

WORLD HEALTH ORGANIZATION-IRAQ

MINISTRY OF HEALTH-IRAQ

NATIONAL TUBERCULOSIS CONTROL PROGRAM

Knowledge, Attitude and Practice of the Community  
Members, TB Patients and Health Care Providers towards  
Tuberculosis in Iraq – 2012

*Prepared by:*

*Respiratory and Chest Disease Specialized Center in Collaboration with  
WHO-Iraq Office*

## Contents

Acronyms	
Introduction	1
Epidemiology of TB in Iraq	1
Survey objectives	1
Methodology	2
Survey instruments	2
Sampling technique and sample size	
Recruitment of staff	3
Training and pre-testing	3
Data collection	3
Data entry, processing and analysis	4
Survey Results	5
First: Community members	5
Demographic data	5
TB knowledge and awareness	8
TB attitude and treatment-seeking behavior	13
TB social stigma	19
Gender	20
TB awareness and source of information	21
Scores	24
Second: TB Patients	29
Demographic data	29
TB knowledge and awareness	32
TB attitude and treatment-seeking behavior	36
TB social stigma	39
Gender	40
TB awareness and source of information	43
Scores	46
Third: Physicians	52
Conclusions and Recommendations	66

## List of Tables

Table 1: Community members' knowledge about TB and NTP	8
Table1 Community members' perception on how serious a problem TB is in their governorates	10
Table 3:Community members' perception regarding TB transmission modes	13
Table 2: How community deals with TB patients from TP patients' perception	16
Table 3: How TB patients are regarded or treated by community from participants' perspective	17
Table 4: How TB patients are regarded or treated by community from participants' perspective	17
Table 5: TB Social Stigma from participants' perspective	19
Table 7: Participants' perception regarding gender and TB	20
Table 6: Reasons why the IEC message wasn't clearly understood by participants	23
Table 9: Community member participants preferred sources of information	24
Table 10: Knowledge, attitude, practice and belief scores of sampled community members.	25
Table11: TB patients' distribution by monthly income	32
Table 7: TB patients' perception regarding TB as a serious problem in all of Iraq's governorates	33
Table 8: Laboratory tests necessary for TB diagnosis from TB patients' perspectives	35
Table 9: Methods to be cured from TB	35
Table 10: Places TB patients should seek to receive treatment	35
Table11: TB patients' perception regarding TB transmission modes	36
Table 12: How community dealt with TB patients from TP patients' perception	39
Table 13: TB Social Stigma from TB patients' perspective	40
Table 14: TB patients' perception regarding gender and TB	41
Table 20: Reasons stated by TB patients regarding their satisfaction with services provided for them	46
Table 21:Reasons stated by TB patients regarding their dissatisfaction with services provided for them	46
Table 22: Descriptive statistics for patients' scores	47
Table 23: Knowledge, attitude, practice and belief scores of sampled TB patients	48
Table 15: Physicians' perception regarding some facts about TB situation in Iraq	55
Table 16 Persons who are in physical contact with smear-positive pulmonary TB patients should be encouraged to check TB infection from physicians' perspective	58
Table 17: Persons who should receive Isoniazid medication as a TB prevention procedure according to physicians	58
Table 18: Aims of TB treatment from physicians' perspective	58
Table 19: Time for a new smear-positive pulmonary patient (Category I) to get	60

the first follow-up sputum examination

Table 20: Time for a relapse patient (smear-positive pulmonary TB; Category II) to get the first follow-up sputum examination	61
Table 30: The first line anti-TB drugs as mentioned by physicians	61
Table 31: Frequency of delivering IEC messages to TB patients	63
Table 32: Knowledge score (out of 26) of sampled health care providers	63
Table 33: Knowledge score (out of 26) of sampled health care providers	64

## List of Figures

Figure1:Community members' distribution by governotrates	5
Figure 2: Community members' distribution by urban and rural	5
Figure1:Community members' distribution by age group	5
Figure 4: Community members' distribution by gender	7
Figure5: Community members' distribution by eduaction	7
Figure6:Community members' information about TB symptoms	9
Figure 7: Community members' perception regarding people who could be infected with TB	11
Figure 8: Community members' information about how long a TB patient needs to take TB medication	12
Figure2:Community members' perception regarding TB prevention	13
Figure 10:Community members' behavior if they suspect they have TB symptoms	14
Figure 11: Reasons mentioned by community members regarding not seeking health care if they think they have TB symptoms	15
Figure 12: Community members' immediate practice when a family member gets infected with TB	15
Figure 13: Reasons why TB patients stop taking TB medication as mentioned by community members	16
Figure 14: Symptoms that drove community members who have been infected with TB to seek health care.	17
Figure 15: Community members' support to their relatives if were TB patients to get their medical treatment	18
Figure 3: Community members' perception towards TB patients' isolation	18
Figure 4: Husband's attitude if his wife gets infected with TB.	20
Figure 5 Participants' attitudes towards their future daughter-in-law	21
Figure 6: Participants' attitudes towards their future son-in-law	21
Figure 20: Participants' regular source of information about TB	22
Figure 21: Sources of information about TB for community member participants during the last six months	22
Figure 22: Community member participants preferred sources of information	23
Figure 23: Community member participants' knowledge score	26
Figure 24: Community member participants' negative attitudes score.	27
Figure 25: Community member participants' practice score.	27

Figure 26: Community member participants' wrong beliefs score.	28
Figure 27: TB patients' distribution by geographical distribution	27
Figure 28: TB patients' distribution by gender	28
Figure 29: TB patients' distribution by age groups	29
Figure 30: TB patients distribution' by urban and rural	30
Figure 31: TB patients' distribution by education	31
Figure 32: TB patients' distribution by career	31
Figure 33: Distribution of the nearest clinics to TB patients' areas of residence	32
Figure 34: TB patients' perception regarding people who could be infected with TB	33
Figure 35: TB patients' knowledge about TB symptoms	34
Figure 36: Recommended period for TB patients to take TB medicine	35
Figure 37: Methods to prevent TB infection	36
Figure 38: TB patients' behavior if they suspect they have TB symptoms	37
Figure 39: Reasons why TB patients stop taking TB medication as mentioned by TB patients' respondents	37
Figure 39: Reasons why TB patients stop taking TB medication as mentioned by TB patients' respondents	37
Figure 40: Symptoms that drove TB patients to seek health care	38
Figure 41: The first treatment-seeking action TB patients resorted to when they experienced TB symptoms and before the initial diagnosis	38
Figure 42: 7 Husbands' attitudes if wives get TB as declared by TB patients	42
Figure 43: TB patients' attitudes towards their future daughter-in-law if she is a TB patient	42
Figure 44: TB patients' attitudes towards their future son-in-law if he is a TB patient	43
Figure 45: TB patients' regular source of information about TB	44
Figure 46: Sources of information TB patients' received information from about TB during the last six months	44
Figure 47: TB patients' preferred sources of information about TB	45
Figure 48: TB patients' satisfaction with provided services	46
Figure 49: TB patients' knowledge score	49
Figure 50: TB patients' negative attitudes score	50
Figure 51: TB patients' practice score	50
Figure 52: TB patients' wrong beliefs score	51
Figure 53: Physicians' distribution by governorates	52
Figure 8: Physicians' distribution by gender	52
Figure 55: Physicians' distribution by specialty	53
Figure 56: Physicians' distribution by years of experience	53
Figure 57: Physicians' sources of knowledge about TB	54
Figure 58: Number of training courses physicians attended about TB (other than academic curriculum)	54
Figure 59: Physicians' perception on how serious a problem is TB in Iraq	55
Figure 60: Percentage of physicians who don't know TB prevalence in Iraq as distributed by their specialties	56
Figure 61: TB transmission modes from physicians' perceptions	56

Figure 62: TB diagnosis procedures as mentioned by physicians	57
Figure 63: Number of sputum samples needed to diagnose TB as mentioned by physicians	57
Figure 64: Percentage of physicians familiar with DOTS	59
Figure 65: The most important aspect of the DOTS from physicians' perspective	59
Figure 66: TB patient treatment supporters in the catchment area of health centers as stated by physicians	60
Figure 67: The recommended treatment duration for new TB cases as mentioned by physicians	61
Figure 68: Number of suspected TB cases referred to specialized clinics by physicians per month	62
Figure 69: Percentage of physicians who received IEC training	62
Figure 70: Reasons for low TB case detection rate in Iraq as reported by physicians	63
Figure 71: Reasons for low TB case detection rate in Iraq as reported by physicians	65

## Acronyms

ACSM	Advocacy, Communication and Social mobilization
CDR	Case Detection Rate
DOTS	Directly Observed Treatment- short term
GP	General Practitioners
KAP	Knowledge, attitudes and practices
NTP	National TB Program
PTB	Pulmonary Tuberculosis
SS+	Sputum Smear Positive
TB	Tuberculosis
WHO	World Health Organization

## Summary

**Background:** Tuberculosis still remains as one of the major public health problems in Iraq. In order to provide information for enhancing TB case detection by making the delivery of DOTS more patient-friendly and more attractant, and obtain background information useful in planning for future NTP related ACSM activities, this study aims at studying the knowledge, attitude and practice of physicians, community members and TB patients towards tuberculosis.

**Methods:** A cross-sectional study conducted during 2012 had covered fifteen governorates in Iraq (all governorates except for the three Kurdish region governorates). The survey participants were community members, TB patients and physicians. The survey tools evaluated the survey target group's knowledge, attitude, and practices regarding TB. The data were collected through direct interviews by structured questionnaire forms after obtaining a signed informed consent from interviewees. A three stage sampling technique was applied. In each stage, systematic sampling and a Probability Proportional to Sample Size sampling methods were used to calculate the three survey samples proportional probability sampling. Statistical Package for Social Sciences software system was used for data entry and analysis. Nine scores were adopted to analyze participants' knowledge, attitudes, practices, and believes against personal characteristics using ANOVA test. Findings with P value less than 0.05 considered significant.

### Results:

*Community members:* Total number was 1972 with an average age of  $41 \pm 14$  year (31.4% were females). 56% of participants heard about pulmonary TB, and 83% acknowledge the seriousness of TB as a disease in Iraq. 73% had reported that TB is a recoverable disease. Only 23% of participants knew the treatment of TB takes 6-8 months. 54% of participants feel ashamed if having TB. 65% of participants mentioned most people avoid TB patients. Community members' knowledge matched only 44.6% of expected correct responses. Older age, Female sex, low education, unemployment (including housewife), low monthly income, and residence in settings which are semi-urban or lie distant from health settings are factors significantly accompanied lower knowledge scores. Interviewers encountered in average 35% of inquired negative attitudes. Marked increase in negative attitudes found with living distant than 30 km from health facilities. Community members practice matched 62% of inquired healthy practices related to TB. Correct practice score increased with male sex, urban settings, and residence lies near ( $\leq 10$  km) to health facilities. Interviewers



encountered in average 51.8% of expected wrong beliefs in studied sample and such beliefs minorly affected by studied personal factors.

*TB patients:* Total number of enrolled TB patients was 783 (Males=75.1%) with mean age of  $40 \pm 16$  years. 83% education level lower than diploma and only 33.7% has job. 73.3% were avoided by the community. 55% ashamed for having TB and 63% agreed that TB affects marital relations. Patients had 59.6% of required knowledge about TB. Knowledge score varied with education, occupation, residence and markedly increase with higher incomes. There was a considerable prevalence of negative attitudes among TB patients which increases with urban settings. TB patients practice 44% of inquired healthy practices. Age and urban settings increased correct practice score. Patients carry 75% of inquired wrong beliefs which increases with low education and urban settings.

*Physicians:* Respondent physicians were 866 physicians, 26% of them were specialists, 62% had no official training on TB, more than half the sample lack the knowledge of TB epidemiology in Iraq. 72% will use sputum smear examination for AFB in diagnosing TB. 65% were familiar with NTP and DOTS (directly observed treatment, short-course) but only 43% considered the most important aspect of the DOTS is watching TB patients swallow TB medication. 77% of physicians are aware of the recommended duration of TB treatment. Physicians got 69.5% of verified correct knowledge & knowledge increases with male sex, specialty, and experience in TB control.

#### Conclusion:

Knowledge, attitudes and practices of both community members and TB patients regarding TB need further efforts from ministry of health and other partners to improve them. Stigma of TB is prominent in Iraqi population and may halt TB control. Media are considered the main source for educating community members about TB and reduce its stigma. Most physicians at PHC level have good knowledge of TB.

# Introduction

Tuberculosis is endemic in Iraq. WHO Global TB Report (2013), reported a TB incidence rate of 45/100 000 population and a prevalence of TB cases at 74/100,000 population and death rate at 2.4/100,000 population during 2012.<sup>1</sup> The Stop TB global strategy, launched by the Stop TB Partnership in January 2006, has six major goals: 1) To pursue high-quality expansion and enhancement of directly observed treatment (DOTS) – short course. 2) To address the co-occurrence of TB and HIV, multidrug-resistant TB (MDR-TB) and other challenges. 3) To contribute to strengthening of health systems. 4) To engage all caregivers. 5) To empower people with TB and their communities. 6) To enable and promote research.<sup>2</sup>

ACSM activities can be used to achieve all six goals. Incorporating ACSM activities as an integral part of reaching objectives set by national TB programs (NTPs) is an effective approach to TB control. Over the years, ACSM has been used successfully to address four key challenges: Improving case detection and treatment adherence; combating stigma and discrimination; empowering people affected by TB; mobilizing political commitment and resources for TB.<sup>3</sup> In the context of wide-ranging partnerships for TB control, advocacy, communication and social mobilization (ACSM) embrace: *advocacy* to influence policy changes and sustain political and financial commitment; two-way *communication* between the care providers and people with TB as well as communities to improve knowledge of TB control policies, programs and services; and *social mobilization* to engage society, especially the poor, and all allies and partners in the campaign to Stop TB. Each of these activities can help build greater commitment to fighting TB.<sup>3</sup> WHO strategy to fight TB "The Stop TB Strategy at a glance" uses advocacy, communication and social mobilization to empower people with TB<sup>4</sup>.

A KAP survey is a representative study of a specific population to collect information on what is known, believed and done in relation to a particular topic — in this case, TB. KAP survey data are essential to help plan, implement and evaluate ACSM work.<sup>3</sup>

## Survey Objectives

In order to provide information for enhancing TB case detection by making the delivery of DOTS more patient-friendly and more attractant, and obtain background information useful in planning for future NTP related ACSM activities, this study aims at studying the knowledge, attitude and practice of physicians, community members and TB patients towards tuberculosis.

The study specific objectives are:

- Determine the knowledge of the community and the TB patients towards TB
- Assess the knowledge, attitudes and practices of physicians (both NTP and Non-NTP) towards tuberculosis and its management
- Identify attitudes and practices of both community and TB patients with regards to TB and TB stigma
- Assess the practices and treatment-seeking behavior of patients towards tuberculosis
- Identify the gender issues relevant to TB care and management
- Build a database useful in planning of ACSM activities
- Obtain information about more useful media and communication channels most effective in conducting messages to targeted groups

# Methodology

A cross-sectional study was used to implement the KAP survey in fifteen governorates in Iraq over the period 2011-2012 (the three governorates of Kurdistan Region Governorate were excluded because already a similar study was conducted earlier). The survey participants were community members, TB patients and physicians.

## Survey instruments

The survey tools, developed by various healthcare experts, probe a multitude of aspects in order to comprehensively evaluate the survey target group's knowledge, attitude, and practice regarding TB. The data were collected using two questionnaire forms:

A structured interviewer-administered questionnaire for the community members and TB patients (annex 2)

The questionnaire was composed of close-ended questions covering the following areas

- Personal characteristics
- Knowledge about TB and awareness
- TB attitudes and seeking behavior
- TB stigma
- Gender Issues relevant to TB
- TB awareness and sources of information
- Satisfaction of the TB patients with the provided treatment

A structured self-administered questionnaire for the physicians within the health facilities in the study area (annex 3)

The questionnaire was composed of the close-ended questions covering the following areas:

- Knowledge of TB care, management, DOT, contact tracing
- Attitude of the providers towards TB patients and tuberculosis as a major health problem
- Practices of the physicians in the management of TB patients, treatment support within the health facilities and at the community level

Both questionnaire forms were written in Arabic so interviewers can easily use it.

## Sampling technique and Sample size

A 3 stage sampling technique was applied. In each stage, systematic sampling and a Probability Proportional to Sample Size sampling methods were used to calculate the three survey samples (proportional probability sampling-PPS) (annex 1). First, units/blocks were selected systematically as primary sampling units (PSUs) with a probability proportional to the size of the PSU. A defined number of PSUs was selected at this stage. Mapping operations were carried out also at this stage and the sample units/blocks were identified and located in the field through field visits. The purpose of updating the frame was to exclude residential places such as hospitals, companies and prisons, and update the sampling frame with any changes that may have occurred since the last census. In the second stage, a fixed number of households were selected as final sampling units in each PSU. In the third stage, random selection of individual interviewees from each household was carried out.

For the TB patients' sample in each governorate, the estimation is proportional to size based on the total number of the TB patients recorded as per year 2010. First, it was necessary to identify the health facilities providing TB care services in each of the sampled districts then the number of attending TB patients during the last year in each health facility.

For physicians, a list was developed of physicians within the sampled districts including both categories. A representative sample of non-NTP physicians in each district was chosen to be interviewed.

Households: required sample within each district was subdivided according to its size into 30-40 households. Update of local households' database that preceded data collection period was tackled by ministry of planning through field visits to targeted areas. Households recruited into this study were the father, the mother, or the elderly son/daughter from the selected house.

### **Recruitment of Staff**

The survey field workers were recruited according to specific criteria, including experience, educational and personal qualifications, and familiarity with geographic areas. The field controllers, supervisors and editors were recruited from among those who participated in other demographic surveys.

Field work team composed of 5 person central (steering) committee (NTP manager, operational research focal point at NTP, head of Health promotion in MoH, research focal point at Health promotion in MoH, Focal point from ministry of planning (MoP). Intermediate level committees composed of three persons from each governmental health directorate (NTP chest clinic manager, head of health promotion, and focal point from MoP) intermediate committees were responsible for supervision of peripheral committees, the process of data collection at governorate level, approaching planned sample size, and quality assurance of data. Peripheral (district) level teams were composed as well of three persons a district TB coordinator (DTC) as a head of the team and two data collectors; a health promotion focal point and MoP focal point. Peripheral teams were responsible for collecting data at district level.

### **Training and Pre- testing**

Highly qualified field workers were recruited to implement the field work throughout the 15 governorates. All field workers attended 3 consecutive days of theoretical and practical training. The training sessions consisted of instructions regarding interviewing techniques and field procedures, a detailed review of each question on the questionnaires, and practice interviews. After the training, a pre-testing was conducted to test the survey tools, sampling technique, methodology and interviewers' capacities. The pre-testing spanned a day and took place in one area. Following the pilot, a review session was conducted to discuss the pre-testing results. Clarifications for some questions and minor modifications were implemented during the feedback session.

