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Research Article

Assessment of Clinical Profile and Impact of Different Risk Factors among Scabietic Children at Teaching Hospital

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ABSTRACT
Background: Scabies is a common contagious skin disease caused by the mite *Sarcoptes scabiei*. It is transmitted mainly through prolonged skin-to-skin contact and is highly prevalent among children. In India, scabies continues to be an important public health problem, especially among school-going children living in overcrowded and low socio-economic settings. Due to its association with poor hygiene, poverty and lack of awareness, scabies is considered a neglected tropical disease. School children are particularly vulnerable because of close contact with peers, shared belongings and limited understanding of personal hygiene. Understanding the prevalence and risk factors of scabies among school children is essential for planning effective preventive and control measures. The present study was conducted to assess prevalence and risk factors for scabies in school children.
Materials & Methods: 350 school children of both genders were selected. A semi-structured questionnaire was used to collect data. The questionnaire included variables related to socio-demographics. Parents provided information about their socioeconomic status and housing conditions via a separate questionnaire.
Results: There were 170 males and 180 females. There were 210 students from private and 140 from government school. Socio-economic status was upper and upper middle in 90, lower middle in 160, upper lower in 44 and lower in 56 children. The difference was significant (P< 0.05). Clinical features were itching seen in 82%, night aggravation in 81% and skin lesions in 73% patients. Family history was present in 80%, past history in 30% and secondary infection in 35% patients. The difference was significant (P< 0.05). Out of 350 patients, scabies was seen in 200 (90 males and 110 females). Risk factors for scabies was private school, lower socio-economic status, absence of cross ventilation, hut house, and overcrowding. The difference was significant (P< 0.05).
Conclusion: There was high prevalence of scabies in school children. Risk factors for scabies was private school, lower socio-economic status, absence of cross ventilation, hut house, and overcrowding.

Keywords: Scabies, Socio-Economic Status, Children.

INTRODUCTION

Scabies, a skin infection caused by the Sarcoptesscabiei var. hominis mite, spreads through direct skin contact. It is among the communal human skin disorders.[1] Scabies is primarily transmitted directly through prolonged contact with infected skin and indirectly through the use of contaminated personal items. Globally, over 300 million cases of scabies occur annually, exceeding expectations.[2] Scabies prevalence rates differ from 0.3% to 46% across various countries. Scabies presents as severe pruritus (particularly nocturnal) and a papular rash that itches. This can impact a large portion of the body or be restricted to the wrist, elbow, armpit, webbing between the fingers, nipple, penis, waist, beltline, and buttocks.[3] The rash can consist of small blisters (vesicles) and scales. Skin sores can develop from scratching the rash; at times contaminated by bacteria.[4] Occasionally, minuscule burrows can be observed on the skin; the tunnelling of the female scabies mite creates these right below the skin's surface. These burrows manifest as small, elevated, and crooked (serpiginous) lines on the skin that are greyish-white or the color of skin.[5] They are most commonly located in the webbing of the fingers, in skin folds on the wrist, elbow, or knee, and on the penis, breast, or shoulder blades. In infants and very young children, the head, face, neck, palms, and soles are often affected, but this is not usually the case for adults and older children.[6] The present study

was conducted to assess prevalence and risk factors for scabies in school children.

MATERIALS & METHODS

Study Place: Saraswathi Institute of Medical Sciences, Hapur

Study Duration: June 2022 to April 2023

Study Design: community-based, descriptive, and cross-sectional study.

