



Pastoralist Community Knowledge and Factors Associated with Occurrence of Tuberculosis In Jigawa State, Nigeria.

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ABSTRACT

Pastoralists live in remote areas of the state, where access to education, health and other social services are at their lowest level. Lack of knowledge about Tb despite their being closely associated with cattle (reservoir for M.bovis) could affect the health-seeking behavior of most of them and sustain transmission of the disease within the community. Four hundred and thirty five individuals who were pastoralists cattle holders were subjected to a community-based cross-sectional questionnaire survey within the three (3) emirate councils of the state (which include Hadejia, Gumel and Dutse emirates). In this study, we assessed the knowledge of individuals about tuberculosis in pastoral communities of Jigawa state. The majority, 62.76% of those interviewed reported that they have heard of about Tb (known locally as “tarin fuka”), also the interviewees associated cause of Tb with exposure to cold air (Harmattan) (50%), malnutrition (45%) and smoking (20%). Social practices such as smoking (30.5%) were identified as risk factors favoring the transmission of the disease. Lack of knowledge especially the critical signs of TB in both cattle and humans could affect the health seeking behavior (46.23%) of most of them and can sustain transmission of the disease within the community. The aim of this study was to determine factors associated with the occurrence and pastoral community knowledge of tuberculosis within the study area.

Keywords: *Tuberculosis, Pastoralists, M.bovis, community*

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INTRODUCTION

In the developing countries, pastoralism account for the livelihood of 50-100 million people, out of which 60% of this population live in more than 21 African countries [1]. In Nigeria, the Northern region has the highest population of pastoralists and the majorities are found in most arid parts of the North. The pastoralists depend on livestock for their livelihood, moving seasonally from place to place with their animals in search of pasture and water. Hence, they have the least access to education and basic health care facilities both human and veterinary services.

Tuberculosis (TB) is one of the major diseases that caused serious public health and economic concern in developing countries [2]. Factors such as HIV/AIDS, smoking and malnutrition have been identified as major contributors to the epidemiological burden of active TB [3, 4]. However, poverty and lack of awareness are considered the most important factors that increase the risk of exposure to TB [5, 6]. Lack of knowledge of the cause, mode of transmission and symptoms as well or appropriate treatment of TB not only affects the health seeking behaviour of patients but also could affect strategy, thereby sustaining the transmission of the disease within the community [7]. It is therefore imperative to create general awareness about TB among the pastoralists community by initiating community participation in the control of the disease which make up one component of the six basic components of the stop TB strategy to the world health organization. [8].

A community-based cross-sectional survey was carried out from March to December 2010. The study population were the heads of pastoralist households who were aged above 18 years and resident of the study area. As per custom the heads of the family interact first with the

society, community, and other visitors and are assumed to have more exposure and knowledge about social and health issues. In the absence of the family heads, the eldest male member of the family was selected for the interview.

According to the WHO 2009 report on the epidemiological burden of TB, Nigeria is ranked 4th among the 22 countries in the world with high burden of TB [9]. To the best of our knowledge, there is no reliable information on the prevalence, incidence or community perception and knowledge of the disease among the pastoralists in the study area.

MATERIAL AND METHODS

Study Area and Population

Jigawa state lies between longitude 11° to 13° North and latitude 8° to 10° East, with land mass of 22,140 sqkm² [10]. The state has 27 local government areas with about 350,000 of the rural households keeping livestock. The human population of the district is estimated at 4.3 million [11]. The common husbandry system practice in the state is the extensive management system, although, nowadays the herd owners are becoming settled pastoralists. The majority of pastoral population of the 3 districts (Hadejia, Gumel and Dutse) is nomadic with very few practicing agro-pastoralism. There was no previous information on the level of pastoral community awareness about TB in the study area as a whole. Thus, based on the assumption that 50% of the participants in the study area had high knowledge of TB, 95% confidence interval and 5% degree of accuracy and a design effect of 1.1 due to multi stage sampling, a total of 435 participants were included in this study. The study was conducted during the rainy season when migration was very minimal.

RESULT

The influence of certain factors and household related factors on community knowledge on TB among the pastoralists is presented in table (1), the majority (62.76%) of the interviewees reported that they have heard about TB (known locally as “Tarin fuka”). While (45.52%) knew the symptoms of TB in humans. However, only 1.1% knew that a bacteria (Agent) were the cause of TB. Cold air, (50%), lack of good feeding (38.0%) and smoking (30.5%) were the

most frequently mentioned factors as the cause of the disease. Knowledge about causes of clinical signs showed that (47.13%) knew that the disease can be transmitted from animals to man and *vice versa*, while the milk consumption habit revealed that (66.67%) boiled milk before consumption, about (33.3%) soured before the consumption and (55.86%) consumed the milk fresh. All these were indicated in table 1.

Table 1: Risk factors for having TB in the pastoralist communities in Jigawa State

Risk factors	Yes	No	% Yes
Awareness:			
Aware	273	162	62.76
Knowledge:			
TB symptoms (in human)	205	230	45.52
Can TB be spread			
from animals to human	198	137	47.13
Milk consumption habit:			
Boiling	290	145	66.67
Souring	145	290	33.33
Others (fresh)	243	192	55.86
Cause of TB:			
Bacteria (Agent)	5	430	1.1
Cold Air	218	217	50.0
Lack of good feeding	196	239	30.5
Smoking			
Health service behavior:			
Modern drug	205	330	75.8
Traditional remedies	220	210	50.0

DISCUSSION

The result of this study indicated that TB is known to the pastoral communities in the study area. Moreover, the participants all agreed that TB is one of the major public health problems of the study area. However, similar findings of the community based studies from other parts of Ethiopia [12, 13], Tanzania [14] and Kenya [15], the participants had little or no information regarding the causative agent of TB. The majority of the participants in this study associated the cause of TB mainly with either exposure to cold air, starvation or frequent smoking which is similar to the beliefs found in a previous study in some parts of Ethiopia [12]. It is important to note that, the community perception about the role of starvation and smoking as the cause of the disease cannot be neglected [3, 16], misconception about the correct cause of the disease could affect patient attitude towards health-seeking behaviour and preventive methods. Particularly, smoking could affect the care seeking behaviour of smokers, as the smokers may perceive their prolong cough as the cause of smoking but TB which could delay treatment and diagnosis.

The findings of this survey indicated that pastoral communities in the study area had basic awareness about the zoonotic nature of the disease, which is comparable to the results of previous studies done elsewhere in Nigeria [15] as also from Tanzania [16].

Pastoral community knowledge regarding treatment of the disease using modern medicine was high in the study area; this is because of the introduction of DOTs programme and free services for those who are suffering from the disease. Among other factor, smoking which is predominantly male behaviour in the study area was suggested as a factor associated with the high risk of acquiring the disease among men. This community concern is in agreement with the findings of the study by Watkins and plant, 2006, which indicated that smoking is a significant predictor of the variance in sex ratio

of TB case notifications among TB high burden countries.

In this study, it was observed that, most of the pastoralists in the study area, consumed milk boiled while very few of them consumed the milk either soured or boiled. The finding of respondents taking fresh milk could be seen as evidence of ignorance of the disease's mode of transmission. Kaltungo *et al* [17] reported similar findings in their respective studies on Brucellosis. The same reason can be advanced in their taking sour milk since the tubercle bacilli could be transmitted through soured milk.

Conclusion

Our findings indicate that majority of the pastoral community members in the study area had basic knowledge of TB. The study also revealed useful information which can be considered when designing community based control strategies for TB.

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