### **Data Collection**

Live data collection spanned one month. In parallel, field work was carried out in the 15 governorates at the same period. Face-to-face interviews were conducted in interviewees' households and self-administered questionnaires were implemented with physicians in health care facilities.

To facilitate data collection, each interviewing team was assigned a number of blocks in the sample area (to ensure good data quality, interviewers were asked to conduct fewer interviews during the first three days of data collection, while they became better acquainted and therefore more efficient with the process); the completed questionnaires were then checked by the team supervisor (DTC), to ensure completeness and consistency of data. The supervisors (district and governorate level) conducted spot checks by randomly visiting some sampled households. The completed questionnaires were delivered to the central office in Baghdad for another process of checking. After central checking of filled

forms, these form sent for MoP for data input. A sample of the filled questionnaires was sent to the WHO Iraq Office in Amman and checked for quality assurance.

### **Data entry, processing and analysis**

Data entry began in the first week of data collection after field checking of questionnaires for completeness and consistency. An SPSS (Statistical Package for Social Sciences) software system was used for data entry by an experienced team at Ministry of Planning (MoP). Double data-entry was performed for 10% of the data in order to run quality control checks. Frequencies and tabulations were run to check completeness and consistency of the data. SPSS was used to run univariate and bivariate analyses to describe all the survey variables. As most of the variables in the study were categorical and measured on nominal or ordinal levels, descriptive frequencies were used to describe the basic features of the data.

Discrete variables presented as numbers and percentages and continuous variables presented as means $\pm$  standard deviation (SD).

Nine scores were adopted for each of community members' and patients' knowledge, negative attitudes, practices and wrong believes and to physicians' knowledge (annex 4). Each score was presented according to socio-demographic characteristics and analyzed using ANOVA test.

P values were asymptotic and two sided. Findings with P value less than 0.05 were considered significant.

# Survey Results

## First: Community Members

### I. Demographic Data

The number of respondents participated in this survey was 1972. The highest percentage of participants are from Baghdad governorate (26%), followed by Ninawa (11%), and the lowest proportion of participants are from Muthanna governorate (3%) (Figure 1). More than two-thirds of respondents are residents of urban areas (79%) and nearly 6% were those live in towns (semi-urban areas), and about 16% of whom are from rural areas (Figure 2). The mean age of the sample was 41 with a standard deviation of  $\pm 14.070$ . The largest percentage (30%) of the participants are in the age group between 36-45 years old, while 22% of respondents ages are between 26-35 years old. The lowest percentage of respondents (1%) in the age group is 75-90 years (Figure 3). Males and females from community members (619 females and 1348 males, Figure 4).

Figure 1: Community members' distribution by governorates

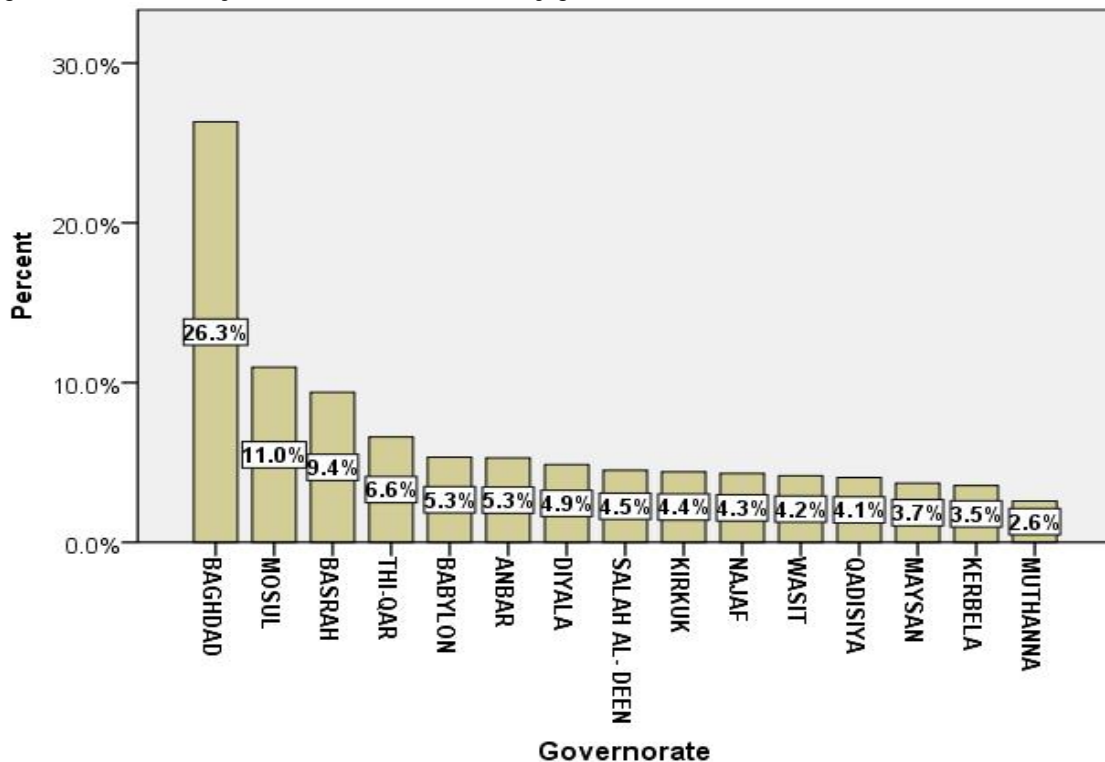


Figure 2: Community members' distribution by urban and rural

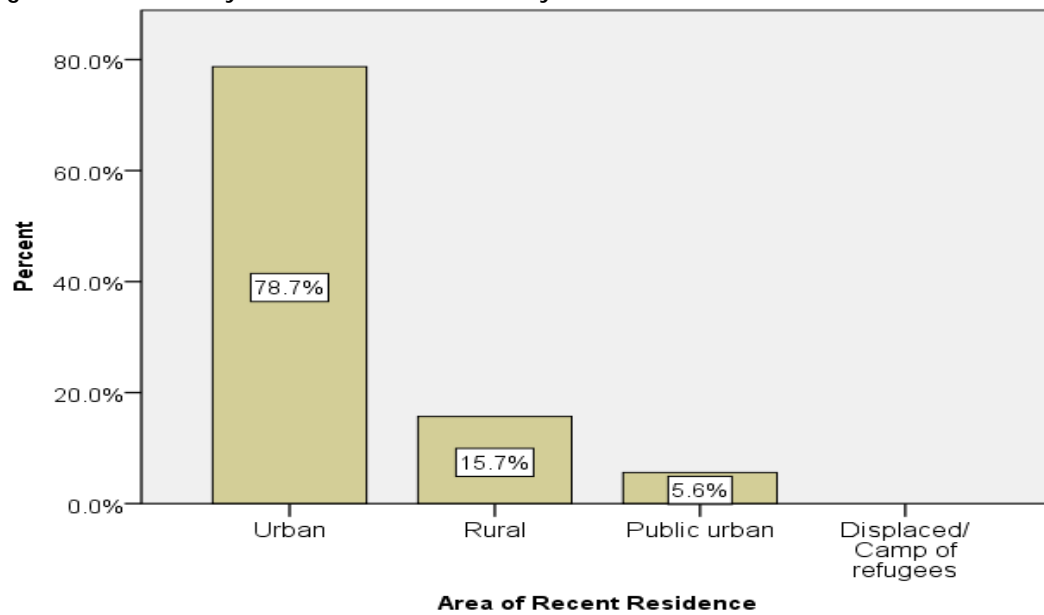


Figure 1: Community members' distribution by age group

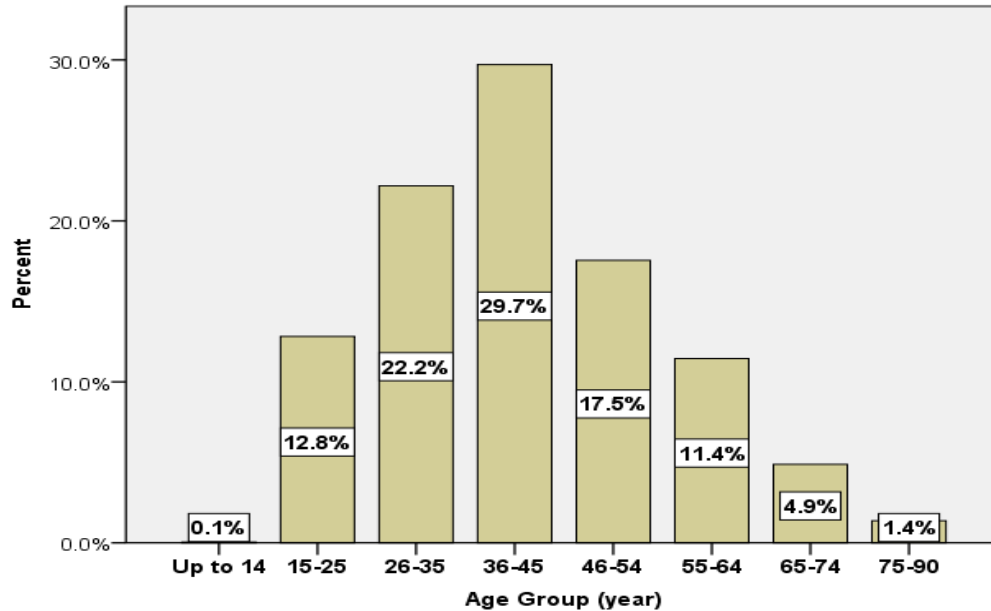
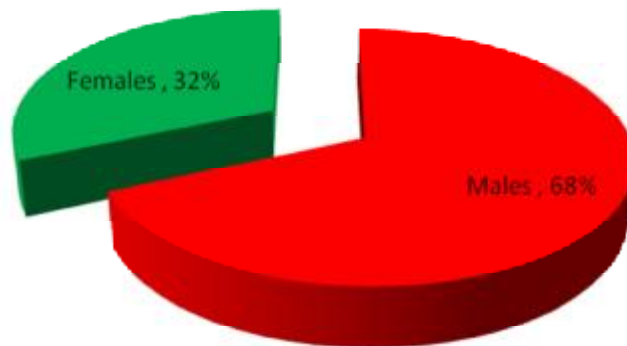
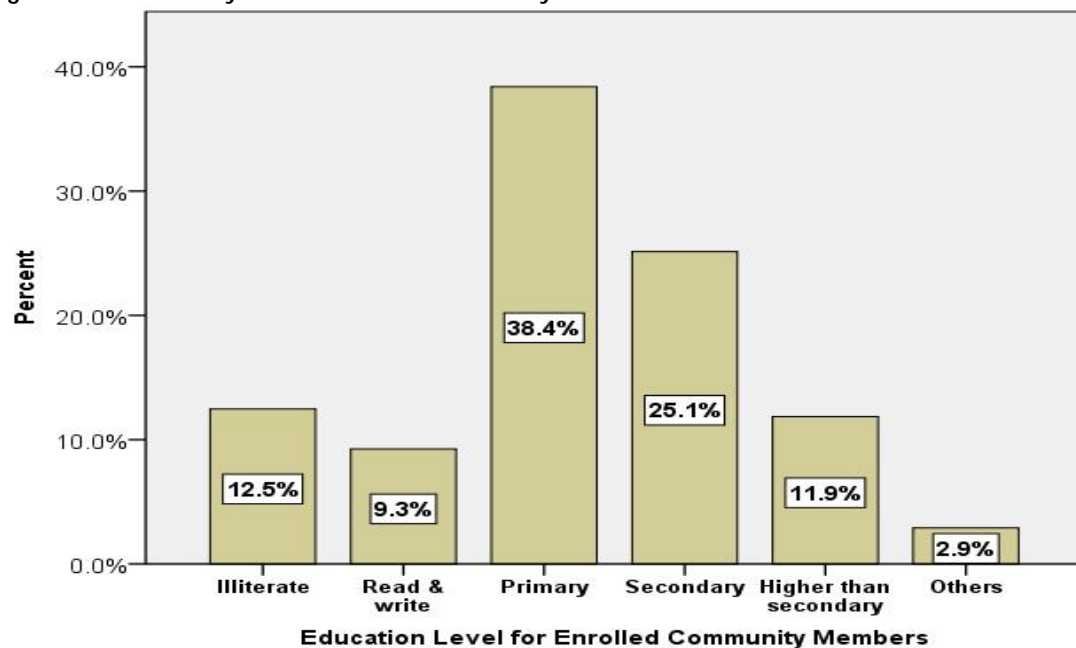


Figure 4: Community members' distribution by gender



Approximately 38% and 25% of the community members sample received primary and secondary education, respectively. About 12% of them hold a university degree. It is worth mentioning that 13% of participants did not receive any education (Figure 5). Nearly half of the respondents (53%) have a paid job. Approximately 24% of those are employees and 14% are self-employed craftsmen. About 26% of the community members sample is housewives.

Figure 5: Community members' distribution by education





Participants were asked about their monthly income. More than half of the respondents (52.8%) monthly income is between 250,000 and 1,000,000 Iraqi dinars, while 35% of the respondents' monthly income was less than 250,000 Iraqi dinars. But a small percentage of participants (2.8%) have a monthly income of more than 1,000,000 Iraqi dinars. It should be mentioned here that about 10% of the participants did not respond to this question.

The participants were asked if they had traveled to places other than their areas of residence this year. Analysis shows that 21.4% (421) of them traveled to other places. Of those; 28% (117) had traveled to the neighboring countries of Iraq (such as: Saudi Arabia, Jordan, Lebanon, Syria, Turkey, Iran, Kuwait, and Uzbekistan). The rest said they had traveled to other provinces and towns inside Iraq.

A question was asked to participants regarding the nearest health clinic or hospital to their areas of residence. About 93% of participants mentioned that the nearest clinic to their areas of residence is 10 kilometers or less far, while 8% reported 30 kilometers or more.

## II. TB Knowledge and Awareness

Around 35% of participants know about the National TB Program (NTP) (Table 1). Further analysis was conducted to investigate these participants' demographic characteristics. Results show that 72% of them were males who have elementary education and 33% are between the ages 36-45.

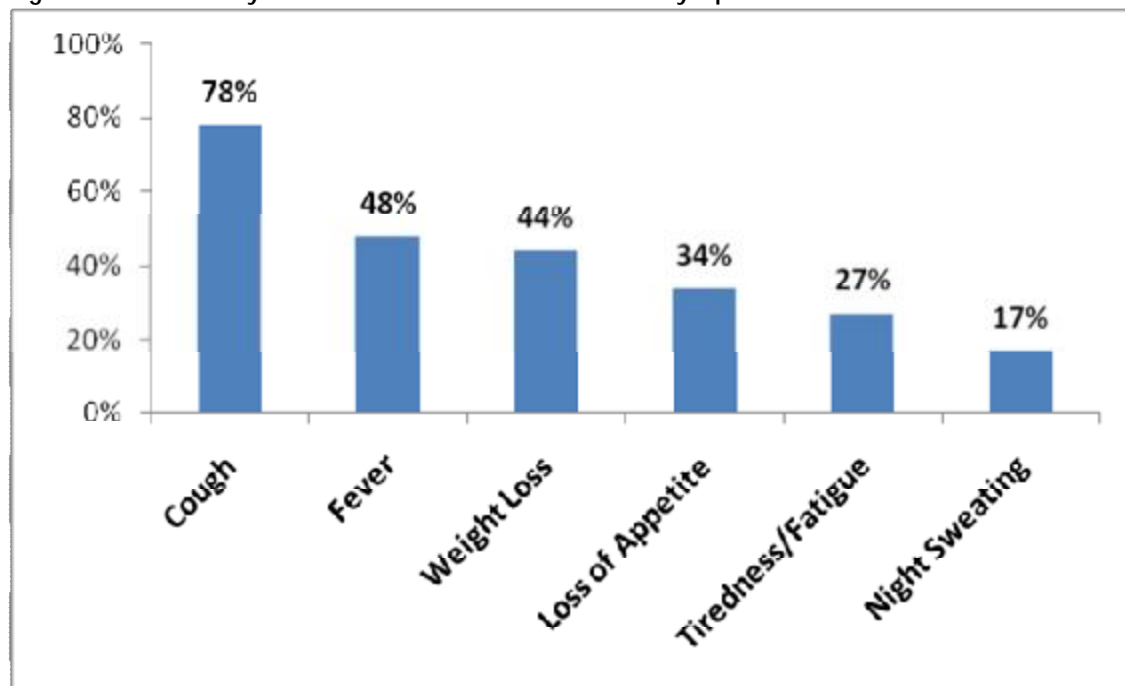
Around 92% of participants had previously heard about TB (Table 1). When participants were asked about TB types; about 56%, 1% and 10% know the Pulmonary TB, Extra-Pulmonary TB and the two types together, respectively. It is mentioning that around 34% of respondents don't know about types of TB. Of those 44% has elementary education and their age range was between 26-35 years.

When participants were asked about their information about TB symptoms; it was noticed that about 16% do not know any of the TB symptoms. The majority of the participants pointed out that cough, fever, loss of appetite, stress and fatigue, night sweating, and weight loss are TB symptoms (Figure 6). Male participants are more knowledgeable about TB symptoms according to the analysis results; the same result applies to the age group 36-45 years. However, no significant difference was found regarding TB symptoms and respondents' education level.

Table 1: Community members' knowledge about TB and NTP

Knowledge Question	Number	%
Have you ever heard about the national TB control Program?	681	34.9
Have you ever heard about TB?	1806	91.6
How serious a problem do you think TB is in Iraq?	1643	83.5

Figure 6: Community members' information about TB symptoms



Note: total does not equal 100%; more than one answer is possible.

Approximately 27%, 14.5% of respondents think that examining sputum smear samples and chest X-rays, respectively, are the necessary laboratory tests for TB diagnosis; however, 35.4% of respondents said they don't know what the necessary laboratory tests for TB diagnosis are.

