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### PREVALENCE AND ASSOCIATED FACTORS OF SKIN DISEASES AMONG PRIMARY SCHOOL CHILDREN IN ILLUABABORZONE, OROMIA REGIONAL STATE, SOUTH WEST ETHIOPIA

**Yohannes Lulu, Geremew Tolesa , John Cris**

*Public Health and Medical Science Faculty, Mettu, Ethiopia.*

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#### ABSTRACT

Skin diseases represent an important public health burden, particularly in developing countries, where high prevalence figures (21%–87%) have been reported and usually are not well managed. School survey is a useful yardstick as it is easy to conduct, less time consuming and large number of children of particular age group can be screened for presence of diseases. To assess the prevalence and associated factor of common skin disease among primary school children in Illu Aba Bora Zone, Oromia Regional state, Ethiopia. Institution based cross-sectional study using both quantitative and qualitative data collection methods was carried out from October, 2015 to May, 2015 G.C. A pre-tested structured questionnaire for participant interview and structured checklist for physical examination was used. A total of 828 participants available during data collection period were systematically included in the study unit. Data were collected by interviewing, physical examination and laboratory investigation to confirm some case. Data was cleaned, coded, and entered to SPSS version 20 for analysis [Analysis and interpretation of data was carried out by considering Chi-square, OR, bivariate and logistic regression and P value of  $< 0.05$  was considered statistically significant]. Physical examination was carried out with absolute privacy, and informed verbal consent was obtained before administering the interview and conducting physical examination. The overall prevalence of skin disorder was 58.3%. Of them 31.7% had two or more skin disorder. Pediculosis capitis was the commonest transmissible skin disorder with an overall prevalence of 63.5%. 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 but skin diseases, especially infestations and infection are not given the emphasis they deserve. Hence appropriate health education program and preventive measures should be implemented.

#### Corresponding author

##### **Geremew Tolesa**

Public Health and Medical Science Faculty,

Mettu, Ethiopia.

geremewtolesa@gmail.com

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## INTRODUCTION

Skin is the mirror of the body (1). Skin of infants, children, adults and the elderly, with its anatomic and physiologic characteristics, acts as a barrier for different environmental insults, and undergoes certain changes in each period during human life (2). Apart from that it is the most extensive organ in the human body, with a surface area of about  $2\text{m}^2$  and a total weight in adults of about 3 kg. It consists of three layers: the epidermis on the outside, then the dermis and the hypodermis. It plays an essential role in protecting the body against external threats (3). It is thin and more delicate in children therefore; they are more prone to develop skin disorders (4). Particularly School going children are more frequently exposed to various risk factors since they are ignorant of the risk factors and maintain close contact with other children (5).

Although skin disease is rarely lethal (7), in delayed diagnosis or inadequate treatment some infections, for example bacterial infections, have the potential for serious sequelae such as nephritis, carditis, arthritis, and septicemia (8). On the other hand, skin diseases particularly in children may result in considerable discomfort, parental anxiety, and embarrassment to the child and unnecessary absence from school. This in turn leads to loss of confidence and disruption of social relations, feeling of stigmatization and major changes in lifestyle (5).

The pattern of skin diseases in any community is influenced by genetic constitution, climate condition, socioeconomic status, occupation, educational background, personal hygiene, customs, quality of medical care, family size, family history and overcrowding in school or household (9, 10). Such factors give each community its unique pattern and account for the wide variation reported from different regions of the world and even in the same country (9). For instance, eczema being the most common skin disorder in developed countries, while infections and infestations in the developing countries (11). Children present a higher prevalence rate than adults for pyoderma (especially under 5 years of age), certain mycoses (tinea capitis) and, to a lesser extent, scabies (12) which contribute for 77.7% of the total burden of skin diseases (13). The WHO, in a workshop in 2004, has advocated for strengthening of community dermatology for developing countries while others have called for training of health workers in the diagnosis and management of skin diseases (21).

Therefore implementing effective treatments targeted at those conditions results in significant gains for both personal and public health (6).

School survey is a useful yardstick as it is easy to conduct, less time consuming and large number of children of particular age group can be screened for presence of diseases at a time. It is also a useful tool to detect prevalence of various skin diseases and status of health and hygiene of society. Moreover, it enables to detect and treat infectious diseases like pyoderma, infestation, fungal infection, leprosy and nutritional deficiency dermatoses in early age (4). More significantly; it enables to diagnose systemic and more serious conditions, such as HIV, during early infection particularly in resource poor countries like sub-Saharan Africa where the disease is endemic (26).

