

A Descriptive Study of Scabies Cases in the Dermatology Department of Kandahar Mirwais Regional Hospital

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Abstract

Background: Scabies is an infectious skin disease caused by a microscopic mite called *Sarcoptes scabiei*. The disease spreads rapidly through direct skin contact or indirectly via personal items.

Objective: The primary objective of this study was to identify the cases of scabies in the dermatology department of Kandahar Mirwais Regional Hospital. Secondary objective included analyzing the distribution of patients by age, gender, and geographical location.

Methodology: This was a retrospective, descriptive, cross-sectional study conducted in Mirwais Regional Hospital. Data were collected from the patient registry books from the month of Sunbula to the end of Hoot in the solar year 1402. From the total number of cases, data from 308 patients were selected and analyzed using the SPSS software.

Results: During the study period, a total of 1,531 patients diagnosed with scabies visited the dermatology department. Out of these, data from 308 patients were analyzed. Among them, 199 were male and 109 were female. The mean age of the patients was 21.23 years, the median age was 18 years, and the standard deviation was 16.63. Most of the patients were residents of Kandahar city.

Conclusion: The study indicates that scabies was more prevalent among males. The majority of the affected individuals were young and came from densely populated areas, particularly Kandahar city. These findings highlight the urgent need for public awareness and preventive measures, especially in crowded communities.

Key words: Scabies, *Sarcoptes scabiei*, Streptococcus, Skin

Introduction

Scabies is a type of skin disease caused by a tiny mite known as *Sarcoptes scabiei*. This parasite burrows into the human skin and lays eggs there, leading to severe itching and redness. The disease spreads rapidly to others through direct physical contact [1].

Scabies is mainly transmitted through direct skin contact or by sharing clothes, bedding, and personal items. People who work or live in crowded environments—such as students and soldiers—are particularly susceptible to this infection [2].

Globally, scabies affects around 200 million people. This figure indicates that the disease exists in almost every country in various forms and levels. The highest prevalence is found in low- and middle-income countries, especially in areas where people live in close quarters—such as camps, densely populated villages, and urban settlements. The disease is particularly widespread in regions like Africa, Southeast Asia, and Oceania, notably in Fiji, Papua New Guinea, and Tanzania [3].

Although scabies is more common in low-income regions, it is also recognized in developed countries. For example, in Europe and the United States, cases have been reported in long-term healthcare facilities, refugee camps, and prisons. In such settings, the disease often spreads through close living conditions and direct physical contact [4].

Kandahar, located in southern Afghanistan, faces major public health challenges due to poverty, limited access to healthcare, and inadequate sanitation infrastructure. The city's population has grown rapidly in recent years, leading to overcrowded housing, poor hygiene conditions, and an increased risk of infectious diseases. Many residents, particularly in rural and peri-urban areas, live in environments where clean water, proper waste disposal, and medical care are scarce. Such socio-economic and environmental conditions create a fertile ground for the spread of communicable skin diseases, including scabies. Children and low-income families are especially vulnerable, as poor living conditions and close interpersonal contact facilitate the transmission of *Sarcoptes scabiei* mites responsible for the disease [5, 6].

Considering these circumstances, the current study was undertaken to explore the epidemiological characteristics of scabies among patients attending the Dermatology Department of Mirwais Regional Hospital in Kandahar. Despite scabies being a globally recognized public health issue, limited data exist from Afghanistan, particularly from southern provinces such as Kandahar. This lack of local evidence hinders the development of context-specific prevention and control programs. Therefore, this descriptive study aims to identify the distribution of scabies cases according to demographic variables such as age, gender, and residential location. The results are expected to guide healthcare professionals and policymakers in designing targeted interventions to reduce scabies transmission and improve community awareness and hygiene practices in Kandahar and other similar low-resource settings [7, 8].

Materials and Methods

Study Design:

This was a retrospective descriptive cross-sectional study conducted in the Dermatology Department of Mirwais Regional Hospital, Kandahar. Data were carefully extracted from the patients' registration book and recorded accurately for inclusion in the study.

Study Population:

The study population included all patients who visited the Dermatology Department of Mirwais Regional Hospital between Sunbula (August/September) and Hoot (February/March) of the solar year 1402 (2023–2024) and were clinically diagnosed with scabies by the dermatology specialists of the department.

Sample Size:

During the six-month study period, a total of 1,531 patients were diagnosed with scabies by dermatology specialists at Mirwais Regional Hospital. For convenience and manageability, a sample of 308 patients

was selected using an online Sample Size Calculator, based on a 95% confidence level and a 5% margin of error.