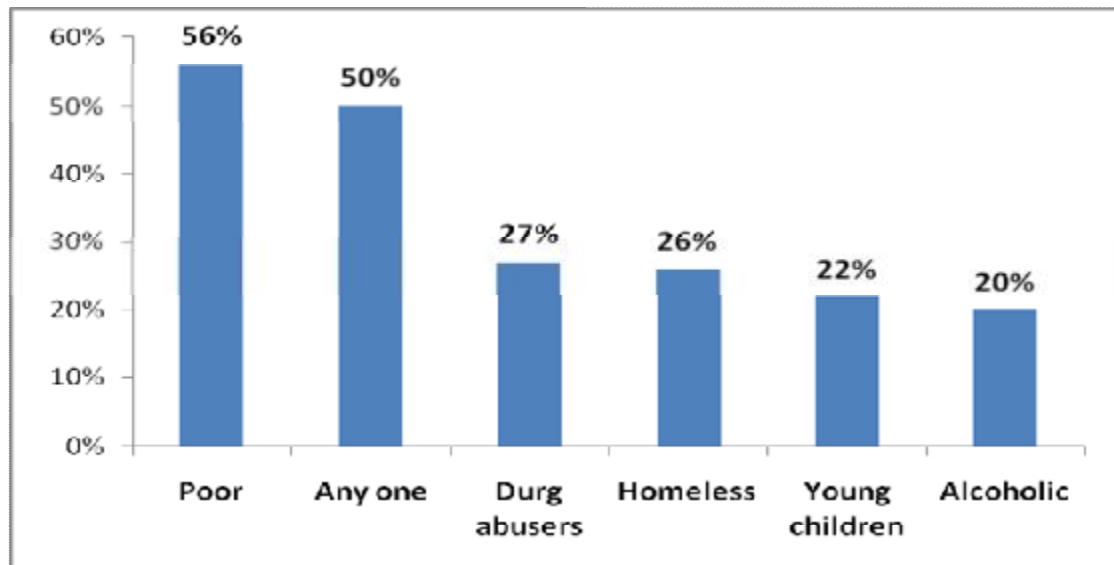
Around 83% of the participants acknowledge the seriousness of TB as a disease in Iraq (35% said that it is very serious and 48% it is serious). It is worth mentioning that 8% of participants reported that they do not know how serious TB is in Iraq (Table 2). Further analysis was run to look at participants' perception regarding the same issue from different governorates. Analysis shows that the majority of participants from Salahelden and Najaf governorates (95.5% and 94.1%, respectively) believe that TB is a serious disease in their provinces. Most of the participants from Baghdad (82.7%) said that TB is a serious disease there, and 90.2% of the participants of the province of Basra believe the same (Table 2).

Participants were asked about their perception regarding risk groups of population that have the possibility to be infected with TB. Approximately 50% of them mentioned that anyone could be infected while 56% said that poor people have the possibility of getting infected with TB. It was noticed that only 27% of participants know that drug abuser have a high possibility too (Figure 7). Participants were asked about their perception regarding the possibility of HIV/AIDS patients to get TB. Around 47% of surveyed participants said they don't know, while 43.1% think that HIV/AIDS patients should be concerned of TB because there is likelihood that they get infected.

Table 1 Community members' perception on how serious a problem TB is in their governorates

How serious a problem do you think TB is in your governorate					
Governorates	Very Serious		Serious		Total
	Number	Number	Number	%	%
Baghdad	225	43.4%	204	39.3%	82.70%
Ninawa	12	5.6%	149	69.3%	74.9%
Basrah	82	44.3%	85	45.9%	90.2%
Kirkuk	9	10.3%	52	59.8%	70.1%
Diyala	40	41.7%	36	37.5%	79.2%
Anbar	22	21.4%	56	54.4%	75.8%
Babylon	22	21.0%	44	41.9%	62.9%
Kerbela	16	23.5%	27	39.7%	63.2%
Wasit	12	15.0%	42	52.5%	67.5%
Salah- Deen	60	67.4%	25	28.1%	95.5%
Najaf	38	44.7%	42	49.4%	94.1%
Qadisiaya	21	26.2%	27	33.8%	60.%
Muthanna	11	22.4%	26	53.1%	75.5%
Thi –Qar	10	7.7%	65	50.0%	57.7%
Maysan	2	2.7%	53	72.6%	75.3%

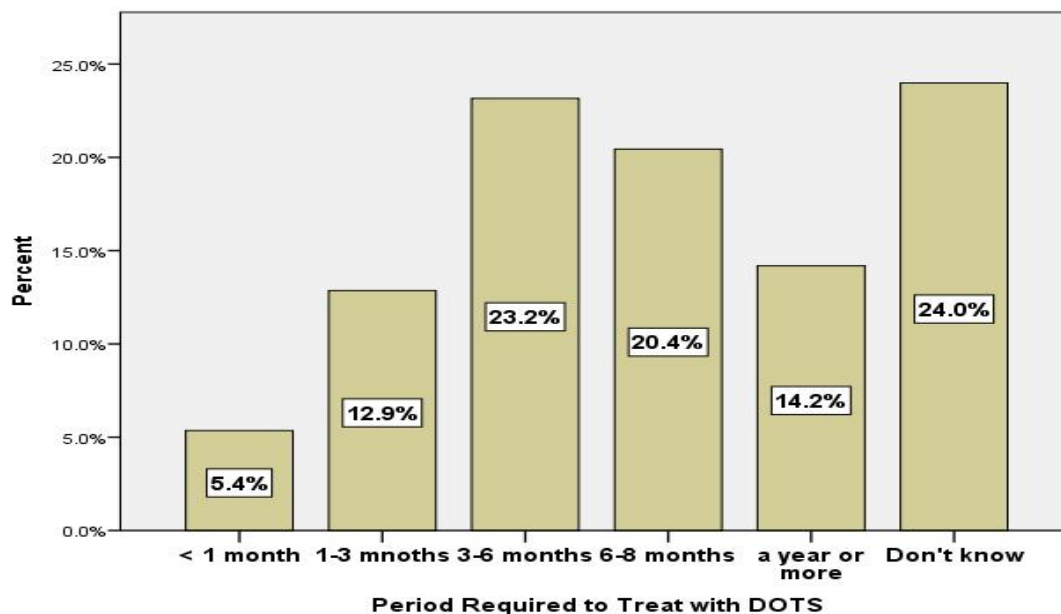
Figure 7: Community members' perception regarding people who could be infected with TB



Note: total does not equal 100%; more than one answer is possible.

More than two-thirds of the respondents (73%) had reported that TB is a recoverable disease. Further analysis was run to look into relations with gender, educational level and age. Results show no significant difference between male and female participants, however difference was noticed entire the educational level. Those were later asked about how to recover from TB. Around 78% of them said by taking certain drugs from health centers, and 14% of them said by Direct Observation Treatment, short-term (DOTS). Small percentage of participants reported that herbs, prayer and rest at home without taking the medication could be the appropriate solutions to be cured of TB (1%, 4% and 1% respectively). But it is worth mentioning that 15.3% of participants said they do not know if TB is a curable disease. Participants who believed that TB is curable were asked about the right place where TB patient should go for treatment. Around 53% of them said that TB patients should go to primary health care centers and 34% of them said they should go to specialized respiratory and chest diseases clinics. When participants were asked for how long TB patients should take TB medication; 23% of them said that TB patients should take medicine for six to eight months and 14% of them said for a year or more. But 24% of participants said that they do not know for how long TB patients should take medicine (Figure 8).

Figure 8: Community members' information about how long a TB patient needs to take TB medication



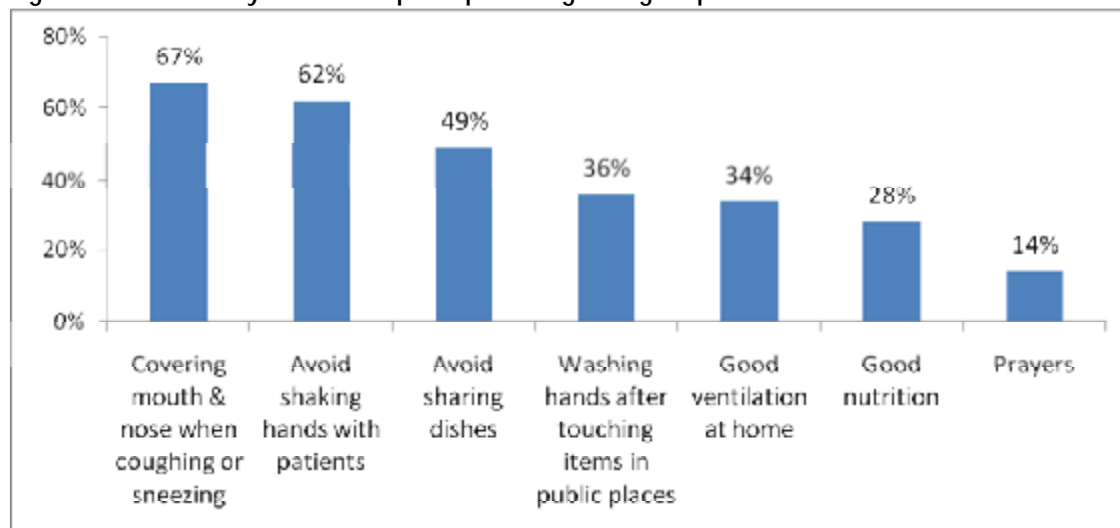
Approximately 85% of the respondents think that tuberculosis is an infectious disease, while 10% said they do not know (no significant differences were found according to age, gender or education level). Participants were asked about their information regarding TB modes of transmission. More than half of the sample (54.8%) considered sneezing, coughing and screaming as modes of TB transmission. Misconceptions as mentioned by participants were such as: drinking unsterilized milk and shaking hands with TB patients or eating with them (Table 3). It should be noted here that 12.4% of respondents do not know how TB is transmitted from an infected person to a healthy one.

Around 79% of participants reported that TB is a preventable disease however 15% of them responded with 'don't know'. Those who said that TB can be prevented were asked about their information about TB prevention methods. Almost 67% mentioned covering mouth and nose during coughing and sneezing. Again, misconceptions appeared regarding TB prevention methods, such as: to avoid shaking hands with an infected person and not to share dishes (Figure 9). Almost 86% of respondents believe that TB could be prevented. Around 88% of them said that TB vaccine is given at birth and 7% of them said vaccine can be given at any age, while 5% do not know when. Participants who said they heard about the TB vaccine (BCG) were also asked if they had received the vaccine in the past. The results show that about 74% had been vaccinated, while 14% of them do not know if they were vaccinated.

Table 3: Community members' perception regarding TB transmission modes

Response	Number	%
Droplet infection through sneezing, coughing and shouting	1074	54.8
Ingestion of unsterilized milk	18	0.9
1 and 2	177	9
Eating with TB patients	366	18.7
Shaking hands with TB patients	50	2.5

Figure 2: Community members' perception regarding TB prevention



Note: total does not equal 100%; more than one answer is possible

### III. TB Attitudes and treatment -seeking behaviors

Results show that very little percentage of respondents (1%) will pursue home and alternative medicine if they suspect having TB symptoms, while the majority of them (99%) reported they would seek help from physicians (Figure 10). Around 42% of the participants said they would seek treatment (go to health centers) as soon as they realize that the symptoms from which they suffer are associated with TB. While 34% of them said they will go to health centers if symptoms remain for two to three weeks. The analysis point to significant proportion of participants (23%) said they would seek health care when alternative treatments, other than health treatment, does not work. However, a little percentage (1.2%) of participants said they would not go to doctors to receive health care, and when asked about the reason behind that; about 22% of them said they do not know exactly where to go for health care and 19% said it was due to the cost of treatment, and 21% are afraid of results (Figure 11).

Afterwards, participants were asked what the immediate response in their families would be if a family member gets infected with TB. Approximately 89% of them will immediately seek a health care provider's help (47% will go to primary health care centers, 22% will go to private clinics/hospitals and 19% will go to public hospitals) (Figure 12). Roughly 71% of them will seek health care provider's help within 1 to 3 days of having TB symptoms. Participants were asked about their opinion regarding TB patients who, in some cases, stop taking the necessary treatment. More than half of the participants gave the reason of hopelessness of getting cured, 48% for cultural reasons and 46% attribute it to the disease stigma (Figure 13).

Figure 10: Community members' behavior if they suspect they have TB symptoms

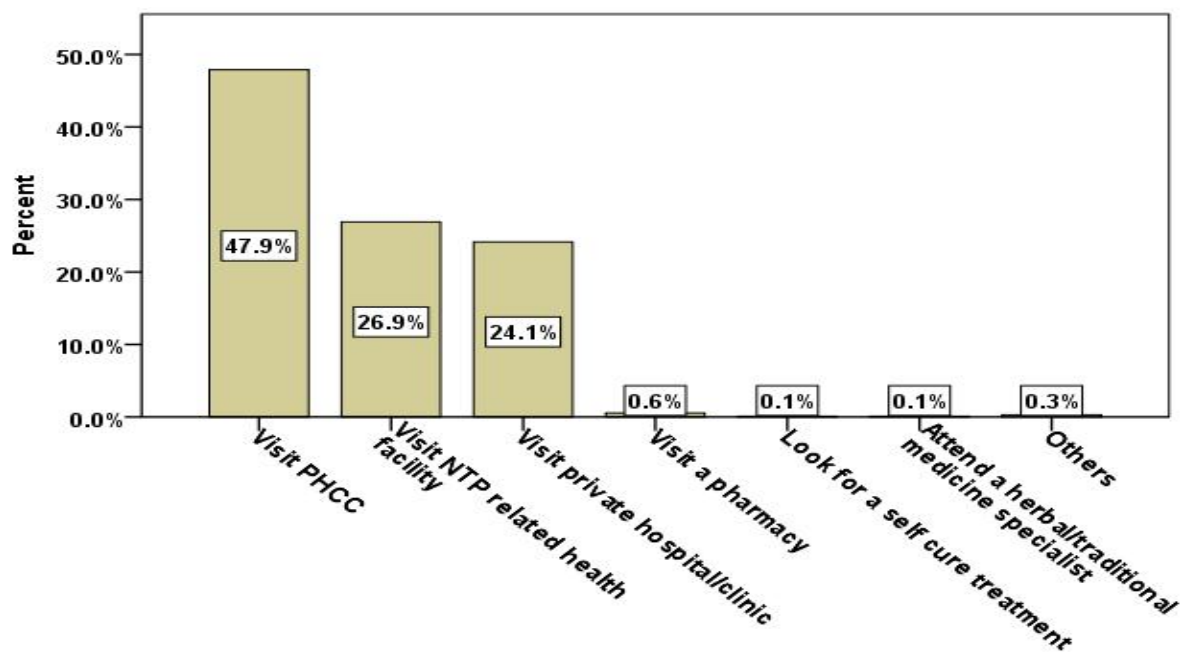


Figure 11: Reasons mentioned by community members regarding not seeking health care if they think they have TB symptoms

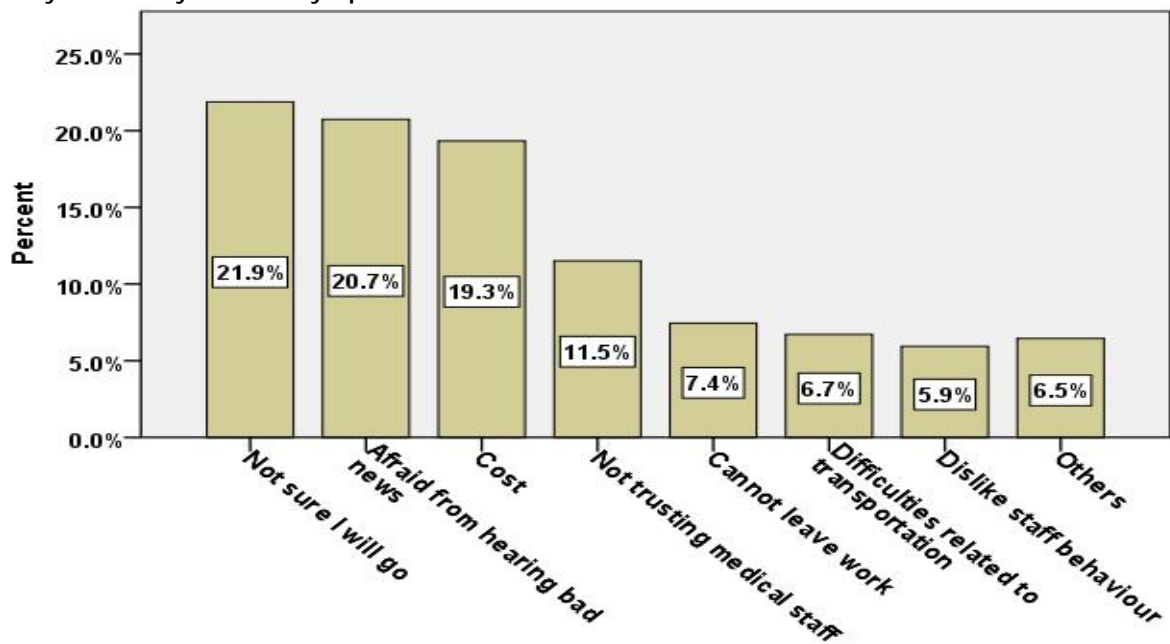


Figure 12: Community members' immediate practice when a family member gets infected with TB

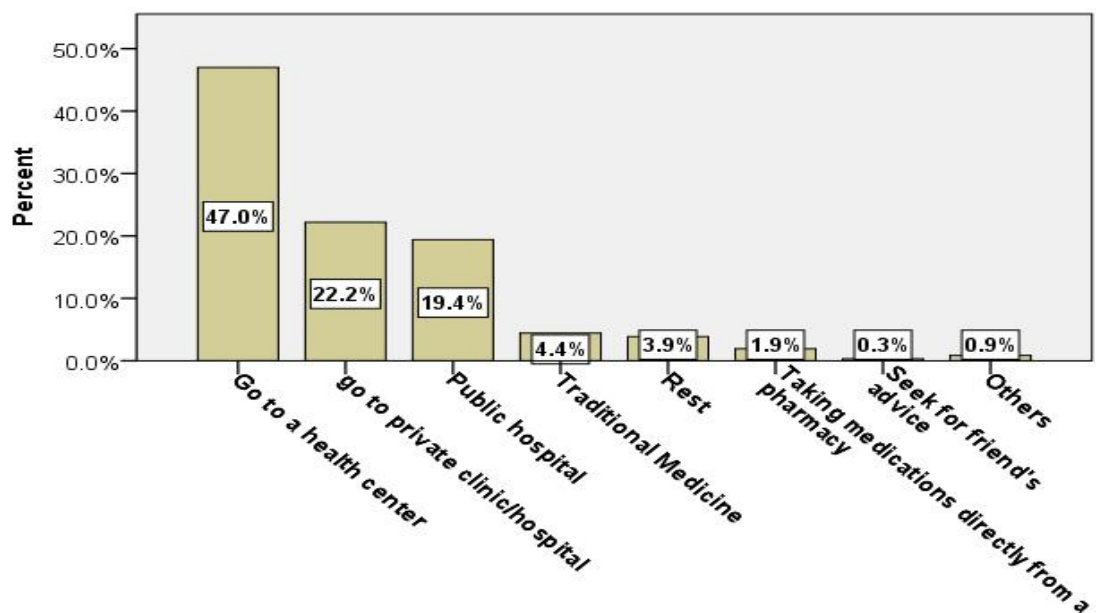
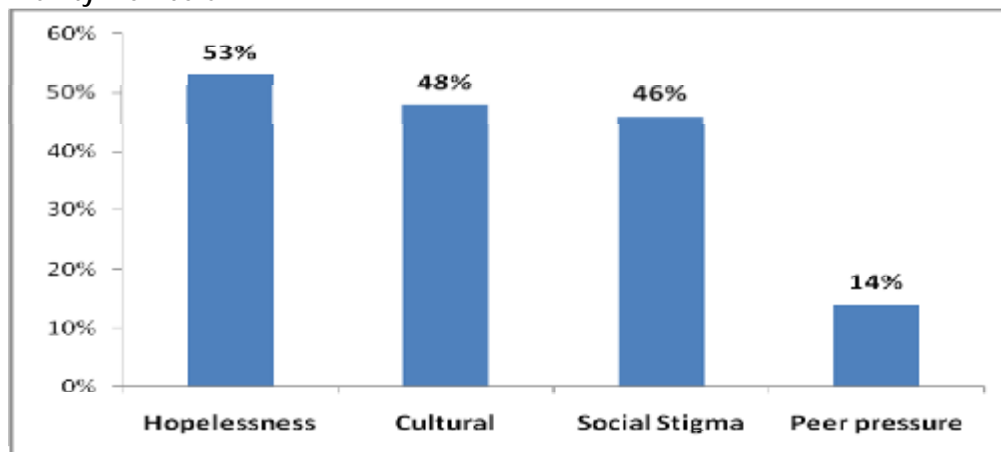