### Significance of the study

Skin diseases in developing world have stimulated a lot of interest over the years because they are potentially preventable and controllable and because skin diseases also serve as an index of community development (23).

The epidemiologic statistics of skin diseases provide us with information about prevalence, age, and sex differences in affected groups, and their regional distribution. It also offers the most useful way of evaluating causes of skin diseases in human populations (28). Skin diseases in children may result in considerable discomfort, parental anxiety, and embarrassment to the child and unnecessary absence from school. This in turn leads to loss of confidence and disruption of social relations, feeling of stigmatization and major changes in lifestyle (5).

However, most information about the epidemiology of skin disease is based on data collected from medical records in specialized centers which unfortunately, does not necessarily represent the actual prevalence of skin disease in the community.

### Justification of the study

Thus the goal of this study is to determine the actual prevalence and possible sociodemographic risk factors implicated in the development of skin disease among primary school children in Illuababora Zone, with the hope of making a significant contribution towards improving the health status of this vital segment of the population. Furthermore, the result of the research will be used as basis for further study in the area.

## METHODS AND MATERIAL

**General objective:** To assess the prevalence of common skin disease and associated risk factor among primary school children in Illubabor Zone

**Specific objective:** To determine the prevalence of skin disease among primary school children in Illubabor Zone, Oromia Regional state, South West Ethiopia

To assess factors related with the development of skin disease among primary school children in Illubabor Zone, Oromia Regional state, South West Ethiopia

### Methods and material:

Institution based cross sectional study design was used in order to assess the prevalence and associated factors of skin disorders among primary school children in Illu ab a bora Zone.

**Source population:**

All children attending primary education in selected school of Illu aba bora zone. The Study population were Students who are available in class during data collection period. Students who agree to participate in the study and who are willing to be examined were included and those who are absent from school for two consecutive days during data collection period excluded. The required sample size was determined by using single population proportion formula and total of 828 students were used for this study. A multi stage sampling technique was employed so as to select a fair representative sample of students from schools. Illu aba bora has 24 woreda from these woreda 6 were selected by random sampling technique. Again from each woreda four elementary schools were selected by simple random sampling technique. Totally 24 elementary school were involved in this study from six woreda. Sample unit (students) were selected using a systematic sampling technique and the numbers of sampled from the selected school were determined using proportionate to population size. An interview was undertaken with either children or parents by using structured questionnaire containing variables on socio-demographic, socio economic and hygiene habit of the child after providing oral instructions and obtaining either verbal or written consent. Four trained data collectors were used for interviewing students. A suitable place among class room with good day-light was used for the clinical examination.

A physical examination of the whole body (scalp, skin and nails) following brief history of symptoms was conducted by two Tropical Dermatology graduate and two female nurse and diagnosis of various skin conditions were made according to; Fitzpatrick's text book of dermatology diagnostic criteria. Dermatological diagnosis was made mainly clinically. Laboratory investigations were used to confirm some difficult cases to diagnose clinically. Skin scrapings, nail clippings and hairs plucking were obtained and treated for 15-30 minutes with 1-2 drops of 20% KOH before being examined microscopically for fungal hyphae. Data qualities were insured by training of data collectors and supervisors and strict supervision during data collection period. Pre testing of questionnaires' was done before the main data collection in two woreda. Study variables:- Skin disease is dependant variable whereas Age, Sex, Residence, Number of family members, Educational status of father and mother, Hygiene status were independent variables. Letter of ethical clearance was obtained from Research Ethics Committee of Mettu University.

**RESULT****Sociodemographic and economic characteristics of the study participants**

A total of 828 pupils from twenty eight schools were included in the analysis with the response rate of 100%. The number of male respondents are slightly higher 431(52.1%) in our study. The highest number of pupils was between the ranges of 6-10 years of age making 48.4% of the total. More than half 582(70.3%) of the respondent's family are living in their own houses while the rest are living in a rented houses. Family size of majority of our respondents is more than five which constitute 73.9% of the total, Eventhough; only 8.7% of them are living in houses having more than two rooms. Regarding the educational level of the parents, majority 271(32.7%) and 410(49.5%), father and mother of respondents can't write and read respectively (table 1). According to this study, the occupation of the higher number 552(66.7%) of student's father was farming and labour works and more than half 504 (60.9%) of respondent's mother were house wife (table1).

