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ORIGINAL ARTICLE

Prevalence of Common Skin Disorders in School Going Children: A Cross Sectional Study

Harsh Wardhan

Assistant Professor, Department of Skin & V.D., Subharti Medical College Meerut, Uttar Pradesh, India

ABSTRACT:
Introduction: Pediatric dermatoses vary in clinical features, treatment, and prognosis from adult dermatoses so that they have to be addressed in a different way. These diseases also act as a window to many systemic disorders. Hence, a knowledge of the pattern and prevalence of skin disorders in school children and help us to strategise our health plan in that particular area. **Aim**: The present study was conducted to find the prevalence and pattern of skin diseases among school-going children of age 5–14 years. **Material and Methods:** This cross-sectional study was conducted in two schools (1 government school and 1 private). Each child was interviewed for age, residence, and any specific complaint related to skin. Then, the student was evaluated for hygiene status. Each child was then subjected to a complete dermatological examination including skin, nail, and mucosa in adequate daylight. Information regarding duration, number, progression, symptoms and family history of skin disorders was obtained. After examination, skin diseases were classified into three broad categories for the purpose of analysis: (1) infectious dermatoses, (2) noninfectious dermatoses, (3) nutritional deficiency dermatoses. **Results**: We included 200 children between 5-14 years, and observed that males constituted 60% while females were 40%. The mean age of the study population is 10.4 years. Overall Prevalence of skin disorders were found in 49.24% school children. Skin disorders were more common in female school children accounting for 49 cases (61.25%) as compared to male school children. It was observed that 85 (42.5%) students had infectious dermatoses, 28 (14%) students had noninfectious dermatoses, and only 10 (5%) had nutritional deficiency dermatoses. Overall prevalence of dermatoses in the school-going children in our study came to be 49.24%. Infectious dermatoses was the most common category of lesions in our study. **Conclusion**: Even though most of the dermatoses were asymptomatic, routine school survey should be carried out every year for the early diagnosis and treatment of communicable and nutritional diseases. Hence we can conclude that both Health education and awareness and practice of good personal hygiene among school going children will definitely help improve the health status of school children.
Key words: Prevalence, dermatological diseases, school children.

Corresponding author: Dr. Harsh Wardhan, Assistant Professor, Department of Skin & V.D., Subharti Medical College Meerut, Uttar Pradesh, India

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INTRODUCTION:
Pediatric dermatoses vary in clinical features, treatment, and prognosis from adult dermatoses so that they have to be addressed in a different way. The pattern of skin disease is a consequence of poverty, malnutrition, overcrowding, poor hygiene, illiteracy, and social backwardness in many parts of India.
Skin diseases especially those affecting the superficial layer despite being very common are seldom the target of any public health programme or strategies due to the assumption that they are benign and not life threatening. They cause considerable discomfort, morbidity, parental anxiety, unnecessary absence from school and other psychosocial side effects such as embarrassment, feeling of stigmatisation, loss of confidence, disruption of social relations. The evaluation for skin disorders is an important component of primary health care practice for all, including children[1,2]
A variety of skin disorders are seen during childhood. The pattern of skin diseases varies from country to country with infections, infestations, and malnutrition being more prevalent in developing countries, while eczemas are more common in developed countries. This can be attributed to differing climatic, cultural, and socioeconomic factors.[3]
These diseases also act as a window to many systemic disorders like systemic lupus erythematosus, tuberous sclerosis; viral exanthemes like measles, chicken-pox hence provide an underlying clue to a more severe disease. These superficial skin disorders such as Acne vulgaris, Seborrhea capitis, Pityriasis alba are diagnosed clinically and can be managed on an outpatient basis.
WHO reported a high prevalence (21- 87%) of skin disorders in general population of developing countries of the world.[5] The prevalence among Indian children varies from 8-37% in school based studies. In recent studies, the prevalence ranges from 30-60%.[6-10]
The incidence of these disorders appears to be increasing and is influenced by age, social, economic, public health, nutritional, environmental, and climatic factors, as well as the genetic make-up of the population studied.
Hence, a knowledge of the pattern and prevalence of skin disorders in school children and help us to

strategise our health plan in that particular area. Therefore, the present study was conducted to find the prevalence and pattern of skin diseases among school-going children of age 5–14 years.

