

## Epidemiology of Sexually Transmitted and Dermatological Diseases among Patients in 250 Bedded General Hospital, Jamalpur, Bangladesh

Dr. Md. Ismail Hossain<sup>1\*</sup>, Dr. A.A.M. Abu Taher<sup>2</sup>, Dr. Biplab Kumar Podder<sup>3</sup>, Dr. Dil Afroz<sup>4</sup>, Dr. Hasanul Bari<sup>5</sup>

<sup>1</sup>Senior Consultant, Department of Dermatology, 250 Bedded General Hospital, Jamalpur, Bangladesh

<sup>2</sup>MBBS. M.C.P.S (Radiotherapy), M.Phil (Clinical Oncology), BSMMU, Dhaka, Upazila Health and Family Planning Officer (UH@FPO), Islampur, Jamalpur, Bangladesh

<sup>3</sup>Assistant Professor (Cardiology), Sheikh Hasina Medical College, Jamalpur, Bangladesh

<sup>4</sup>Assistant Professor, Department of Dermatology, Sheikh Hasina Medical College, Jamalpur, Bangladesh

<sup>5</sup>Emergency Medical Officer, 250 Bedded General Hospital, Jamalpur, Bangladesh

DOI: <https://doi.org/10.36347/sjams.2024.v12i11.012>

Received: 12.12.2023 | Accepted: 16.01.2024 | Published: 08.11.2024

\*Corresponding author: Dr. Md. Ismail Hossain

Senior Consultant, Department of Dermatology, 250 Bedded General Hospital, Jamalpur, Bangladesh

### Abstract

### Original Research Article

**Background:** Skin diseases are widespread in developing nations. It is commonly acknowledged that the occurrence and characteristics of skin and venereal diseases vary across countries and even within different regions of a single country. These variations are influenced by a complex interplay of social, economic, racial, and environmental factors. **Objective:** To assess the epidemiology of sexually transmitted infections and skin illnesses among patients visiting the outpatient department of a tertiary care hospital in Bangladesh. **Methods:** This study was conducted at the outpatient department of skin and venereal diseases at the 250-bedded General Hospital in Jamalpur. The study took place from January 2023 to June 2023 and used a descriptive cross-sectional design. A total of 150 patients, spanning all age groups and presenting with various skin and venereal diseases, were included as the study sample from the 250-bedded General Hospital in Jamalpur during the study period. Data collection was conducted using the purposive sampling method. **Results:** The study findings revealed that a significant proportion of the patients (28%) fell within the age range of 20-29 years, with 23.3% and 18.7% falling within the age ranges of 10-19 years and <10 years, respectively. A mere 7.3% of individuals were encompassed within the age bracket of 50 years and older. Out of the 150 patients, a majority (54.70%) were male. In the study it was discovered that a noteworthy 14% of the patients were affected by venereal diseases and 86% of the patients were affected by skin diseases. It was particularly noteworthy that the highest prevalence of these venereal diseases was concentrated within the 20-29 years age range, affecting approximately 14.29% of individuals within this group. Specifically, 19.51% of males in the study were found to have venereal diseases, in contrast to a lower prevalence of 7.35% among females. Non-Gonococcal Urethritis (NGU) was a notable condition observed among males, affecting 8.54% of them. On the other hand, Trichomoniasis was more prevalent among females, with 4.41% of females suffering from these particular infections. Among males, scabies is the most common ailment, with 19.52% of males suffering from it. Likewise, among females, scabies also takes the top spot, affecting 29.41% of the female population. **Conclusion:** In conclusion, skin and venereal diseases pose unique challenges, particularly in populations facing adverse socio-economic conditions and reduced access to healthcare. Efforts to address these diseases should not only focus on medical treatment but also on education and awareness to promote early intervention, reduce stigma, and encourage patients to actively engage in their healthcare journey for better overall outcomes.

**Keywords:** Sexually Transmitted Diseases, Skin Diseases, Healthcare.

Copyright © 2024 The Author(s): This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC BY-NC 4.0) which permits unrestricted use, distribution, and reproduction in any medium for non-commercial use provided the original author and source are credited.