Method of Sampling:

The sampling method used in this study was non-probability consecutive sampling.

Inclusion Criteria:

All patients who were diagnosed with scabies and visited the Dermatology Department of Mirwais Regional Hospital within the six-month study period were included in the study.

Exclusion Criteria:

All patients who were diagnosed with scabies before or after the defined six-month period were excluded from the study.

Variables:

1. Age
2. Gender
3. Address

Data Collection and Analysis Methods:

Data were collected from the registration records of **308 patients** who were diagnosed with scabies by dermatology specialists at Mirwais Regional Hospital between **Sunbula 1402 and Hoot 1402**. The collected information was entered into a structured data collection form, and statistical analysis was performed using the **SPSS 26** to obtain and interpret the study results.

Results

This study was conducted in the Dermatology Department of Mirwais Regional Hospital, Kandahar, on patients infected with scabies, covering the period from Sunbula 1402 to the end of 1402 (August 2023 – March 2024). During this period, a total of 1,531 scabies patients visited the department. For the purpose of feasibility and effective analysis, data from 308 patients were selected as a sample and analyzed accordingly.

Among these 308 patients, 199 (64.6%) were male and 109 (35.4%) were female. The mean age of the patients was 21.23 years, the median age was 18 years, and the standard deviation was 16.63.

Prevalence of Scabies by Gender

In our study, out of a total of 308 patients, 199 (64.6%) were males, while 109 (35.4%) were females. The chart below clearly shows the distribution of scabies cases by gender (Figure 1).

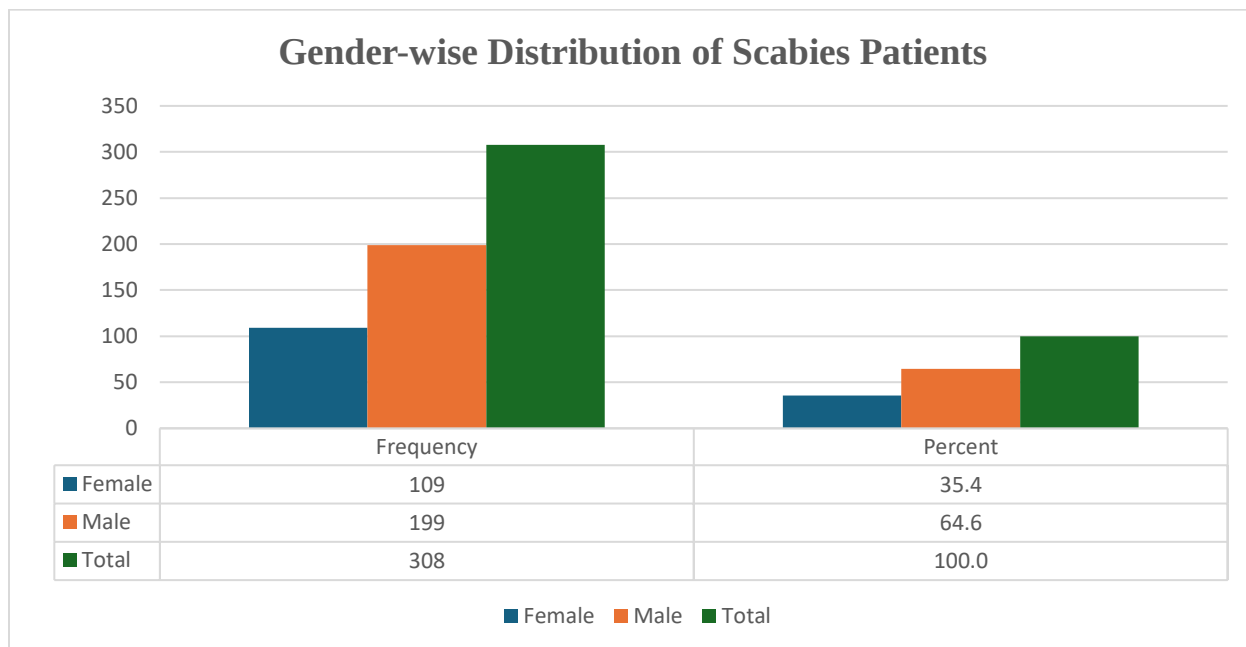


Figure 1: Gender-wise Distribution of Scabies Patients (n = 308).