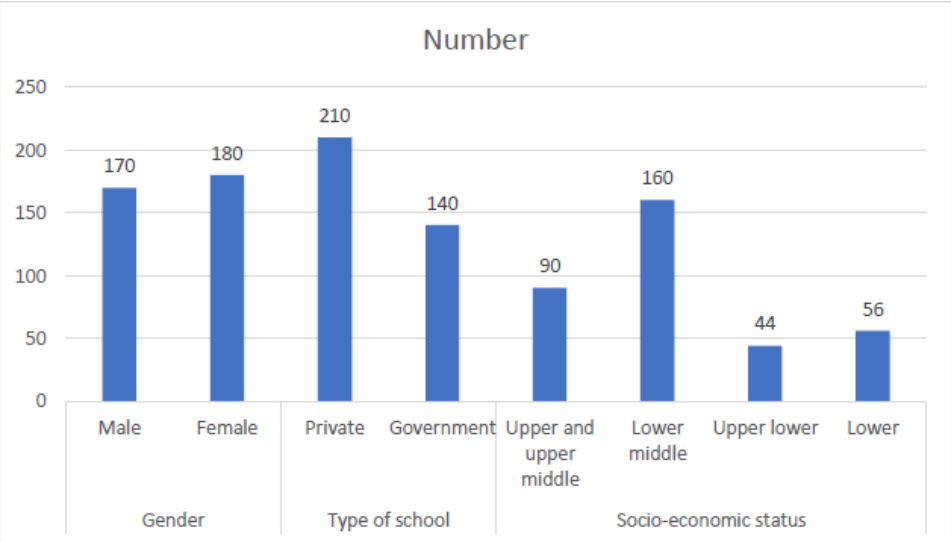
The study was carried out on 350 school children of both genders. All parents gave their written consent to participate in the study. Data such as name, age, gender etc. was recorded. A semi-structured questionnaire was used to collect data. The questionnaire included variables related to socio-demographics. Parents provided information about their socioeconomic status and housing conditions via a separate questionnaire. The evaluation of socio-economic status was done using a modified version of Kuppusamy's classification. The degree of overcrowding was indicated by the number of individuals per room. Overcrowding occurred when there were two or more occupants per rooms. Anthropometric measurements included height in meters; measured to the nearest 0.5 cm using a measuring tape and weight in kg; measured to the nearest 0.5 kg using a bathroom scale. The investigator, who had adequate training for diagnosing scabies, conducted the clinical examination. Scabies was operationally defined as the presence of a persistent pruritic rash characterized by increased night time itching, reported at least at two specific body sites (the wrist, sides and web spaces of the fingers, axillae, areolae, periumbilical region, genital area, abdomen, and buttocks), with or without a history of pruritus in close contacts. Results thus obtained were subjected to statistical analysis. P value < 0.05 was considered significant.

RESULTS

Table I. Socio demographic details

Parameters	Variables	Number	P value
Gender	Male	170	0.15
	Female	180	
Type of school	Private	210	0.02
	Government	140	
Socio-economic status	Upper and Upper Middle	90	0.05
	Lower Middle	160	
	Upper Middle	44	
	Lower Middle	56	

Table I, graph I shows that there were 170 males and 180 females. There were 210 students from private and 140 from government school. Socio-economic status was upper and upper middle in 90, lower middle in 160, upper lower in 44 and lower in 56 children. The difference was significant (P< 0.05).



Graph I. Socio Demographic Details

Table II. Clinical Profile of Patients

Clinical profile	Number	P value
Itching	82%	0.05
Night aggravation	81%	
Skin lesions	73%	
Family history		
Present	80%	0.06
Absent	20%	
Past history		
Present	30%	0.02
Absent	70%	
Secondary infections		
Present	35%	0.01
Absent	65%	

Table II shows that clinical features were itching seen in 82%, night aggravation in 81% and skin lesions in 73% patients. Family history was present in 80%, past history in 30% and secondary infection in 35% patients. The difference was significant (P< 0.05).