## INTRODUCTION

Sexually Transmitted and Dermatological Diseases (STDDs) are a significant public health concern worldwide, including Bangladesh. These diseases encompass a broad range of infections and skin conditions that affect individuals of all ages and gender.

The prevalence of skin diseases varies throughout countries and within different regions of a country, influenced by social, economic, racial, and environmental factors. Patients from different countries have reported a multitude of skin illnesses with diverse patterns. Dermatological conditions impact individuals of all age groups, ranging from newborns to the elderly.

**Citation:** Md. Ismail Hossain, A.A.M. Abu Taher, Biplab Kumar Podder, Dil Afroz, Hasanul Bari. Epidemiology of Sexually Transmitted and Dermatological Diseases among Patients in 250 Bedded General Hospital, Jamalpur, Bangladesh. Sch J App Med Sci, 2024 Nov 12(11): 1502-1508.

It can inflict damage through several means and have a significant impact on both individuals and communities. The condition can result in substantial morbidity as a result of deformity, impairment, persistent itching, and, although uncommon, even mortality caused by persistent skin illness. The prevalence and geographic distribution of dermatological illnesses vary between countries and within different regions of the same country [1]. Various factors such as heredity, environment, race, religion, career, nutrition, and habits can have an impact on the development of skin diseases [2]. Geographical factors, including season and climate, also play a role in the higher occurrence of specific skin conditions in a particular region. In addition to hot and humid climates, developing countries also face challenges such as low hygiene, limited access to water, overcrowding, and increased interpersonal contact. These factors significantly contribute to the development of certain skin disorders, including pyoderma, scabies, and fungal infections [3]. Approximately 70% of individuals in underdeveloped nations experience skin ailments at some point in their lives [4]. A significant portion of the population lacks access to fundamental skincare treatments, and even in affluent nations, 15% of patients resort to home cures prior to seeking appropriate medical assistance [5]. Several skin diseases are prevalent in underdeveloped countries. Nevertheless, there is a lack of comprehensive understanding of the epidemiology of these diseases in numerous regions, notably in Bangladesh [6]. Various studies have had varying outcomes. Nevertheless, the majority of the findings from the Indian subcontinent exhibit a resemblance to the results of the current study. Developed countries such as the U.K., Denmark, Egypt, and Singapore have varying outcomes. In the Indian subcontinent, the prevalence of infectious skin disorders is higher than that of non-infectious diseases, even in Ghana [7]. In Denmark, Egypt, and Singapore, dermatoses are more prevalent, but in the UK, premalignant and malignant skin illnesses are more prevalent [8, 9]. Furthermore, there is a lack of understanding regarding prevalent skin conditions that can be effectively treated by general practitioners, hence lessening the workload on specialised facilities that handle more complex skin ailments. Furthermore, it is imperative to raise awareness among the general public and primary healthcare practitioners in order to educate individuals about preventive measures pertaining to skin ailments, hence reducing the overall disease burden [10, 11]. Thus, this study was conducted to assess the epidemiology of sexually transmitted infections and skin illnesses among patients visiting the outpatient department of a tertiary care hospital in Bangladesh.

## METHODS AND MATERIALS

This study was conducted at the outpatient department of skin and venereal diseases at the 250-bedded General Hospital in Jamalpur. The study took place from January 2023 to June 2023 and used a descriptive cross-sectional design. A total of 150 patients, spanning all age groups and presenting with various skin and venereal diseases, were included as the study sample from the 250-bedded General Hospital in Jamalpur during the study period. Data collection was conducted using the purposive sampling method.

### Inclusion Criteria

- Both male and female.
- Suffering from any kind of skin disease for at least one month.

### Exclusion Criteria

- Patients with skin disease for more than one year.
- Patients with other major complications.
- Severely ill patients.