MATERIAL AND METHODS:

This cross-sectional study was conducted in two schools (1 government school and 1 private). A prior approval from the Ethical Committee of our institution was taken and required permissions from the school management was also taken. Informed consent of parents/guardians was also taken. The study population included the students aging between 5 -14 years of either sex, from the two schools.

Each child was interviewed for age, residence, and any specific complaint related to skin. Then, the student was evaluated for hygiene status. Each child was then subjected to a complete dermatological examination including skin, nail, and mucosa in adequate daylight. Information regarding duration, number, progression, symptoms and family history of skin disorders was obtained. History of past illness, allergy, atopy, treatment taken and dietary history were also recorded in the proforma. The diagnosis was made based on clinical features and appropriate investigations.

After examination, skin diseases were classified into three broad categories for the purpose of analysis: (1) infectious dermatoses, (2) non infectious dermatoses, (3) nutritional deficiency dermatoses.

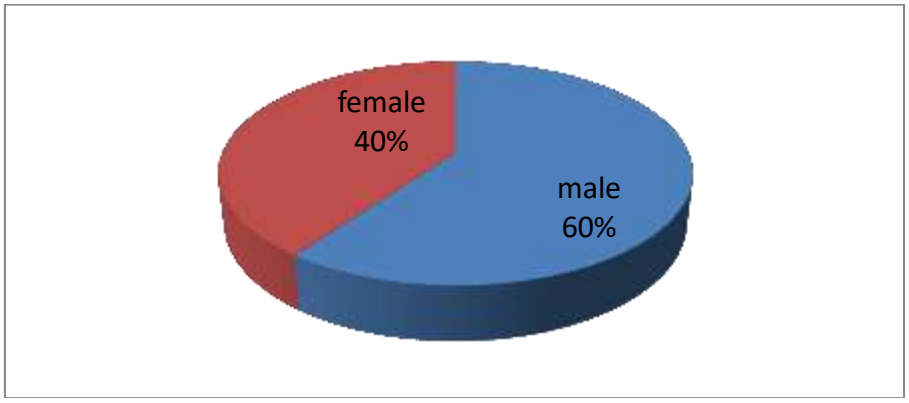
STATISTICAL ANALYSIS:

The data was gathered and recorded using the questionnaire and clinical examination were compiled, coded, and entered in Excel Spreadsheets. Statistical analysis was performed using SPSS Version 21 [SPSS, Inc., Chicago, IL, USA]. Chi-square test was used to compare categorical variables. $P<$ 0.05 was considered to indicate statistical significance.

RESULTS:

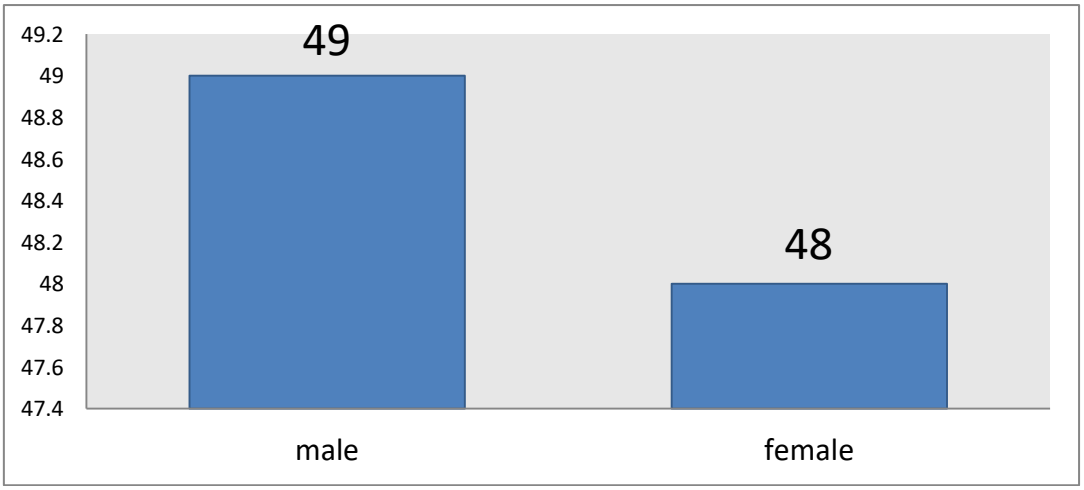
We included 200 children between 5-14 years, and observed that males constituted 60% while females were 40%. The majority of the study subjects were in the age group of 8–10 years, and the mean age of the study population is 10.4 years.

