

Myths and realities about knowledge, attitudes and practices of household contacts of tuberculosis patients

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SUMMARY

SETTING: Five Colombian cities: Villavicencio, Pereira, Cucuta, Bucaramanga and Bosa.

OBJECTIVE: To describe the knowledge, attitudes and practices related to tuberculosis (TB) in household contacts (HHCs) of TB patients.

METHODS: A cross-sectional study was conducted. The estimated sample size required was 855. The World Health Organization guide 'Advocacy, communication and social mobilization for TB control: a guide to developing knowledge, attitude and practice surveys' was translated into Spanish and adapted to the dialect of each city. HHCs were invited to participate in the study and included if they agreed.

RESULTS: We interviewed 878 HHCs. Most of them knew that TB was transmitted by airborne droplets;

however, 52.2% also said that TB could be transferred from one person to another by sharing plates or clothes or shaking hands. Fifty-five per cent of HHCs acquired TB-related information from health care workers, and 44% from family members and friends. Fear was the main reaction reported by HHCs when they were informed of a TB diagnosis (60%). Eighty-five per cent of HHCs answered that the community rejects or avoids TB cases. **CONCLUSION:** There are significant gaps in the knowledge about TB and the stigmatisation associated with it. Educational strategies should be designed together with the community to demystify many misconceptions about TB.

KEY WORDS: tuberculosis; knowledge; practice; attitudes; household contacts

KNOWLEDGE ABOUT TUBERCULOSIS (TB) helps to break down myths regarding transmission, care and healing, thereby facilitating optimal adherence to treatment.^{1,2} Education also helps to improve TB programme outcomes, and reduces the stigma and discrimination to which patients suffering from the disease are subjected.^{3,4} Community advocacy, communication and social mobilisation projects have also been reported to increase TB awareness even if there are other challenges, and are therefore associated with an increase in the number of people accessing TB care.⁵

Studies on patients and their families have shown that stigma is more common in developing countries.^{6,7} Strategies that provide appropriate health education aimed at significantly increasing knowledge about TB among relatives of people affected by the disease (i.e., information on the causal agent, mode of transmission, prevention and treatment of the disease) is essential for local TB control programmes.⁴ This is especially important to improve treatment adherence and therefore to cure TB. Low self-esteem, depression, poor adherence to medica-

tion and failure to seek help have been associated with stigma.^{8–10}

The Colombian National Programme for Prevention and Control of Tuberculosis does not currently provide educational material for use by health care workers to educate household contacts (HHCs) or TB cases about TB. After a TB case has been diagnosed, contact tracing is conducted at home to rule out TB in HHCs. However, no educational resources are given to patients or their families; this constitutes a missed opportunity for increasing understanding of the disease.

Some studies have been carried out in Colombia on TB-related knowledge, attitudes and practice (KAP), most among medical students, nursing and health personnel,^{11–15} one in the community¹⁶ and one in an indigenous population;¹⁷ however, none have focused specifically on the HHCs of patients with TB. A KAP study among HHCs would allow us to understand the prevailing attitudes and misconceptions regarding TB, and guide the design of further educational activities that address the needs of patients and families.

The objective of the present study was to describe the KAP about TB in the HHCs of patients diagnosed with this disease.

METHODS

Context

More than 90% of the inhabitants in the study cities (Villavicencio, Pereira, Cucuta, Bucaramanga and Bosa) have some type of health coverage—either a ‘subsidised’ health care plan for those who cannot afford other types of health care coverage, or a ‘contributive’ health care plan paid for by employees and employers. TB diagnosis and treatment in Colombia is free for all patients. The patient is transferred to her/his health care provider to start TB treatment, followed by contact tracing by a nurse at home 8 days, 6 months and 12 months after TB diagnosis. At each visit, the nurse collects information about TB symptoms in each HHC and gives them instructions to visit a health care institution in case of respiratory symptoms. Due to the lack of standardised educational material, education about TB transmission and prevention varies according to each nurse and her/his knowledge of the disease.

Study type

This operational research project was a cross-sectional study. Villavicencio, Pereira, Cucuta, Bucaramanga and Bosa are among the eight cities with the highest burden of TB in Colombia. A total of 1174 HHCs of 347 TB index cases were identified in the first semester of 2014 under the TB control programme in these cities. The total population selected was 1109, as 65 medical records had no telephone data, non-existent addresses or other exclusion criteria.

Sample size

The required sample size was 855 assuming the prevalence of TB knowledge to be 14.2%,¹⁸ an accuracy of 2%, a design effect of 1.5 per stratification per city and an alpha error of 0.05. We used random sampling stratified by city as follows: Bosa locality, 4; Bucaramanga, 121; Cucuta, 133; Pereira, 295 and Villavicencio, 349. Allocation was done proportionally according to the number of HHCs per TB case. Interviewers in all cities received a list of HHCs to interview for each index case. If an HHC was not found, a new random list of HHCs was generated. The random sequence was created using Epidat[®] (Consellería de Sanidade, Servizo Galego de Saúde, Santiago de Compostela, Spain).

Inclusion criteria

Inclusion criteria were: HHCs of a TB case aged ≥ 15 years, had had at least one contact visit in the first half of 2014, and agreed to participate and complete the survey.

Exclusion criteria

Homeless people, cases with no contacts, and contacts that could not be reached due to a change in telephone number and/or residential address were excluded.

Procedures

During routine contact tracing for HHCs at home, surveys were conducted on the number of contacts assigned to each TB index case who were available at home at the time of the visit. Interviewers were trained to read the questionnaire to avoid misinterpretation, and to record the answers that each HHC gave about the KAP of TB. We used the questionnaire from the World Health Organization entitled ‘Advocacy, communication and social mobilization for TB control: a guide to developing knowledge, attitude and practice surveys’;¹⁹ this was translated into Spanish and adapted to the dialect of each city. Each interview took 45–70 min.

Before conducting the surveys, the format was reviewed by three TB experts, and then sent to the field team (health professional, a nurse’s assistant and a community peer leader) to adapt it to the local dialect. A pilot study was conducted on five contacts per city to assess the feasibility of contacting HHCs, as well as the understanding and clarity of the questionnaire. HHCs interviewed in the pilot study were not included in the final analysis.

The questionnaire comprised general and demographic questions, questions on health-seeking behaviour, TB knowledge and awareness, TB attitudes and care-seeking behaviour, TB attitudes and stigma, and TB awareness and sources of information (Appendix*). The following questions had correct/incorrect responses (correct answers were placed in parentheses): signs and symptoms (cough, cough and fever, or cough and weight loss), ways to acquire TB (through the air when a person with TB coughs or sneezes), how to prevent TB (covering mouth and nose when coughing or sneezing), who can acquire TB (any person), TB treatment (TB can be cured using specific drugs given at health centres), feelings about people with TB disease (feeling compassion and a desire to help or do not have any particular feeling), and how the community usually regards/treats a person with TB (the community is mostly supportive and helps him/her).

Analysis

Survey responses were entered into an Access[®] database (Microsoft, Redmond, WA, USA). Frequencies and percentages for each question were estimated by city (Appendix Tables A.1 and A.2). We estimated

* The appendix is available in the online version of this article, at <http://www.ingentaconnect.com/content/ijatld/ijatld/2018/00000022/00000011/art00009>

Table 1 Demographic characteristics of household contacts of tuberculosis cases in five cities in Colombia

Variable	Cities					Total (n = 878) %
	Villavicencio (n = 366) %	Pereira (n = 237) %	Cucuta (n = 144) %	Bucaramanga (n = 100) %	Bosa (n = 41) %	
Female	53.5	60.8	58.2	67	78	58.8
Age, years						
15–24	27.6	14.3	27.6	19	31.7	23.2
25–49	43.7	40.9	41	41	34.1	41.8
50–64	20.8	26.6	23.1	24	19.5	2.3
≥65	7.9	18.1	8.2	16	14.6	12
Level of education						
No school	2.7	4.2	5.2	6	2.4	3.9
Elementary	15	29.5	44.8	36	24.4	26.3
High school	54.2	45.6	38.1	42	56.1	48.1
College/university	27.8	20.7	11.9	16	17.1	21.6
Currently paid employment	57.5	41.4	36.6	52.5	41.5	48.6

the intra-class correlation coefficient to evaluate the correlation between answers among HHCs belonging to the same household, and found that only cough and dyspnoea were correlated. A bivariate analysis was performed to estimate the prevalence ratio, with 95% confidence intervals for each variable. A multivariate analysis using Poisson regression was undertaken to estimate which variables (sex, age, city, education level, employment, distance between home and health centre, and facility the person attends if sick) were associated with correct answers for signs and symptoms, routes of TB acquisition and ways to prevent TB, persons who can acquire TB, anti-tuberculosis treatment, feelings about people with TB disease, and how the person with TB is usually regarded/treated by the community. STATA® (Stata-Corp, College Station, TX, USA) was used for bivariate and multivariate analyses.

Ethics statement

This research was approved by the Ethics Committee (Comité de Ética de Investigación en Salud) of Universidad Pontificia Bolivariana, Medellín, Colombia.

RESULTS

A total of 878 people were surveyed (Villavicencio, 366; Pereira, 237; Cucuta, 134; Bucaramanga, 100; Bosa locality, 41). Sixty-five per cent of HHCs were aged <50 years, and 51% were unemployed (Table 1). Of those surveyed, 64% had to take at least one ground transportation to access health services, and the median time between home and the health centre was 15 min (interquartile range 10–20) by car/public transport (Table 2).

Of the 91% of persons who responded that TB was transmitted by airborne droplets, 52.2% answered that it could also be transmitted by shaking hands, sharing dishes and clothing, eating from the same

plate, touching objects in public places or did not know (Table 3).

