RESEARCH ARTICLE

Incidence of Human Scabies in Babylon Province, Iraq

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ABSTRACT

This study aimed to estimate the prevalence of scabies in humans in Babylon province. The study comprised a total of 740 individuals who complained of skin disorders when they visited the clinic. There were 740 cases in all, 320 women (43.2%), 282 men (38.1%), and 138 kids (18.7%). The prevalence of scabies in Babylon province was 14.32%. This study showed that males 25.5% were significantly more infected than females 41.5% and children 33%. The infection with scabies in the spring season is significantly higher than in the other seasons of the year, where the temperature is between 20–35ºC.

In conclusion, the prevalence of scabies was significantly higher in males and children than in females and the spring season was the most prevalent season for infection.

Keywords: Babylon, Human, Prevalence, Scabies.

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INTRODUCTION

One of the most common skin conditions, particularly in poor nations, is scabies, which are brought on by the mite *Sarcoptes scabiei*.[1,2] The primary method of infection and a prevalent one among family members, is sexual transmission.[3] Skin redness and intense itching are symptoms of scabies infection in several body areas, including the arms, legs, and area between the thighs.[4, 5] Most people with this condition reside in rural regions with little access to care and little knowledge of health issues.[6-8] There are almost 100 million scabies sufferers globally.[9,10] The presence of the *Sarcoptes scabiei* mite or its products and the severity of the itching and skin irritation are all factors in the clinical and physical diagnosis of scabies.[11] Scabies affect males and females of all ages and are prevalent in tropical climates among the underprivileged in rural regions.[12,13]

War, floods, earthquakes, and other natural and human-induced crucial periods are common catalysts for the spread of scabies. Scabies prevalence ranges from 0.4 to 50% in different environments.[14-17] At least 3.3% of the population was found to be at risk in Basrah, which is located in the southern part of Iraq, and in Tikrit 1.2% (in the center region), Samara (in the middle) 1.9%, and Kirkuk 2.7% (in northern Iraq) in certain population-based studies.[18-21]

This study aimed to estimate the prevalence of scabies in humans in Babylon province.

MATERIALS AND METHODS

The research was carried out in Babylon city. For nine months from March 2021 to February 2022, the dermatological clinic in Babylon receives patients from all over the country. The total of sample was 740 cases (320 female, 282 male, and 138 children). Patients either came to the clinic on their initiative or were referred by their primary care physicians. About 20% of the general population seeks medical attention, according to the people who come to the dermatological clinic. Conventional criteria were used to diagnose scabies cases according to.[14] A preliminary diagnosis of scabies was made based on symptoms of itching and a physical examination of the affected area. Each patient's complete body was evaluated. The burrows of scabies were shown using mineral oil or ink. Mites or their eggs or excrement were identified by scraping a sample of the burrow site or the patient's fingernails for microscopic identification.

Statistical analysis was done by using SPSS software.

RESULTS AND DISCUSSION

The study comprised a total of 740 individuals who complained of skin disorders when they visited the clinic. There were 740 cases in total, 320 women (43.2%), 282 men (38.1%), and 138 children (18.7%) (Table 1, Figure 1).

The prevalence of scabies in Babylon province was 14.32%. This study showed that males 25.5% were more significantly

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Table 1: Study populations

Group	*Number*	*Percentage (%)*
Female	320	43.2
Male	282	38.1
Children	138	18.7
Total	740	100

Table 2: Number and percentages of infected patients

Group	*Number*	*Percentage (%)*
Female	27	25.5
Male	44	41.5**
Children	35	33*
Total	106 (14.32%)	100

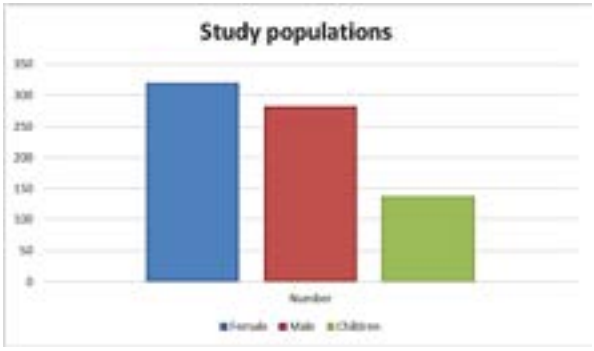

Figure 1: Study populations

infected than females 41.5% and children 33% (Table 2, Figure 2).