Prevalence of Scabies by Age

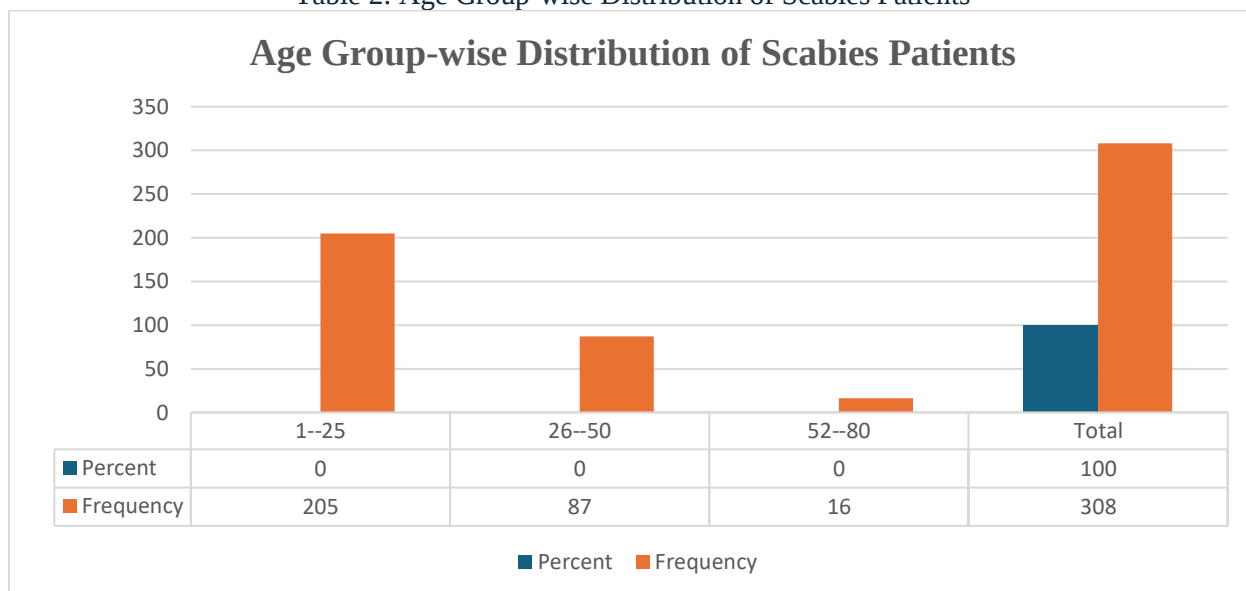
In our study, the average age of the total 308 patients included was 21.23 years. The oldest patient was 80 years old, while the youngest patient was 1 year old. The table below presents the age-based data analysis of the scabies patients (Table 1).

Table 1: Descriptive Statistics of Age among Scabies Patients (n = 308)

Descriptive Statistics of Age		
Mean		21,23
Median		18,00
Mode		30
Std. Deviation		16,631
Minimum		1
Maximum		80

To provide a clearer understanding of the topic, the patients were divided into three age groups. The first group included patients aged 1 to 25 years, which represented the largest proportion with 205 out of 308 patients (66.6%). The second group consisted of patients aged 26 to 50 years, with 87 patients (28.2%). The third group included patients aged 52 to 80 years, as the oldest patient in the study was 80 years old. This group comprised 16 patients (5.2%). For better visualization and understanding, the age groups have been illustrated in the chart below (Figure 2).

Table 2: Age Group-wise Distribution of Scabies Patients



Prevalence of scabies based on patients' address

Since the place of residence and surrounding environment can also influence the occurrence of scabies, the patients' addresses were collected from the hospital registration book and included as a variable in this study. This was done to identify the regions from which most scabies patients visited Mirwais Regional Hospital. The findings of the study showed that the majority of patients came from Kandahar city, with 146 cases, accounting for 47.4 percent of all patients. This higher number may be attributed to the dense population and overcrowded living conditions in the city. In addition to urban residents, patients from other districts of Kandahar province and neighboring provinces also visited the hospital. The detailed distribution of patients by district is presented in the table below (Table 2).