Of the HHCs surveyed, 85.5% considered TB to be a serious disease, and 14.5% considered it to be a moderately serious disease or not serious. Weight loss

Table 2 Factors and behaviors associated with the search for health services among contacts of patients diagnosed with TB

Factor/behaviour	Total n (%)
How far do you live from the nearest health centre?	
Same neighbourhood (on foot)	312 (35.5)
Same neighbourhood (one bus)	85 (9.7)
Another neighbourhood (one bus)	409 (46.5)
Another quarter (two or more buses)	72 (8.2)
Where do you usually go if you are sick?	
Private physician	145 (16.5)
Clinic/hospital	811 (92.4)
Pharmacy/drugstore	142 (16.2)
Homeopathic healer	32 (3.6)
Church	3 (0.3)
Other	18 (2)
How often do you generally seek health care at a clinic or hospital?	
Twice a year or more	608 (69.2)
Once per year	175 (19.9)
Less than once a year, but at least twice in past 5 years	24 (2.7)
Once in past 5 years	21 (2.4)
Never in past 5 years	12 (1.4)
Other	38 (4.3)
I know or recognise anything about TB	810 (92.3)
What are the signs and symptoms of TB?	
Rash	38 (4.3)
Cough	421 (49.9)
Cough that lasts >3 weeks	632 (72)
Coughing up blood	352 (40.1)
Severe headache	221 (25.2)
Nausea	145 (16.5)
Weight loss	698 (79.5)
Fever	444 (50.6)
Fever with no clear cause that lasts >7 days	229 (26.1)
Chest pain	508 (57.9)
Shortness of breath	231 (26.3)
Ongoing fatigue	309 (35.2)
Do not know	20 (2.3)
Other	49 (5.6)

TB = tuberculosis.

Table 3 Knowledge about TB reported by the household contacts of patients diagnosed with TB

Factor/behaviour	Total n (%)
Do you know or recognise anything about TB?	
Yes	810 (92.3)
No	68 (7.7)
Where did you first learn about TB?*	
Physician/nurse	447 (55.3)
Family/friends/neighbours/colleagues	358 (44.2)
Brochures, posters and other printed materials	200 (24.7)
Billboards	100 (12.3)
Television	98 (12.1)
Community leaders	56 (6.9)
Radio	55 (6.8)
Teachers	25 (3.1)
Religious leaders	21 (2.6)
Newspapers and magazines	20 (2.5)
Others	78 (9.7)
How can a person get TB?*	
Through the air when a person with TB coughs or sneezes	805 (91.7)
Through eating from the same plate	251 (28.6)
Through sharing dishes and clothes	164 (18.7)
Through shaking hands	113 (12.9)
By touching objects in public sites	83 (9.5)
Do not know	15 (1.7)
Other	35 (4)
How can a person prevent getting TB?	
Avoid shaking hands	96 (10.9)
Covering mouth and nose when coughing or sneezing	802 (91.3)
Avoid sharing dishes	278 (31.7)
Washing hands after touching objects in public places	220 (25.1)
Closing windows at home	24 (2.7)
Through good nutrition	353 (40.2)
By praying	127 (14.5)
Do not know	11 (1.3)
Other	26 (3)

* People could give more than one answer. In total, 47.8% answered correctly: only airborne when a person coughs or sneezes. TB = tuberculosis.

(80.2%), cough for >3 weeks (72.3%), chest pain (58.3%) and fever (50.9%) were considered the most common signs and symptoms of TB (Table 2).

Fear (60.7%) and sadness (39.5%) were the most frequent responses when asked how they would react if they were diagnosed with TB (Table 4); 85% said that people reject or avoid a person with TB (Table 4).

On multivariate analysis, people from Pereira had the least knowledge about the signs and symptoms of TB, modes of TB transmission, how to prevent TB, and TB treatment (Table 5), and had negative feelings about people with TB disease (Table 6) compared with people from Villavicencio. People from Bosa were most knowledgeable about TB transmission modes and TB treatment compared with people from Villavicencio. People from all five cities knew who could acquire TB (Table 5).

DISCUSSION

We found significant gaps in knowledge about TB. Ignorance about the disease, in addition to the 'myths'

Table 4 Feelings about and attitude towards TB in the household contacts of TB patients

Variable	n (%)
Who can acquire TB?	
Anybody	857 (97.6)
Only poor people	20 (2.3)
Only alcoholics	39 (4.4)
Only homeless people	68 (7.7)
Only drug users	52 (5.9)
Only people living with HIV/AIDS	46 (5.2)
Only people who have been in prison	47 (5.4)
TB can be cured	864 (98.5)
How is TB cured?	
Herbal remedies	41 (4.7)
Home rest without medicine	3 (0.3)
By praying	60 (6.9)
Specific drugs given by health centre	848 (97.7)
Do not know	4 (0.5)
Other	15 (1.7)
I think I can get TB	846 (96.4)
What would be your reaction if you were found out that you have TB?	
Fear	533 (60.7)
Surprise	343 (39.1)
Shame	44 (5.0)
Embarrassment	53 (6.0)
Sadness or hopelessness	347 (39.5)
Do not believe or not accept	24 (2.7)
Other	101 (11.5)
Which statement is closest to your feeling about people with TB disease?	
'I feel compassion and wish to help'	679 (77.2)
'I feel compassion but tend to stay away from these people'	125 (14.2)
'It is their problem and I cannot get TB'	3 (0.3)
'I fear them because they may infect me'	33 (3.8)
'I have no particular feeling'	37 (4.2)
Other	1 (0.1)
In your community, how is a person who has TB usually regarded/treated?	
Most people reject them	434 (49.4)
Most people are friendly, but they generally try to avoid them	311 (35.4)
The community mostly supports and helps them	121 (13.8)
Other	11 (1.3)

TB = tuberculosis; HIV = human immunodeficiency virus; AIDS = acquired immune-deficiency syndrome.

that people have, generate reactions and actions that are stigmatising and discriminatory for patients.

One of the most important study findings was that more than 90% of people reported that TB was an airborne infection, but half of the people surveyed had misconceptions, which can affect programme goals. A study on contacts and TB index cases in Viet Nam reported that discrimination against people affected by TB, and the lack of knowledge about TB transmission, can affect contact investigation in the HHCs of index cases.²⁰ Another study of people with TB in India found that most TB cases did not know the cause of the disease or mode of transmission, and that health care providers did not provide patient education on respiratory hygiene/cough etiquette to prevent the spread of disease among family members.²¹ In Viet Nam, Fox et al. reported that contacts of index cases who did not attend the screening

Table 5 Multivariate analysis: factors associated with correct answers related to signs and symptoms, ways to acquire TB, how to prevent TB, who can acquire TB and TB treatment in household contacts of TB cases

Variables	Correct answers*				
	TB signs and symptoms aPR (95%CI)	TB transmission modes aPR (95%CI)	How to prevent TB aPR (95%CI)	Who can acquire TB aPR (95%CI)	TB treatment aPR (95%CI)
Age, years					
≥50 (reference)	1.0	1.0	1.0	1.0	1.0
14–24	0.92 (0.65–1.29)	0.93 (0.76–1.13)	1.05 (0.79–1.41)	1.00 (0.92–1.09)	1.06 (0.98–1.15)
25–49	1.11 (0.81–1.53)	1.16 (0.97–1.38)	1.23 (0.95–1.59)	0.97 (0.90–1.04)	1.08 (1.01–1.16)
Female sex	1.05 (0.81–1.36)	1.09 (0.95–1.26)	1.16 (0.95–1.41)		
Education level					
None (reference)	1.0	1.0	1.0	1.0	1.0
Elementary school	1.17 (0.63–2.18)	1.10 (0.73–1.65)	1.20 (0.67–2.15)	1.19 (0.97–1.46)	1.00 (0.85–1.18)
High school	1.16 (0.63–2.14)	1.19 (0.79–1.79)	1.19 (0.66–2.13)	1.19 (0.97–1.46)	1.01 (0.85–1.18)
College/university	0.92 (0.46–1.86)	1.23 (0.80–1.88)	0.98 (0.53–1.82)	1.05 (0.84–1.30)	0.96 (0.81–1.15)
Currently paid employment	0.79 (0.58–1.09)	1.01 (0.86–1.17)	1.00 (0.81–1.24)	1.06 (0.99–1.13)	1.01 (0.95–1.07)
City					
Villavicencio (reference)	1.0	1.0	1.0	1.0	1.0
Bosa	0.33 (0.82–1.32)	1.85 (1.59–2.16) [†]	1.11 (0.74–1.67)	1.55 (1.40–1.71) [†]	1.13 (1.04–1.23) [†]
Bucaramanga	1.33 (0.82–2.16)	1.13 (0.93–1.38)	1.30 (1.02–1.64) [†]	1.50 (1.37–1.65) [†]	1.10 (1.02–1.19) [†]
Cucuta	4.12 (2.91–5.82) [†]	1.15 (0.95–1.40)	0.93 (0.70–1.24)	1.55 (1.41–1.70) [†]	1.09 (1.02–1.17) [†]
Pereira	0.45 (0.26–0.78) [†]	0.46 (0.36–0.60) [†]	0.13 (0.07–0.24) [†]	1.51 (1.38–1.66) [†]	0.89 (0.82–0.97) [†]
Distance between home and health centre					
Same neighbourhood (on foot)	0.98 (0.59–1.63)	0.82 (0.65–1.03)	0.62 (0.45–0.86) [†]	0.92 (0.84–1.01)	1.02 (0.92–1.14)
Same neighbourhood (one bus)	1.24 (0.63–2.44)	0.89 (0.67–1.19)	0.61 (0.40–0.94) [†]	0.83 (0.69–1.00)	1.07 (0.94–1.23)
Another neighbourhood (one bus)	0.91 (0.55–1.50)	0.74 (0.60–0.91)	0.73 (0.56–0.96) [†]	0.91 (0.83–1.00)	1.03 (0.93–1.15)
Another quarter (two or more buses) (reference)	1.0	1.0	1.0	1.0	1.0

* Correct answers for each model are included in parentheses, as follows: signs and symptoms (cough, cough and fever or cough and weight loss), TB transmission modes (airborne when a person coughs or sneezes), how to prevent TB (cover the nose or mouth when a person coughs or sneezes), who can acquire TB (any person), and TB treatment (TB can be cured using specific drugs given by health centre).

[†] Statistically significant.

