



Prevalence of Skin Infections and Regular Personal Hygiene Practices in Ashram School Students: A Cross-Sectional Study

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ABSTRACT

Introduction: It is well known that skin diseases are a major health problem in the pediatric age group and are associated with significant morbidity. Also people in rural areas are often prey to diseases and morbidity due to undesirable health attitudes and behaviors. The present study was conducted to explore the clinical profile of skin infections among ashram school students; to study the association between skin infections and regular personal hygienic practices and to make recommendations based on the study findings.

Methodology: A cross-sectional study was done among students of an ashram school located in a rural area of Maharashtra.

Results: 19.0 % students had skin infections of which majority were found to be acne and scabies, 24.6% and 22.8% respectively. 31.3% students were not following regular personal hygiene practices. Lack of regular hygienic practices was strongly associated with skin morbidities ($p < 0.05$).

Conclusion Regular personal hygiene practices are an important factor associated with skin diseases in the school students, so regular health educational activities on personal hygiene should be carried out for the ashram school students and teachers as well.

Key words: Skin infection, regular personal hygiene, ashram school, students

INTRODUCTION

Skin diseases are a major health problem in the pediatric age group and are associated with significant morbidity. Skin diseases in the pediatric age group can be transitory or chronic and recurrent. The recurrent dermatitis is associated with significant morbidity and psychological impact. ¹ School going children are more susceptible to various communicable diseases including skin diseases because a large number of students have to live in close proximity with each other. A World Health Organization (WHO) review of prevalence studies done on skin diseases among children reported an overall prevalence ranging from 21% to 87%.² In India, the prevalence of skin diseases among children range from 8 % to 35% in school based surveys ^{3, 4, 5} It is quite common to identify skin diseases because of their appearance on skin and their

peculiar characteristics and little or no further investigation in children, for example, Acne vulgaris, Psoriasis, Pityriasis alba, etc.³ A study conducted by Dogra S et al in Northern India found that more than 85% of skin disorders can be grouped into fewer than eight categories and this is important in designing training programs for medical teams involved in the delivery of primary health care services in developing countries such as India.⁴

With an objective to increase education among Scheduled Tribes including PTGs Ashram Schools were set up provide education with residential facilities in an environment conducive to learning. ⁶ Studies have however found, that overall the status of personal hygiene among ashram school children to be poor. It led to high prevalence of morbidities related to poor personal hygiene.^{7, 8} Most of the time schools, especially in rural areas, are not in a

condition to provide good hygienic conditions such as toilet facilities, good ventilation, lighting condition in class rooms etc.⁹ According to the Sixth All India Educational Surveys, 1993-94, out of 6.3 lakh primary and upper primary rural schools, only 44 percent have water supply facilities, 19 percent have urinals and 8 percent have lavatory facilities. Only 19 percent have separate urinals and 4 percent lavatory facility for girls. Though, recent estimates show that the number of schools as well as coverage of water and sanitation facilities has increased. The number of rural schools of all categories has gone to more than one million out of which 45.9% are without toilets and only 17.3 % are without water supply.¹⁰

If proper measures are not taken for keeping the body clean, the body is liable to various skin infections and it may hamper the physical well-being of the individual. Due to ignorance or lack of proper education, proper hygiene methods may not be practiced.¹¹ It is well known that rural people developed various unhygienic health practices and undesirable health attitudes because of poverty, illiteracy, ignorance, misconception and superstition. Rural school children have suffered various skin infections due to poor hygienic practices. Hence the current study was a preliminary study done to assess the prevalence of skin infections and personal hygiene practices of the ashram school students so that based on the findings necessary remedial measures can be taken.

OBJECTIVES

The study was conducted to explore the clinical profile of skin infections among ashram school students; to study the association between regular personal hygiene practices and skin infections; and also to make recommendations based on the above findings.

MATERIALS AND METHODS -

The cross-sectional study was carried out during last quarter of 2017 in an ashram school situated in a rural area of Raigad district Maharashtra, which is attached to a tertiary hospital. There are a total of 355 students from 5th to 10th standard. All students, except those who were absent from the school during study period or didn't give consent [due to illness] were included in the study. 300 students participated in the study. Data collection included examination by trained doctors and questionnaire. The questionnaire had three parts: General information- Age, sex, Standard; Skin Examination findings- eg. Scabies, Tinea, Boils/furuncles etc.; Questions on Regular personal hygiene prac-

tices - Responses were Yes/No. Daily- bathing and wearing clean clothes, hair combing, regular washing of scalp hair, clean and trimmed finger and toe nails, washing hands before eating and after visiting toilet were considered as regular personal hygienic practices in this study. Initially the purpose of the study was explained to the students and consent taken. Prior approval for the study was taken from the Institutional Ethics Committee. There was no source of funding and no conflict of interest in the study. The data was entered in MS office excel and analyzed using SPSS version 20.0.

RESULTS

There were a total of 300 students who participated in the study, of which 152 were boys and 148 were girls .Table 1.

Table 2 shows the pattern of skin morbidity in the students. It was observed that, of the 57 (19%) students who had skin infection, most common were acne and scabies, 24.6% and 22.8% respectively.