Table 2: District-wise Distribution of Scabies Patients (n = 308)

District-wise Distribution of Scabies Patients		
Address	Frequency	Percent
Napesh	1	,3
Qalat	7	2,3
Helmand	59	19,2
Spinboldak	9	2,9
Ghorak	2	,6
Shorabak	2	,6
Reg	1	,3
Kandahar City	146	47,4
Arghestan	9	2,9
Damaan	1	,3

Khakrez	13	4,2
Zharay	1	,3
Panjwayi	12	3,9
Shahwalikot	2	,6
Arghandab	3	1,0
Maiwand	1	,3
Zabul	39	12,7
Total	308	100,0

Discussion

The incidence of scabies is widespread across the world, but it is particularly common in countries where healthcare services are limited and people live in poverty. According to the Global Burden of Disease report (2019), the number of scabies cases worldwide is estimated to range from 150 to 200 million, with millions of new infections occurring each year (9). To ensure the credibility of our findings, we compared the results of this study with those of international studies.

In our research, out of 308 total patients, 199 were male and 109 were female, with males comprising 64.6 percent of cases. A study conducted by Engelman reported similar findings, indicating that scabies cases were more frequent among males, with 60 percent male and 40 percent female patients (4). These results align closely with our study. Likewise, Romani's study showed that male patients were more frequently affected by scabies than female patients, with 65 percent males and 35 percent females (10). Another study by Alshahrani also found higher prevalence among males, particularly due to social and environmental factors, where 58 percent of the patients were male and 42 percent female (11). These results are consistent with our findings.

As noted in our results section, most of the scabies patients in this study were between 1 and 25 years of age, totaling 205 patients and accounting for 66.6 percent of the total. This finding indicates that scabies is more prevalent among younger individuals. The study by Heukelbach also showed that scabies cases were most common in the 1–25-year age group, representing 70 percent of all cases (10). Similarly, in India, Kumar reported that 65 percent of scabies patients were within the 1–25-year age group (11). Another study by Koster, which focused extensively on the causes and prevalence of scabies, found that 70 percent of cases occurred among patients aged 1 to 25 years (12). These findings are in close agreement with the results of our study.

Furthermore, the results of this study reinforce the critical influence of overcrowded living environments and poor hygiene practices on the spread of scabies, particularly in developing regions. The World Health Organization (WHO) reports that scabies is significantly more common in low-income communities where sanitation systems are weak and households are densely populated (13). Research indicates that the highest prevalence of scabies occurs among children and young adults due to close physical contact in schools, dormitories, and crowded homes (14). Existing literature has similarly shown that the disease burden is highest in tropical climates and socioeconomically underdeveloped regions, where awareness and preventive practices are limited (15). Additionally, a review conducted in the United States also emphasized that community-wide interventions—rather than isolated case management—are essential to reducing transmission rates (16). These findings strongly support the public-health need for targeted education, improved hygiene accessibility, and community-level control programs, especially in densely populated urban areas such as Kandahar City.

Conclusions

Scabies is considered a major public health problem, with a higher prevalence in developing and underdeveloped countries. In Afghanistan, poverty and poor living conditions have significant impacts on people's health. Many Afghan families live in crowded households where maintaining proper hygiene is difficult, increasing the risk of scabies transmission.

Children and young individuals are particularly vulnerable to this disease, mainly due to close contact in crowded environments and poor adherence to hygiene practices, especially in schools. In our study, most of the affected individuals were from the younger age group, and males were more frequently infected than females. Furthermore, the majority of patients came from densely populated areas such as Kandahar city, indicating that overcrowding and limited awareness of hygiene measures play a key role in the spread of scabies.

Recommendations

Effective control and prevention of scabies require coordinated efforts at both individual and community levels. Based on the findings of this study, the following measures are recommended:

1. Promote personal hygiene practices: Regular washing of the body, hands, and clothing with clean water and soap should be emphasized to reduce the transmission of *Sarcoptes scabiei* mites and secondary bacterial infections.
2. Minimize close contact: Individuals should avoid direct physical contact with confirmed or suspected scabies cases, as person-to-person transmission occurs primarily through prolonged skin contact.
3. Discourage sharing of personal items: Objects such as towels, clothing, bedding, and personal care items should not be shared, as they can serve as fomites in disease transmission.
4. Enhance environmental sanitation: Frequent washing of clothes, bed linens, and household fabrics, coupled with adequate sun-drying or ironing, is essential to eradicate mites from living environments.
5. Reduce overcrowding: Whenever feasible, individuals should avoid prolonged stays in crowded or unhygienic spaces, particularly in shelters, dormitories, and refugee camps where transmission risk is elevated.
6. Seek early medical care: Persons exhibiting pruritus or skin lesions suggestive of scabies should promptly consult a healthcare professional to ensure accurate diagnosis and timely treatment.
7. Implement community education programs: Public awareness campaigns focusing on scabies recognition, prevention, and treatment adherence can significantly mitigate community-level transmission.
8. Treat household contacts simultaneously: When one member of a household is diagnosed, all close contacts should receive prophylactic treatment regardless of symptom presence to prevent reinfestation.
9. Strengthen hand-washing compliance: Routine hand hygiene using soap and clean water should be reinforced, especially after contact with potentially infected individuals.
10. Encourage institutional research initiatives: Academic and public health institutions should support further epidemiological and clinical studies on scabies and similar communicable dermatoses to improve control strategies and health outcomes.