TB = tuberculosis; aPR = adjusted prevalence ratio; CI = confidence interval.

appointment for ruling out TB were not aware that TB was transmitted by an infectious organism; they also had limited knowledge of the fact that sharing the same room increased the risk of TB transmission, and believed that there are non-infectious causes of TB.²⁰ These studies show how ignorance about the disease affects adherence to screening programmes to rule out TB and, therefore, the lack of TB diagnosis among HHCs. Misinformation also affects the control and prevention measures designed to limit transmission and dissemination of the disease between contacts.

Lack of knowledge regarding TB transmission may explain the fact that, in our study, 85% of respondents considered that people in the community reject or try to avoid people with TB. This attitude may negatively affect treatment adherence,²² the use of personal protection measures, self-care and care for others, as described in a recent study in Cameroon, in which the authors concluded that negative attitudes towards patients and bad practices are an obstacle to TB elimination and control efforts in that country.²³ A survey in Peru found that ignorance about TB and marked stigma in the community towards people with the disease influenced poor contact investigation, partly because families rejected tuberculin skin testing for fear of being diagnosed with TB, or due to

stigma, which hampered the diagnosis of TB in children and adults.²⁴

Among the possible explanations for the lack of knowledge about TB among HHCs, we found different studies on the KAP of TB carried out in Colombia among health care personnel and undergraduate students in the health sciences^{11–17} that may explain the low level of education that patients and contacts receive from health care personnel. Three articles reported that the counselling that health care workers provide to patients is loaded with cultural misconceptions about TB, and some of these attitudes foster stigma and discrimination;¹⁵ 20% said that they never carry out TB educational activities among patients or their relatives,¹² and undergraduate students were afraid of infection and had shunned TB patients.¹¹ As described in the Methods section, there was no educational material that nurses could use among HHCs and TB patients during contact tracing at home. These studies therefore suggest that not only patients and their families, but also health care workers and students, need to be educated.

One of our study findings that merits discussion is that 64.4% of people reported having to take at least one bus to visit the health care centre. This is important—several surveys have reported that the distance between the clinic in which they are

Table 6 Bivariate and multivariate analysis: factors associated with correct answers related to feelings about people with TB and reaction in the community with TB cases in the household contacts of TB cases

Variables	Correct answers*			
	Desire to help people with TB or no particular feeling PR (95%CI)	Desire to help people with TB or no particular feeling aPR (95%CI)	Most people from the community support and help a person who has TB PR (95%CI)	Most people from the community support and help a person who has TB aPR (95%CI)
Age, years				
≥50 (reference)	1.0	1.0	1.0	1.0
14–24	1.00 (0.91–1.09)	0.94 (0.76–1.17)	1.25 (0.83–1.89)	1.55 (0.93–2.56)
25–49	1.08 (1.00–1.16)	1.04 (0.85–1.26)	0.87 (0.59–1.30)	1.00 (0.61–1.62)
Female sex	1.13 (1.05–1.21)	1.16 (0.99–1.35)	1.02 (0.73–1.43)	1.05 (0.72–1.53)
Education level				
None (reference)	1.0	1.0	1.0	1.0
Elementary school	0.95 (0.79–1.14)	0.96 (0.64–1.45)	0.68 (0.34–1.33)	0.55 (0.25–1.21)
High school	1.05 (0.88–1.25)	1.02 (0.68–1.54)	0.58 (0.30–1.11)	0.50 (0.22–1.11)
College/university	1.06 (0.88–1.27)	1.02 (0.66–1.58)	0.40 (0.19–0.85)	0.33 (0.13–0.83) [†]
Currently paid employment	1.06 (1.00–1.13)	1.01 (0.84–1.20)	0.82 (0.58–1.14)	1.08 (0.70–1.65)
City				
Villavicencio (reference)	1.0	1.0	1.0	1.0
Bosa	0.84 (0.72–0.98)	0.82 (0.56–1.19)	0.41 (0.10–1.65)	0.39 (0.92–1.65)
Bucaramanga	0.86 (0.78–0.95)	0.84 (0.65–1.09)	1.02 (0.56–1.86)	1.19 (0.61–2.33)
Cucuta	0.79 (0.71–0.87)	0.80 (0.62–1.02)	1.96 (1.29–2.98)	1.88 (1.10–3.20) [†]
Pereira	0.68 (0.61–0.75)	0.67 (0.54–0.82) [†]	1.18 (0.77–1.80)	1.22 (0.74–2.01)
Distance between home and health centre				
Same neighbourhood (on foot)	0.90 (0.80–1.01)	0.96 (0.71–1.30)	2.88 (1.07–7.72)	2.89 (1.02–8.20) [†]
Same neighbourhood (one bus)	1.06 (0.94–1.20)	0.98 (0.69–1.39)	3.17 (1.10–9.14)	4.16 (1.33–13.0) [†]
Another neighbourhood (one bus)	0.98 (0.88–1.09)	0.93 (0.70–1.23)	2.28 (0.85–6.13)	2.57 (0.91–7.22)
Another quarter (two or more buses) (reference)	1.0	1.0	1.0	1.0
Time to reach the place >15 min	1.09 (1.03–1.16)	—	0.57 (0.38–0.84)	—
Where the person goes when sick				
Private physician	1.14 (1.07–1.21)	—	0.60 (0.35–1.05)	—
Clinic/hospital	0.97 (0.87–1.08)		1.58 (0.72–3.46)	
Pharmacy/drugstore	1.01 (0.93–1.10)		0.84 (0.52–1.36)	
Homeopathic medicine	0.79 (0.62–1.02)		0.90 (0.35–2.29)	
Church	0.81 (0.36–1.81)		2.43 (0.48–12.1)	
Other	0.88 (0.66–1.17)		0.39 (0.05–2.6)	

* Correct answers for each model: Yes to 'Desire to help people with TB or no particular feeling', and yes to 'Most people from the community support and help a person who has TB'.

[†] Statistically significant.

TB = tuberculosis; PR = prevalence ratio; aPR = adjusted PR; CI = confidence interval.

evaluated or treated and the place of residence may be a barrier to the uptake of TB screening tests due to time constraints or costs;²⁰ this can therefore discourage treatment adherence. Two studies conducted in Colombia showed that 51.8% of treatment costs incurred by patients and HHCs were spent on transportation, in addition to loss of wages due to taking time off work for visits;²⁵ this suggests a mean decrease in the monthly salary of 61 719 Colombian peso (approximately 25 USD; the minimum monthly salary in Colombia is around 250 USD).²⁶

The main limitation of our study was that, although it was conducted in five of the eight cities with the highest TB burden in Colombia, these results may not reflect the reality of the country due to the economic and cultural differences between the cities. However, with our knowledge of TB care programmes in Colombia, we believe that the results could be extrapolated to other cities to design educational programmes.

In terms of contribution to the Colombian national TB programme, these results suggest a missed opportunity for health education and indicate the importance of developing educational material that targets the HHCs of TB patients specifically for use during contact tracing. In addition, this material should be developed together with the health authorities, the community and non-governmental organisations to guarantee the validation, appropriation and effectiveness of the educational material. Finally, it is essential to develop permanent and continuous educational programmes on TB to evaluate their impact on programme indicators.

In conclusion, education of the HHCs of TB patients was insufficient in the cities in which this study was conducted, but all the contacts included had had at least one follow-up visit at the time of study entry. Educational material should be created and standardised, not only for contacts, but also for those who conduct contact investigations, and, in

general, the personnel of health care institutions who have contact with TB patients. The cultural issues and myths that affect the education of contacts and patients with TB remain; misconceptions about TB generate reactions and activities that are stigmatising and discriminatory towards patients.

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APPENDIX



OIM • IOM

Project “Knowledge, Attitudes, and Practices of Tuberculosis among Household Contacts of Patients with Tuberculosis from Villavicencio, Pereira, Cúcuta, Bucaramanga and Bosa, 2014–2015”

Universidad
Pontificia
Bolivariana

This survey was taken from the WHO document: Advocacy, communication and social mobilization for TB control: a guide to developing knowledge, attitude and practice surveys. WHO/HTM/STB/2008.46.

It was translated into Spanish, modified and adapted to the local dialect of each city where the Global Fund Project was conducted.

NB: The main changes are in the Spanish version of the questionnaire. The English version below was translated for publication in the IJTL.

Date of interview (DD/MM/YYYY): ____/____/____

Name of household contact: _____

Dear interviewer, please read each question to the household contact, and mark with an “X” the chosen answer(s) to the following questions:

General and demographic questions

1. Age, years: _____
2. Sex: Female ___ Male ___
3. What is your highest level of education?
 - a. None
 - b. Primary school
 - c. High school
 - d. College/university (including graduate studies)
4. Are you currently in paid employment? Yes ___ No ___
5. How far do you live from the nearest health centre?
 - a. The same neighbourhood (on foot)
 - b. The same neighbourhood (one bus trip)
 - c. Another neighbourhood (one bus trip)
 - d. Another quarter (two or more buses)
 Time to the health care centre, minutes _____

Health-seeking behaviour

6. What is the name of your health care insurance (EPS in Spanish). Please check the health care identity card of the EPS and FOSYGA.