Figure 13: Reasons why TB patients stop taking TB medication as mentioned by community members

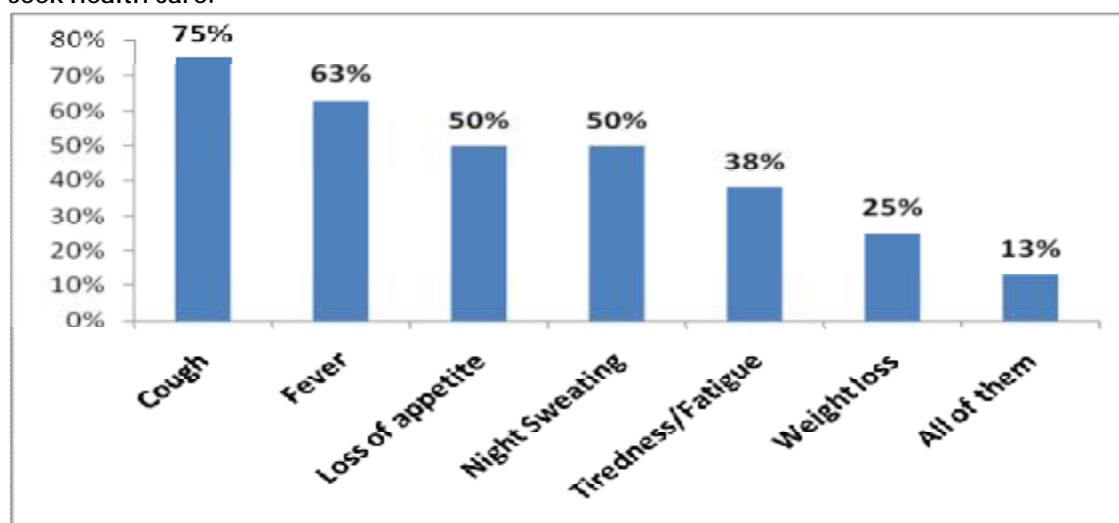


10 participants (less than 1% of the survey participants) answered 'Yes' when they were asked if they had ever been infected with TB. Those TB patients said that cough (75%) was the main reason, while 63% said that the fever was the reason behind seeking health care and to inquire about the reason. It is worth noting that 13% of those who had been diagnosed with TB said they suffered from more than one symptom which what prompted them to see a doctor (cough, fever, loss of appetite, night sweating, fatigue, and weight loss) (Figure 14). 50% (5 persons) of TB patients went to a health care provider when they suffered from the first symptoms (before diagnosis). While the other five TB patients used home remedies first. A question was asked to TB patients regarding how they were treated in their communities as TB patients. Around 27% of them said they were isolated, while 18% mentioned that their communities dealt with them normally (Table 4). 5 TB patients reported that they were financially supported from governmental and non-governmental organizations, and community members.

Table 2: How community deals with TB patients from TP patients' perception

Response	Number	%
The community totally isolated me	2	18.2
Most of the community members isolated me	3	27.3
Never isolated	2	18.2
All the community members dealt with me normally	1	9.1
Most of the community members supported me	2	18.2

Figure 14: Symptoms that drove community members who have been infected with TB to seek health care.



Note: total does not equal 100%; more than one answer is possible.

All participants were asked how a person who has TB is usually regarded or treated in the community. Around 65% of participants reported that most people deal with TB patients in a friendly manner, but they generally try to avoid them. However, approximately 15% mentioned that people usually reject TB patients (Table 5). Few questions were asked to the survey participants to investigate their perception towards TB and the situation of TB patients in the community. Almost 60% of the survey participants will support their TB patients' relatives to get their medical treatment; nevertheless, 36% of them said they will support them to get their medical treatment but at the same time they will fear infection. Only 2% of participants mentioned they will resort to alternative medicine such as herbs and home treatment (Figure 15).

About two thirds of the participants (78.8%) think that TB patients should be isolated (Figure 16). However, 74% of them reported they do not avoid people who were cured from TB. 66.7% of them mentioned that TB patients can have a promising future as any healthy person.

Table 3: How TB patients are regarded or treated by community from participants' perspective

Perspective	Number	%
Most people reject him or her	302	15.4
Most people are friendly, but they generally try to avoid him or her	1265	64.6
The community mostly supports and helps him or her	371	18.9

Figure 15: Community members' support to their relatives if were TB patients to get their medical treatment

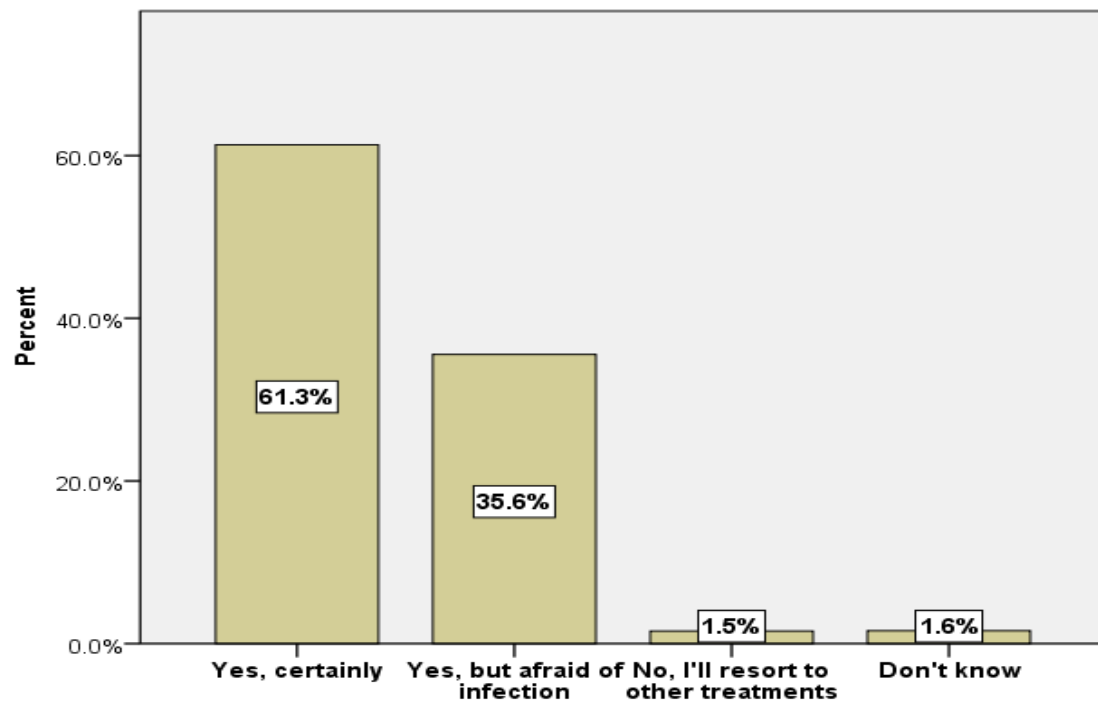
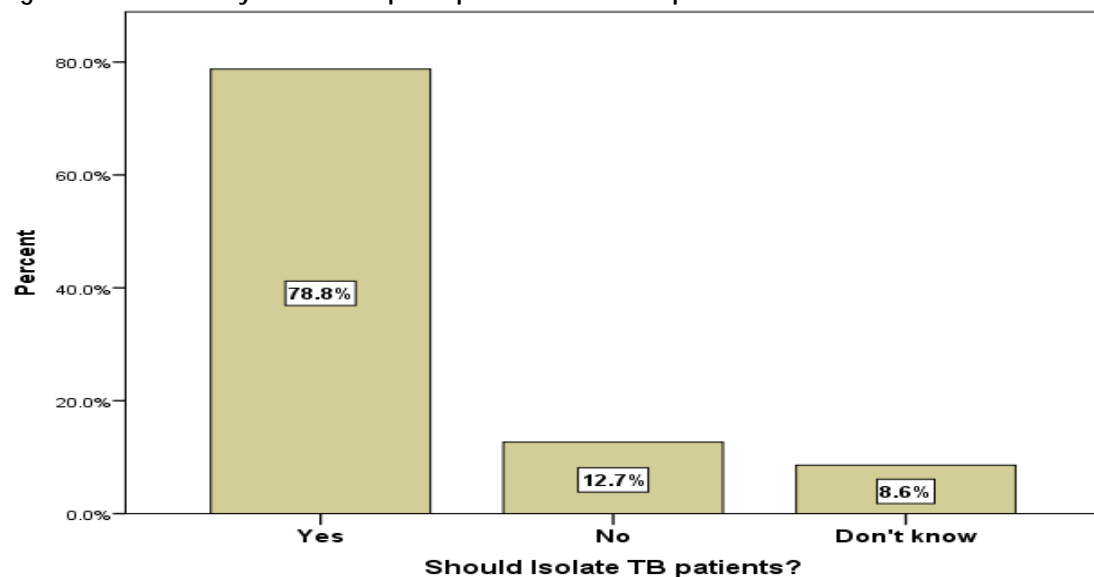


Figure 3: Community members' perception towards TB patients' isolation



#### IV. TB Social Stigma

TB is a disease that is not accepted in communities. Researchers conducting this survey tried to explore participants' perception regarding TB social stigma. Results show that approximately 54% of participants feel ashamed for having TB, 71% of participants said TB affects relations with others, 72% of participants said TB affects marital relations, 74% of participants think that TB decreases marriage chances, and 83% think it affects work performance (Table 6).

Table 4: TB Social Stigma from participants' perspective

Questions	Strongly agree		Agree		Average		Don't agree		Don't agree at all	
	N	%	N	%	N	%	N	%	N	%
You will feel ashamed for having TB	365	18.6	687	35	219	11.1	526	26.7	168	8.5
Do you have to hide TB diagnosis from people?	176	9	535	27.3	266	13.6	797	40.6	188	9.6
Does TB affect relations with others?	349	17.8	1035	52.7	271	13.8	267	13.6	42	2.1
TB medication is very costly due to long duration of disease	317	16.2	823	41.9	478	24.4	295	15	49	2.5
Do you prefer to live in isolation after TB diagnosis?	335	17.1	939	47.8	307	15.6	338	17.2	44	2.2
Does TB affect TB patients' performance?	445	22.7	1181	60.1	195	9.9	123	6.3	20	1.0
Does TB affect marital relations?	504	25.7	904	45.8	267	13.6	262	13.4	25	1.3
Does TB affect family responsibilities?	358	18.2	1020	52	319	16.2	240	12.2	26	1.3
Do you think that marriage chances decrease due to TB diagnosis?	555	28.3	896	45.7	267	13.6	217	11.1	27	1.4
Does TB affect family relations?	263	13.4	979	49.9	399	20.3	292	14.9	29	1.5

## V. Gender

Approximately 50% agreed that women go alone to health care facilities and 70% agreed that men accompany their wives to health care facilities (Table 7). Around 61% of participants reported that men are more likely to get TB. Around 84% of participants mentioned that men will support their wives to be cured if they get TB (Figure17). Participants' perception was identified also for future son and daughter-in-law. Approximately 34% of participants will support future daughter or son-in-law if he or she is a TB patient to become a member of their family after he or she is cured (Figures 18 and 19 respectively).

Table 7: Participants' perception regarding gender and TB

Questions	Strongly agree		Agree		Average		Don't agree		Don't agree at all	
	N	%	N	%	N	%	N	%	N	%
Women usually go to health care facilities alone	202	10.2	739	37.7	235	12	638	32.5	147	7.5
Men usually accompany their wives to visit health care facilities	434	22.1	898	45.8	344	17.5	237	12.1	48	2.4
Men are more likely to get TB than women	331	16.9	852	43.6	454	23.2	254	13.1	62	3.2

Figure 4: Husband's attitude if his wife gets infected with TB.

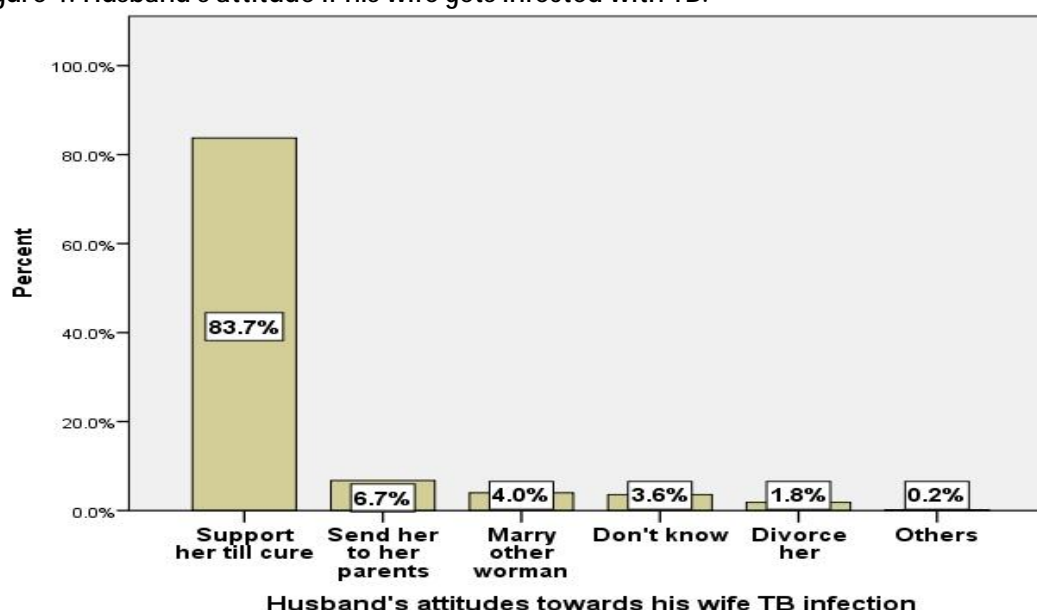


Figure 5 Participants' attitudes towards their future daughter-in-law

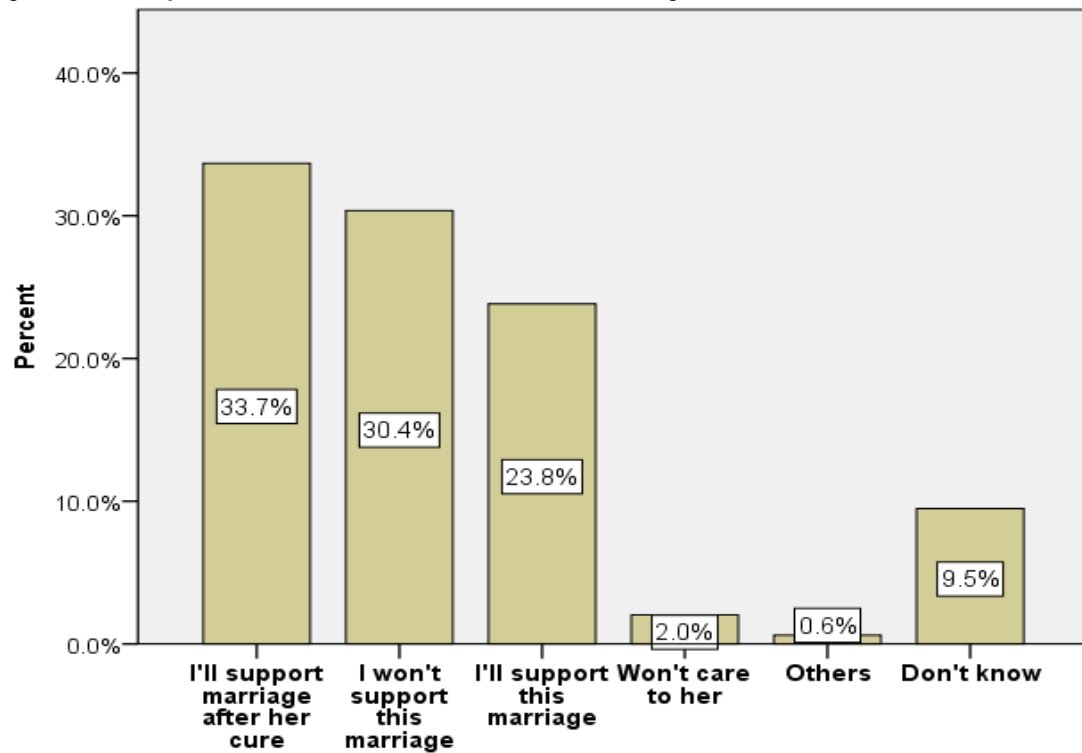
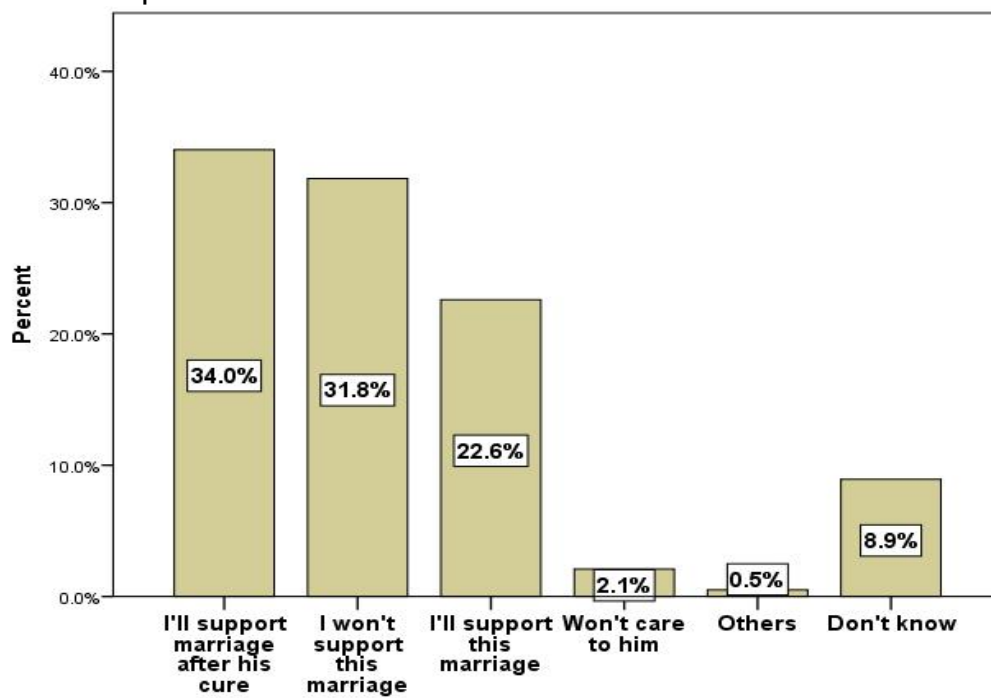