**Table 1. Sociodemographic and economic characteristics of study participants in primary schools in Illu Aba Bora Zone, Oromia, Ethiopia, 2015 (N=828).**

| Sociodemographic and economic characteristics | Number No | Percent % |
|---|-----------|-----------|
| Age(years)                                    |           |           |
| 6-10  | 401       | 48.4      |
| 10-15   | 287       | 34.7      |
| >15   | 140       | 16.9      |
| Sex   |           |           |
| Male  | 431       | 52.1      |
| Female  | 397       | 47.9      |
| Residence                                     |           |           |
| Rural   | 432       | 52.2      |
| Urban   | 392       | 47.8      |
| Family size                                   |           |           |
| <5  | 216       | 26.1      |
| >5  | 612       | 73.9      |
| Number of rooms                               |           |           |
| One   | 546       | 65.9      |
| Two   | 210       | 25.4      |
| >two  | 72        | 8.7       |
| Property of the house                         |           |           |
| Own   | 582       | 70.3      |
| Rented  | 246       | 29.7      |
| Educational level of father                   |           |           |
| Can't write and read                          | 271       | 37.2      |
| Grade 1-8                                     | 245       | 29.6      |
| Grade 9-12                                    | 206       | 24.9      |
| Diploma and above                             | 106       | 12.8      |
| Educational level of mother                   |           |           |
| Can't write and read                          | 410       | 49.5      |
| Grade 1-8                                     | 278       | 33.6      |
| Grade 9-12                                    | 131       | 15.8      |
| Diploma and above                             | 9         | 1.1       |
| Occupation of father                          |           |           |
| Farmer/labourer                               | 552       | 66.7      |
| G/NGO employee                                | 276       | 33.3      |
| Occupation of mother                          |           |           |
| Farmer/labourer                               | 504       | 60.9      |
| House wife                                    | 316       | 38.2      |
| G/NGO employee                                | 8         | 1.0       |

**Personal hygiene and skin care related characteristics of the respondents**

According to this study finding more than half 484(58.5) of respondents use other sources of water. Majority, 227 (57.3%) of those who have access to tap water belongs to urban. The highest number 713(86.1%) of respondent wash their body only once week and six hundred twenty five (75.5% of study participants wash their hands three times a day. Among interviewed students majority 603(72.8%) and 493(59.5%) of them are found to use soap during taking shower and hand washing sometimes respectively. More than half 560 (67.6%) of interviewed students have reported that they don't use ointment. Among our study subjects 747(90.2%), 739(89.3%), 680(82.1%) and 380(45.9%) have reported that they share comb, towel, bed and close with their siblings and/or other family members respectively. According to our finding 74.5% of respondents wear shoe. Nearly half (50.2%) of participants own pets at residence of which majority of the owners are rural resident 220(50.9%). Majority 514(62.1%) of respondents don't know whether there is individual with skin disease or not at home (table 2).

**Table 2. Personal hygiene and skin care related characteristics of the study participants in primary schools in Illu Aba Bora Zone, Oromia, Ethiopia, 2015 (N=828).**

| Hygiene related and skin related characteristics | Number No | Percent % |
|--|-----------|-----------|
| Source of water                                  |           |           |
| Tape water                                       | 344       | 41.5      |
| Other source                                     | 484       | 58.5      |
| Shower per week                                  |           |           |
| Once   | 713       | 86.1      |
| Twice  | 115       | 13.9      |
| Use soap during shower                           |           |           |
| Always   | 72        | 8.7       |
| Some times                                       | 603       | 72.8      |
| Rarely   | 153       | 18.5      |
| Use of ointment                                  |           |           |
| Yes  | 268       | 32.4      |
| No   | 560       | 67.6      |
| Hand washing a day                               |           |           |
| Three times                                      | 625       | 75.5      |
| More than three times                            | 161       | 19.4      |
| Less than three times                            | 42        | 5.1       |
| Towel sharing                                    |           |           |
| Yes  | 739       | 89.3      |
| No   | 89        | 10.7      |
| Close sharing                                    |           |           |
| Yes  | 380       | 45.9      |
| No   | 448       | 54.1      |
| Comb sharing                                     |           |           |
| Yes  | 747       | 90.2      |
| No   | 81        | 9.8       |
| Bed sharing                                      |           |           |
| Yes  | 680       | 82.1      |
| No   | 148       | 17.9      |
| Pet at home                                      |           |           |
| Yes  | 416       | 50.2      |
| No   | 412       | 49.8      |
| Shoe wearing                                     |           |           |
| Yes  | 617       | 74.5      |
| No   | 211       | 27.5      |
| Person with skin disease at home                 |           |           |
| Yes  | 44        | 5.3       |
| No   | 270       | 32.6      |
| I don't know                                     | 514       | 62.1      |