Table 1: Standard and sex wise distribution of the students

Standard	Males (n=152) (%)	Females (n=148) (%)	Total (n=300) (%)
5 th	19 (12.5)	24 (16.2)	43 (14.3)
6 th	26 (17.1)	26 (17.6)	52 (17.3)
7 th	24 (15.8)	30 (20.3)	54 (18.0)
8 th	26 (17.1)	29 (19.6)	55 (18.3)
9 th	30 (19.7)	22 (14.8)	52 (17.3)
10 th	27 (17.8)	17 (11.5)	44 (14.7)

Table 2: Pattern of skin morbidity in students

Skin Morbidity	Boys (n=27)(%)	Girls (n=30)(%)	Total (n=57)(%)
Scabies	7 (25.9)	6 (20.0)	13 (22.8)
Tinea	2 (7.4)	3 (10.0)	5 (8.8)
Pityriasis versicolor	5 (18.5)	4 (13.3)	9 (15.8)
Pediculosis	2 (7.4)	2 (6.7)	4 (7.0)
Acne vulgaris	5 (18.5)	9 (30.0)	14 (24.6)
Boils/Furuncles	6 (22.2)	6 (20.0)	12 (21.0)

In Table 3, the association between Standard, Sex, Socioeconomic status (Calculated according to Revised Socio-economic status scale (Rural) by Udai Pareek ¹²) Regular personal hygiene practices and Skin infection is shown. There was no statistically significant association between skin infections and standard, sex and socioeconomic status of the students. 206 (68.7%) students were following regular personal hygiene practices of which 12 (21.1%) had skin infection. Whereas prevalence of skin infection was 78.9% (45 students) in the 94 (31.3%) students who were not following regular personal hygiene practices.

Table 3: Association between Sex, Standard, Socioeconomic status, Regular personal hygiene practices and Skin infection

Variable	Students with skin infection (n=57)(%)	Students without skin infection (n=243)(%)	Total (n=300)(%)	P value
Sex				
Boys	27 (47.4)	126 (51.9)	153 (51.0)	0.559
Girls	30 (52.6)	117 (48.1)	147 (49.0)	
Standard				
5 th - 7 th	29(50.9)	120 (49.4)	149 (49.7)	0.839
8 th - 10 th	28 (49.1)	123 (50.6)	151 (50.3)	
Socioeconomic status				
Class III	3 (5.3)	21 (8.6)	24 (8.0)	0.165
Class IV	44 (77.2)	174 (71.6)	218 (72.7)	
Class V	10 (17.5)	48 (19.8)	58 (19.3)	
Regular personal hygiene practices				
Yes	12 (21.1)	194 (79.8)	206 (68.7)	<0.05
No	45 (78.9)	49 (20.2)	94 (31.7)	

DISCUSSION

In our study, 300 students (152 boys and 148 girls respectively) from classes 5th to 10th standard were studied to explore prevalence of skin infections and their regular personal hygiene practices.

Out of the 300 students, 57(19.0%) i.e. 27 boys and 30 girls respectively, had one or other type of skin morbidity during their clinical examination. Table 2. The types of infections found were scabies (22.8%), tinea (8.8%), pityriasis versicolor (15.8%) and pediculosis (7.0%). 14 (24.6%) and 12 (21.0%) students were having acne and boils respectively. The study conducted by Talukdar and Baruah¹³ shows, out of all skin disorder, majority was found to be scabies with the prevalence of 21.7% among the students, followed by pityriasis 19.6%. A similar study conducted by Sharma NL et al¹⁴ found prevalence of scabies to be 12.9% whereas pediculosis capitis was 74.1%.

A study conducted in Wardha amongst tribal school children by Dongre *et al.* found the prevalence of head lice was (42.8%), scabies (36.6%) and multiple boils (8.9%) amongst the school children.⁸

In the current study, 72.7% and 19.3% students were from socioeconomic class IV and class V respectively. There was no statistically significant association between skin infections and standard, sex and socioeconomic status of the students. Table 3

Regular personal hygiene practices were maintained by 206 (68.7%) students whereas 94 (31.3%) students were not following regular personal hygiene practices. In the 94 (31.3%) students who were not following regular personal hygiene practices, the prevalence of skin infection was 78.9%. Regular personal hygiene was found to be strongly associated with skin morbidities (chi square value is 74.14, df- 2, p<0.05). (Table 3) This finding can be compare with the study conducted by A. Shrahan

Kumar et al³ which also shows the similar results. Treatment was given to the children having skin ailments and appropriate health education was given to all regarding maintenance of daily hygienic practices.

In our study the prevalence of skin morbidities in school children was 19% which was lower than other comparable studies. This ashram school being attached to a tertiary health centre health checkups and health education are conducted in the school which can be a reason for low prevalence of skin morbidities in these children. However, the current prevalence could be attributed to the fact that besides contact with each other in school the students also stay in close proximity in common residential facilities and the chances of transmission of infection between them are higher. So especially in these settings there is more need for frequent health education activities for the students and their mentors i.e. teachers.

LIMITATIONS

A study of other epidemiological correlates of skin infection and environmental factors was not in the scope of this study.

CONCLUSION

There was a 19% prevalence of skin infections in the ashram school students. Almost one third of students had irregular personal hygiene practices which were found to be significantly associated with skin infections. Hence, there is a need for conducting regular screening programmes for skin infections and health educational activities on regular personal hygiene practices in the ashram school students.

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