7. Where do you usually go if you are sick or to receive treatment? (You can choose more than one option)
 - a. Private physician
 - b. Clinic / hospital
 - c. Pharmacy / drugstore
 - d. Homeopathic healer
 - e. Church
 - f. Other ___ Please describe: _____

8. How often do you generally seek health care at a clinic or hospital? (Choose only one):
- a. Twice a year or more
 - b. Once per year
 - c. Less than once a year, but at least twice in the last 5 years
 - d. Once in the last 5 years
 - e. Never in the last 5 years
 - f. Other___ Please explain: _____

Knowledge about TB

9. Do you know or recognise anything about TB? Yes___ No ___ *If the answer is NO, please continue to question 11.*
10. Where did you learn for the first time about tuberculosis? (You can choose more than one option)
- a. Newspapers and magazines
 - b. Radio
 - c. TV
 - d. Billboards
 - e. Brochures, posters and other printed materials
 - f. Physician / nurse
 - g. Family / friends / neighbours / colleagues
 - h. Religious leaders
 - i. Community leaders
 - j. Teachers
 - k. Other (please explain):

11. In your opinion, how serious a disease is TB? (Choose only one):
- a. Very serious (It is life threatening)
 - b. Somewhat serious (The person is sick but it is not life threatening)
 - c. Not very serious (The person has mild symptoms and treatment is not necessary)
12. How serious a problem do you think TB is in your country/city/neighbourhood? (Choose only one)
- a. Very serious (There are many sick people, and some of them die)
 - b. Somewhat serious (There are many sick people but none of them die)
 - c. Not very serious (There are few sick people and none of them die)
 - d. Tuberculosis does not exist
13. What are the signs and symptoms of TB? (You can choose more than one option):
- a. Rash
 - b. Cough
 - c. Cough that lasts longer than 3 weeks
 - d. Coughing up blood
 - e. Severe headache
 - f. Nausea
 - g. Weight loss
 - h. Fever
 - i. Fever without clear cause that lasts >7 days

- j. Chest pain
- k. Shortness of breath
- l. Ongoing fatigue
- m. Do not know
- n. Other:

14. How can a person get TB? (You can choose more than one option):

- a. Through shaking hands
- b. Through the air when a person with TB coughs or sneezes
- c. Through sharing dishes and clothes
- d. Through eating from the same plate
- e. Through touching items in public sites (door and window handles, transport railings, etc)
- f. Do not know
- g. Other (Please explain): _____

15. How can a person prevent getting TB? (You can choose more than one option):

- a. Avoid shaking hands
- b. Covering mouth and nose when coughing or sneezing
- c. Avoid sharing dishes
- d. Washing hands after touching items in public places
- e. Closing windows at home
- f. Through good nutrition
- g. By praying
- h. Do not know
- i. Other (Please explain): _____

16. Who can get TB? (You can choose more than one option):

- a. Anybody
- b. Only poor people
- c. Only homeless people
- d. Only alcoholics
- e. Only drug users
- f. Only people living with HIV/AIDS
- g. Only prisoners
- h. Other (Please explain): _____

17. Can TB be cured? *If your answer is NO, please continue to question 19*

- a. Yes
- b. No

18. How is TB cured? (You can choose more than one option):

- a. Herbal remedies
- b. Home rest without medicine
- c. By praying
- d. Specific drugs given by health centre
- e. Do not know
- f. Other: _____

Attitudes about tuberculosis and health care behaviour

19. Can I get tuberculosis? (please explain your answer)
- a. Yes. Why?

 - b. No. Why?

20. What would be your reaction if you discovered that you had TB? (You can choose more than one option):
- a. Fear
 - b. Surprise
 - c. Shame
 - d. Embarrassment
 - e. Sadness or hopelessness
 - f. Do not believe or not accept
 - g. Other: _____
21. Who would you talk to about your illness if you had TB? (You can choose more than option):
- a. Doctor or other medical worker
 - b. Spouse
 - c. Parent
 - d. Child(ren)
 - e. Other family member
 - f. Close friend
 - g. No-one
 - h. Other: _____
22. What would you do if you thought you had symptoms of TB? (You can choose more than one option):
- a. Go to a health facility
 - b. Go to a pharmacy
 - c. Go to a traditional healer
 - d. Pursue other-self-treatment options (herbs, etc.)
 - e. Other: _____
23. If you had symptoms of TB, at what point would you go to the health facility? (Please choose only one)
- a. When taking treatment for my cough or fever does not work (self-prescription with no improvement). *If the person chooses this go to question 24*
 - b. When cough, expectoration, fever and/or weight loss last for more than 3–4 weeks. *If the person chooses this go to question 24*
 - c. As soon as I realise that my symptoms might be related to TB. *If the person chooses this go to question 25*
 - d. I would not go to the doctor. *If the person chooses this go to question 24*
24. If you would not go to the health facility, what is the reason? (You can choose more than one option):
- a. Not sure where to go
 - b. Costs

- c. Difficulties with transportation/distance to clinic
- d. Do not trust medical workers
- e. Do not like attitude of medical workers
- f. Cannot leave work (overlapping work hours with medical facility working hours)
- g. Do not want to find out that something is really wrong
- h. Other (Please explain):

25. How expensive do you think TB diagnosis and treatment is in this country? (Choose only one)
- a. It is free of charge
 - b. It is reasonably priced
 - c. It is somewhat/moderate expensive
 - d. It is very expensive
 - e. Interviewer: If the person mentions a specific cost, please write it down:
\$ _____

Attitudes about tuberculosis and stigma

26. Which statement is closest to your feeling about people with TB disease? (Read the options and choose only one):
- a. I feel compassion and desire to help
 - b. I feel compassion but tend to stay away from these people
 - c. It is their problem and I cannot get TB
 - d. I fear them because they may infect me
 - e. I have no particular feeling
 - f. Other (Please explain): _____
27. In your community, how is a person who has TB usually regarded/treated??
- a. Most people reject them
 - b. Most people are friendly, but they generally try to avoid them
 - c. The community mostly supports and helps them
 - d. Other (Please explain): _____
28. Do you think that HIV positive people should be concerned about TB?
- a. Yes. *Go to question 29*
 - b. No. *Go to question 30*
29. Why?
- a. People with HIV/AIDS are more likely to develop TB
 - b. Do not know
 - c. Other (Please explain): _____
30. Why not?
- a. People with HIV are just as likely as people without HIV to develop TB
 - b. Do not know
 - c. Other (Please explain): _____

Awareness about tuberculosis and sources of information

31. Do you feel well informed about TB?
- a. Yes
 - b. No
32. Do you wish you could get more information about TB?
- a. Yes
 - b. No
33. What are the sources of information that you think can most effectively reach people like you with information on TB? (Please choose the three most effective options):
- a. Newspapers and magazines
 - b. Radio
 - c. TV
 - d. Billboards
 - e. Brochures, posters and other printed material
 - f. Physician / nurse
 - g. Family / friends / neighbours / colleagues
 - h. Religious leaders
 - i. Community leaders
 - j. Teachers
 - k. Other (Please explain): _____

34. What are your main concerns when you think about tuberculosis?

Name of interviewer: _____

Many thanks for your participation in this study

Table A.1 Frequencies and percentages of each question, estimated by city. Questions 1–8: General and demographic information, health-seeking behaviour

	City					Total n (%)	P value
	Bosa n (%)	Bucaramanga n (%)	Cucuta n (%)	Pereira n (%)	Villavicencio n (%)		
Sex							0.009
Female	32 (78)	67 (67)	78 (58.2)	144 (60.8)	196 (53.6)	517 (58.9)	
Male	9 (22)	33 (33)	56 (41.8)	93 (39.2)	170 (46.4)	361 (41.1)	
Age, years, median (percentile 25–percentile 75)	40 (22–57)	44 (28–60)	37 (23–53)	47 (31–60)	34 (24–51)	39 (25–55)	0.001
Highest level of education							0.001
No school	1 (2.4)	6 (6)	7 (5.2)	10 (4.2)	10 (2.7)	34 (3.9)	
Elementary	10 (24.4)	36 (36)	60 (44.8)	70 (29.5)	55 (15)	231 (26.3)	
High school	23 (56.1)	42 (42)	51 (38.1)	108 (45.6)	199 (54.4)	423 (48.2)	
College/university	7 (17.1)	16 (16)	16 (11.9)	49 (20.7)	102 (27.9)	190 (21.6)	
Currently paid employment							0.001
Yes	17 (41.5)	52 (52.5)	49 (36.6)	98 (41.4)	211 (57.7)	427 (48.7)	
No	24 (58.5)	47 (47.5)	85 (63.4)	139 (58.6)	155 (42.3)	450 (51.3)	
How far do you live from the nearest health centre?							0.001
The same neighbourhood (on foot)	28 (68.3)	23 (23)	75 (56)	133 (56.1)	53 (14.5)	312 (35.5)	
The same neighbourhood (one bus)	1 (2.4)	3 (3)	0	15 (6.3)	66 (18)	85 (9.7)	
Another neighbourhood (one bus)	11 (26.8)	48 (48)	51 (38.1)	77 (32.5)	222 (60.7)	409 (46.6)	
Another neighbourhood (two or more buses)	1 (2.4)	26 (26)	8 (6)	12 (5.1)	25 (6.8)	72 (8.2)	
Time to the health care centre, min, median (percentile 25–percentile 75)	15 (10–20)	15 (3–30)	10 (7–20)	10 (10–15)	15 (10–20)	15 (10–20)	0.001
Where do you usually go if you are sick?							0.001
Private physician							0.001
Yes	4 (9.8)	4 (4)	15 (11.2)	25 (10.5)	97 (26.5)	145 (16.5)	
No	37 (90.2)	96 (96)	119 (88.8)	212 (89.5)	269 (73.5)	733 (83.5)	
Clinic/hospital							0.005
Yes	33 (80.5)	87 (87)	124 (92.5)	222 (93.7)	345 (94.3)	811 (92.4)	
No	8 (19.5)	13 (13)	10 (7.5)	15 (6.3)	21 (5.7)	67 (7.6)	
Pharmacy/drugstore							0.001
Yes	7 (17.1)	11 (11)	13 (9.7)	58 (24.5)	53 (14.5)	142 (16.2)	
No	34 (82.9)	89 (89)	121 (90.3)	179 (75.5)	313 (85.5)	736 (83.8)	
Homeopathic healer							0.001
Yes	1 (2.4)	1 (1)	1 (0.7)	26 (11)	3 (0.8)	32 (3.6)	
No	40 (97.6)	99 (99)	133 (99.3)	211 (89)	363 (99.2)	846 (96.4)	
Church							0.874
Yes	0	0	1 (0.7)	1 (0.4)	1 (0.3)	3 (0.3)	
No	41 (100)	100 (100)	133 (99.3)	236 (99.6)	365 (99.7)	875 (99.7)	
Other							0.001
Yes	2 (4.9)	2 (2)	0	14 (5.9)	0	18 (2.1)	
No	39 (95.1)	98 (98)	134 (100)	223 (94.1)	366 (100)	860 (97.9)	
How often do you generally seek health care at a clinic or hospital?							0.001
Twice a year or more	22 (53.7)	44 (44)	92 (68.7)	148 (62.4)	302 (82.5)	608 (69.2)	
Once a year	9 (22)	19 (19)	29 (21.6)	65 (27.4)	53 (14.5)	175 (19.9)	
Less than once a year, but at least twice in the past 5 years	0	4 (4)	6 (4.5)	10 (4.2)	4 (1.1)	24 (2.7)	
Once in the past 5 years	3 (7.3)	0	6 (4.5)	8 (3.4)	4 (1.1)	21 (2.4)	
Never in the past 5 years	4 (9.8)	3 (3)	1 (0.7)	3 (1.3)	1 (0.3)	12 (1.4)	
Other	3 (7.3)	30 (30)	0	3 (1.3)	2 (0.5)	38 (4.3)	