### Data Collection and Analysis:

At the beginning of the research, a carefully crafted questionnaire was developed. Before commencing the study, a pretest was performed to assess the questionnaire. Consequently, the final questionnaire was created. The sample that underwent pretesting was excluded from the study. The questionnaire consisted of a meticulously crafted and structured set of inquiries. Before starting the data gathering process, the respondents were asked to give their verbal agreement. The investigator personally collected the patients' information using a standardized questionnaire. The interview was conducted in a designated area to guarantee absolute confidentiality, employing a face-to-face interview structure. After the data gathering was completed, the collected data underwent a comprehensive process of scrutiny, authentication, and refinement before being organized into a tabular format. The data was duplicated within Excel spreadsheets. The data were analyzed via SPSS 23 software, with a specific emphasis on individual variables. Tables were built using the provided criteria, along with related descriptions.

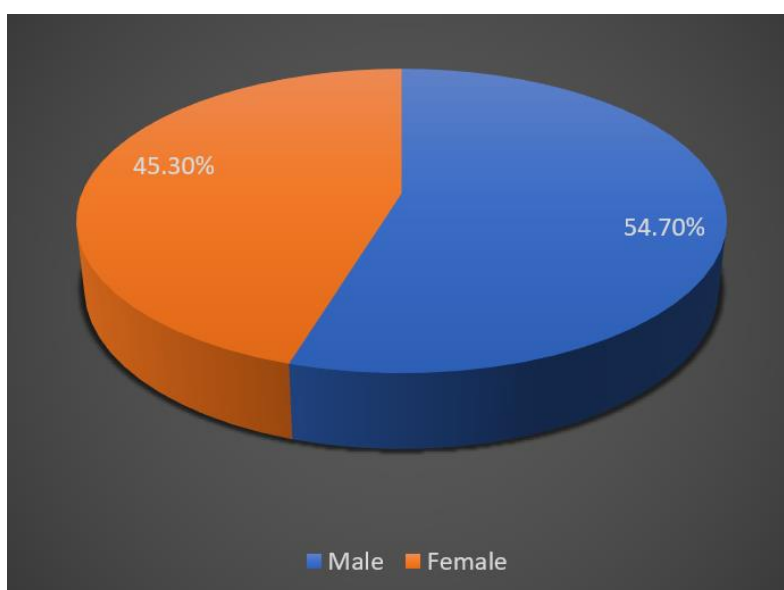
## RESULTS

The study findings revealed that a significant proportion of the patients (28%) fell within the age range of 20-29 years, with 23.3% and 18.7% falling within the age ranges of 10-19 years and <10 years, respectively. A mere 7.3% of individuals were encompassed within the age bracket of 50 years and older (Table 1).

**Table 1: Age Distribution of the Patients (N=150)**

Age range	Frequency	Percentage
<10 Years	28	18.7%
10-19 Years	35	23.3%
20-29 Years	42	28.0%
30-39 Years	18	12.0%
40-49 Years	16	10.7%
50+ Years	11	7.3%
<b>Total</b>	<b>150</b>	<b>100%</b>

Figure 1 depicted the distribution of patients according to gender. Out of the 150 patients, a majority (54.70%) were male.

**Figure 1: Sex Distribution of the Patients**

The study revealed some distinct patterns in the prevalence of venereal diseases, specifically Non-Gonococcal Urethritis (NGU) and Trichomoniasis, within different age groups. It was particularly noteworthy that the highest prevalence of these venereal diseases was concentrated within the 20-29 years age range, affecting approximately 14.29% of individuals within this group. This finding suggests that individuals in their twenties were more susceptible to these infections. Conversely, there were no reported cases of venereal diseases among respondents under the age of 10

years or those aged 50 years and older. This implies that these infections were virtually absent in both the very young and the older age brackets.

These observations underscore the age-specific variations in the prevalence of venereal diseases, emphasizing the need for targeted sexual health education and preventive measures, particularly among individuals in their twenties, to curb the incidence of NGU and Trichomoniasis within this demographic (Table 2).