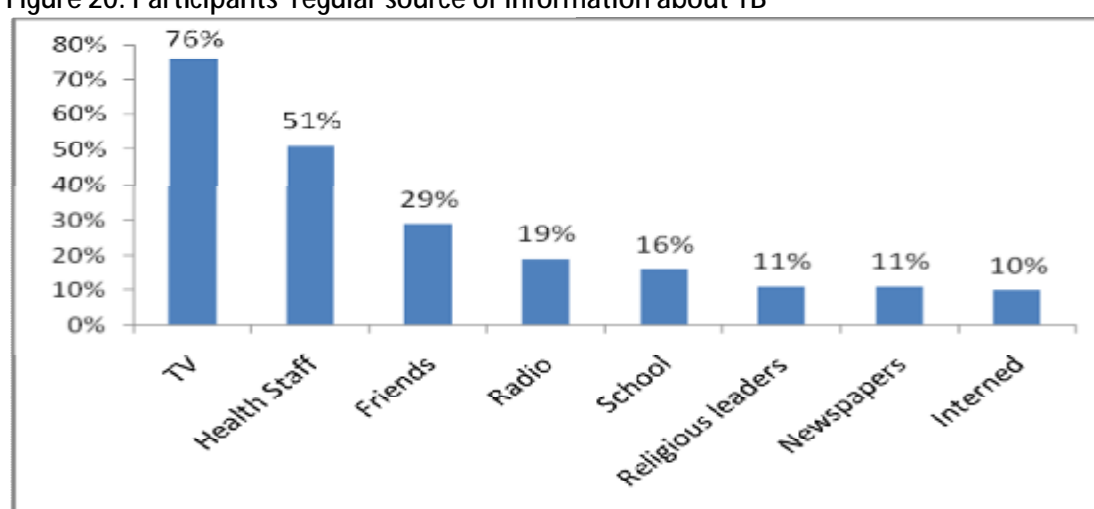
Figure 6: Participants' attitudes towards their future son-in-law



## VI. TB Awareness and Source of Information

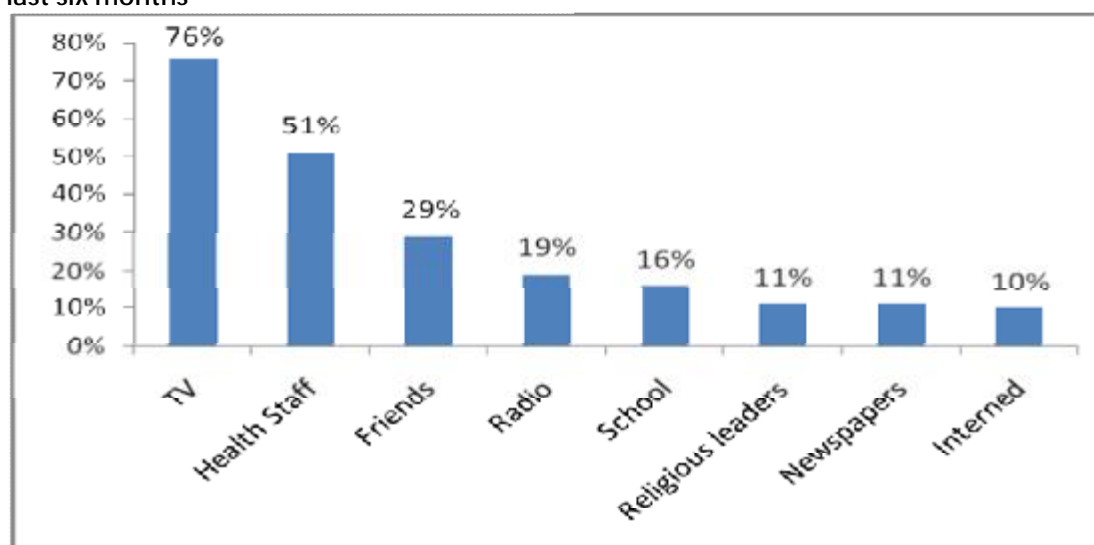
More than two thirds (76%) of participants mentioned that they usually obtain information about TB from TV and 51% from health care workers. A small percentage (10%) stated Internet as their regular resource of information about TB (Figure 20). Approximately 91% of participants answered 'No' when they were asked if they received any IEC messages about TB during the last six months. Of those who said they received information during the last six months, around 72%, 57% and 2 Participants who received IEC message on TB during the six last months were asked if the message was clearly understood. Around 98% reported that the message was clearly understood. While 2.3% said it wasn't due to the difficulty of the message (42.9%), the message content wasn't clear (28.6%) and the message content was mostly incorrect (Table 8). Around 7% of them received information from health workers, TV and Radio, respectively (Figure 21).

Figure 20: Participants' regular source of information about TB



Note: total does not equal 100%; more than one answer is possible.

Figure 21: Sources of information about TB for community member participants during the last six months



Note: total does not equal 100%; more than one answer is possible.

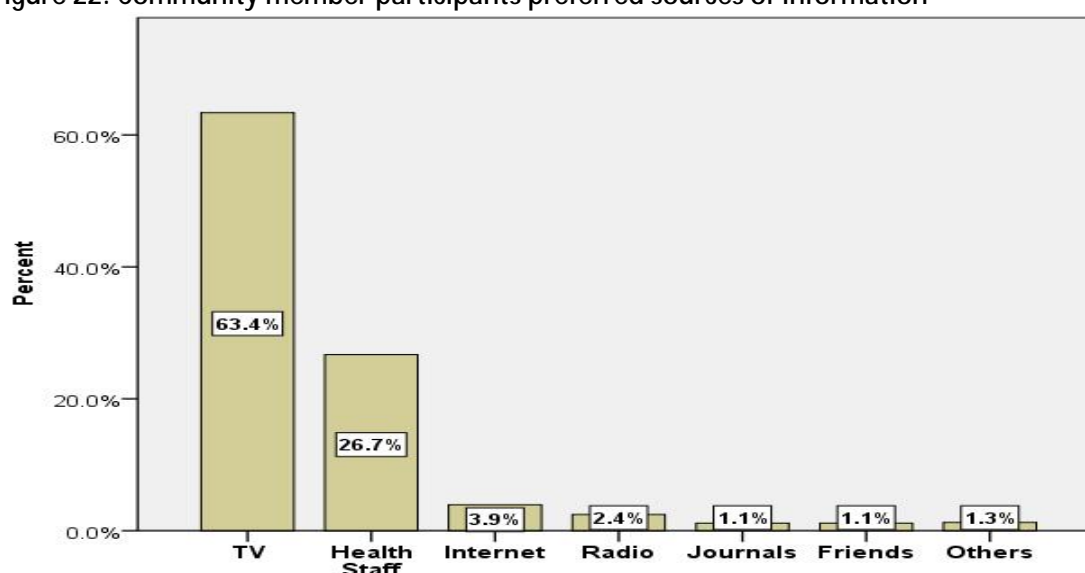
Table 5: Reasons why the IEC message wasn't clearly understood by participants

Reason	N	%
The message language is difficult	6	42.9
The message contents are not clear	4	28.6
The message contents are very detailed	3	21.4
The message contents are incomplete	4	28.6
The message contents are mostly incorrect	2	14.3
The message contents cannot be believed	3	21.4

Note: total does not equal 100%; more than one answer is possible.

Finally, participants were asked if they feel well-informed about TB (around 75% answered 'No') and if they want to know more information on TB and what source of information they prefer to receive the TB information from. From all participants, 88% mentioned they would like to be informed more about TB and of those, analysis shows that 63.4% prefer the TV to be the source of information about TB and only 3.9% prefer the Internet (Figure 22).

Figure 22: Community member participants preferred sources of information





## VII. Scores

### 1- Knowledge score:

It was found low that community members' knowledge matched only 44.6% of expected correct responses (average score was 20.5 out of a total score of 46) (table 9, figure 23).

Older age, Female sex, low education, unemployment (including housewife), low monthly income, and residence in settings which are semi-urban or lie distant from health settings (20-31 km) are factors accompanied lowest knowledge scores ( $P < 0.05$ , table 10).

### 2- Negative attitudes score:

In average negative attitudes score was 1.7 out of a total score of 5 (table 9, figure 24), i.e. we encountered in average 35% of inquired negative attitudes.

Minor changes in this score are observed with changes in education level and occupation but marked increase in negative attitudes found with living distant than 30 km from health facilities ( $P < 0.05$ , table 10).

### 3- Correct Practices score:

This score had a mean of 6.2 out of a total score of 10 (table 9, figure 25), i.e. community member practice around 62% of expected correct practices related to TB.

Correct practice score increased with male sex, urban settings, and residence lies near ( $\leq 10$  km) to health facilities ( $P < 0.05$ , table 10).

### 4- Wrong beliefs score

Wrong beliefs score was in average 5.2 out of a total score of 10 (table 9, figure 26), i.e. we encountered in average 51.8% of inquired wrong beliefs in studied sample.

This score exhibited minor changes with studied personal factors (table 10).

Table 9: Community member participants preferred sources of information

Community Members' Scores	N	Minimum	Maximum	Mean	SD
Knowledge Score (out of 46)	1972	0	40	20.5	7.8
Attitude Score (out of 5)	1972	0	5	1.7	1.2
Practice Score (out of 10)	1972	1	10	6.2	1.6
Belief Score (out of 10)	1972	0	6	5.2	1.5

Table 10: Knowledge, attitude, practice and belief scores of sampled community members.

		Score <sup>A</sup>							
		Knowledge		Attitude <sup>B</sup>		Practice		Belief <sup>C</sup>	
Variables	N	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Age Group									
≤ 14	1	25.0	---	0.0	---	5.0	---	6.0	---
15-25	252	19.0	8.0	1.6	1.1	6.3	1.7	5.1	1.5
26-35	436	19.6	8.2	1.7	1.2	6.2	1.5	5.1	1.6
36-45	584	21.3	7.2	1.6	1.1	6.2	1.5	5.1	1.5
46-55	345	21.7	7.2	1.7	1.2	6.1	1.5	5.3	1.3
56-65	225	20.8	7.7	1.7	1.2	6.2	1.6	5.3	1.3
66-75	96	21.0	7.9	1.8	1.2	6.0	1.8	5.3	1.2
≥ 76	27	16.4	10.5	2.0	1.3	6.2	1.8	5.2	1.8
P value		< 0.001		0.448		0.812		0.361	
Sex									
Male	1348	21.3	7.6	1.7	1.2	6.4	1.5	5.2	1.5
Female	619	18.9	7.7	1.7	1.2	5.8	1.6	5.2	1.4
P value		< 0.001		0.135		< 0.001		0.923	
Education									
Illiterate	245	16.4	9.0	1.7	1.2	5.8	1.6	5.1	1.6
Read & write	182	19.1	8.9	1.4	1.2	6.0	1.6	4.6	2.2
Primary	755	19.9	7.4	1.7	1.2	6.2	1.5	5.3	1.4
Intermediate/secondary	494	22.2	6.4	1.8	1.1	6.3	1.6	5.3	1.3
Higher than secondary	233	24.3	6.6	1.6	1.2	6.3	1.7	5.2	1.3
Others	57	21.2	7.0	1.2	1.1	6.4	1.5	5.2	1.0
P value		< 0.001		< 0.001		0.001		< 0.001	
Occupation									
Employed	474	23.1	6.8	1.7	1.2	6.4	1.5	5.3	1.3
Skilled worker	86	20.2	7.7	1.6	1.2	6.6	1.5	5.0	1.8
Unskilled worker	130	19.6	9.1	1.4	1.2	6.1	1.7	4.6	2.1
Professional	278	20.2	7.4	1.6	1.1	6.3	1.5	5.2	1.5
Retired	183	22.6	7.1	1.8	1.1	6.5	1.6	5.5	1.0
Free work	22	22.1	6.8	1.5	1.1	6.6	1.8	5.3	1.6
Student	71	22.7	6.3	1.5	1.1	6.6	1.6	5.1	1.6
Unemployed	161	19.4	8.4	1.7	1.2	6.2	1.6	5.2	1.5
Housewife	499	18.0	7.7	1.8	1.2	5.7	1.5	5.2	1.5
Others	55	19.6	8.0	1.6	1.3	6.3	1.4	5.3	1.5
P value		< 0.001		0.034		< 0.001		< 0.001	
Monthly income (ID)									
< 250,000	686	19.8	8.5	1.6	1.1	6.2	1.6	5.0	1.7
250,000 - Million	1042	21.3	7.2	1.6	1.2	6.2	1.6	5.3	1.3
> Million	55	22.1	7.6	1.7	1.1	6.4	1.5	4.9	1.6
P value		< 0.001		0.998		0.537		0.003	
<sup>A</sup> Maximum possible scores are 36 for knowledge, 5 for negative attitude, 10 for practice, and 10 for negative Beliefs.									
<sup>B</sup> Negative attitudes									
<sup>C</sup> wrong beliefs									

Table 10: Continue.

		Score A							
		Knowledge		Attitude <sup>B</sup>		Practice		Belief <sup>C</sup>	
Variables	N	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Area of Residence									
Urban	1545	21.0	7.4	1.7	1.1	6.2	1.6	5.3	1.3
Rural	308	19.6	9.2	1.5	1.4	6.0	1.5	4.6	2.1
Semi-urban	110	17.0	6.7	2.0	1.3	5.8	1.6	5.2	1.4
P value		< 0.001		< 0.001		0.004		< 0.001	
Distance to nearest health facility									
≤ 10 Km	1813	20.6	7.8	1.7	1.2	6.2	1.6	5.2	1.4
11-20 Km	106	20.0	6.8	1.6	1.3	5.8	1.5	4.7	2.1
21-30 Km	25	17.2	5.7	1.8	1.2	6.4	1.4	5.5	1.4
> 30 Km	15	24.3	5.3	2.8	1.4	5.4	1.4	5.7	1.3
P value		0.033		0.010		0.016		0.001	
<sup>A</sup> maximum possible scores are 36 for knowledge, 5 for negative attitude, 10 for practice, and 10 for negative Beliefs.									
<sup>B</sup> Negative attitudes									
<sup>C</sup> wrong beliefs									

Figure 23: Community member participants' knowledge score

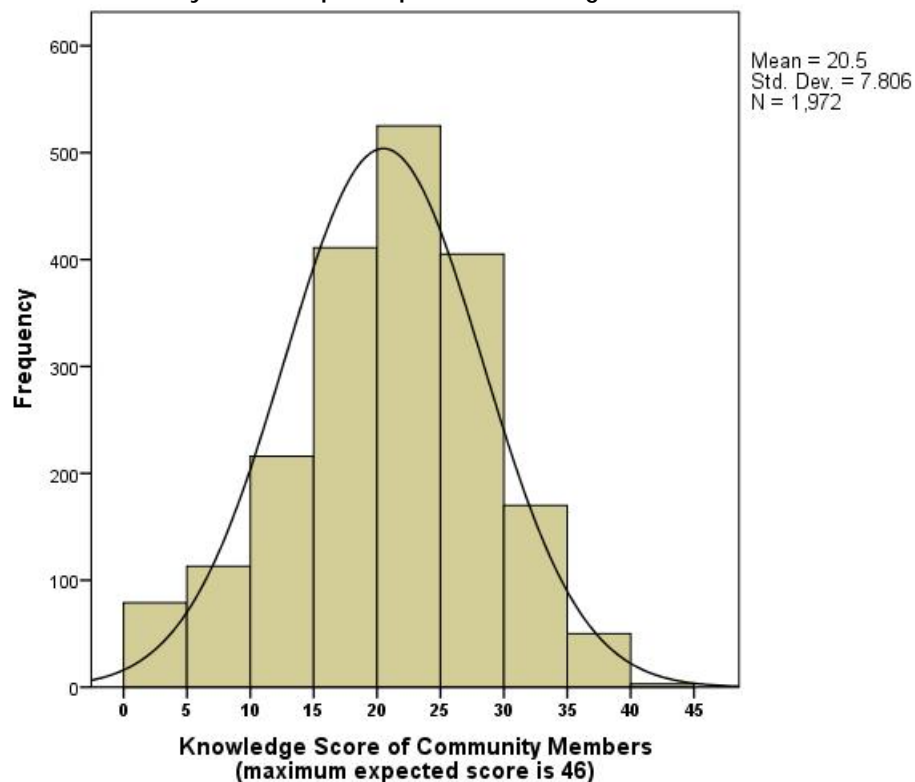


Figure 24: Community member participants' negative attitudes score.

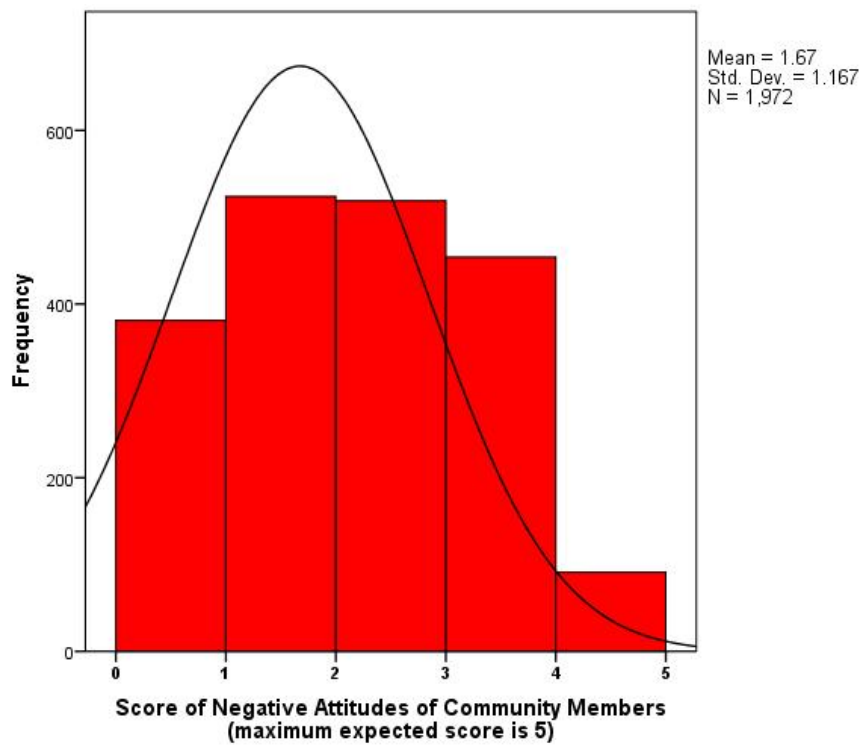


Figure 25: Community member participants' practice score.

