

Perception and Risk Factors Associated with Tuberculosis in the Manyara Region, Tanzania

Prudence Masanga, Sarapia Paul, Peter Mbelele, Peter Daud, Alphonse Liyoyo, Lidia Munuo, Samson Lyimo, Beatus Lyimo, Sreenidhi Srinivasan, Isabella Cattadori, Robab Katani, Vivek Kapur, Stella Mpagama and Joram Buza

Supplementary Material: Study Participant Questionnaire

ZTB - INDIVIDUAL QUESTIONNAIRE

SECTION 1: INTERVIEW DETAILS

1.1 Location ID

Interviewer's initials

1.2 Enrollment Date (dd/mm/yyyy)

--	--	--	--	--	--	--	--

1.3

--	--	--

1.4 Individual ID

Date (dd/mm/yyyy)

1.5 Interview Date (dd/mm/yyyy)

--	--	--	--	--	--

Review

--	--	--	--	--	--

1.6 Language

Reviewer's initials

1.7 Primary information

--	--	--

☐ Kiswahili ☐ English ☐ Maasai ☐ Self ☐ Parent/Guardian ☐ Relative ☐ Other

SECTION 2: INDIVIDUAL DESCRIPTION**2.1 Sex**

- ☐ Male ☐ Female

2.2 Date of birth (dd/mm/yyyy)

*If only the year of birth is known, record 01 for dd and 07 for mm.
If year of birth is known, ask question 2.4.*

2.3 Age class

- ☐ 0-18 yr
☐ 19-54yr
☐ >55 yr

2.4 What is your tribe?

- ☐ Sonjo
☐ Maasai
☐ Iraq
☐ Barabaig
☐ Fyomi

Other (specify)

If Maasai or Arusha ask 2.5a/2.5b, otherwise proceed to 2.6

2.5a. What is your age set (men)?

- ☐ Nyangulo
☐ Ilkiponi/Korrianga
☐ Ilkumunyak/ILandis (Ilkidotu)
☐ Ilkishumu/ Makaa (Irkishomo)
☐ ISeuri
☐ Ilnyankusi/Meshuki

2.5b. What is your age set (women)? (these are 'unofficial' but commonly used)

- ☐ Boda boda/Ingoipila: under 20yrs
☐ Njujulai: 20-30yrs
☐ Maharage (Intiamaragi)/N'gali: 30-36yrs
☐ Mosogiro: 37-46yrs
☐ Isusan: 47-56yrs
☐ Ingaimuk (Ingaimug): 56-65yrs
☐ Enderito: 65+yrs

2.6 What is your marital status

- ☐ Married (Nimeolewa/oa)
☐ Single (Sijaolewa/oa)
☐ Divorced/separated (Nimeachika/acha)
☐ Widowed (Miane)

2.7 Manyara Districts

- ☐ Babati Rural ☐ Kiteto
☐ Babati Urban ☐ Simanjiro
☐ Mbulu ☐ Other
☐ Hanang

Other Region

Other District

2.8 Ward

2.9 Village

2.10 Sub-village

2.11 How long has your boma been in your current village?

- ☐ Years/ ☐ Months ☐ Days

2.12 How many adults live in your boma?

(age 18 years or older)

2.13 How many children live in your boma?

(age less than 18 years)

2.14. In the past 30 days, have you travelled outside your home region?☐ Yes ☐ No**2.15** How many years of education have you had?

- ☐ No education
- ☐ Primary (1-7 years)
- ☐ Secondary (8-11 years)
- ☐ High school (12-13 years)
- ☐ University/college

2.16 What are your main work/professional activities?

Primary occupation (Choose one)

Other occupation (Choose many) (

1. Livestock attendant		
2. Butcher/Abattoir worker		
3. wildlife workers		
4. Milk suppliers		
5. Student		
6. Crafts person		
7. Veterinarian		
8. Housewife		
9. Office worker		
10. Healthcare worker		
11. Merchant/trader		
12. Teacher		

13. Driver		
15. Guard/Police		
16. Unemployed		
17. Pre-working age		
18. Other		

SECTION 3: CURRENT AND RECENT ILLNESS

3.1 3. During the past two weeks, have you had any of the following types of illness? (indicate all that apply)

	YES	NO
cough with expectoration		
1. Fever		
2. Abdominal pain		
3. Weight loss		
4. Loss appetite		
5. Body ache		
6. Chest pain		

body aches: body aches, abdominal ache and chest.