**Table-2: Distribution of Respondents by Sexually Transmitted Diseases and Age (N=150)**

Diseases	Age in years						Total	
	<10 (n=28)	10-19 (n=35)	20-29 (n=42)	30-39 (n=18)	40-49 (n=16)	50+ (n=11)	N	%
Gonorrhoea	-	1 (2.86%)	2(4.76%)	-	-	-	3	2.0%
Trichomoniasis	-	-	3(7.14%)	1(5.6%)	-	-	4	2.67%
NGU	-	1 (2.86%)	6(14.29%)	-	-	-	7	4.67%
Chancroid	-	1 (2.86%)	1(2.38%)	-	-	-	2	1.33%
Herpes Progenital	-	-	1(2.38%)	1(5.6%)	1(6.25%)	-	3	2.0%
Syphilis	-	-	2(4.76%)	-	-	-	2	1.33%
<b>Total</b>	<b>0</b>	<b>3(8.57%)</b>	<b>15(35.71%)</b>	<b>2(11.11%)</b>	<b>1(6.25%)</b>	<b>0</b>	<b>21</b>	<b>14.00%</b>

In the study involving 150 respondents, it was discovered that a noteworthy 14% of the participants were affected by venereal diseases, indicating a significant presence of sexually transmitted diseases within the surveyed population.

Interestingly, when considering gender distribution, it became evident that males were disproportionately affected by these sexually transmitted diseases. Specifically, 19.51% of males in the study were found to have venereal diseases, in contrast to a lower prevalence of 7.35% among females. Non-Gonococcal Urethritis (NGU) was a notable condition observed

among males, affecting 8.54% of them. On the other hand, Trichomoniasis was more prevalent among females, with 4.41% of females suffering from this particular infection. In comparison, only one male case was reported with Trichomoniasis.

These findings emphasize both the presence of venereal diseases within the surveyed population and the gender-based variations in their prevalence. It underscores the importance of targeted sexual health education and intervention strategies to address these concerns effectively among both males and females (Table 3).

**Table-3: Distribution of Respondents by Sexually Transmitted diseases and Sex (N=150)**

Diseases	Male (n=82)	Female (n=68)	Total	
			N	%
NGU	7 (8.54%)	0	7	4.67%
Trichomoniasis	1(1.22%)	3(4.41%)	4	2.67%
Chancroid	2(2.44%)	0	2	1.33%
Herpes Progenitalis	2(2.44%)	1(1.47%)	3	2.00%
Syphilis	2(2.44%)	0	2	1.33%
Gonorrhoea	2(2.44%)	1(1.47%)	3	2.00%
<b>Total</b>	<b>16(19.51%)</b>	<b>5(7.35%)</b>	<b>21</b>	<b>14.00%</b>

Among the 150 respondents included in the study, a significant majority, totaling 129 individuals (86%), were found to be affected by various skin diseases. This highlights the substantial prevalence of dermatological conditions within the surveyed population. Scabies emerged as the most widespread skin ailment, afflicting 24% of the respondents. Following closely were Ring Worm and Eczema, each affecting 8.67% of the surveyed individuals. Seborrhoeic Dermatitis was another noteworthy condition, impacting 7.33% of the respondents predominantly. Among the 28 respondents under the age of 10, a significant 53.57% of

children were afflicted by Scabies, while Eczema affected 17.85% of this age group. In contrast, individuals aged 50 years and above were predominantly affected by Wart, with 27.27% of cases falling into this category. Acne Vulgaris cases were primarily observed in the 10-19 years (17.14%) and 20-29 years (7.14%) age groups. These findings underscore the diverse range of skin diseases affecting the population under study and emphasize the need for tailored healthcare interventions and treatments to address these prevalent dermatological conditions across different age groups (Table 4).