### Prevalence of skin disorders

The overall point prevalence of any skin disease was found to be 58.3% in our study. Regarding the etiology or types of skin disease the most common skin problem encountered by study participant was parasitic infestation representing 20.5% of the total followed by fungal infection (fig.1). According to the current study finding pediculosis capitis was found to be the leading parasitic infestation affecting children (63.5%) followed by scabies. Among other communicable skin disorders impetigo, tinea capitis and herpes labialis constitute 60.5%, 53.2% and 41.7% from their specific category respectively. Pityriasis alba was found to be the most common eczematous disease encountered by study participants (79.8%). Among skin disorders categorized under other types, xerosis was found to affect 35.5% of children with skin disorder. Among children with skin problem majority (31.7%) of them are affected by more than two skin problem (Table 3).

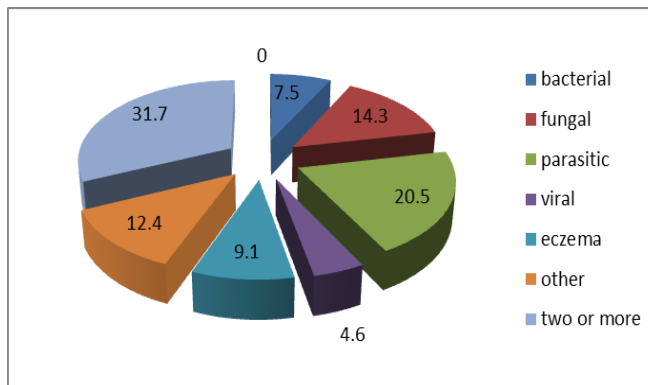


Figure 1. Types of skin disease in primary school children in Illu Aba Bora zone, Oromia, Southwest Ethiopia, 2015(N=483).

Table 3. Distribution of identified skin diseases according to their types among examined primary school children in Illu Aba Bora Zone, Oromia, Ethiopia, 2015 (N=483).

| Skin disease          | No of cases | %     |
|-----------------------|-------------|-------|
| Bacterial infection   | 52          | 60.5  |
| Impetigo              | 12          | 14    |
| Furuncle              | 22          | 25.64 |
| Ecthyma               | 86          | 100   |
| Total                 |             |       |
| Fungal infection      |             |       |
| Tinea capitis         | 74          | 53.2  |
| Tinea facialis        | 31          | 22.3  |
| Tinea pedis           | 13          | 9.4   |
| Onychomycosis         | 13          | 9.4   |
| Pityriasis versicolor | 8           | 5.8   |
| Total                 | 139         |       |
| Viral infection       |             |       |
| Verruca vulgaris      | 2           | 8.3   |
| Molluscum contagiosum | 10          | 41.7  |
| Herpes labialis       | 12          | 50.0  |
| Total                 | 24          |       |
| Parasitic infestation |             |       |
| Scabies               | 66          | 36.5  |
| Pediculosis capitis   | 115         | 63.5  |
| Total                 | 184         |       |
| Eczematous condition  |             |       |
| Atopic dermatitis     | 17          | 20.2  |
| Pityriasis alba       | 67          | 79.8  |
| Total                 | 84          | 100   |
| Other skin disease    |             |       |
| Papular urticaria     | 47          | 34.1  |
| Drug reaction         | 3           | 2.2   |
| Miliaria              | 1           | 0.7   |
| Acne vulgaris         | 33          | 23.9  |
| Xerosis               | 49          | 35.5  |
| Pigmentary disorder   | 2           | 1.4   |
| Urticaria             | 3           | 2.2   |
| Total                 | 138         | 100   |

|                        |     |      |
|------------------------|-----|------|
| Number of skin disease | 326 | 67.5 |
| One                    | 137 | 28.4 |
| Two                    | 20  | 4.1  |
| More than two          |     |      |
| Total                  | 483 | 100  |

#### Sociodemographic and economic determinants of skin disorders.

According to this study skin disorder was predominant in children of six to ten years of age (60.3 %), However the difference is not statistically significant in our study. Regarding the gender majority (60.2%) of respondents with skin disorders were females, Eventhough the difference is statistically insignificant. According to this study the prevalence of skin disease was 60.2% in rural areas. Prevalence of skin disorder was higher in children whose father can't write and read (74.9%) when compared to those whose father have graduated in diploma and above (32.1%) and the difference is statistically significant ( $p=0.004$ ). According to our study finding the occupation of father (61.2%) and mother (63.7%) of children with skin disorder was farming and/or daily labour respectively. The prevalence of skin disease was higher (70.7%) in children those who share single room with other family members for sleeping. And the difference is statistically significant ( $p=0.003$ ). And skin disease was found to be higher (58.5%) in children of more than five family sizes however the difference is statistically insignificant (table 3).