Table A.1 Questions 9–18: Knowledge about tuberculosis

	City					Total n (%)	P value
	Bosa n (%)	Bucaramanga n (%)	Cucuta n (%)	Pereira n (%)	Villavicencio n (%)		
Do you know or recognise anything about TB?							
Yes	36 (87.8)	80 (80)	106 (79.1)	230 (97)	358 (97.8)	810 (92.3)	0.001
No	5 (12.2)	20 (20)	28 (20.9)	7 (3)	8 (2.2)	68 (7.7)	
Where did you learn for the first time about TB?							
Newspapers and magazines							0.003
Yes	0	5 (6.3)	6 (5.6)	7 (3)	2 (0.6)	20 (2.5)	
No	36 (100)	75 (93.8)	101 (94.4)	223 (97)	356 (99.4)	791 (97.5)	
Radio							0.001
Yes	0	4 (5)	2 (1.9)	8 (3.5)	41 (11.5)	55 (6.8)	
No	36 (100)	76 (95)	105 (98.1)	222 (96.5)	317 (88.5)	756 (93.2)	
Television							0.001
Yes	0	11 (13.8)	6 (5.6)	12 (5.2)	69 (19.3)	98 (12.1)	
No	36 (100)	69 (86.3)	101 (94.4)	218 (94.8)	289 (80.7)	713 (87.9)	
Billboards							0.001
Yes	0	2 (2.5)	14 (13.1)	10 (4.3)	74 (20.7)	100 (12.3)	
No	36 (100)	78 (97.5)	93 (86.9)	220 (95.7)	284 (79.3)	711 (87.7)	
Brochures, posters and other printed materials							0.001
Yes	0	16 (20)	20 (18.7)	7 (3)	157 (43.9)	200 (24.7)	
No	36 (100)	64 (80)	87 (81.3)	223 (97)	201 (56.1)	611 (75.3)	
Physician/nurse							0.044
Yes	14 (38.9)	53 (66.3)	52 (48.6)	128 (55.7)	200 (55.9)	447 (55.1)	
No	22 (61.1)	27 (33.8)	55 (51.4)	102 (44.3)	158 (44.1)	364 (44.9)	
Family/friends/neighbours/colleagues							0.001
Yes	4 (11.1)	12 (15)	61 (57)	101 (43.9)	180 (50.3)	358 (44.1)	
No	32 (88.9)	68 (85)	46 (43)	129 (56.1)	178 (49.7)	453 (55.9)	
Religious leaders							0.178
Yes	1 (2.8)	0	5 (4.7)	3 (1.3)	12 (3.4)	21 (2.6)	
No	35 (97.2)	80 (100)	102 (95.3)	227 (98.7)	346 (96.6)	790 (97.4)	
Community leaders							0.001
Yes	3 (8.3)	1 (1.3)	1 (0.9)	1 (.4)	50 (14)	56 (6.9)	
No	33 (91.7)	79 (98.8)	106 (99.1)	229 (99.6)	308 (86)	755 (93.1)	
Teachers							0.01
Yes	0	1 (1.3)	2 (1.9)	15 (6.5)	7 (2)	25 (3.1)	
No	36 (100)	79 (98.8)	105 (98.1)	215 (93.5)	351 (98)	786 (96.9)	
Others							0.001
Yes	22 (62.9)	18 (22.5)	16 (15)	19 (8.3)	3 (0.8)	78 (9.6)	
No	13 (37.1)	62 (77.5)	91 (85)	211 (91.7)	355 (99.2)	732 (90.4)	
In your opinion, how serious a disease is TB?							0.001
Very serious	36 (87.8)	75 (75)	99 (73.9)	199 (84)	343 (93.7)	752 (85.6)	
Somewhat serious	5 (12.2)	21 (21)	34 (25.4)	37 (15.6)	23 (6.3)	120 (13.7)	
Not very serious	0	4 (4)	1 (0.7)	1 (0.4)	0	6 (0.7)	
How serious a problem do you think TB is in your country/region?							0.001
Very serious	24 (58.5)	70 (70)	64 (47.8)	119 (50.2)	332 (90.7)	609 (69.4)	
Somewhat serious	15 (36.6)	24 (24)	61 (45.5)	103 (43.5)	29 (7.9)	232 (26.4)	
Not very serious	2 (4.9)	6 (6)	9 (6.7)	15 (6.3)	5 (1.4)	37 (4.2)	
Does not exist	0	0	0	0	0	0	
What are the signs and symptoms of TB?							
Rash							0.001
Yes	0	3 (3)	2 (1.5)	23 (9.7)	10 (2.7)	38 (4.3)	
No	41 (100)	97 (97)	132 (98.5)	214 (90.3)	356 (97.3)	840 (95.7)	
Cough							0.001
Yes	7 (17.1)	25 (25)	48 (35.8)	223 (94.1)	118 (32.2)	421 (47.9)	
No	34 (82.9)	75 (75)	86 (64.2)	14 (5.9)	248 (67.8)	457 (52.1)	
Cough that lasts >3 weeks							0.01
Yes	37 (90.2)	63 (63)	77 (57.5)	180 (75.9)	275 (75.1)	632 (72)	
No	4 (9.8)	37 (37)	57 (42.5)	57 (24.1)	91 (24.9)	246 (28)	
Coughing up blood							0.01
Yes	6 (14.6)	18 (18)	52 (38.8)	157 (66.2)	119 (32.5)	352 (40.1)	
No	35 (85.4)	82 (82)	82 (61.2)	80 (33.8)	247 (67.5)	526 (59.9)	
Severe headache							0.001
Yes	7 (17.1)	10 (10)	17 (12.7)	113 (47.7)	74 (20.2)	221 (25.2)	
No	34 (82.9)	90 (90)	117 (87.3)	124 (52.3)	292 (79.8)	657 (74.8)	
Nausea							0.001
Yes	1 (2.4)	16 (16)	5 (3.7)	95 (40.1)	28 (7.7)	145 (16.5)	
No	40 (97.6)	84 (84)	129 (96.3)	142 (59.9)	338 (92.3)	733 (83.5)	
Weight loss							0.001
Yes	36 (87.8)	83 (83)	92 (68.7)	210 (88.6)	277 (75.7)	698 (79.5)	
No	5 (12.2)	17 (17)	42 (31.3)	27 (11.4)	89 (24.3)	180 (20.5)	

Table A.1 (continued)

	City					Total n (%)	P value
	Bosa n (%)	Bucaramanga n (%)	Cucuta n (%)	Pereira n (%)	Villavicencio n (%)		
Fever							0.001
Yes	13 (31.7)	43 (43)	61 (45.5)	208 (87.8)	119 (32.5)	444 (50.6)	
No	28 (68.3)	57 (57)	73 (54.5)	29 (12.2)	247 (67.5)	434 (49.4)	
Fever without clear cause that lasts >7 days							0.001
Yes	24 (58.5)	15 (15)	2 (1.5)	128 (54)	60 (16.4)	229 (26.1)	
No	17 (41.5)	85 (85)	132 (98.5)	109 (46)	306 (83.6)	649 (73.9)	
Chest pain							0.001
Yes	32 (78)	20 (20)	14 (10.4)	169 (71.3)	273 (74.6)	508 (57.9)	
No	9 (22)	80 (80)	120 (89.6)	68 (28.7)	93 (25.4)	370 (42.1)	
Shortness of breath							0.001
Yes	24 (58.5)	4 (4)	3 (2.2)	176 (74.3)	24 (6.6)	231 (26.3)	
No	17 (41.5)	96 (96)	131 (97.8)	61 (25.7)	342 (93.4)	647 (73.7)	
Ongoing fatigue							0.001
Yes	35 (85.4)	62 (62)	7 (5.2)	173 (73)	32 (8.7)	309 (35.2)	
No	6 (14.6)	38 (38)	127 (94.8)	64 (27)	334 (91.3)	569 (64.8)	
Do not know							0.001
Yes	0	4 (4)	13 (9.7)	2 (0.8)	1 (0.3)	20 (2.3)	
No	41 (100)	96 (96)	121 (90.3)	235 (99.2)	365 (99.7)	858 (97.7)	
Other							0.001
Yes	0	3 (3)	3 (2.2)	38 (16)	5 (1.4)	49 (5.6)	
No	41 (100)	97 (97)	131 (97.8)	199 (84)	361 (98.6)	829 (94.4)	
How can a person get TB?							
Through shaking hands							0.001
Yes	1 (2.4)	6 (6)	9 (6.7)	31 (13.1)	66 (18)	113 (12.9)	
No	40 (97.6)	94 (94)	125 (93.3)	206 (86.9)	300 (82)	765 (87.1)	
Through the air when a person with TB coughs or sneezes							0.413
Yes	40 (97.6)	89 (89)	126 (94)	216 (91.1)	334 (91.3)	805 (91.7)	
No	1 (2.4)	11 (11)	8 (6)	21 (8.9)	32 (8.7)	73 (8.3)	
Through sharing dishes and clothes							0.001
Yes	1 (2.4)	20 (20)	13 (9.7)	69 (29.1)	61 (16.7)	164 (18.7)	
No	40 (97.6)	80 (80)	121 (90.3)	168 (70.9)	305 (83.3)	714 (81.3)	
Through eating from the same plate							0.001
Yes	2 (4.9)	17 (17)	31 (23.1)	134 (56.5)	67 (18.3)	251 (28.6)	
No	39 (95.1)	83 (83)	103 (76.9)	103 (43.5)	299 (81.7)	627 (71.4)	
Through touching items in public sites							0.001
Yes	0	2 (2)	4 (3)	69 (29.1)	8 (2.2)	83 (9.5)	
No	41 (100)	98 (98)	130 (97)	168 (70.9)	358 (97.8)	795 (90.5)	
Do not know							0.057
Yes	0	1 (1)	4 (3)	8 (3.4)	2 (0.5)	15 (1.7)	
No	41 (100)	99 (99)	130 (97)	229 (96.6)	364 (99.5)	863 (98.3)	
Other							0.001
Yes	0	2 (2)	0	32 (13.5)	1 (0.3)	35 (4)	
No	41 (100)	98 (98)	134 (100)	205 (86.5)	365 (99.7)	843 (96)	
How can a person prevent getting TB?							
Avoid shaking hands							0.001
Yes	0	2 (2)	4 (3)	33 (14)	57 (15.6)	96 (10.9)	
No	41 (100)	98 (98)	130 (97)	203 (86)	309 (84.4)	781 (89.1)	
Covering mouth and nose when coughing or sneezing							0.099
Yes	41 (100)	94 (94)	120 (89.6)	210 (88.6)	337 (92.1)	802 (91.3)	
No	0	6 (6)	14 (10.4)	27 (11.4)	29 (7.9)	76 (8.7)	
Avoid sharing dishes							0.001
Yes	1 (2.4)	21 (21)	26 (19.4)	143 (60.3)	87 (23.8)	278 (31.7)	
No	40 (97.6)	79 (79)	108 (80.6)	94 (39.7)	279 (76.2)	600 (68.3)	
Washing hands after touching items in public places							0.001
Yes	2 (4.9)	13 (13)	30 (22.4)	141 (59.5)	34 (9.3)	220 (25.1)	
No	39 (95.1)	87 (87)	104 (77.6)	96 (40.5)	332 (90.7)	658 (74.9)	
Closing windows at home							0.001
Yes	0	0	0	15 (6.3)	9 (2.5)	24 (2.7)	
No	41 (100)	100 (100)	134 (100)	222 (93.7)	357 (97.5)	854 (97.3)	
Through good nutrition							0.001
Yes	21 (51.2)	21 (21)	33 (24.6)	175 (73.8)	103 (28.1)	353 (40.2)	
No	20 (48.8)	79 (79)	101 (75.4)	62 (26.2)	263 (71.9)	525 (59.8)	
By praying							0.001
Yes	1 (2.4)	0	0	72 (30.4)	54 (14.8)	127 (14.5)	
No	40 (97.6)	100 (100)	134 (100)	165 (69.6)	312 (85.2)	751 (85.5)	
Do not know							0.001
Yes	0	1 (1)	8 (6)	0	2 (0.5)	11 (1.3)	
No	41 (100)	99 (99)	126 (94)	237 (100)	364 (99.5)	867 (98.7)	