**Table 4: Distribution of Respondents by Skin Diseases and Age (N=150)**

Diseases	Age in years						Total	
	<10 (n=28)	10-19 (n=35)	20-29 (n=42)	30-39 (n=18)	40-49 (n=16)	50+ (n=11)	N	%
Urticaria	-	1(2.86%)	1(2.38%)	-	-	1(9.1%)	3	2.0%
Pigmentary Disorder	-	-	-	2(11.11%)	1(6.25%)	1(9.1%)	4	2.67%
Chr.Folliculitis	-	-	-	-	2(12.5%)	-	2	1.33%
Scabies	15(53.57%)	11(31.43%)	6(14.29%)	4(22.22%)	-	-	36	24.0%
Pyoderma	-	3(8.56%)	3(7.14%)	-	-	-	6	4.0%
Acne Vulgaris	-	6(17.14%)	3(7.14%)	-	-	-	9	6.0%
Ring Worm	-	1(2.86%)	5(11.90%)	3(16.67%)	3(18.75%)	1(9.1%)	13	8.67%
Wart	-	1(2.86%)	1(2.38%)	-	1(6.25%)	3(27.27%)	6	4.0%
Impetigo	2(7.14%)	1(2.86%)	1(2.38%)	-	-	1(9.1%)	5	3.33%
Atopic Dermatitis	-	-	4(9.52%)	3(16.67%)	1(6.25%)	-	8	5.33%
Pityriasis	1(3.57%)	2(5.71%)	-	1(5.56%)	-	1(9.1%)	3	2.0%
Eczema	5(17.85%)	4(11.42%)	3(7.14%)	-	2(12.5%)	1(9.1%)	13	8.67%
Seborrhoeic dermatitis	2(7.14%)	-	1(2.38%)	3(16.67%)	1(6.25%)	-	11	7.33%
Alopecia	-	-	-	-	1(6.25%)	-	1	0.67%
Psoriasis	-	1(2.86%)	-	-	1(6.25%)	1(9.1%)	2	1.33%
Boil	3 (10.71%)	1(2.86%)	-	-	-	-	4	2.67%
Chr.Paronychea	-	1(2.86%)	-	-	1(6.25%)	1(9.1%)	3	2.0%
<b>Total</b>	<b>28(100%)</b>	<b>33(94.28%)</b>	<b>28(66.67%)</b>	<b>16(88.89%)</b>	<b>14(87.5%)</b>	<b>11(100%)</b>	<b>129</b>	<b>86%</b>

The data reveals that scabies is the most prevalent dermatological condition, affecting a significant proportion of both males and females. Among males, scabies is the most common ailment, with 19.52% of males suffering from it. Likewise, among females, scabies also takes the top spot, affecting 29.41% of the female population. Furthermore, when considering the

combined data irrespective of sex, scabies remains the predominant condition, indicating that it affects a substantial portion of the entire population under study. This underscores the importance of addressing scabies as a significant dermatological concern in this particular population group (Table 5).

**Table 5: Distribution of Respondents by Skin Diseases and Sex**

Disease	Male (n=82)	Female (n=68)	Total	
			N	%
Urticaria	1(1.22%)	2(2.94%)	3	2.0%
Pigmentary Disorder	3(3.66%)	1(1.47%)	4	2.7
Chr.Folliculitis	1(1.22%)	1(1.47%)	2	1.9
Scabies	16(19.52%)	20(29.41%)	36	24.0
Pyoderma	3(3.66%)	3(4.41%)	6	4.0
Acne Vulgaris	4(4.88%)	5(7.35%)	9	6.0
Ring Worm	7(8.54%)	6(8.82%)	13	8.7
Wart	3(3.66%)	3(4.41%)	6	4.0
Impetigo	2(2.44%)	3(4.41%)	5	3.3
Atopic Dermatitis	6(7.32%)	2(2.94%)	8	5.3
Pityriasis	1(1.22%)	2(2.94%)	3	2.0
Eczema	4(4.88%)	9(3.24%)	13	8.7
Seborrhoeic Dermatitis	8(9.76%)	3(4.41%)	11	7.3
Alopecia	1(1.22%)	-	1	0.7
Psoriasis	2(2.44%)	-	2	1.3
Boil	2(2.44%)	2(2.94%)	4	2.7
Chr.Paronychea	2(2.44%)	1(1.47%)	3	2.0
<b>Total</b>	<b>66(80.49%)</b>	<b>63(92.65%)</b>	<b>129</b>	<b>86.00%</b>

## DISCUSSION

Skin and venereal diseases (VD) represent significant public health challenges globally. These conditions transcend age, gender, and socioeconomic classes, posing substantial community health concerns, particularly in developing countries. Several factors contribute to the prevalence and persistence of these diseases in society.