**Table 4. Skin disease according to the sociodemographic and economic characteristics of respondents in primary schools in Illu Aba Bora Zone, Oromia, Ethiopia, 2015 (N=483).**

| Sociodemographic and economic characteristics | Skin disorders |           | COR(95% CI)     | P.Value | AOR(95% CI)        |
|---|----------------|-----------|-----------------|---------|--------------------|
|   | Yes No (%)     | No No (%) |                 |         |                    |
| Educational level of father                   |                |           |                 |         |                    |
| Can't write and read                          | 203(74.9)      | 68(25.1)  | .158(.097,.259) | .000    | .090(.049,.166)    |
| Grade 1-8                                     | 144(58.8)      | 101(41.2) | .331(.205,.536) | .000    | .216(.121,.383)    |
| Grade 9-12                                    | 102(49.5)      | 104(50.5) | .481(.295,.787) | .004    | .289(.164,.508)    |
| Diploma and above                             | 34(32.1)       | 72(67.9)  | 1               |         |                    |
| Occupation of father                          |                |           |                 |         |                    |
| Farmer/daily labourer                         | 338(61.2)      | 214(38.8) | .701(.523,.938) | .017    | 2.591(1.678,4.003) |
| G/NGO employee                                | 145(52.5)      | 131(47.5) | 1               |         |                    |
| Number of rooms                               |                |           |                 |         |                    |
| One   | 386(70.7)      | 160(29.3) | .100(.054,.185) |         | .094(.050,.176)    |
| Two   | 83(39.5)       | 127(60.5) | .369(.194,.755) | .003    | .459(.230,.916)    |
| More than two                                 | 14(19.4)       | 58(80.6)  | 1               |         |                    |

#### Prevalence of skin disorders in relation to hygiene and skin care characteristics

According to this study finding skin disease were predominantly seen in children those who don't have access to tape water (60.1%) however the difference shows no statistically significant association when compared with those who use tap water. Regarding the habit of taking shower majority of cases 416(58.3%) are seen in children who bath their body once a week but the difference shows no significant association. Prevalence of skin disorder was higher in children using soap rarely during shower (83.7%) compared to those who use it always and the difference is statistically significant ( $P=.000$ ) (Table 4)

**Table 5. Distribution of skin disorders in relation to hygiene and skin care characteristics of respondents in primary schools in Illu Aba Bora Zone, Oromia, Ethiopia, 2015 (N=483).**

| Hygiene and skin care related characteristics | Presence of skin disorder |            | COR(95% CI)         | P.Value | AOR(95% CI)          |
|---|---------------------------|------------|---------------------|---------|----------------------|
|   | Yes No.(%)                | No No. (%) |                     |         |                      |
| Source of water                               |                           |            |                     |         |                      |
| Tape water                                    | 192(55.8)                 | 152(44.2)  | 1.194(.902,1.579)   | .215    |                      |
| Other source                                  | 291(60.1)                 | 193(39.9)  | 1                   |         |                      |
| Shower per week                               |                           |            |                     |         |                      |
| Once  | 416(58.3)                 | 297(41.7)  | .997(.668,1.486)    | .986    |                      |
| Twice   | 67(58.3)                  | 48(41.7)   | 1                   |         |                      |
| Use soap during shower                        |                           |            |                     |         |                      |
| Always  | 9(12.5)                   | 63(87.5)   | .190(.132,.275)     | .000    | 16.377(8.217,32.640) |
| Some times                                    | 346(57.4)                 | 257(42.6)  | 1                   |         |                      |
| Rarely  | 128(83.7)                 | 25(16.3)   |                     |         |                      |
| Hand washing a day                            |                           |            |                     |         |                      |
| Three times                                   | 31(73.8)                  | 11(26.2)   | .222(.104,.474)     | .000    |                      |
| More than three times                         | 390(62.4)                 | 235(37.6)  | .377(.264,.539)     |         |                      |
| Less than three times                         | 62(38.5)                  | 99(61.5)   | 1                   |         |                      |
| Towel sharing                                 |                           |            |                     |         |                      |
| Yes   | 420(56.8)                 | 319(43.2)  | 1.840(1.1399,2.973) | .013    |                      |
| No  | 63(70.8)                  | 26(29.2)   | 1                   |         |                      |
| Close sharing                                 |                           |            |                     |         |                      |
| Yes   | 286(75.3)                 | 94(24.7)   | .258(.191,.348)     | .000    | .259(.186,.360)      |
| No  | 197(44.0)                 | 251(56.0)  | 1                   |         |                      |
| Bed sharing                                   |                           |            |                     |         |                      |
| Yes   | 421(61.99)                | 259(38.1)  | .444(.309,.637)     | .000    | .503(.333,.758)      |
| No  | 62(41.9)                  | 86(58.1)   | 1                   |         |                      |