At least 3.3% of the population was found to be at risk in Basrah, which is located in the southern part of Iraq, as well as in Tikrit 1.2% (in the center region), Samara (in the middle) 1.9%, and Kirkuk 2.7% (in northern Iraq) in certain population-based studies.[18-21] These were in agreement with the current results, which found that the prevalence of scabies was 14.32%. These differences may be due to war, floods, earthquakes, the environment and other natural and human-induced crucial periods, which are common catalysts for the spread of scabies. In contrast, the current results agree with many results of many studies, which found that Scabies prevalence ranges from 0.4 to 50% in different environments.[14-17]

As a result of the more physical contact children experience, especially within large families, which facilitates transmission and indirectly explains the differential rates associated with age and sex for scabies, this study indicated that scabies was more prevalent in children and males. In addition, to close, direct skin-to-skin contact, infected persons can transmit scabies indirectly by sharing mite-infested items such as bedding, clothing, furniture, bed linens, shared caps, and head coverings.[22,23] It was reported that scabies infection contributes to the induction of cellular immune response by elevated cytokine secretion, especially IL6, and IL4, and they are related to age and gender.[24]

The high occurrence of scabies in males may be related to their active social lives in the neighborhood and their extended

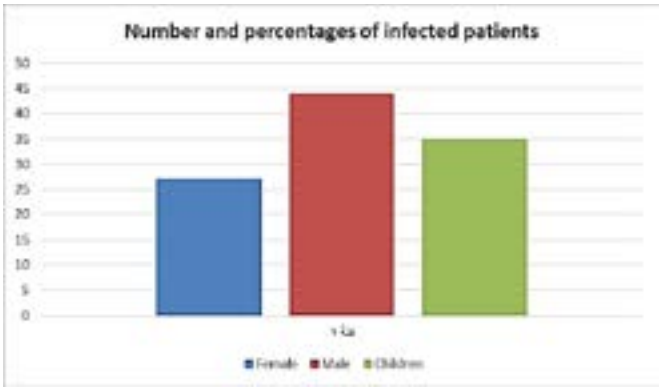

Figure 2: Number and percentages of infected patients

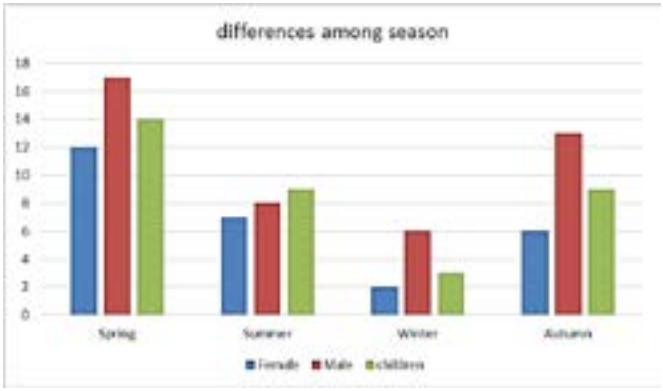

Figure 3: Number and percentages of infected patients at different seasons of the year

Table 3: Number and percentages of infected patients at different seasons of the year

Group	*Spring*	*Summer*	*Winter*	*Autumn*
Female (27)	12	7	2	6
Male (44)	17	8	6	13
Children (35)	14	9	3	9
Total (106)	43 (40.6%)*	24 (22.6%)	11 (10.4 %)	28 (26.4%)

time spent working outside the home, which raised their risk of exposure to sources of possible mites.[23,25,26]

Table 3 shows that the infection with scabies in the spring season is significantly higher than in the other seasons of the year when the temperature is between 20 to 35ºC (Figure 3).

One of the most significant variables that affect scabies occurrence globally is climate.[27] Iraq is a tropical country with year-round high temperatures ranging from 30 to 40ºC. Our findings demonstrated that scabies was most common in the spring when temperatures ranged from 20 to 35ºC. These findings concur with much research.[28-30] Because these conditions offer favorable elements for parasite development and survival in many sections of the human body, there is a significant correlation between temperature and humidity and the occurrence of scabies.[31,32] Scabies is one of the most common skin conditions in tropical regions, especially in emerging nations where poverty and rapid population growth are problems.[33-36] Although the World Health Organization (WHO) designated scabies as a neglected illness, no official

initiatives for scabies control in underdeveloped countries have yet been implemented.[37]

CONCLUSION

The prevalence of scabies was significantly higher in males and children than in females and the spring season was the most prevalent season for infection.

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