In this study, a total of 150 patients were examined, with a gender distribution showing that 54.7% were male, while 43.3% were female. This gender composition resulted in a male-to-female ratio of approximately 1.2:1, indicating a slight predominance of males in the study cohort. It's noteworthy that a significant proportion of the patients, accounting for more than 40%, fell within the age group of less than 20 years, underscoring the substantial representation of younger individuals in the study population. Furthermore, when assessing the health conditions of these patients, it was revealed that 86% of them had skin diseases, emphasizing the prevalent nature of dermatological ailments within this group. In contrast, 14% of patients were diagnosed with venereal diseases (VD), indicating the coexistence of sexually transmitted infections alongside skin conditions among the study participants.

In case of sexually transmitted disease, NGU obtained highest proportion (4.7%) with least percentage of syphilis and chancroid (each with 1.3%). It was particularly noteworthy that the highest prevalence of these venereal diseases was concentrated within the 20-29 years age range, affecting approximately 14.29% of individuals within this group. This finding suggests that individuals in their twenties were more susceptible to these infections. Conversely, there were no reported cases of venereal diseases among respondents under the age of 10 years or those aged 50 years and older. Specifically, 19.51% of males in the study were found to have venereal diseases, in contrast to a lower prevalence of 7.35% among females. Non-Gonococcal Urethritis (NGU) was a notable condition observed among males, affecting 8.54% of them. On the other hand, Trichomoniasis was more prevalent among females, with 4.41% of females suffering from this particular infection. In comparison, only one male case was reported with Trichomoniasis. This study was somewhat concomitant to the study conducted by Hossain MM *et al.*, [12] Feni Sadar Hospital, showed NGU 3.3%, Gonorrhoea 0.82%, and syphilis 0.49%, only. This study also strongly supported by a study conducted by Ahad SMMA *et al.*, [13] in private Chamber of Skin and VD-showed that out of total, cases only 13.7% were suffer from STDs.



Among the 150 respondents included in the study, a significant majority, totaling 129 individuals (86%), were found to be affected by various skin diseases. This highlights the substantial prevalence of dermatological conditions within the surveyed population. Scabies emerged as the most widespread skin ailment, afflicting 24% of the respondents. Following closely were Ring Worm and Eczema, each affecting 8.67% of the surveyed individuals. Seborrhoeic Dermatitis was another noteworthy condition, impacting 7.33% of the respondents predominantly. Among the 28 respondents under the age of 10, a significant 53.57% of children were afflicted by Scabies, while Eczema affected 17.85% of this age group. In contrast, individuals aged 50 years and above were predominantly affected by Wart, with 27.27% of cases falling into this category. Acne Vulgaris cases were primarily observed in the 10-19 years (17.14%) and 20-29 years (7.14%) age groups. Among males, scabies is the most common ailment, with 19.52% of males suffering from it. Likewise, among females, scabies also takes the top spot, affecting 29.41% of the female population. This result was compatible to the study of Hossain MM, [12] Conducted on skin and sexually transmitted diseases OPD of Modernised Sadar Hospital, Feni and reported that 22.08% of patients were Scabies, followed by Fungal infection (20.91%), Eczema (19.29%), Seborrhoeic dermatitis (8.80%) psoriasis (0.19%) and NGU 3.33%. The percentage of vitiligo in this study was 2.7%. This proportion was in close accord with available report from another study conducted by Ahad SMMM, *et al.*, [13] who showed that the proportion of vitiligo was 2.9%. The proportion of psoriasis was 1.3%, In another study, it was 1.5% which consistent to the present study [14].

## CONCLUSION

Skin and venereal diseases are known for their highly contagious nature, often making them particularly prevalent in populations afflicted by war, famine, or other widespread diseases. In such challenging circumstances, the emphasis on personal hygiene tends to diminish, and socio-economic conditions often deteriorate significantly. These factors collectively contribute to the increased transmission and prevalence of these diseases.