Table A.1 (continued)

	City					Total n (%)	P value
	Bosa n (%)	Bucaramanga n (%)	Cucuta n (%)	Pereira n (%)	Villavicencio n (%)		
Other							
Yes	0	0	2 (1.5)	24 (10.1)	0	26 (3)	0.001
No	41 (100)	100 (100)	132 (98.5)	213 (89.9)	366 (100)	852 (97)	
Who can acquire TB?							
Anybody							0.354
Yes	41 (100)	99 (99)	130 (97)	228 (96.2)	359 (98.1)	857 (97.6)	
No	0	1 (1)	4 (3)	9 (3.8)	7 (1.9)	21 (2.4)	
Only poor people							0.001
Yes	0	0	0	2 (.8)	18 (4.9)	20 (2.3)	
No	41 (100)	100 (100)	134 (100)	235 (99.2)	348 (95.1)	858 (97.7)	
Only homeless people							0.001
Yes	0	1 (1)	1 (.7)	4 (1.7)	62 (16.9)	68 (7.7)	
No	41 (100)	99 (99)	133 (99.3)	233 (98.3)	304 (83.1)	810 (92.3)	
Only alcoholics							0.001
Yes	0	2 (2)	1 (.7)	0	36 (9.8)	39 (4.4)	
No	41 (100)	98 (98)	133 (99.3)	237 (100)	330 (90.2)	839 (95.6)	
Only drug users							0.001
Yes	0	0	1 (.7)	3 (1.3)	48 (13.1)	52 (5.9)	
No	41 (100)	100 (100)	133 (99.3)	234 (98.7)	318 (86.9)	826 (94.1)	
Only people living with HIV/AIDS							0.001
Yes	0	0	0	0	46 (12.6)	46 (5.2)	
No	41 (100)	100 (100)	134 (100)	237 (100)	320 (87.4)	832 (94.8)	
Only prison inmates							0.001
Yes	1 (2.4)	0	0	2 (.8)	44 (12)	47 (5.4)	
No	40 (97.6)	100 (100)	134 (100)	235 (99.2)	322 (88)	831 (94.6)	
Only people who have been in prison							0.001
Yes	0	2 (2)	0	9 (3.8)	0	11 (1.3)	
No	41 (100)	98 (98)	134 (100)	228 (96.2)	366 (100)	867 (98.7)	
Can TB be cured?							0.674
Yes	41 (100)	99 (99)	131 (97.8)	231 (97.9)	362 (98.9)	864 (98.5)	
No	0	1 (1)	3 (2.2)	5 (2.1)	4 (1.1)	13 (1.5)	
How is TB cured?							
Herbal remedies							0.039
Yes	0	1 (1)	5 (3.7)	18 (7.8)	17 (4.7)	41 (4.7)	
No	41 (100)	98 (99)	129 (96.3)	214 (92.2)	345 (95.3)	827 (95.3)	
Home rest without medicine							0.74
Yes	0	1 (1)	0	1 (0.4)	1 (0.3)	3 (0.3)	
No	41 (100)	98 (99)	134 (100)	231 (99.6)	361 (99.7)	865 (99.7)	
By praying							0.003
Yes	0	2 (2)	4 (3)	25 (10.8)	29 (8)	60 (6.9)	
No	41 (100)	97 (98)	130 (97)	207 (89.2)	333 (92)	808 (93.1)	
Specific drugs given by health centre							0.062
Yes	40 (97.6)	98 (99)	133 (99.3)	221 (95.3)	356 (98.3)	848 (97.7)	
No	1 (2.4)	1 (1)	1 (0.7)	11 (4.7)	6 (1.7)	20 (2.3)	
Do not know							0.916
Yes	0	0	1 (0.7)	1 (0.4)	2 (0.6)	4 (0.5)	
No	41 (100)	99 (100)	133 (99.3)	231 (99.6)	360 (99.4)	864 (99.5)	
Other							0.001
Yes	1 (2.4)	2 (2)	0	12 (5.2)	0	15 (1.7)	
No	40 (97.6)	97 (98)	134 (100)	220 (94.8)	362 (100)	853 (98.3)	

Table A.1 Questions 19–25: Attitudes about tuberculosis and health care behaviour

	City					Total n (%)	P value
	Bosa n (%)	Bucaramanga n (%)	Cucuta n (%)	Pereira n (%)	Villavicencio n (%)		
Can I get TB?							0.003
Yes	38 (92.7)	92 (92)	126 (94)	228 (96.2)	362 (98.9)	846 (96.4)	
No	3 (7.3)	8 (8)	8 (6)	9 (3.8)	4 (1.1)	32 (3.6)	
What would be your reaction if you discovered that you had TB?							
Fear							0.001
Yes	25 (61)	57 (57)	73 (54.5)	112 (47.3)	266 (72.7)	533 (60.7)	
No	16 (39)	43 (43)	61 (45.5)	125 (52.7)	100 (27.3)	345 (39.3)	
Surprise							0.001
Yes	15 (36.6)	30 (30)	39 (29.1)	173 (73)	86 (23.5)	343 (39.1)	
No	26 (63.4)	70 (70)	95 (70.9)	64 (27)	280 (76.5)	535 (60.9)	
Shame							0.941
Yes	3 (7.3)	4 (4)	7 (5.2)	11 (4.6)	19 (5.2)	44 (5)	
No	38 (92.7)	96 (96)	127 (94.8)	226 (95.4)	347 (94.8)	834 (95)	
Embarrassment							0.001
Yes	5 (12.2)	3 (3)	1 (0.7)	9 (3.8)	35 (9.6)	53 (6)	
No	36 (87.8)	97 (97)	133 (99.3)	228 (96.2)	331 (90.4)	825 (94)	
Sadness or hopelessness							0.001
Yes	13 (31.7)	32 (32)	22 (16.4)	127 (53.6)	153 (41.8)	347 (39.5)	
No	28 (68.3)	68 (68)	112 (83.6)	110 (46.4)	213 (58.2)	531 (60.5)	
Do not believe or not accept							0.001
Yes	0	9 (9)	3 (2.2)	11 (4.6)	1 (0.3)	24 (2.7)	
No	41 (100)	91 (91)	131 (97.8)	226 (95.4)	365 (99.7)	854 (97.3)	
Other							0.001
Yes	2 (4.9)	8 (8)	11 (8.2)	77 (32.5)	3 (0.8)	101 (11.5)	
No	39 (95.1)	92 (92)	123 (91.8)	160 (67.5)	363 (99.2)	777 (88.5)	
Who would you talk to about your illness if you had TB?							
Doctor or other medical worker							0.001
Yes	33 (80.5)	77 (77)	115 (85.8)	227 (95.8)	293 (80.1)	745 (84.9)	
No	8 (19.5)	23 (23)	19 (14.2)	10 (4.2)	73 (19.9)	133 (15.1)	
Spouse							0.001
Yes	22 (53.7)	43 (43)	34 (25.4)	160 (67.5)	129 (35.2)	388 (44.2)	
No	19 (46.3)	57 (57)	100 (74.6)	77 (32.5)	237 (64.8)	490 (55.8)	
Parent							0.001
Yes	6 (14.6)	28 (28)	28 (20.9)	183 (77.2)	32 (8.7)	277 (31.5)	
No	35 (85.4)	72 (72)	106 (79.1)	54 (22.8)	334 (91.3)	601 (68.5)	
Child(ren)							0.001
Yes	0	1 (1)	1 (0.7)	78 (32.9)	3 (0.8)	83 (9.5)	
No	41 (100)	99 (99)	133 (99.3)	159 (67.1)	363 (99.2)	795 (90.5)	
Other family member							0.001
Yes	24 (58.5)	21 (21)	33 (24.6)	148 (62.4)	164 (44.8)	390 (44.4)	
No	17 (41.5)	79 (79)	101 (75.4)	89 (37.6)	202 (55.2)	488 (55.6)	
Close friend							0.001
Yes	5 (12.2)	2 (2)	0	111 (46.8)	92 (25.1)	210 (23.9)	
No	36 (87.8)	98 (98)	134 (100)	126 (53.2)	274 (74.9)	668 (76.1)	
No one							0.823
Yes	0	1 (1)	1 (0.7)	2 (0.8)	1 (0.3)	5 (0.6)	
No	41 (100)	99 (99)	133 (99.3)	235 (99.2)	365 (99.7)	873 (99.4)	
Other							0.001
Yes	1 (2.4)	2 (2)	2 (1.5)	17 (7.2)	1 (0.3)	23 (2.6)	
No	40 (97.6)	98 (98)	132 (98.5)	220 (92.8)	365 (99.7)	855 (97.4)	
What would you do if you thought you had symptoms of TB?							
Go to health facility							0.342
Yes	40 (97.6)	99 (99)	134 (100)	235 (99.2)	365 (99.7)	873 (99.4)	
No	1 (2.4)	1 (1)	0	2 (0.8)	1 (0.3)	5 (0.6)	
Go to pharmacy							0.001
Yes	1 (2.4)	1 (1)	0	6 (2.5)	31 (8.5)	39 (4.4)	
No	40 (97.6)	99 (99)	134 (100)	231 (97.5)	335 (91.5)	839 (95.6)	
Go to traditional healer							0.535
Yes	0	0	1 (0.7)	1 (0.4)	0	2 (0.2)	
No	41 (100)	100 (100)	133 (99.3)	236 (99.6)	366 (100)	876 (99.8)	
Pursue other-self-treatment options (herbs, etc.)							0.844
Yes	0	0	0	0	1 (0.3)	1 (0.1)	
No	41 (100)	100 (100)	134 (100)	237 (100)	365 (99.7)	877 (99.9)	
Other							0.001
Yes	0	1 (1)	1 (0.7)	11 (4.6)	1 (0.3)	14 (1.6)	
No	41 (100)	99 (99)	133 (99.3)	226 (95.4)	365 (99.7)	864 (98.4)	