Table III. Association between Prevalence of Scabies and Selected Socio-Demographic Factors

Parameters	Variables	Number	Scabies present	No scabies	P value
Gender	Male	170	90	80	0.30
	Female	180	110	70	
Type of school	Private	210	150	60	0.05
	Government	140	60	80	
Socio-economic status	Upper and Upper Middle	90	50	40	0.02
	Lower Middle	160	100	60	
	Upper Middle	44	30	14	
	Lower Middle	56	42	14	
Cross ventilation	Present	200	110	90	0.04
	Absent	150	130	20	
Type of house	Pucca& semi pucca	180	105	75	0.02
	Hut	170	130	40	
Over crowding	Present	210	180	30	0.01
	Absent	140	54	86	

Table III shows that out of 350 patients, scabies was seen in 200 (90 males and 110 females). Risk factors for scabies was private school, lower socio-economic status, absence of cross ventilation, hut house, and overcrowding. The difference was significant (P< 0.05).

DISCUSSION

Individuals with crusted scabies might not exhibit the typical signs and symptoms, like the distinctive rash or itching (pruritus).[7,8] The most commonly occurring symptom is itching, and the disease leads to considerable health problems, whether by means of infestation or as a result of secondary bacterial infection. It may also result in diminished work productivity, interruption of school attendance, sleep disturbances, and psychological effects.[9] Scabies was included in the WHO's neglected tropical diseases list in 2017. The report also mentioned that actions such as mapping the disease prevalence must be completed before large-scale scabies prevention and control activities can commence.[10] The present study was conducted to assess prevalence and risk factors for scabies in school children. We found that there were 170 males and 180 females. There were 210 students from private and 140 from government school. Socio-economic status was upper and upper middle in 90, lower middle in 160, upper lower in 44 and lower in 56 children. Khan et al [11] seeked out the prevalence and associated risk factors for Scabies among the adolescent school children. Information was collected using a pretested

semi structured questionnaire. A trained medical examiner made the identification and clinical diagnosis of infection. Prevalence of Scabies infection was found to be 23.33%. Age of the student, overcrowding and the type of house was found to be statistically related to the infection. We found that clinical features were itching seen in 82%, night aggravation in 81% and skin lesions in 73% patients. Family history was present in 80%, past history in 30% and secondary infection in 35% patients. We found that out of 350 patients, scabies was seen in 200 (90 males and 110 females). Risk factors for scabies was private school, lower socio-economic status, absence of cross ventilation, hut house, and overcrowding. Dagne H et al [12] assessed the prevalence of scabies and associated factors among students in primary schools. A total of 494 students selected by a multi-stage sampling technique were included in this study. Scabies was diagnosed by medical practitioners based on lesions observed on body surfaces after a physical examination. The prevalence of scabies was 9.3% (46/494) with 95% CI (5.66%, 12.94%). Among school children who were infested by scabies, 65.22% (30/46) had a mild, 28.26% (13/46) had moderate, and 6.52% (3/46) had severe lesions. Studying at a rural school (AOR = 2.99, 95% CI 1.33, 6.71), had illiterate father (AOR = 5.11, 95% CI 2.25, 11.58), being grade level 1–4 (AOR = 3.91, 95% CI 1.69, 9.05), rarely taking a bath (AOR = 3.54, 95% CI 1.36, 9.25), contact with a person with itching symptom (AOR = 2.66, 95% CI 1. 21, 5.83), a family member with itchy symptoms (AOR = 4.76, 95% CI 2.20, 10.28), not living with both parents (AOR = 2.49, 95% CI 1.02, 6.06), and using water only for hand washing (AOR = 4.38, 95% CI 1.78, 10.76) were factors associated with scabies infestation among school children.

CONCLUSION

Authors found that Scabies remains a significant health problem among school children in India, particularly in underprivileged communities. High prevalence is closely linked to overcrowding, poor hygiene, poverty and lack of awareness. Effective control of scabies requires a combined approach involving schools, families and community health services. Early detection, proper treatment and health education can significantly reduce the burden of scabies and improve the quality of life of school-going children. There was high prevalence of scabies in school children. Risk factors for scabies was private school, lower socio-economic status, absence of cross ventilation, hut house, and overcrowding.

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