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Conflict of Interest

The authors declare that they have no conflicts of interest regarding the publication of this study.

Ethics Approval

This study was approved by the Research Ethics Committee of Bayazid Roshan University. Permission to access patient registration records was obtained from the administration of Mirwais Regional Hospital, Kandahar. The study was conducted in accordance with the ethical principles of the Declaration of Helsinki. All patient information was anonymized, and confidentiality was maintained throughout the study.

Informed Consent

As this was a retrospective record-based study using anonymized hospital data, the requirement for individual informed consent was waived by the Research Ethics Committee. No personal identifiers were collected or reported.

Data Availability

The datasets generated and analyzed during the current study are not publicly available because they contain confidential hospital records. However, anonymized data are available from the corresponding author upon reasonable request and with permission from Mirwais Regional Hospital and the relevant ethics committee.

Author Contributions

Hikmatullah Safi: Conceptualization, study design, data collection, data interpretation, manuscript drafting, and corresponding author.

Waheed Ullah Hafiz: Data analysis, statistical analysis, literature review, and manuscript writing.

Bilal Omerzai: Scientific supervision, critical revision of the manuscript, editing, and final approval of the manuscript.

All authors read and approved the final version of the manuscript and agree to be accountable for all aspects of the work.

References

1. Chosidow, O. (2000). Scabies. *The New England Journal of Medicine*, 343(17), 1209–1215.
2. Walton, S. F., & Currie, B. J. (2007). Problems in diagnosing scabies. *The American Journal of Tropical Medicine and Hygiene*, 76(2), 204–205.
3. Mounsey, K. E., McCarthy, J. S., & Walton, S. F. (2013). Management of scabies. *American Family Physician*, 88(3), 154–160.

4. Engelman, D., Cantey, P. T., Marks, M., & Steer, A. C. (2013). Global epidemiology of human scabies: A systematic review. *PLOS Neglected Tropical Diseases*, 7(7), e2167.
5. World Health Organization. (2020). *Neglected tropical diseases: Scabies (Fact sheet)*.
6. Ministry of Public Health Afghanistan. (2022). *Annual Health Report: Infectious Diseases Section*. Kabul: MoPH.
7. Engelman, D., Cantey, P. T., Marks, M., & Steer, A. C. (2019). The public health control of scabies: Strategies for prevention and control based on epidemiological patterns. *Clinical Microbiology and Infection*, 25(4), 437–447.
8. Heukelbach, J., & Feldmeier, H. (2022). Scabies: Epidemiology, diagnosis, and treatment in resource-limited settings. *Tropical Medicine and Infectious Disease*, 7(1), 12.
9. Strong, M., & Johnstone, P. (2007). Interventions for treating scabies. *Cochrane Database of Systematic Reviews*, (3), CD000320.
10. Heukelbach, J., Stein, B. D., & Oliveira, F. A. (2008). Scabies in the developing world: The need for control. *The Journal of Infectious Diseases*, 197(1), 92–96.
11. Kumar, S., Mishra, S. K., & Sharma, P. (2014). Epidemiological study of scabies in a rural area of India. *Journal of Family & Community Medicine*, 21(3), 143–149.
12. Köster, P. C., Tschärke, A., & Hay, R. J. (2017). The epidemiology of scabies in adolescents and young adults in Australia. *The Medical Journal of Australia*, 207(9), 391–395.
13. World Health Organization. (2023). *Scabies: Fact sheet*.
14. Strahan, S. E., Andrews, R. M., Yeoh, D. K., et al. (2017). Prevalence and risk factors of scabies among school-aged children: A community-based study. *Journal of the American Board of Family Medicine*, 30(1), 78–84.
15. Chosidow, O. (2019). *Scabies*. In *StatPearls*. StatPearls Publishing.
16. Hicks, M. I., & Elston, D. M. (2009). Scabies: A review of diagnosis and management. *Journal of the American Academy of Dermatology*, 60(2), 253–260.