Table A.1 (continued)

	City					Total n (%)	P value
	Bosa n (%)	Bucaramanga n (%)	Cucuta n (%)	Pereira n (%)	Villavicencio n (%)		
If you had symptoms of TB, at what point would you go to the health facility?							0.001
When treatment on my own does not work	1 (2.4)	2 (2)	6 (4.5)	8 (3.4)	0	17 (1.9)	
When symptoms that look like TB signs last for 3–4 weeks	7 (17.1)	3 (3)	3 (2.2)	6 (2.5)	11 (3)	30 (3.4)	
As soon as I realized that my symptoms might be related to TB	33 (80.5)	95 (95)	125 (93.3)	222 (93.7)	355 (97)	830 (94.5)	
I would not go to the doctor	0	0	0	1 (0.4)	0	1 (0.1)	
If you decided not to go to the health facility, what is the reason?							
Not sure where to go							0.661
Yes	1 (12.5)	1 (20)	1 (11.1)	1 (6.7)	3 (27.3)	7 (14.6)	
No	7 (87.5)	4 (80)	8 (88.9)	14 (93.3)	8 (72.7)	41 (85.4)	
Difficulties with transportation/distance to clinic							0.556
Yes	0	0	1 (11.1)	3 (20)	1 (9.1)	5 (10.4)	
No	8 (100)	5 (100)	8 (88.9)	12 (80)	10 (90.9)	43 (89.6)	
Do not trust medical workers							0.181
Yes	0	1 (20)	3 (33.3)	3 (20)	0	7 (14.6)	
No	8 (100)	4 (80)	6 (66.7)	12 (80)	11 (100)	41 (85.4)	
Do not like attitude of medical workers							0.278
Yes	0	0	1 (11.1)	1 (6.7)	3 (27.3)	5 (10.4)	
No	8 (100)	5 (100)	8 (88.9)	14 (93.3)	8 (72.7)	43 (89.6)	
Cannot leave work (work hours overlap with medical facility working hours)							0.158
Yes	0	2 (40)	2 (22.2)	3 (20)	0	7 (14.6)	
No	8 (100)	3 (60)	7 (77.8)	12 (80)	11 (100)	41 (85.4)	
Do not want to find out that something is really wrong							0.001
Yes	7 (87.5)	0	1 (11.1)	2 (13.3)	1 (9.1)	11 (22.9)	
No	1 (12.5)	5 (100)	8 (88.9)	13 (86.7)	10 (90.9)	37 (77.1)	
Other							0.248
Yes	0	1 (20)	0	4 (26.7)	3 (27.3)	8 (16.7)	
No	8 (100)	4 (80)	9 (100)	11 (73.3)	8 (72.7)	40 (83.3)	
How expensive do you think TB diagnosis and treatment is in this country?							0.001
It is free of charge	41 (100)	73 (73)	120 (89.6)	189 (79.7)	348 (95.1)	771 (87.8)	
It is reasonably priced	0	10 (10)	6 (4.5)	13 (5.5)	9 (2.5)	38 (4.3)	
It is somewhat/moderately expensive	0	10 (10)	7 (5.2)	19 (8)	1 (0.3)	37 (4.2)	
It is very expensive	0	7 (7)	1 (0.7)	16 (6.8)	8 (2.2)	32 (3.6)	

Table A.1 Questions 26–30: Attitudes about tuberculosis and stigma

	City					Total n (%)	P value
	Bosa n (%)	Bucaramanga n (%)	Cucuta n (%)	Pereira n (%)	Villavicencio n (%)		
Which statement is closest to your feeling about people with TB disease?							0.001
‘I feel compassion and desire to help’	32 (78)	75 (75)	99 (73.9)	143 (60.3)	330 (90.2)	679 (77.3)	
‘I feel compassion but tend to stay away from these people’	5 (12.2)	10 (10)	27 (20.1)	71 (30)	12 (3.3)	125 (14.2)	
‘It is their problem and I cannot get TB’	0	0	2 (1.5)	0	1 (0.3)	3 (0.3)	
‘I fear them because they may infect me’	3 (7.3)	8 (8)	4 (3.0)	12 (5.1)	6 (1.6)	33 (3.8)	
‘I have no particular feelings’	1 (2.4)	7 (7)	2 (1.5)	10 (4.2)	17 (4.6)	37 (4.2)	
Other	0	0	0	1 (0.4)	0	1 (0.1)	
In your community, how is a person who has TB usually regarded/treated?							0.001
Most people reject them	21 (51.2)	56 (56)	53 (39.8)	79 (33.3)	225 (61.5)	434 (49.5)	
Most people are friendly, but they generally try to avoid them	17 (41.5)	32 (32)	49 (36.8)	118 (49.8)	95 (26)	311 (35.5)	
The community mostly supports and helps them	2 (4.9)	12 (12)	31 (23.3)	33 (13.9)	43 (11.7)	121 (13.8)	
Other	1 (2.4)	0	0	7 (3)	3 (0.8)	11 (1.3)	
Do you think that HIV-positive people should be concerned about TB?							0.001
Yes	40 (97.6)	95 (95)	125 (93.3)	212 (89.5)	348 (95.1)	820 (93.4)	
No	1 (2.4)	5 (5)	9 (6.7)	25 (10.5)	18 (4.9)	58 (6.6)	
Why?							0.001
People with HIV/AIDS are more likely to develop TB	26 (65)	90 (94.7)	117 (93.6)	191 (90.1)	330 (94.8)	754 (92)	
Do not know	1 (2.5)	5 (5.3)	8 (6.4)	20 (9.4)	10 (2.9)	44 (5.4)	
Other	13 (32.5)	0	0	1 (0.5)	8 (2.3)	22 (2.7)	
Why not?							0.001
People with HIV are just as likely as people without HIV to develop TB	0	0	8 (80)	4 (16)	15 (83.3)	27 (45.8)	
Do not know	1 (100)	5 (100)	2 (20)	21 (84)	2 (11.1)	31 (52.5)	
Other	0	0	0	0	1 (5.6)	1 (1.7)	

Table A.1 Questions 31–33: Awareness about tuberculosis and sources of information s