FIGURE 1: GENDER WISE DISTRIBUTION OF STUDY SUBJECTS



In our study overall Prevalence of skin disorders were found in 49.24% school children. Skin disorders were more common in female school children accounting for 49 cases (61.25%) as compared to male school children accounting for 48 cases (40%). 25% had one skin disorder, 12% had two and 8% had three skin disorders.

FIGURE 2: GENDER WISE DISTRIBUTION OF DERMATOSIS AMONG STUDY SUBJECTS



It was observed that 85 (42.5%) students had infectious dermatoses, 28 (14%) students had non-infectious dermatoses, and only 10 (5%) had nutritional deficiency dermatoses. We observed about 32 types of skin lesions among the children; of these, 13 were infectious, 15 were non-infectious, and 4 were nutritional dermatoses. Fifty-four children had more than one type of skin disease.

Infectious dermatoses: Most common infectious dermatosis included seorrheic dermatitis (24.7%) followed by acne vulgaris, pediculosis capitis, scabies, herpes simplex, verruca vulgaris, herpes zoster, and impetigo. Overall this category of lesions were more common among girls.

Among the noninfectious dermatoses atropic eczema was the common dermatoses(39.2%), followed by allergic contact, pityriasis alba, premature graying of hair, nail dystrophy, lichen planus, pigmentation, scars, vitiligo and albinism.

Out of nutritional dermatoses, angular chelitis was commonest (40%) followed by xerosis and phrynoderma.

DISCUSSION:

Skin disorders are an important cause of health loss on global level and put a large burden on health care systems worldwide. Highly prevalent skin disorders with a small individual burden may lead to a high burden on a population level. Therefore, prevention of skin disorders should be prioritized.

Dermatological problems, especially infectious dermatoses, affect a high proportion of school children in developing countries like India. Skin disorders in children may result in considerable discomfort, parental anxiety, and embarrassment to the child and unnecessary absence from school and work. This, in turn, leads to loss of confidence and disruption of social relations, feeling of stigmatization, and major changes in lifestyle.[11]

We included 200 children between 5-14 years, and observed that the mean age of the study population is 10.4 years with skin disorders more common in female school children accounting for 49 cases (61.25%). In our study skin disorders were found in 49.24% school children. In comparison Rao et al.[12] reported 76.65% incidence and Valia et al[13] . reported 53.6% incidence of dermatosis. Dogra and Kumar[14] and Sharma et al.[10] reported a prevalence of 38.80% and 14.30% which is less when compared to our study.

It was observed that 85 (42.5%) students had infectious dermatoses, 28 (14%) students had noninfectious dermatoses, and only 10 (5%) had nutritional deficiency dermatoses. In Similarity Patodi et al.[15] and Badame.[16] also reported similar results. The prevalence of skin disorders was high among the primary school children in the study area. This might be a reflection of the prevalence in the overall population of the area.

Previous studies have shown that, the prevalence rate of skin disorders on correlating with socioeconomic status as well as literacy level yields significant results. Inanir et al[17] in a study from Turkey showed socioeconomic status to be significant factor affecting the prevalence.

In relation to hygiene, Dongre AR, et al[18] showed that improvement in hygiene status over 1 year showed significant reduction in prevalence of Pediculosis capitis (42.8%), Scabies (36.6%) and multiple boils (8.9%) to 18.8%, 17.9% and 8% respectively.

The need of the hour is basic health education about personal hygiene and training of personnel to identify these conditions with as well as regular periodical examination of the children which can go a long way in curbing the morbidity due to these diseases.

CONCLUSION:

Overall prevalence of dermatoses in the school-going children in our study came to be 49.24%. Infectious dermatoses was the most common category of lesions in our study. Even though most of the dermatoses were asymptomatic, routine school survey should be carried out every year for the early diagnosis and treatment of communicable and nutritional diseases. Hence we can conclude that both Health education and awareness and practice of good personal hygiene among school going children will definitely help improve the health status of school children.

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