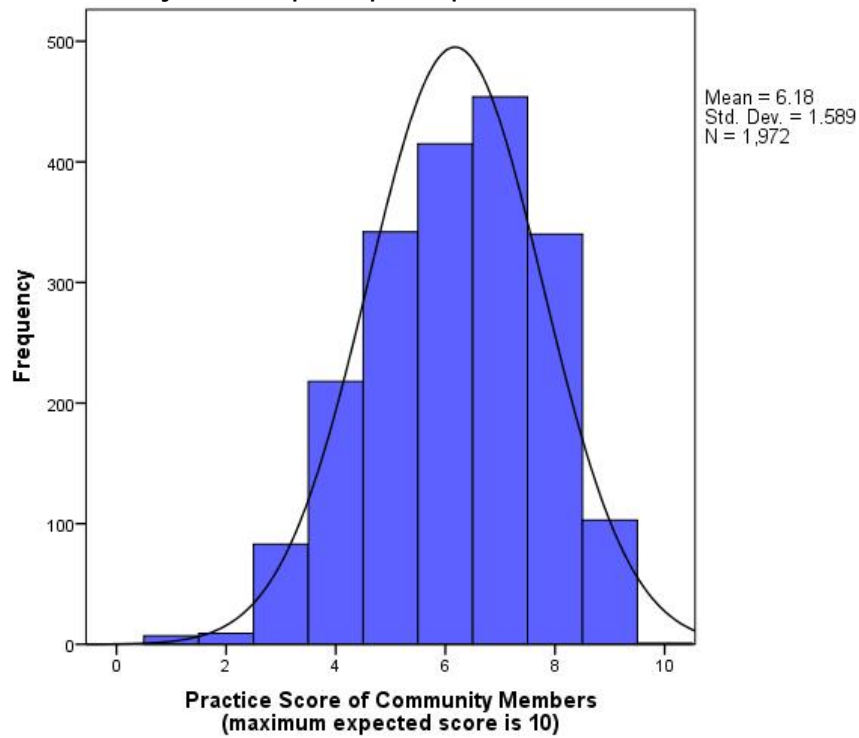
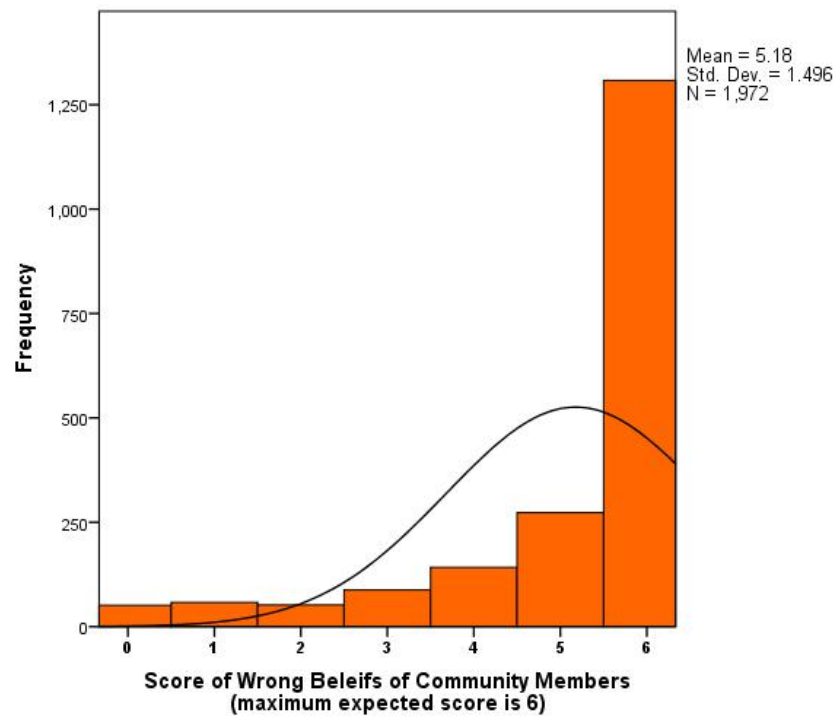


Figure 26: Community member participants' wrong beliefs score.



## Second: TB Patients

### I. Demographic Data

The total number of TB patients who participated in this survey was 783 from 15 governorates (around one forth from Baghdad) (Figure 27), male to female ratio approximates 1:1 (447 males and 334 females) (Figure 28). The mean age of respondents was  $40 \pm 16$  years, around 50% of the TB patients sample was between 15 and 35 years old (Figure 29). Around 76% of the surveyed TB patients live in urban areas (figure 30).

Figure 27: TB patients' distribution by geographical distribution

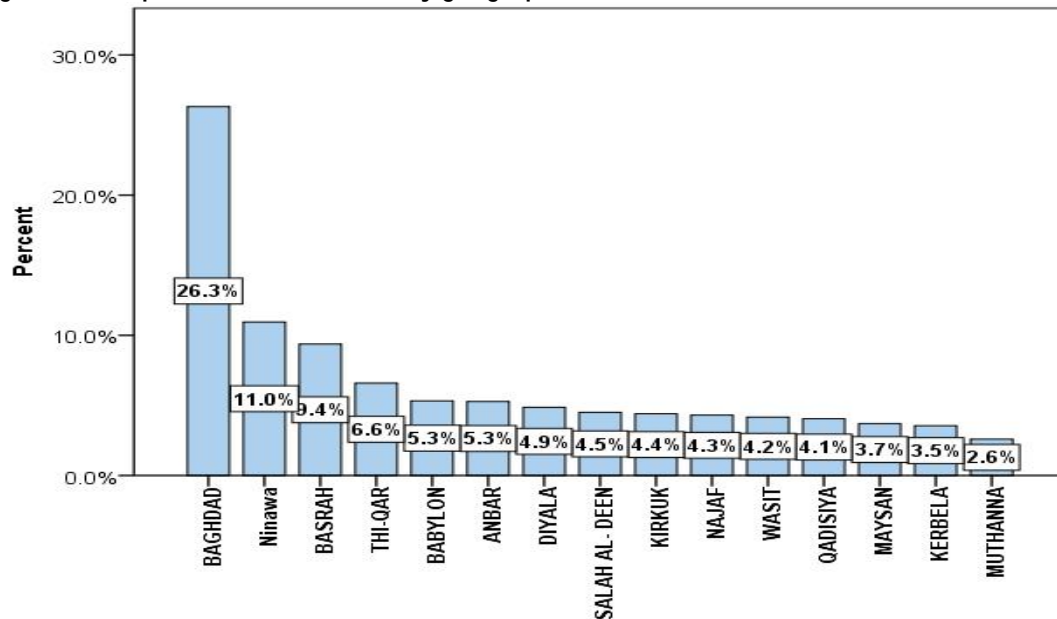


Figure 28: TB patients' distribution by gender

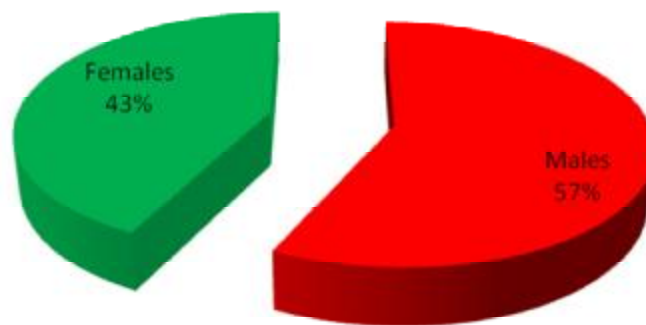


Figure 29: TB patients' distribution by age groups

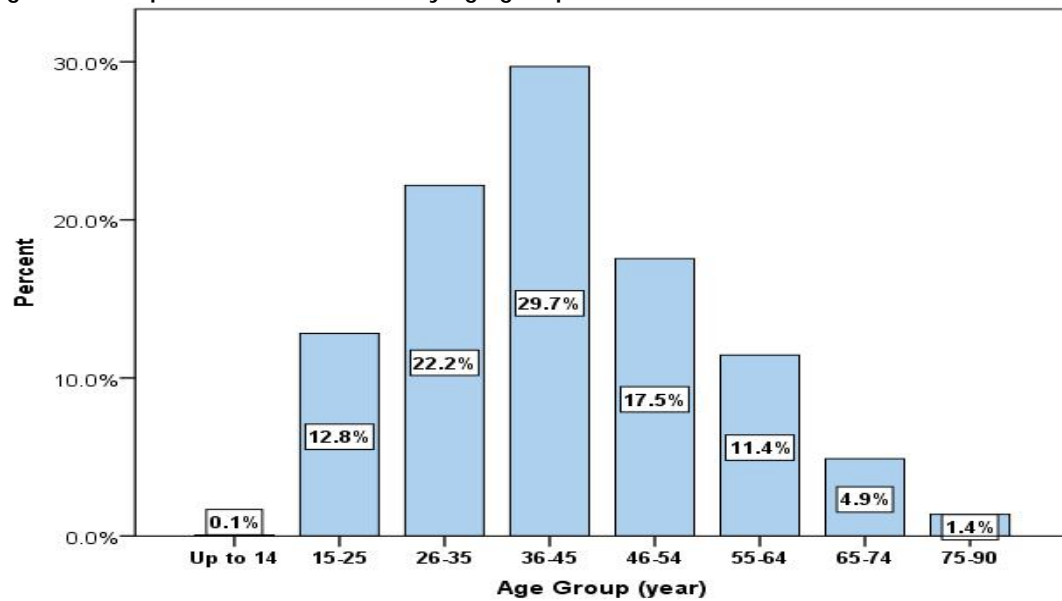
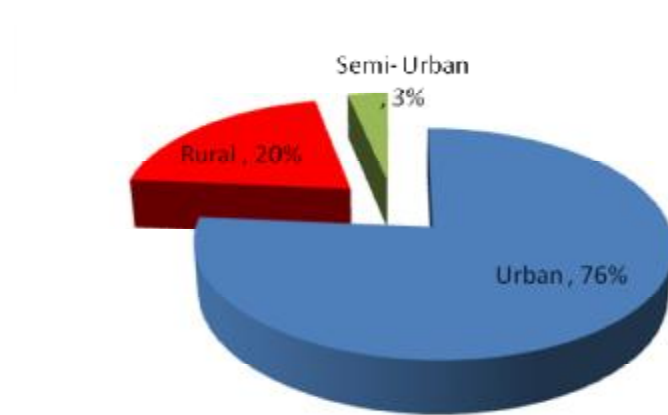


Figure 30: TB patients distribution' by urban and rural



Approximately 22% of TB patients are illiterate, 42% have only primary education and 19% got not more than high school education. However, only 6% hold university degrees (figure 31). TB patients' labor status as revealed by analysis was as follow: in total, 264 patients have work (33.7%). Results show that 33% of TB patients are housewives (only 25 of females work). Around 11% of TB patients are employees, 10% are professionals and 8% are unskilled laborers (Figure 32). Analysis reveals that 18% of them are not employed. Participants were asked if they traveled out of their governorate, analysis shows that 178 (22.7%) traveled last year inside and outside Iraq. 26 TB patients traveled outside Iraq during the previous year to: India, Russia , Saudi Arabia, Jordan, Lebanon, Syria, Turkey and Iran.

Figure 31: TB patients' distribution by education

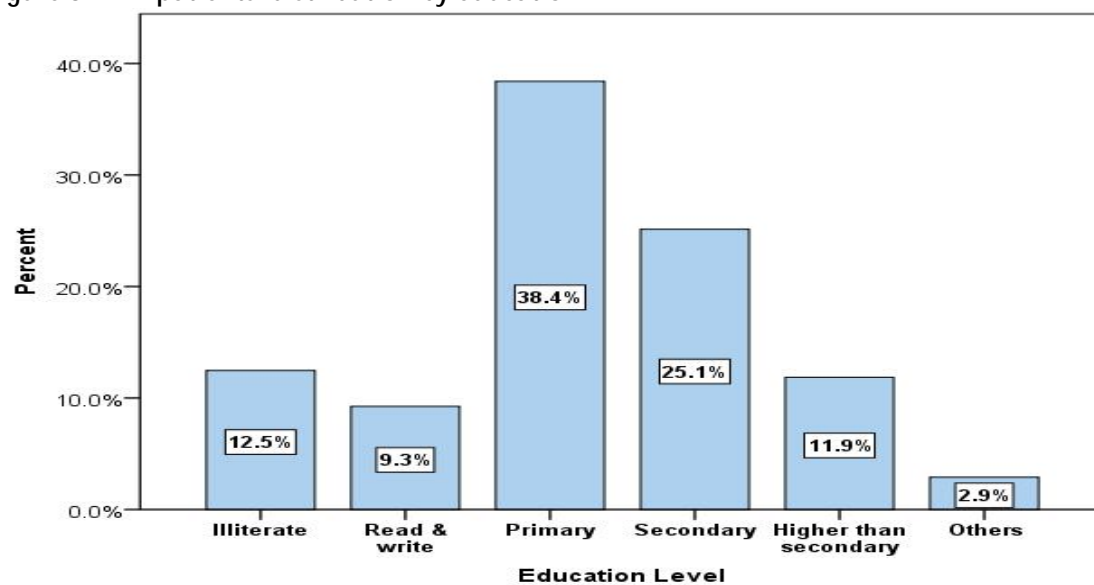
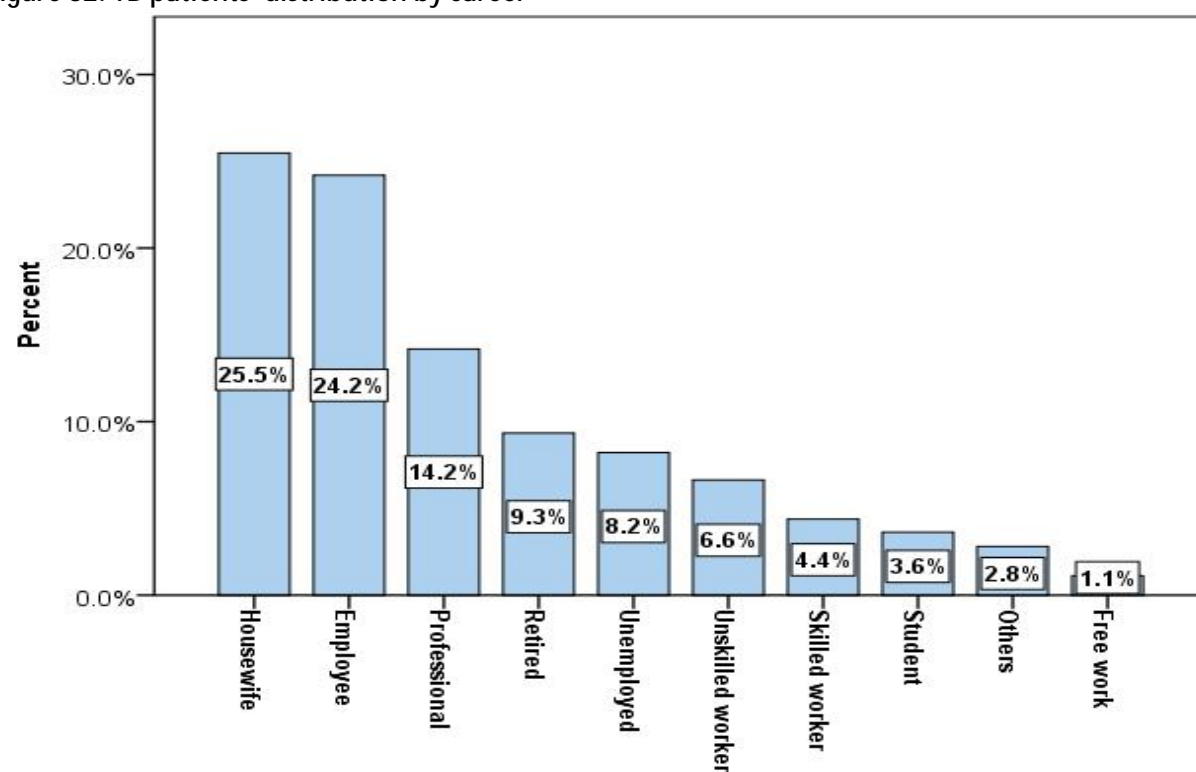


Figure 32: TB patients' distribution by career





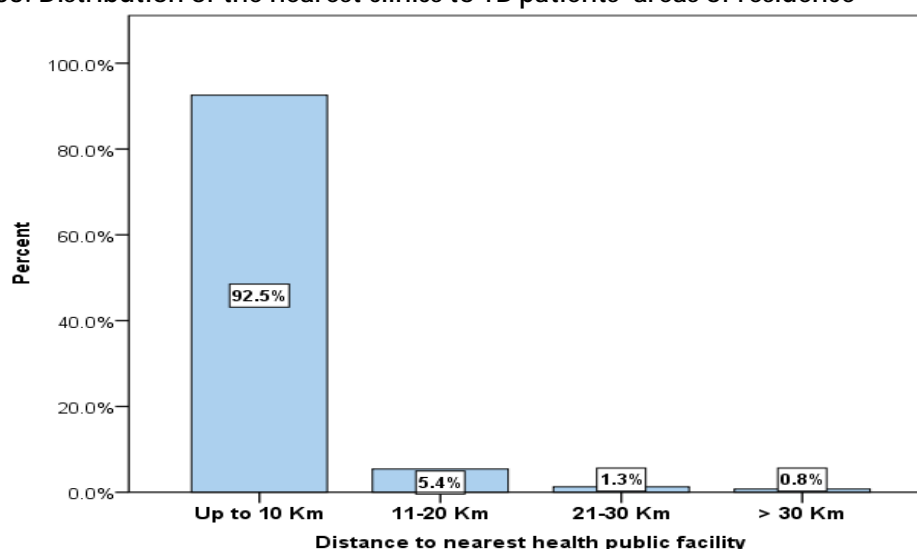
Around 48% of TB patients' monthly income (in Iraqi Dinars) is less than ID 250,000 (< USD 220), while 29.5% of the respondents' monthly income is between ID 250,000 and 1000,000 (USD 220 -800). Around 21% of participants did not respond to this question (Table 11).

Table 11: TB patients' distribution by monthly income

Category	Number	%
< 250,000	376	48.0
250,000-1000,000	231	29.5
> 1000,000	10	1.3
Missing	166	21.1

About 92% of the participants mentioned that the nearest clinic for their area of residence is 10 kilometers or less, while 1% reported 30 kilometers or more as the nearest clinic to their areas of residence (figure 33)

Figure 33: Distribution of the nearest clinics to TB patients' areas of residence



## II. TB Knowledge and Awareness

The majority of respondents from the TB patients' sample (96%) stated they heard about TB. However, not all of them know about NTP (68% reported that they know NTP). Approximately 77% of TB patients think that TB is a serious problem in Iraq. The majority of respondents from Diwania, Najaf and Anbar consider TB a serious problem in their governorates (Table 12).

