupils indicates a significant impact on life. Mean symptom score was 2 and mean feeling score 1.5. Childhood scabies and acne, which cause extreme itching and lower self-esteem, had higher ratings. Skin problems did not influence school or employment.

Discussion

Majority girls were between 14-16 years (53.48%) followed by 10-13 years (46.51%). 71.40% of the girls were residing in urban area and 28.60% in rural area. The dermatoses were seen in 68.75% of the participants and infectious diseases were observed in 80.28% of the adolescent girls (Table 1). A cross-sectional study by Suman Saurabh *et al.* examined skin infections in primary school children aged 5-10. They assessed 306 pupils. Screened kids had 176 single skin disorders, 27 two, 7 three, and 1 four, a total prevalence of 69%. Most people had pediculosis (56.5%), followed by pyoderma (7.1%) and scabies (3.9%)^[8]. Sreedevi L *et al.* found 86.6% of 1-18-year-old children had infective genital dermatoses. Of them, 50.2% had parasitic infections, 26.5% fungal, 19% bacterial, and 4% viral^[9]. Similarly, our study showed that pediculosis (57.09%) was the most common skin condition, followed by pityriasis alba (34.62%), seborrhoeic dermatitis (26.56%), acne (23.32%), pyoderma (11.78%), scabies (10.45%), and Ichthyosis (7.21%), possibly due to residential school students' close contact (Table 2). Several studies have shown that acne is a disfiguring condition that may adversely impact a patient's life^[10, 11]. Screening teenagers for diseases like acne may be important due to their social image and the large range of treatments available^[12].

Sunil Dogra and Bhushan Kumar examined 12586 Indian schoolchildren aged 6-14 for skin problems. About 30% had one skin issue, 6% had two, and 2.7% had three. Skin infections dominate (11.4%), followed by pityriasis alba (8.4%), dermatitis/nonspecific eczemas (5.2%), infestations (5.0%), pigmentation disorders (2.6%), keratinization disorders (mainly keratosis pilaris) (1.3%), and nevi/hamartomas (1.1%)^[13]. Jose L Figueroa *et al.* found

80.4% of 112 schoolchildren had skin diseases. Most pathologies were infestation (81.2%) and fungal infections (13.4%)^[14]. Isnil Inanir *et al.* found pediculosis capitis in 74 (9.4%), scabies in 17 (2.2%), viral skin disorders in 30 (3.8%), and fungal infections in 6 (0.7%) of 785 Turkish primary school pupils. Melanocytic nevi (14.4%), keratosis pilaris (12.5%), pityriasis alba (12%), xerosis (11.8%), and atopic dermatitis (6.8%) were also prevalent. Girl students had greater acne, dandruff, and pediculosis capitis^[15]. Eczemas, including Pityriasis alba (3.3%), chronic hand and foot eczema, and allergic contact dermatitis, were the second most frequent skin ailment, according to Shrestha DP *et al.* P. alba affects children and adolescents^[16]. Urticaria was 3.1%, equal to Nepal's prevalence (2.9%). Only 1.8% of people had pigmentary problems, compared to 6.8%^[17].

A Sangameshwara GM and U Venkatesh research of 100 children identified fungal infections in 57%, viral infections in 23%, and bacterial infections in 20%^[18]. An epidemiological survey by AK Gupta *et al.* screened 3000 patients aged 5-14. Eczematous illnesses (18%) followed infectious diseases (49%) in prevalence. Dermatophytosis, Verruca vulgaris, and pityriasis Alba were the most frequent bacterial, viral, and Eczema^[19]. With lower socioeconomic position, transmissible skin disorders rose dramatically. Each youngster in this research was socially disadvantaged and had poor hygiene.

Psychological impacts of dermatological disorders may adversely impact lifestyle. Skin disease may cause anxiety, sadness, and other psychological issues that impact people like arthritis or other crippling diseases. Skin problems are more visible, increasing stigma. Skin illnesses should be assessed by symptoms, physical, psychological, and social factors. Skin disorders have a huge, underappreciated impact. Understanding mind-body connections and treatments may improve skin problems and quality of life.

Conclusion

Child skin disorders are more prevalent in schools due to poor hygiene that causes many infections and pests. Thus, teachers and physicians to address common skin illnesses

and educating parents about hygiene, sexual behaviour, and medical advice. Children should learn good hygiene habits including bathing, head washing, and hand washing etc. To prevent re-infection, all children should be treated for scabies. Adolescent is a crucial transition from childhood to maturity. To avoid apparent dermatological symptoms and self-esteem loss, various dermatological disorders must be effectively controlled.

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