One notable characteristic of these diseases is their relatively low mortality rate. While they may not be life-threatening, they can cause considerable discomfort and suffering. In many cases, individuals who are literate and financially solvent may delay seeking specialized medical care. This delay can be attributed to several factors, including a lack of awareness about the importance of early intervention, the misconception that these diseases are not serious, or the stigma associated with discussing them openly.

Moreover, the chronic nature of many skin and venereal diseases can lead to patient reluctance regarding long-term treatment and adherence to medical advice. The extended duration of treatment can be challenging for patients, and the need for consistent follow-up and medication may discourage some individuals from seeking or continuing care.

In conclusion, skin and venereal diseases pose unique challenges, particularly in populations facing adverse socio-economic conditions and reduced access to healthcare. Efforts to address these diseases should not only focus on medical treatment but also on education and awareness to promote early intervention, reduce stigma, and encourage patients to actively engage in their healthcare journey for better overall outcomes.

## REFERENCES

- Rook, A., Savin, J. A., & Wilkinson, D. S. (1987). The prevalence, incidence and ecology of diseases of skin, In: Rook, A., Wilkinson, D. S., Ebling, F. J., Champion, R. H., & Burton, J. L., editors, Text book of Dermatology. Oxford University Press: Mumbai. 39-53.
- Parthasaradhi, A., & Al Gufai, A. F. (1998). The pattern of skin diseases in Hail region, Saudi Arabia. *Annals of Saudi medicine*, 18(6), 558-561.
- Atraide, D. D., Akpa, M. R., & George, I. O. (2011). The pattern of skin disorders in a Nigerian tertiary hospital. *Journal of Public health and epidemiology*, 3(4), 177-181.
- Devi, T. B., & Zamzachin, G. (2006). Pattern of skin diseases in Imphal. *Indian journal of Dermatology*, 51(2), 149.
- Symvoulakis, E. K., Krasagakis, K., Komminos, I.D., Kastrinakis, I., Lyronis, I., Philalithis, A., & Tosca, A. D. (2006). Primary care and pattern of skin diseases in a Mediterranean island. *BMC Family Practice*, 7(1), 6.
- Grover, S., Ranyal, R. K., & Bedi, M. K. (2008). A cross section of skin diseases in rural Allahabad. *Indian journal of dermatology*, 53(4), 179-181.
- Jain, S., Barambhe, M. S., Jain, J., Jajoo, U. N., & Pandey, N. (2016). Prevalence of skin diseases in rural Central India: A community-based, crosssectional, observational study. *Journal of Mahatma Gandhi Institute of Medical Sciences*, 21(2), 111-15.
- Kar, C., Das, S., & Roy, A. K. (2014). Pattern of skin diseases in a tertiary institution in Kolkata. *Indian journal of dermatology*, 59(2), 209.
- Chua- Ty, G., Goh, C. L., & Koh, S. L. (1992). Pattern of skin diseases at the National Skin Centre (Singapore) from 1989–1990. *International journal of dermatology*, 31(8), 555-559.
- El- Khateeb, E. A., Imam, A. A., & Sallam, M. A. (2011). Pattern of skin diseases in Cairo, Egypt. *International journal of dermatology*, 50(7), 844-853.

11. Onayemi, O., Isezuo, S. A., & Njoku, C. H. (2005). Prevalence of different skin conditions in an outpatients' setting in north- western Nigeria. *International journal of dermatology*, 44(1), 7-11.
12. Hossain, M. M. (1993). Pattern of skin sexually Transmitted Disease in District Hospital. *Bangladesh J dermatol, Venereol, leprol*, 10(2), 7-9.
13. Ahad, S. M. M. A., Ali, A., & Maidul, A. Z. M. (1994). Disease Pattern of Patients attended in private chambers of Dermatologist and venereologist and sex related disorders. *Bangladesh J. dermatol, Venrol, leprol*, 11(2), 34-36.
14. Basit, A. (1966). A study of psoriasis in East Pakistan. *Pakistan J. Med. Rsc*, 294-304.