If yes to fever in 3.1, ask questions 3.2 - 3.5

3.2 Is your fever continual or intermittent?☐ Continual ☐ Intermittent**3.3** How long ago did the fever start?☐ Days ☐ Months ☐ Years**3.4** How long ago did your illness start?☐ Days ☐ Months ☐ Years**3.4a** How long is you coughing?☐ Days ☐ weeks ☐ Months

3.5 Have you had any of the following signs or symptoms of illness during this current illness?

(If not currently febrile, please ask for past 2 weeks and past 12 months only.)

	Current illness			Past 2 weeks			Past 12 months		
	Y E S	N O	D K	Y E S	N O	D K	Y E S	N O	D K
Night sweats									
Loss body weight									
Joint pain									
Back pain									
Loss of appetite									
Swollen joints									
Abdominal pain									
Chills									
coughing that last three weeks									
Headaches									
Sprained ankle									
Swollen lymph node									
Pain in the bones/ joints									
Pain during breathing									
Meningitis									
Dysuria/frequent urination/ headaches									

3.6a Have you sought care for this illness at another location prior to presentation at Haydom, Dareda and Mbulu Hospital?

☐ Yes ☐ No

If yes, how many locations?

If yes for question 3.6a ask 3.6b

3.6b Which type of Healthcare facilities were visited??

- ☐ Pharmacy
☐ Dispensary
☐ Traditional healer
☐ Health center
☐ Other Hospital
☐ Other

3.7 Detection by acid fast bacilli (AFB)?

- ☐ Smear
☐ Sputum culture
☐ chest x-ray

3.8 Have you taken any medicines over the past 2 weeks

☐ Yes ☐ No ☐ DK

If yes, what was the medication(s) for?

A.

B.

C.

D.

If yes, what was the medication(s) name(s)?

A.

B.

C.

D.

SECTION 4: TUBERCULOSIS/TB HISTORY

4.1 Before we talked to you about this study, had you heard of a disease called tuberculosis (TB)?

☐ Yes ☐ No

If no to 4.1, skip to 4.8

4.2 Can you tell us what are the usual symptoms of Tuberculosis in people?

Go through the list of symptoms/ signs and prompt the respondent to find out if they think each is associated with Tuberculosis. Record a Yes (Y) or No (N) response after prompting. record any additional reported signs or symptoms in the text box

	YES	NO
Malaise		
Headache		
Fever		
Abdominal pain		
Anorexia		
Joint pain		
Back pain		
Sweats		
Chills		
Chest pain		
Muscle aches		
Cough		
Constipation		
Neck pain		
Diarrhea		
Vomiting		
Breathlessness		
Weight loss		
Joint swelling		
Rash		
Orchitis (in males)		

Other signs/symptoms/

4.3 Have you ever been diagnosed with tuberculosis?

☐ Yes ☐ No

If no to 4.3, skip to 4.7

4.4 When was the diagnosis made?

☐ Months ☐ Years/

4.5 Did you receive treatment?

☐ Yes ☐ No

If no to 4.5, skip to 4.7

4.6 What was your treatment?

4.7 Have any other members of your family ever been diagnosed with tuberculosis?

☐ Yes ☐ No

If yes, record who in the family, where and by who the diagnosis was made?

If participant is coughing.

4.8 Do you know anyone in your boma or village who has current symptoms similar to yours?

☐ Yes ☐ No

	Yes	No	number
Boma member			
Village member			

SECTION 5: ANIMAL MANAGEMENT

5.1 What type of the animals are you keeping?

	Yes	No	number
Cow			
Goat			
Sheep			
another animal			

5.2 What is your husbandry system?

5.3 What is the type of your animals and breed?

☐ Local breed ☐ High breed

Mention them

5.4 What is your feeding practice?

	Yes	No
Free grazing		
Confined grazing		

5.5 Why are you keeping animals?**5.6 Where do you obtain your cattle?**

5.7 Mention different uses of the animals you keep.

5.8 How often do you sell your animals?

☐ Yes ☐ No

5.9 Why are you selling your animals?

5.10 Size of household (involved in animal business)?

SECTION 6: FOOD

*If yes, include how many days per week (in a typical week).
If no, ask if the dairy product has been consumed in the past 12 months*

		Past 30 days		Number of days 1-7	Past 12 months	
		Yes	No		Yes	No
1	Have you consumed boiled or pasteurized dairy products?					
2	Have you consumed any types of raw meat or offal or raw animal blood?					
3	Have you consumed soup with blood?					
4	Have you consumed blood mixed with milk?					
5	Have you consumed meat or offal from an aborted animal or the placenta of an aborted animal?					
6	Have you consumed the following types of raw dairy products?					

