

## Original Article

## Pattern of Skin Diseases: Experience from a Rural Community of Bangladesh

A Nafiza<sup>1</sup>, MZ Islam<sup>2</sup>, S Farjana<sup>3</sup>**Abstract:**

Disease pattern in a given population is generally determined by different ecological factors. Thus the objective of this cross-sectional study was to determine the pattern of skin diseases in a selected rural community of Dhamrai Upazila under Dhaka district. Out of 2645 patients attending a medical camp showed 410(15.5%) patients with dermatological problems. Among all, 260(63.4%) patients were males and 150(36.6%) were females with a male to female ratio of 1.7:1. Of these patients, 178(43.4%) had cutaneous infections and 234(56.6%) had non-infectious dermatoses. Few patients (2.7%) had more than one dermatoses. Fungal infection was the commonest infection seen (22.9%) and eczemas took an upper hand in non-infectious group (32.2%). Improvement in the standard of living, health education, improvement in the environmental sanitation and good nutritious food may help the people to bring down the skin disease in the rural part of country.

**Keywords:** Rural community, Skin Diseases, Pattern, Risk Factors.

**Introduction:**

Disease pattern in a given population is generally determined by different ecological factors.<sup>1</sup> Dhamrai Upazila is a densely populated area of Dhaka district with high humidity and a heavy rainfall. Due to lack of education, the patients don't report for treatment unless compelled by the severity of the symptoms.<sup>2</sup> In Bangladesh there is a significant incidence of infectious disorders because of underdeveloped economy and social backwardness.<sup>3</sup> The selected rural community is also one such place where a high incidence of cutaneous infection was seen.

**Materials and methods:**

This Cross-sectional study was conducted during the period of January to June 2008 to determine the pattern of skin diseases in a selected rural community. The rural community 40 Km west to the Dhaka city called "Chandrail (Choto and

Patients were included in the study irrespective of age and sex considering specific selection criteria. Data was collected by face-to-face interview and clinical examination with the help of a semi-structured questionnaire and checklist respectively. Considering the objectives of the study, a medical camp was organized in a village near to Dhamrai Upazila. All 2645 patients attending the camp were examined under bright sunlight for cutaneous diseases. After diagnosing, they were treated accordingly. All data was processed considering the nature of variables, objectives and maintaining quality control check.

**Statistical Analysis:**

Data was analyzed by using the SPSS soft-ware (version-18.0) and accordingly descriptive statistics frequency distribution, percentage and mean  $\pm$  SD was estimated. The diseases were classified, tabulated and compared with the similar reports from other parts of the country.

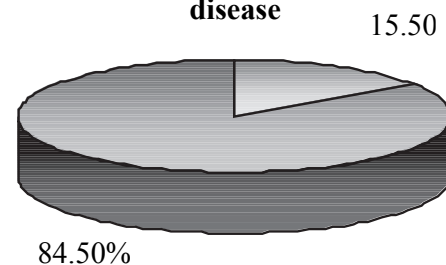
**Ethical considerations:**

Informed written/verbal consent was taken from the individual patient prior to inclusion in the study. They were also informed about the objectives, procedure and benefits of the study along with their freedom to withdraw consent at any stage of the study. Privacy was maintained during data collection and confidentiality of data was maintained properly.

**Results:**

Analysis of 2645 cases attending the camp showed 410(15.5%) patients having skin diseases while the rest

**Figure-1: Distribution of the patients by skin disease**



Among the patients, 260 (63.4%) were males and 150 (36.6%) were females with a male to female ratio of 1.7:1. The general living and hygienic standards of these patients were average to poor and majority of them belonged to lower socioeconomic class with monthly income within Tk.10,000/- of most (88.7%) of the patients. A remarkable part (37.3%) of the patients was illiterate and majority (32.25%) was housewives followed by businessmen (30.4%), which are shown in the table-1.

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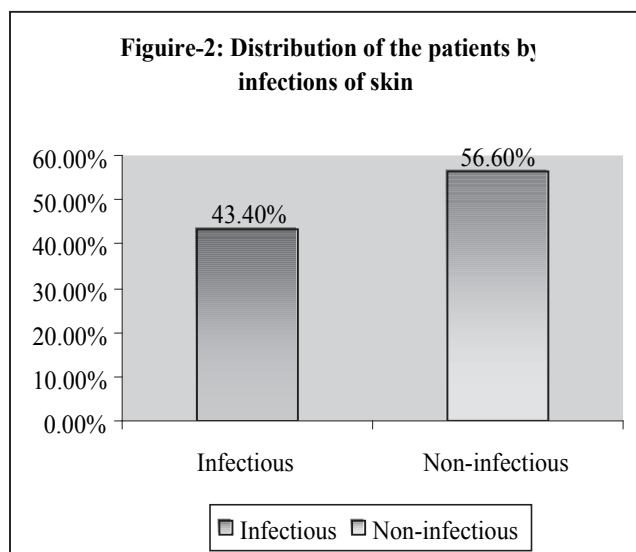
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**Table-1:** Socio-demographic Profile of the Patients (n=410)

