

SCABIES IN BORNO STATE, NIGERIA: A REVIEWBiu, A.A.¹, Rabo, J.S.² Dawurung J.S.³ and Joy Charles Ndappi⁴¹Department of Veterinary Microbiology & Parasitology, Faculty of Veterinary Medicine, PO Box 8136 University of Maiduguri, Nigeria²Department of Veterinary Pathology and Microbiology, Faculty of Veterinary Medicine, University of Agriculture, Makurdi, Nigeria³WHO National Polio Laboratory, University of Maiduguri Teaching Hospital, Maiduguri, Nigeria⁴Department of Microbiology, Faculty of Sciences, University of Maiduguri, Nigeria
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Abstract: Scabies is an infestation of the skin by microscopic itch mite, *Sarcoptes scabiei* var *hominis* favoured by poor conditions of hygiene, poverty and overcrowding. Objectively this study will provide a baseline data that will signal the public health significance of the disease in Maiduguri. This is a four year review on the prevalence of human scabies in Borno State, Nigeria conducted between 2004 and 2007 using patient's data assessment (PDA) from University of Maiduguri Teaching Hospital (UMTH), State Specialist Hospital (SSH) and Molai Leprosarium. Out of the 1020 patients examined 983 (96.4%) were infested with 49.9% as male and 50.1% female ($p > 0.05$); 77.2% as children and 22.8% as adults ($p < 0.05$). The highest rate was observed in unemployed patients (65.5%) and the lowest in commercial vehicle drivers (0.3%) ($p < 0.05$). The findings in this study have indicated that factors such as the occupational status, age and sex of patients could influence the spread of scabies amongst people of Borno State, Nigeria.

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Introduction

Scabies is an infestation of the skin with microscopic itch mite, *Sarcoptes scabiei* var *hominis*, is a common disease worldwide afflicting people under poor conditions of hygiene, inadequate housing and water supply [1,2,3]. Physiological variants of the same species cause "mange" in other mammals like dogs, cats, cattle, rabbits, pigs and horses. It is a public health problem with about 300 million cases reported each year, with higher rates under natural disasters, war and poverty which may lead to overcrowding which provides body odour and warmth which are aids to the host-seeking behaviour of the mites [4]. The determination of prevalence rates of human scabies is an important step in the overall control and elimination of the disease, and thus this investigation aims to provide a baseline data that will signal the public health significance of the disease in Borno State, Nigeria with an estimated population of 7 million people living under poor conditions of inadequate housing, water supply, and hygiene, usually with overcrowdedness and unpredictable weather conditions [5].

Materials and Methods

Maiduguri, the capital city of Borno State lies within the semi arid region of northeastern Nigeria on latitude 11°30' and 11°45'E and longitude 12° and 13°5'E, characterized by a short rainy season of about

3 months (July - September) and a long dry season from October to June [6].

Clinical cases of human scabies for 983 patients recorded between 2004 and 2007 from the UMTH, SSH and Molai Leprosarium were reported for this study. Data were analyzed based on the sex, age group and the social status of the infected patients using the Graph Pad InStat Software Package [8].

Results

The results of this study as shown in Table 1 indicates that a total of 983 cases of human scabies were recorded with 49.9% as male and 50.1% as female ($p > 0.05$). Children had 77.2% prevalence while adults had 22.8% ($p < 0.05$). Social status indicated that the unemployed had the highest prevalence of 65.5% while the lowest was recorded for commercial drivers 0.3%.

Table 2 indicated that there was a significant drop in scabies in 2007 with 9.5% prevalence compared to 2004, 2005 and 2006 with 19.3%, 40.6% and 30.6% respectively ($p < 0.05$). The leading prevalence in children and unemployed patients was consistent throughout the 4 year study period.

Figure 1 shows the cumulative monthly prevalence of human scabies in Borno State, Nigeria. Infection generally occurred throughout the years of this study.

Table 1: Prevalence of human scabies based on sex, age and social status of patients

		No (%) of reportable cases
All positive cases		983
Sex:		
	Male	491(49.9)
	Female	492 (50.1)
Age Group:		
	Children (<15 years)	759(77.2)
	Adult (>18 years)	224(22.8)
Social Status:		
	Housewife	99(10.1)
	Student	158(16.1)
	Trader	22(2.4)
	Teacher	8(0.8)
	Farmer	19(1.9)
	Unemployed	644(65.5)
	Civil Servant	30(3.1)
	Commercial Vehicle Drivers	3(0.3)

N= number of patients examined= 1020

Table 2: Annual Distribution of Human Scabies based on Sex, Age and Occupation

	No (%) infected yearly				
	2004	2005	2006	2007	
Overall	190(19.3)	399(40.6)	301(30.6)	93(9.5)	
Sex:					
	Male	103(54.2)	199(51.0)	153(50.8)	37(39.8)
	Female	87(45.8)	200(51.3)	148(49.2)	56(60.2)
Age Group:					
	Children	139(73.2)	328(82.2)	62(20.6)	66(70.9)
	Adult	51(26.8)	71(17.8)	239(79.4)	27(29.0)
Social Status:					
	Housewife	25(13.2)	39(9.8)	26(8.6)	9(9.7)
	Student	33(17.4)	72(18.1)	39(12.9)	15(16.1)
	Trader	7(3.7)	7(1.8)	5(1.7)	3(3.2)
	Teacher	1(0.5)	5(1.3)	2(0.5)	- (-)
	Farmer	3(1.6)	4(1.0)	8(2.7)	4(4.3)
	Unemployed	114(60.0)	261(65.4)	213(70.8)	55(59.1)
	Civil Servant	6(3.2)	10(2.5)	7(2.3)	7(7.5)
	Commercial Vehicle Drivers	1(0.5)	1(0.3)	1(0.3)	- (-)