	City					Total <i>n</i> (%)	<i>P</i> value
	Bosa <i>n</i> (%)	Bucaramanga <i>n</i> (%)	Cucuta <i>n</i> (%)	Pereira <i>n</i> (%)	Villavicencio <i>n</i> (%)		
Do you feel well informed about TB?							0.001
Yes	39 (95.1)	71 (71)	103 (76.9)	128 (54)	354 (96.7)	695 (79.2)	
No	2 (4.9)	29 (29)	31 (23.1)	109 (46)	12 (3.3)	183 (20.8)	
Do you wish you could get more information about TB?							0.055
Yes	41 (100)	92 (92)	122 (91)	228 (96.2)	350 (95.6)	833 (94.9)	
No	0	8 (8)	12 (9)	9 (3.8)	16 (4.4)	45 (5.1)	
What are the sources of information that you think can most effectively reach people like you with information on TB?							
Newspapers and magazines							0.001
Yes	8 (19.5)	31 (31)	55 (41)	65 (27.4)	31 (8.5)	190 (21.6)	
No	33 (80.5)	69 (69)	79 (59)	172 (72.6)	335 (91.5)	688 (78.4)	
Radio							0.007
Yes	22 (53.7)	36 (36)	65 (48.5)	123 (51.9)	207 (56.6)	453 (51.6)	
No	19 (46.3)	64 (64)	69 (51.5)	114 (48.1)	159 (43.4)	425 (48.4)	
TV							0.001
Yes	34 (82.9)	62 (62)	87 (64.9)	180 (75.9)	298 (81.4)	661 (75.3)	
No	7 (17.1)	38 (38)	47 (35.1)	57 (24.1)	68 (18.6)	217 (24.7)	
Billboards							0.001
Yes	3 (7.3)	7 (7)	27 (20.1)	21 (8.9)	75 (20.5)	133 (15.1)	
No	38 (92.7)	93 (93)	107 (79.9)	216 (91.1)	291 (79.5)	745 (84.9)	
Brochures, posters and other printed material							0.001
Yes	4 (9.8)	27 (27)	26 (19.4)	36 (15.2)	194 (53)	287 (32.7)	
No	37 (90.2)	73 (73)	108 (80.6)	201 (84.8)	172 (47)	591 (67.3)	
Physician/nurse							0.001
Yes	16 (39)	39 (39)	69 (51.5)	146 (61.6)	146 (39.9)	416 (47.4)	
No	25 (61)	61 (61)	65 (48.5)	91 (38.4)	220 (60.1)	462 (52.6)	
Family/friends/neighbours/colleagues							0.001
Yes	12 (29.3)	3 (3)	8 (6)	33 (13.9)	63 (17.2)	119 (13.6)	
No	29 (70.7)	97 (97)	126 (94)	204 (86.1)	303 (82.8)	759 (86.4)	
Religious leaders							0.012
Yes	3 (7.3)	11 (11)	3 (2.2)	7 (3)	25 (6.8)	49 (5.6)	
No	38 (92.7)	89 (89)	131 (97.8)	230 (97)	341 (93.2)	829 (94.4)	
Community leaders							0.044
Yes	11 (26.8)	16 (16)	14 (10.4)	26 (11)	44 (12)	111 (12.6)	
No	30 (73.2)	84 (84)	120 (89.6)	211 (89)	322 (88)	767 (87.4)	
Teachers							0.001
Yes	12 (29.3)	13 (13)	33 (24.8)	68 (28.7)	31 (8.5)	157 (17.9)	
No	29 (70.7)	87 (87)	100 (75.2)	169 (71.3)	335 (91.5)	720 (82.1)	
Other							0.001
Yes	1 (2.4)	23 (23)	9 (6.7)	6 (2.5)	1 (0.3)	40 (4.6)	
No	40 (97.6)	77 (77)	125 (93.3)	231 (97.5)	365 (99.7)	838 (95.4)	

TB = tuberculosis; HIV = human immunodeficiency virus; AIDS = acquired immune-deficiency syndrome.

Table A.2 Bivariate analysis: factors associated with correct answers related to signs and symptoms, ways of acquiring TB, how to prevent TB, who can acquire TB and TB treatment in the household contacts of TB cases

Variables	Correct answers				
	TB signs and symptoms	Ways of acquiring TB	How to prevent TB	Who can acquire TB	TB treatment
Age, years					
≥ 50 (reference)	1	1	1	1	1
14–24	1.03 (0.72–1.49)	1.07 (0.88–1.30)	1.21 (0.92–1.58)	0.95 (0.87–1.03)	1.09 (1.01–1.18)
25–49	1.05 (0.77–1.43)	1.22 (1.04–1.44)	1.28 (1.01–1.62)	0.95 (0.89–1.02)	1.10 (1.03–1.17)
Female sex	1.05 (0.80–1.39)	1.11 (0.96–1.28)	1.12 (0.91–1.37)	1.07 (1.00–1.14)	0.93 (0.88–0.98)
Education level					
None (reference)	1	1	1	1	1
Elementary school	1.28 (0.64–2.56)	1.10 (0.72–1.68)	1.16 (0.64–2.10)	1.21 (0.98–1.49)	1.03 (0.87–1.21)
High school	0.90 (0.45–1.80)	1.19 (0.78–1.80)	1.25 (0.70–2.24)	1.11 (0.90–1.36)	1.05 (0.90–1.23)
College/university	0.61 (0.28–1.31)	1.18 (0.77–1.82)	1.05 (0.57–1.92)	0.95 (0.76–1.19)	1.02 (0.86–1.20)
Currently paid employment	0.69 (0.52–0.91)	1.11 (0.96–1.27)	1.15 (0.95–1.41)	0.95 (0.89–1.02)	1.04 (0.99–1.10)
City					
Villavicencio (reference)	1	1	1	1	1
Bosa	0.34 (0.08–1.35)	1.86 (1.64–2.10)	1.07 (0.73–1.58)	1.60 (1.45–1.76)	1.10 (1.01–1.19)
Bucaramanga	1.33 (0.83–2.15)	1.17 (0.97–1.41)	1.45 (1.17–1.80)	1.57 (1.43–1.72)	1.07 (1.00–1.15)
Cucuta	4.30 (3.23–5.73)	1.12 (0.94–1.34)	0.92 (0.71–1.20)	1.45 (1.45–1.73)	1.08 (1.01–1.14)
Pereira	0.47 (0.27–0.81)	0.47 (0.36–0.60)	0.13 (0.07–0.23)	1.53 (1.40–1.67)	0.87 (0.80–0.95)
Distance and time between home and health centre					
Same neighbourhood (on foot)	1.17 (0.7–1.95)	0.76 (0.61–0.94)	0.44 (0.32–0.59)	0.99 (0.91–1.08)	0.97 (0.87–1.08)
Same neighbourhood (one bus)	0.84 (0.43–1.65)	0.84 (0.64–1.11)	0.54 (0.36–0.82)	0.69 (0.57–0.82)	1.01 (0.89–1.14)
Another neighbourhood (one bus)	0.90 (0.54–1.51)	0.74 (0.60–0.92)	0.67 (0.52–0.87)	0.84 (0.77–0.93)	1.00 (0.90–1.11)
Another quarter (two or more buses) (reference)	1	1	1	1	1
Time to reach the place >15 min	0.71 (0.52–0.97)	1.11 (0.96–1.28)	1.25 (1.02–1.52)	0.83 (0.77–0.90)	0.96 (0.91–1.02)
Where the person goes when sick					
Private physician	0.48 (0.29–0.80)	0.85 (0.69–1.05)	0.62 (0.44–0.86)	0.80 (0.71–0.90)	0.96 (0.89–1.04)
Clinic/hospital	1.33 (0.73–2.39)	0.93 (0.73–1.20)	0.99 (0.68–1.43)	0.98 (0.87–1.10)	1.00 (0.90–1.11)
Pharmacy/drugstore	0.57 (0.35–0.91)	0.98 (0.81–1.18)	0.91 (0.68–1.20)	1.09 (1.01–1.17)	0.98 (0.91–1.06)
Homeopathic medicine	0.15 (0.02–1.07)	0.71 (0.43–1.15)	0.09 (0.01–0.66)	1.12 (1.00–1.26)	0.72 (0.55–0.94)
Church	1.71 (0.34–8.54)	0.69 (0.14–3.45)	2.14 (0.95–4.80)	0.82 (0.36–1.83)	0.38 (0.07–1.92)
Other	0.56 (0.15–2.10)	0.80 (0.45–1.45)	0.35 (0.09–1.30)	1.17 (1.04–1.31)	0.77 (0.55–1.07)

TB = tuberculosis.

RESUMÉ

CONTEXTE : Cinq villes de Colombie (Villavicencio, Pereira, Cucuta, Bucaramanga et Bosa).

OBJECTIF : Décrire les connaissances, les attitudes et les pratiques relatives à la tuberculose (TB) parmi les contacts domiciliaires (HHC) des patients TB.

MÉTHODES : Une étude transversale a été réalisée. La taille d'échantillon requise a été estimée à 855. Le document « Plaidoyer, communication et mobilisation sociale pour la lutte contre la TB : un guide de l'élaboration d'enquêtes relatives aux connaissances, attitudes et pratiques » a été traduit et adapté au langage de chaque ville. Les HHC ont été invités à l'étude et ils ont été inclus s'ils étaient d'accord pour participer.

RÉSULTATS : Nous avons interrogé 878 HHC. La majorité savait que la TB avait une transmission aérienne, mais 52,2% ont répondu que la TB pouvait

être transmise par le partage de vaisselle, de vêtements ou par des poignées de main. Cinquante-cinq pour cent des HHC ont acquis les informations relatives à la TB du personnel de santé et 44% de membres de la famille et d'amis. La peur a été la principale réaction des HHC rapportée lors du diagnostic de TB (60%). Quatre-vingt-cinq pour cent des HHC ont déclaré que les individus de la communauté rejetaient ou évitaient les patients atteints de TB.

CONCLUSION : Il y a des lacunes significatives en termes de connaissances et une stigmatisation associée à la TB. Il est nécessaire d'élaborer des stratégies d'éducation conçues avec la communauté qui permettent une démythification de nombreuses idées erronées relatives à la TB.

RESUMEN

LUGAR: Cinco ciudades colombianas (Villavicencio, Pereira, Cúcuta, Bucaramanga y Bosa).

OBJETIVO: Describir los conocimientos, actitudes y prácticas relacionadas con tuberculosis (TB) en contactos que conviven (HHC) con pacientes con TB.

MÉTODOS: Estudio transversal. El tamaño de muestra fue 855 personas. El formato 'Apoyo, comunicación y movilización social para el control de la TB: una guía para realizar encuestas de conocimientos, actitudes y prácticas' se tradujo y adaptó al lenguaje local. Se incluyeron los HHC que aceptaron participar en el estudio.

RESULTADOS: Se entrevistaron 878 personas. La

mayoría sabía que TB se transmite por vía aérea, pero el 52,2% respondieron que la TB podría transmitirse por compartir platos o ropa, o saludar de mano; 55% de los contactos aprendieron sobre TB de trabajadores de la salud, y 44% de la familia y amigos. El miedo fue la principal reacción (60%) que reportaron los contactos si se le diagnosticara TB, y 85% respondieron que la comunidad rechaza o evita a las personas con TB.

CONCLUSIÓN: Aun hay desconocimiento y estigmatización asociados con TB. Se requieren estrategias educativas diseñadas en conjunto con la comunidad que permitan desmitificar múltiples conceptos erróneos sobre TB.