## DISCUSSION

School going children are more frequently exposed to various risk factors. They are also ignorant of the risk factors and maintain close contact with other children. Socio demographic factors such as age, gender, economic status, overcrowding etc play a crucial role in determining the pattern of skin disease in this age group. Type of skin diseases vary from country to country (3). In the same country it even varies from region to region. Skin diseases depend on different ecological, socio-economic, religious and environmental factors (4, 5, 6, 7). While skin diseases are very common among the populations in many developing countries, they have not been regarded as a significant problem that could benefit from public health measures (17). The overall prevalence of skin disease in this study population was 58.3% however it is lower from a study reported from rural areas of Ethiopia many decades ago (80%) is slightly similar to the studies conducted by Ewaldo V Komba et al in Dar es Salaam and RA Valia et al in Varanasi, Vikas Bhatia in Chandigarh where the prevalence was 57.3% and 54%, 51% respectively (36,37,38). Regarding the age, majority (60.3%) of study participants were found to be children of six to ten years of age even though there is no statistically significant difference when compared with other age group. The result of our study shows that transmissible skin disorders are more common in which parasitic infestation (20.5%) was the leading followed by fungal infection (14.3%), bacterial infection (7.5%) and viral infection (4.6%) in descending order. This is almost in accordance with many study findings compiled and reported by WHO in 2005 from different developing countries (17). The higher prevalence of infectious skin disorder in our study subject could probably be explained by overcrowding of children in class, frequent contact with their friends, poor personal and environmental hygiene lack of awareness to seek medical care to be treated and break transmission of the disease. We observed that 31.7% of respondents are suffering from two or more skin disease According to the current study finding pediculosis capitis was found to be the leading parasitic infestation affecting children (63.5%) followed by scabies. This is in line with study conducted in Egypt which has reported 83.8% and 16.2% of pediculosis capitis and scabies respectively (39) however it is incomparably very high from study results reported from India and Turkey (40,41). Regarding gender, pediculosis capitis was more common in female students and similar finding was reported from different geographic area at different period of time (5, 6).

Prevalence of skin disorder was higher in children whose father can't write and read (74.9%) when compared to those whose father have graduated in diploma and above (32.1%) and the difference is statistically significant ( $p=0.004$ ). The prevalence of skin disease was higher (70.7%) in children those who share single room with other family members for sleeping. And the difference is statistically significant ( $p=0.003$ ). In line with our study finding, a study done in Hijarat & Sultanabad found a high prevalence of infectious skin disease, scabies (37.5%), in children with low awareness of family (30%, 60%), overcrowding (85%, 70%), sharing of bed (70%, 50%) and poor personal hygiene (55%, 30%) respectively (33). Another study done in Calicut, Kerala, have shown that, Prevalence of skin disease was higher among those staying in overcrowded conditions in contrast to those staying in not overcrowded conditions (72.9% and 63.3% respectively) (5). This could be explained by children from educated family have better opportunity for better income and better personal and environmental sanitation in addition to better health seeking behavior than others. And skin disease was found to be higher (58.5%) in children of more than five family sizes however the difference is statistically insignificant. This lack of association in our case could be explained by information bias since children are unable to give all appropriate information.

## CONCLUSION

In conclusion, 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 but skin diseases, especially infestations and infection are not given attention it deserves. Similar population based studies are required to estimate the burden of skin disorders and formulate appropriate strategies to prevent and treat them. Regular examination of school children by experienced health professionals with the help of school authorities will help in reducing the prevalence of skin disorders in children. Training of health extension workers on diagnosis and treatment of most common dermatological disease is also recommended in order to detect and treat the problem early. Moreover emphasis should be given on the awareness creation of dermatological disease for parents and teachers of children in primary schools.

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