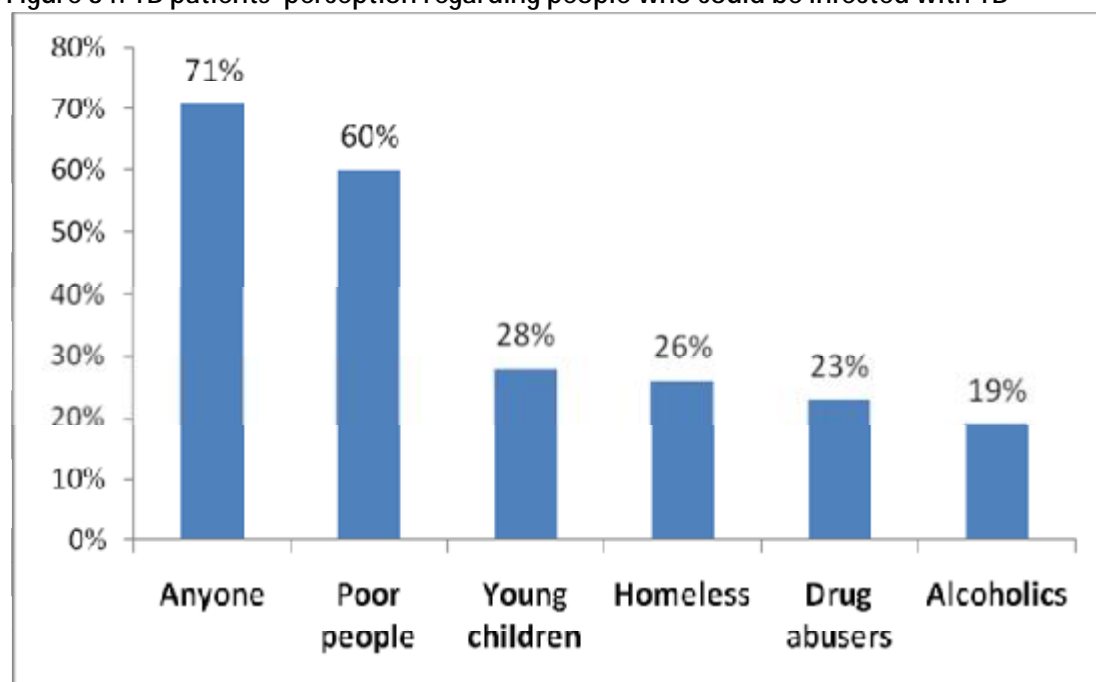
Around 71% of TB patients are aware that anyone can get infected with TB. A good percentage (23%) of them are also aware of some of the most vulnerable groups of population that are more likely to be infected with TB, such as drug users (this is also mentioned by males more than females). No significant relation was found between level of education and knowledge of TB vulnerable groups (figure 34).

Around 30% of the participants know about both types of TB (pulmonary and extra-pulmonary), while 53.2% know pulmonary TB only. Almost 16% of them don't know TB types. Only 10 TB patients recorded 'don't know' when asked about TB symptoms. The majority of TB patients know that cough (91%) is one of TB symptoms. Fever, loss of appetite, loss of weight and fatigue were well-known TB symptoms, however; night sweating (57%) recorded the lowest percentage of participants' knowledge about TB symptoms (Figure 35).

Table 6: TB patients' perception regarding TB as a serious problem in all of Iraq's governorates

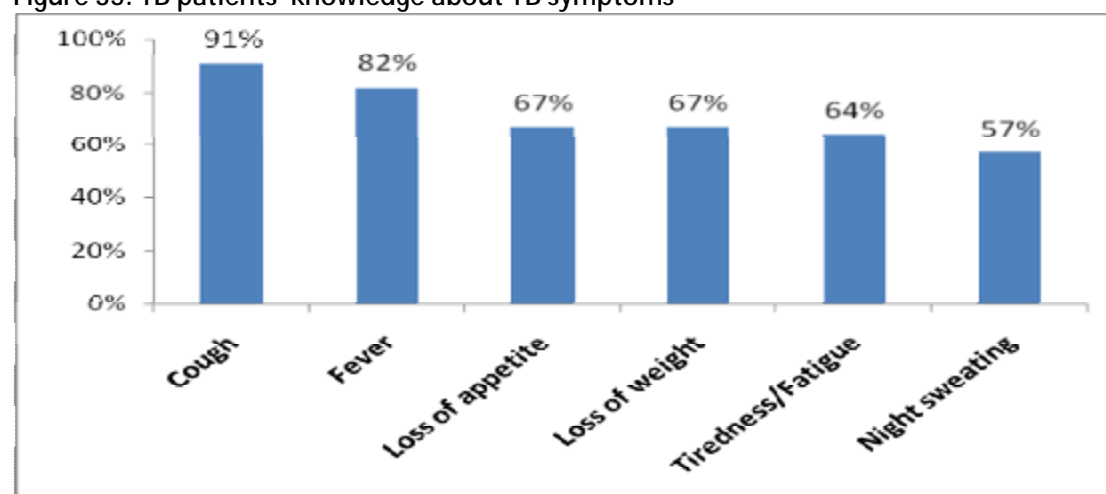
Governorates	Very Serious		Serious		Total
	Number	%	Number	%	%
Ninawa	12	25	23	47.9	72.9
Kirkuk	3	9.7	9	29	38.7
Diyala	15	23.8	23	36.5	60.3
Anbar	12	52.2	9	39.1	91.3
Baghdad	67	30.2	87	39.2	69.4
Babylon	7	10.9	40	62.5	73.4
Kerbela	2	6.2	20	62.5	68.7
Wasit	4	10.8	16	43.2	54
Salah Al- Deen	7	28	9	36	64
Najaf	6	15.8	29	76.3	92.1
Diwania	7	17.1	31	75.6	92.7
Muthanna	1	8.3	8	66.7	75
Thi -Qar	3	5.8	21	40.4	46.2
Maysan	8	28.6	15	53.6	82.2
Basrah	10	16.1	33	53.2	69.3

Figure 34: TB patients' perception regarding people who could be infected with TB



Note: total does not equal 100%; more than one answer is possible.

Figure 35: TB patients' knowledge about TB symptoms



Almost 91% of the respondents stated that TB is a communicable disease and around 95% of them believe that TB is curable; although 3% recorded 'don't know' when asked if TB can be cured. Approximately 23%, 10% of the respondents think that sputum smear examination and chest X-rays, respectively, are the necessary laboratory tests for TB diagnosis but 60.7% of respondents reported both sputum smear samples and chest X-rays tests necessary for TB diagnosis. However, 5.6% do not know what the necessary laboratory tests for TB diagnosis (Table 13).

Around 70.9% of TB patients stated TB can be cured by taking certain drugs from health centers and 25.3% of them said by short-term treatment under appropriate supervision. A small percentage of participants (3.1%) reported that herbs, prayer and rest at home without taking the medication could be the appropriate solutions to be cured from TB (Table 14).

Almost all participants from the TB patients' sample said that TB treatment is for free in their governorates. Most of surveyed TB patients believe that health facilities are the appropriate place to receive TB treatment as 48.7% mentioned TB centers and 46.4% mentioned hospitals. About 49% of TB patients said that the recommended period for TB patient treatment is six to eight months (Table 15, figure 36).

Participants were asked about their information regarding TB modes of transmission. More than half of the sample (63.9%) considered sneezing, coughing and screaming as modes of transmission or for extrapulmonary TB; drinking unsterilized milk. Misconceptions mentioned by participants such as: and shaking hands with TB patients or eating with them (Table 16). Around 87% of participants reported that TB is a preventable disease; however, 8% of them responded with "don't know". Those who said that TB can be prevented; were asked about their information about TB prevention methods. Almost 79% mentioned covering mouth and nose during coughing and sneezing. Again, misconceptions appeared regarding TB prevention methods, such as: to avoid shaking hands with an infected person and not to share dishes, and praying (Figure 37). Around 78% of respondents who believe in TB prevention reported that they know about TB vaccine (BCG). Around 89% of them said that TB vaccine is given at birth and 3.6% of them said vaccine can be given at any age, while 7% do not know when. Participants who said they heard about the TB vaccine (BCG) were also asked if they had received the vaccine in the past. Results show that about 66% had been vaccinated, while 15.3% of them did not know if they were vaccinated before.

Table 7: Laboratory tests necessary for TB diagnosis from TB patients' perspectives

Laboratory tests necessary for TB diagnosis	N	%
Sputum examination	182	23.2
Chest X-ray	77	9.8
Sputum test and X-ray	475	60.7
Don't know	44	5.6

Table 8: Methods to be cured from TB

Methods to be cured from TB	N	%
Alternative medicine (herbs)	2	0.3
Rest in house without any medication	4	0.5
Prayer	17	2.3
Taking certain drugs from PHC	526	70.9
Directly Observed Treatment, short-course (DOTS)	188	25.3
Don't know	4	0.5

Table 9: Places TB patients should seek to receive treatment

	N	%
TB center	362	48.7
Private clinics	32	4.3
Hospitals	345	46.4
At home	3	0.4
Don't need treatment	0	0.0

Figure 36: Recommended period for TB patients to take TB medicine

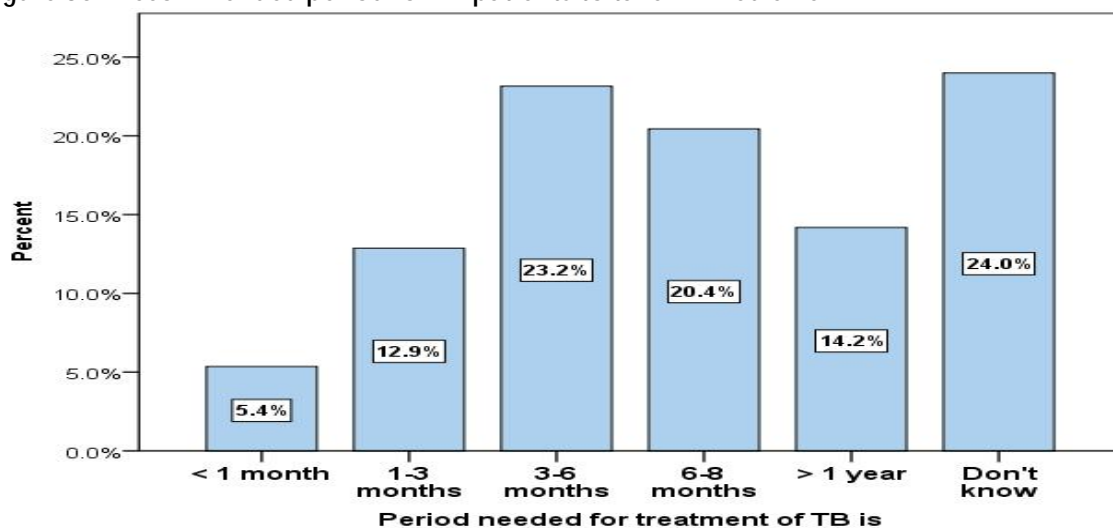
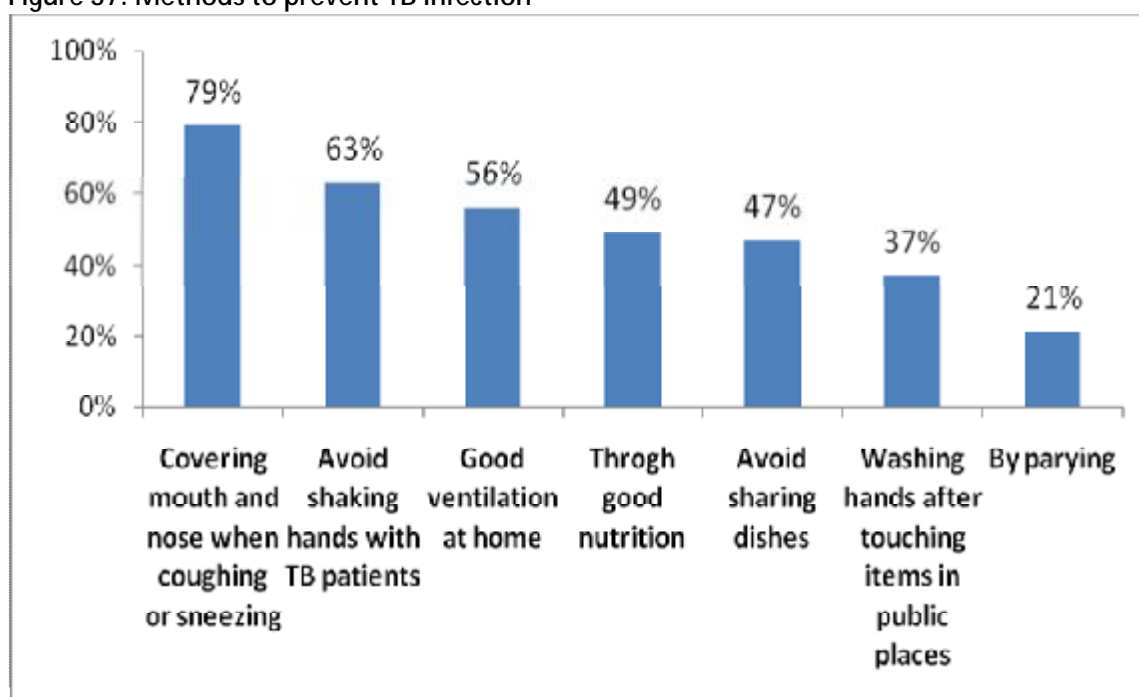


Table 10: TB patients' perception regarding TB transmission modes

	Number	%
Droplet infection through sneezing, coughing and shouting	495	63.9
Ingestion of unsterilized milk	9	1.2
1 and 2	143	18.5
Eating with TB patients	68	8.8
Shaking hands with TB patients	11	1.4
Don't know	46	5.9

Figure 37: Methods to prevent TB infection

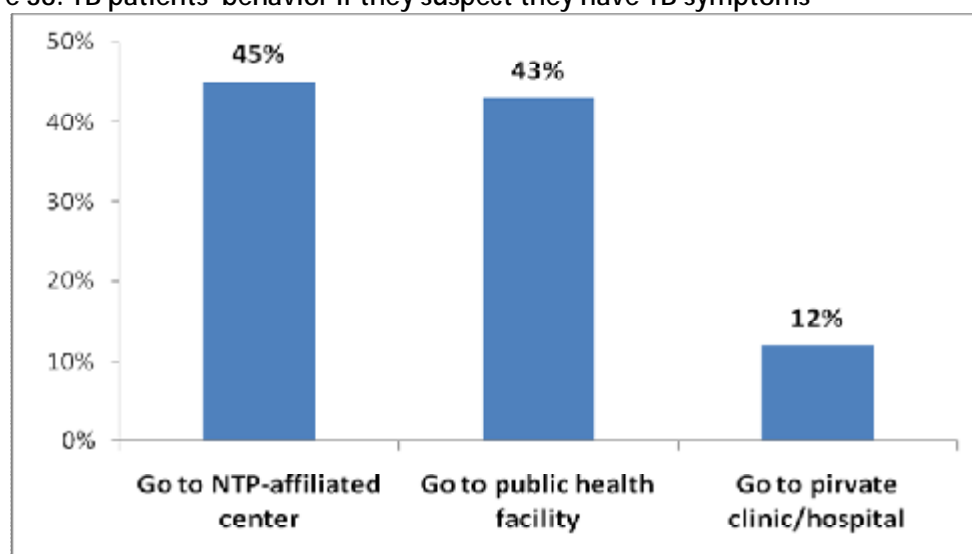


Note: total does not equal 100%; more than one answer is possible.

### III. TB Attitudes and Treatment-seeking Behaviors

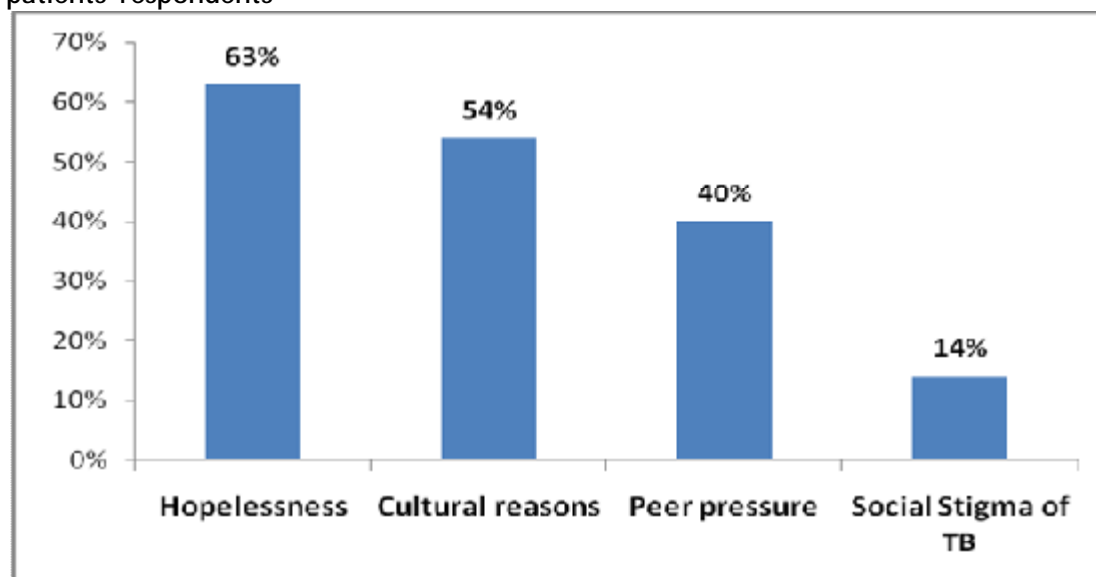
Almost all respondents will seek care from health facilities if they suspect they have TB symptoms. Around 45% will seek care from the NTP center and 43% will go to PHC to seek TB care (Figure 38).

Figure 38: TB patients' behavior if they suspect they have TB symptoms



Around 47% and 31% of respondents will seek care from health centers when they suffer from symptoms like TB symptoms for 2 to 3 weeks and when they realize that symptoms they suffer from may be related to TB symptoms, respectively. However, 21% will go to health centers when home treatment does not work. Participants were asked why some TB patients stop taking their medications. Roughly 63% of respondents (TB patients) reported 'hopelessness' as the main reason and 54% of them attribute it to cultural reasons (Figure 39).