SECTION 7: ANIMAL RELATED ACTIVITIES

*If yes, include how many days per week (in a typical week).
If no, ask if the dairy product has been consumed in the past 12 months*

		Past 30 days		Number of days 1-7	Past 12 months	
		Yes	No		Yes	No
1	Have you milked cattles?					
2	have you handled the waste (manure) cattles, including during building construction, cleaning animal pens, use as fertilizer etc.?					
3	Have you herded or used any cattles for herding?					
4	have you slept in the same room or enclosure with cattles?					
5	Have you assisted with the birthing of any cattles?					
6	Have you handled/had contact with any placental or birth material of cattle?					
7	Have you handled/had contact with any aborted birth products from cattle, including dead young/ offspring, animal fluid, placenta or blood?					
8	Have you slaughtered or butchered (or assisted in butchering) any cattles?					
9	Have you handled/had contact with the carcass/ carcasses of cattle?					
10	Have you handled/prepared raw animal blood, meat or offal of cattle?					
11	Have you handled or prepared animal hides from cattle?					
12	Have any of your cattles died? (do not include animals intentionally slaughtered)?					
13	Can you list the causes of death for your animals?					

SECTION 8: Animal-Animal Interaction

		YES	NO
1	have you use same bulls for breeding your cattles?		
2	Have you taken your animals out of the stable?		
3	Are your cattles in contact with other cattles?		
4	Are your cattles in contact with wild life animals?		
5	Do you graze your animals by shifting them in places according to weather?		
6	Do you feed your animals in communal grazing?		
7	Do you take your animals to cattle market?		
8	Do you take your cattles in vaccination centers?		
9	Do you have a tendency of taking your cattle's in drinking spots?		
10	Do you have a tendency of taking your cattles in communal dips?		

SECTION 9: Awareness in Animal TB

9.1 Before we talked to you about this study, had you heard that cattles can have Tuberculosis?

☐ Yes ☐ No

If no to 9.1, skip to 9.3

9.2 Can you tell us what are the usual symptoms of Tuberculosis in cattles?

Go through the list of symptoms/ signs and prompt the respondent to find out if they think each is associated with Tuberculosis. Record a

Yes (Y) or No (N) response after prompting. record any additional reported signs or symptoms in the text box

	YES	NO
Emaciation		
Lethargy		
Fluctuating Fever		
Weakness		
Anorexia		
Pneumonia		
Chronic moist cough		
Enlarged lymph nodes		
Weight loss		
Dyspnea		
Whistle or snoring respiration		
Low milk production		
Other signs/symptoms	<div style="border: 1px solid black; height: 60px; width: 100%;"></div>	

9.3 have you ever done animal screening?

☐ Yes ☐ No

If no to 9.3, skip to 10.5

9.4 What is your screening frequency towards your animals?

9.5 Have you ever diagnosed your cattles with tuberculosis?

☐ Yes ☐ No

If no to 9.5, skip to 9.7

9.5 When was the diagnosis made?

☐ Months ☐ Years

9.6 Did you took any measures?

☐ Yes ☐ No

If no to 9.6 skip to 9.8

9.7 What were your measure?

--

9.8 Have you heard or know about bovine TB control law?

☐ Yes ☐ No

If no to 9.8 skip to 9.10

9.9 Do you implement the laws under bovine TB control?

☐ Yes ☐ No

9.10 Do you have any testing agency for your cattles?

☐ Yes ☐ No

9.11 Do you conduct routine testing to your cattles?

☐ Yes ☐ No

9.12 Have you paid for bovine TB test?

☐ Yes ☐ No

9.13 Do you know the bovine tuberculosis can be transmitted to humans?

☐ Yes ☐ No

If no to 10.13, skip to 10.15

9.14 Do you know the mode of transmission of tuberculosis between cattles and human being?

☐ Yes ☐ No

If yes fill the modes you know in this table

	YES	NO
Unpasteurized milk/		
Untreated meat/		

Aerosol		
Direct contact		

9.15 Have you vaccinated your animals for TB?

☐ Yes ☐ No

If no to 9.15 skip to 9.17

9.16 What is your routine of vaccination?

- ☐ Once a year
- ☐ Twice a year
- ☐ Only once

9.17 Have you ever seen a veterinary for your cattles?

☐ Yes ☐ No

If no to 9.17 skip to 9.18

What was the reason for veterinary attention?

--

9.18 How many times in a year do you visit the veterinary doctor?

- ☐ Once a year
- ☐ Twice a year
- ☐ Only once