Attribute	Finding
Sex	Male: 63.41%, Female: 36.59%
Age (in years)	15 -19: 7.33%, 20 -30: 44 .63%, 31 -40: 28.41%, Mean age ( $\pm$ SD ) = 3 2.37 $\pm$ 7.24 years.
Education	Illiterate: 37.31%, Primary: 30 .33%, Secondary: 25.00%, SSC: 4.91%, HSC: 2.45%.
Occupation	House wife: 32.25%, Business: 30 .40%, Farmer: 26.60%, Student: 10.75%.
Monthly family income	Tk.2000 -5000= 35.78%, Tk.500 1-10,000= 52.94%, Tk.10,001 20,000= 10.28%, Average ( $\pm$ SD )= Tk. 6843.14 $\pm$ 2786.77.

Of these patients, 178(43.4%) had cutaneous infections and 232(56.6%) had non-infectious dermatoses (Figure-2). Few patients (2.7%) had more than one dermatoses.



Fungal infection 94 (22.9%) was the commonest infection seen in the infectious group. Scabies was seen in 42 (10.2%) patients and bacterial infections in 39 (9.5%) patients. Viral infections were seen in 7 (1.7%), pediculosis in 6 (1.5%) patients and leprosy was found only in 2 (0.5%) patients (Table-2).

**Table-2:** Pattern of cutaneous infection by sex

Infection	Male	Female	Total
Fungal	62	32	94 (22.9)
Scabies	24	18	42 (10.2)
Bacterial	30	09	39 (9.5)
Leprosy	01	01	02 (0.5)
Viral	03	04	07 (1.7)
Pediculosis	02	04	06 (1.5)

Multiple Responses

In the non-infectious group, eczema and dermatitis took an upper hand and was observed in 132(32.2%) patients. Hereditary disorders and psoriasis were seen in 18(4.4%) patients while pigmentary disorders and autoimmune diseases were found in 12(2.9%) patients. Acne was seen in 20(4.4%) patients, deficiency disorders were found in 10(2.4%) patients and another 20(4.4%) patients had miscellaneous skin diseases (Table-3).

**Table-3:** Pattern of non-infectious dermatoses by sex

Infection	Male	Female	Total
Eczema and D ermatitis	90	42	132 (3 2.2)
Hereditary Disorder	10	8	18 (4.4)
Pigmentary Disorder	4	8	12 (2.9)
Autoimmune Diseases	8	4	12 (2.9)
Psoriasis	10	8	18 (4.4)
Acne	8	12	20 ( 4.8 )
Deficiency Disorder	4	6	10 (2.4)
Miscellaneous	12	8	20 (4.8)

Multiple Responses

#### Discussion:

Analysis of 2645 cases showed 410(15.5%) patients having skin diseases. Reports from other parts of the neighbor country India also showed similar results like 8.59%<sup>1</sup>, 10.50%<sup>5</sup> and 9.98%<sup>6</sup>. The prevalence of dermatoses in the tribal population of Dhamrai was found to be 40%<sup>7</sup>. Out of all the patients 178(43.4%) had cutaneous infections and 243(56.6%) had non-infectious dermatoses. Some other reports showed 53.18%<sup>1</sup>, 46.86%<sup>5</sup>, 38%<sup>8</sup> patients having cutaneous infections and 46.72%<sup>1</sup>, 53.14%<sup>5</sup>, 62%<sup>8</sup> patients with non-infectious dermatoses. Analysis of patients attending the Skin & STD out-patient department of KMC Hospital, India showed that 44.14% had cutaneous infections and 56.58% had noninfectious dermatoses.

Fungal infections dominated the infectious group and eczema took an upper hand in the non-infectious group in all the studies. Fungal infections were seen in 22.9% of patients. Geographical factors such as season and climate contributed to the higher proportion of fungal infection in this population. High proportion of bacterial infections and scabies can be explained due to the overcrowding, poor resistance, poverty and also poor economic and living standards of these patients.

Leprosy was low in this particular study (0.5%) compared to the other studies where it was as high as 11.76%<sup>1</sup>, 5.09%<sup>5</sup> and 4.91%<sup>8</sup> This may be because the population covered in the study were well aware of the disease and seek treatment in the early stage. The proportion of non-infectious dermatoses is similar to the other reports. Finally the study was compared with the incidence of dermatoses from other

hospital, considering it as representative of an urban population. The only difference was the high incidence of viral infections (15.73%) among the hospital patients. This can be explained due to the fact that the hospital has got newer treatment modalities available for treating warts viz. electrocautery and cryotherapy and hence cases are referred from peripheral centers.

**Conclusion:**

Improvement in the standard of living, education of the general public, improvement in the environmental sanitation and good nutritious food may help us to bring down the skin diseases in this area.

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