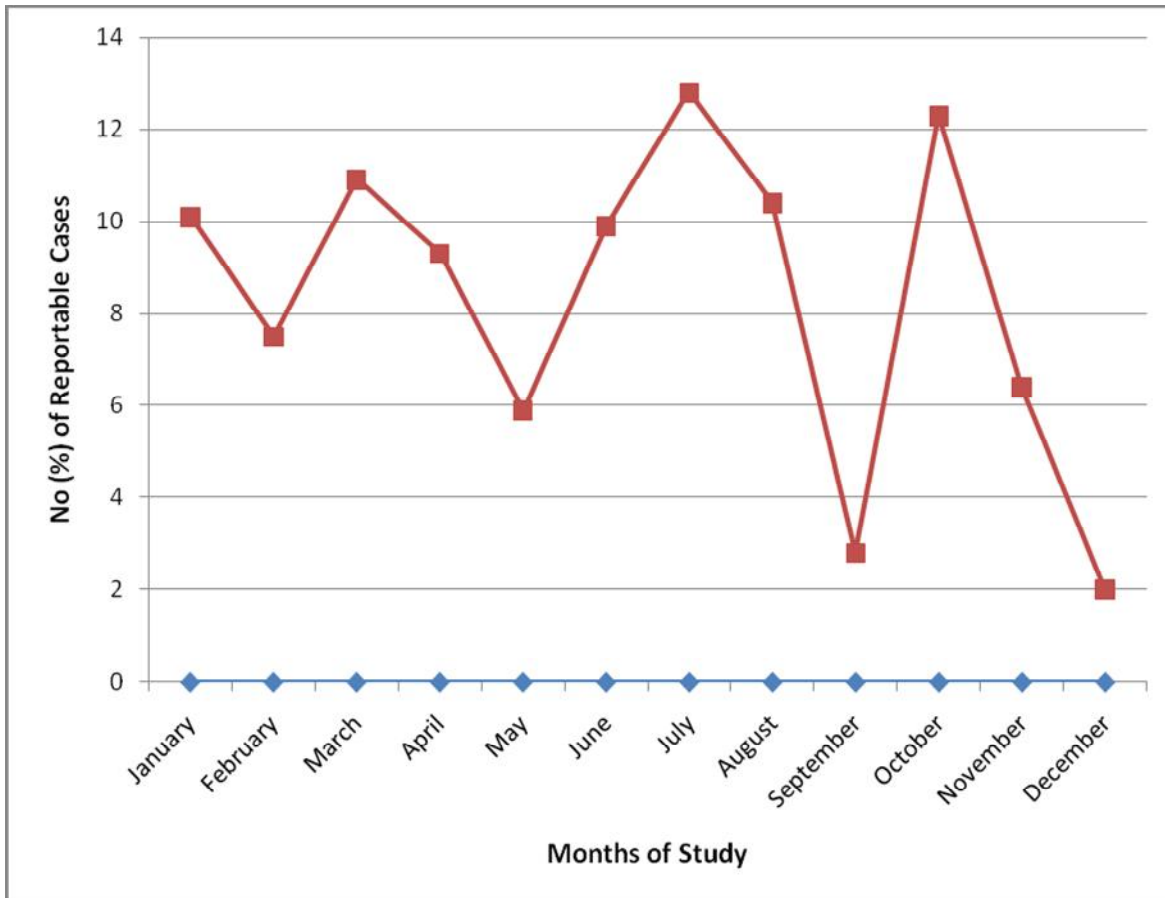


Figure 1: Cumulative Monthly Prevalence of Human Scabies in Borno State, Nigeria.

Discussion

The findings in this study has indicated that human scabies is prevalent in Maiduguri with significantly even distribution among male and female patients, as reported by Schleicher and Stewart [6] that it is worldwide and affects people of all races and social class, and is spread by direct prolonged skin to skin contact, shared clothing, towels, and beddings, encouraged by factors of poverty and poor hygiene nearly always associated with overcrowding [2, 9, 10]. This agrees with the situation in Borno State with an estimated population of 7million people living under poor conditions of inadequate housing, water supply and hygiene usually with overcrowdedness and unpredictable weather conditions [5].

Children and young were most affected in this study compared to the adults. This conforms to the findings by Chang *et al.* [2] who indicated that distribution of scabies in children was more diffuse than in adults, mostly during the cold harmattan seasons in tropical Africa where poor hygiene

conditions and overcrowdedness prevails. The relationship of age to scabies incidence varies, and in general scabies is commonest in the very young, remains frequent in older children and younger adults and thereafter declines sharply. However, Dehghani *et al.* [3] reported that scabies is age dependent and interaction between age factor and social relations in the higher ages can lead to increased prevalence.

Conclusion

The findings in this study concludes that the prevalence of scabies varies with the age, sex, occupational status of individuals, and as such, more emphasis on public health education, hygiene, provision of scabicial agents, adequate water supply and sufficient housing should be given priority towards ensuring efficient control of human scabies.

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