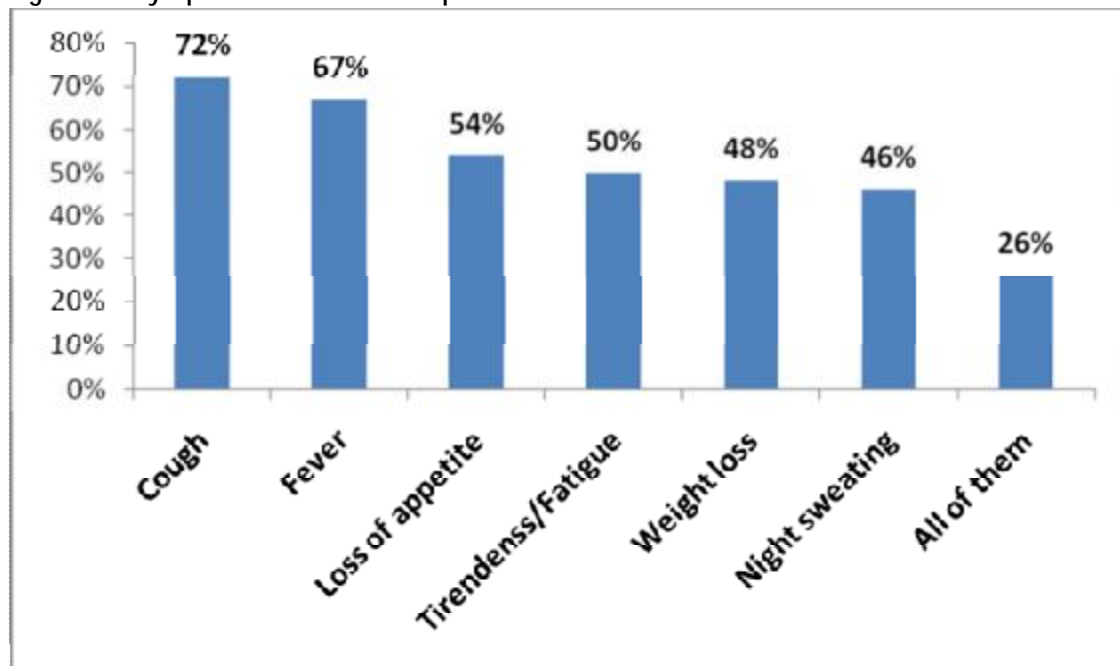
Figure 39: Reasons why TB patients stop taking TB medication as mentioned by TB patients' respondents



Note: total does not equal 100%; more than one answer is possible.

About 72% of TB patients stated that cough is what motivated them to seek health care, while 67% mentioned fever. Around 26% of TB patients reported that they sought health care when they suffered from all TB symptoms (Figure 40).

Figure 40: Symptoms that drove TB patients to seek health care

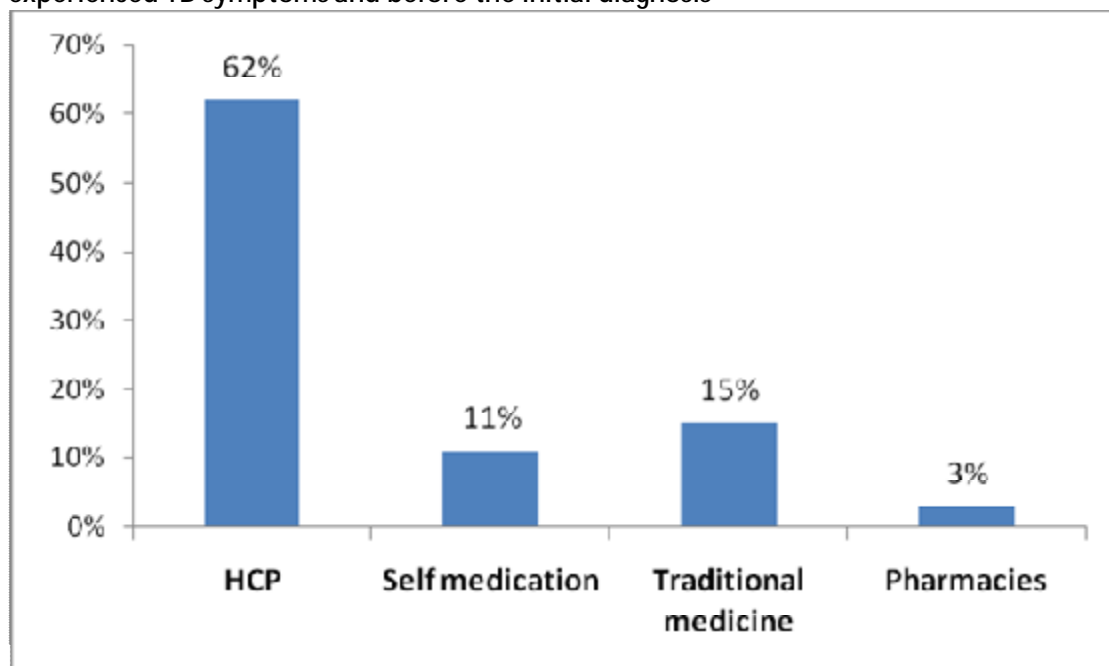


Note: total does not equal 100%; more than one answer is possible.

All participants were asked about the first practices in their families if a family member becomes infected with TB. Approximately 91% will seek care from health facilities (62.9%, 15% and 12.6 of them stated that they will go to health centers, private hospitals/clinics and public hospitals, respectively).

TB patients were asked about their first treatment-seeking action they resorted to when they experienced TB symptoms (before the initial diagnosis). Around 62% of them went to primary health care centers, while 25% resorted to traditional medicine (Figure 41).

Figure 41: The first treatment-seeking action TB patients resorted to when they experienced TB symptoms and before the initial diagnosis



In general, TB patients are treated properly in their community (Table 17). Another question was asked for respondents to identify their perception regarding the way the community deals with TB patients in general. Around 61% of them mentioned that most people deal with TB patients in a friendly manner, but at the same time avoid them. However, 12.3% said that most people isolate TB patients, and 26.8% said that community members deal with TB patients as any other healthy person. 71% of TB patients think that TB patients should be isolated while 87% of respondents reported that people do not avoid persons who have been cured from TB. And 88% of them mentioned that TB patients can live a promising future as any healthy person.

Table 11: How community dealt with TB patients from TP patients' perception

Response	N	%
The community totally isolated me	89	11.6
Most of the community members isolated me	144	18.8
Never isolated	180	23.5
All the community members dealt with me normally	282	36.8
Most of the community members supported me	72	9.4

Around 97% of the TB patients (respondents) said that they don't receive financial support from any organization, roughly 51% of those who reported receiving financial support, reported it is from community members, and 11% from NGOs.

Only 37.7% of participants in this survey declared that HIV/AIDS patients should worry about getting infected with TB, because they think that HIV/AIDS patients have a likelihood to get infected with TB (as reported by 81% of them). Noteworthy, around 54% of them don't know if HIV/AIDS patients should worry about getting infected with TB.

#### IV. TB Social Stigma

Results show that approximately 56% of TB patients agree that TB affects relations with others, 55% declared that they feel ashamed for having TB, 44% prefer to live in isolation after TB diagnosis, 69% agreed that TB affects work performance, 63% agree that TB affects marital relations and 58% reported that marriage chances decrease after TB diagnosis (Table 18).



Table 12: TB Social Stigma from TB patients' perspective

Questions	Strongly agree		Agree		Average		Don't agree		Don't agree at all	
	N	%	N	%	N	%	N	%	N	%
You feel ashamed for having TB	135	17.5	285	37.0	153	19.8	150	19.5	48	6.2
Do you have to hide TB diagnosis from people?	102	13.2	264	34.2	145	18.8	223	28.9	37	4.8
Does TB affect relations with others?	96	12.5	332	43.1	164	21.3	144	18.7	35	4.5
TB medication is very costly due to the long duration of the disease	75	9.7	164	21.3	141	18.3	275	35.7	116	15.0
Do you prefer to live in isolation after TB diagnosis?	73	9.5	265	34.4	167	21.7	234	30.4	32	4.2
Does TB affect TB patients' performance at work?	151	19.6	379	49.2	148	19.2	73	9.5	19	2.5
Does TB affect marital relations?	105	13.7	299	38.9	156	20.3	178	23.1	31	4.0
Does TB affect family responsibilities?	103	13.4	332	43.1	151	19.6	157	20.4	27	3.5
Do you think that marriage chances decrease due to TB diagnosis?	123	16.0	322	41.8	180	23.4	125	16.2	20	2.6
Does TB affect family relations?	66	8.6	271	35.2	164	21.3	231	30.0	38	4.9

## V. Gender

Participants were asked if TB incidence differs by gender if women go alone to health care facilities, and whether men accompany their wives to health care facilities. Approximately 47% agree that women go alone to health care facilities and 68% agreed that men accompany their wives to health care facilities (Table 19). Around 50% of participants reported that men have more chances to get TB.

Table 13: TB patients' perception regarding gender and TB

Questions	Strongly agree		Agree		Average		Don't agree		Don't agree at all	
	N	%	N	%	N	%	N	%	N	%
Women usually go to health care facilities alone	62	8.1	299	38.9	118	15.3	247	32.1	43	5.6
Men usually accompany their wives to visit health care facilities	128	16.6	393	51.0	167	21.7	76	9.9	6	.8
Men are more likely to get TB than women	103	13.4	283	36.7	170	22.0	169	21.9	46	6.0

Around 86% of participants mentioned that men will support their wives to be cured if she gets TB (Figure 42). Participants' perception was identified also for future son and daughter-in-law. Approximately 32% and 42% of participants will support future daughter or son-in-law if he or she is a TB patient to become a member of their family after his/her is cured, respectively (Figures 43 and 44).

Figure 42:7 Husbands' attitudes if wives get TB as declared by TB patients

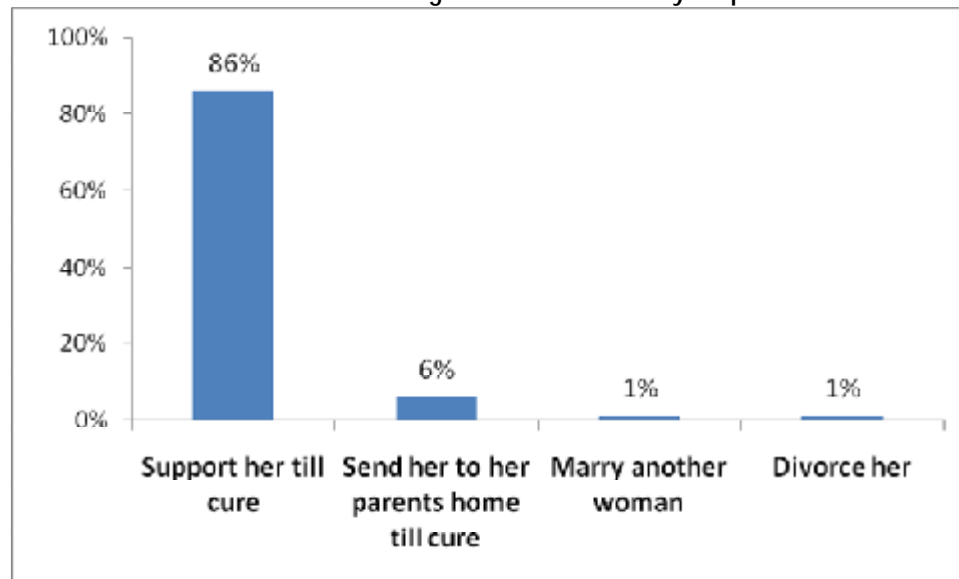


Figure 43: TB patients' attitudes towards their future daughter-in-law if she is a TB patient

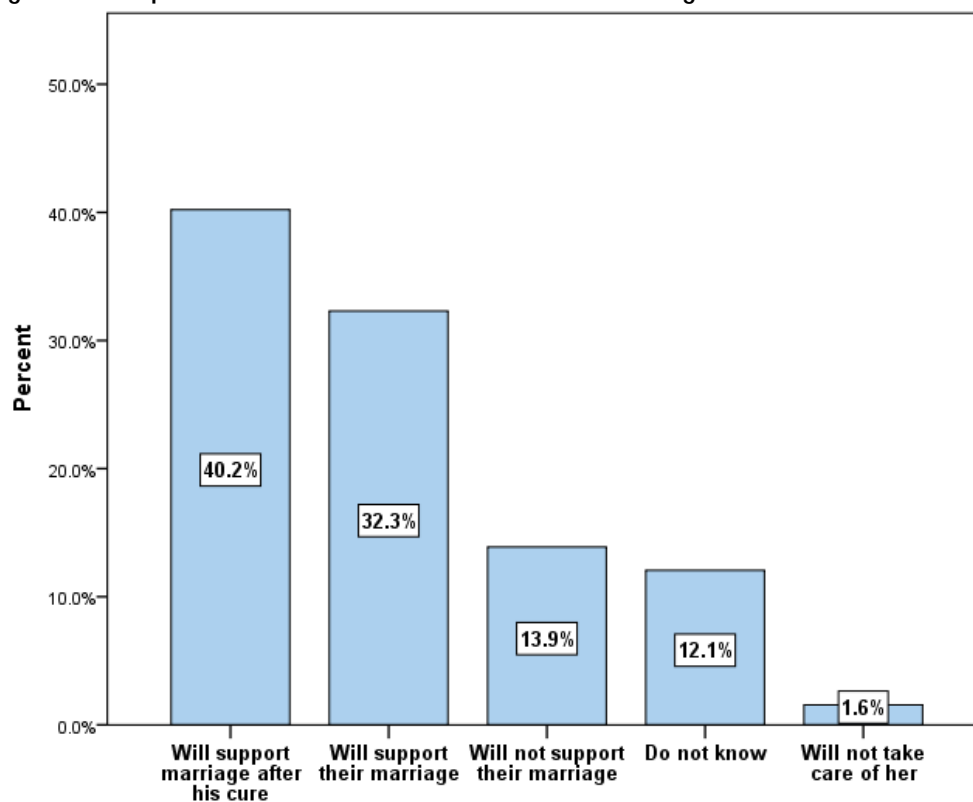
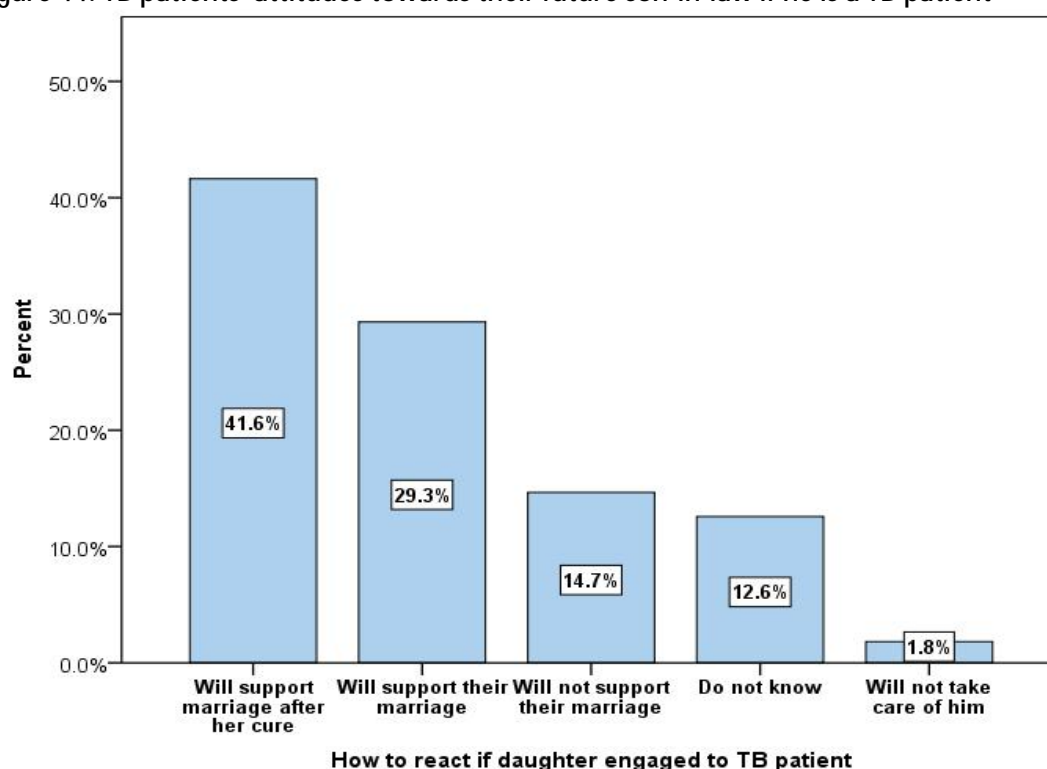


Figure 44: TB patients' attitudes towards their future son-in-law if he is a TB patient

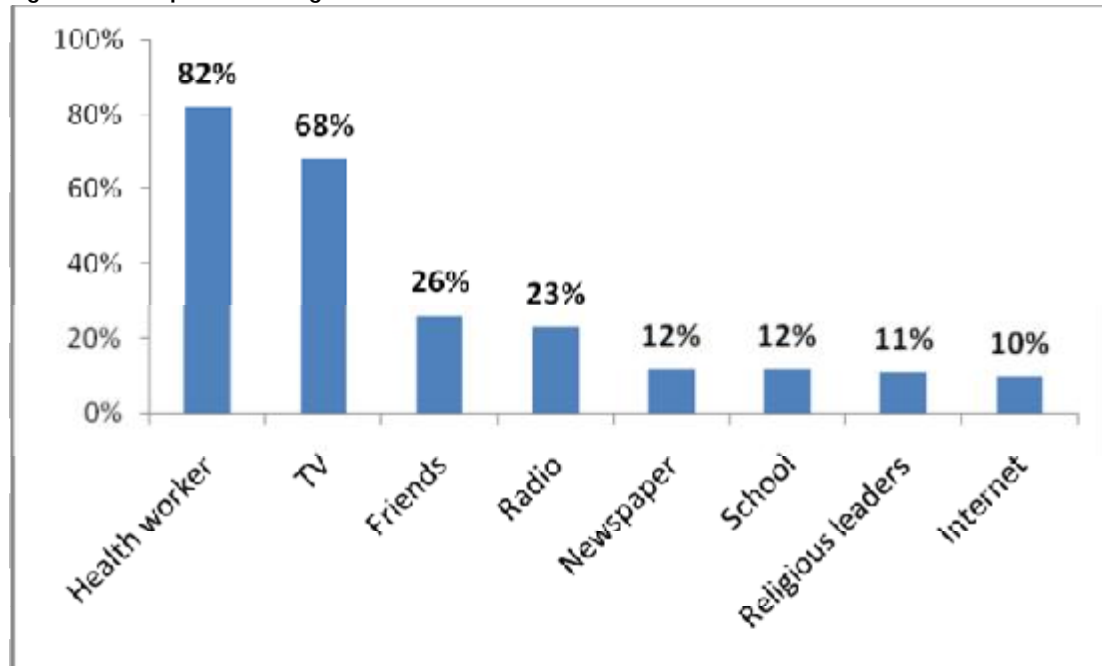


## VI. TB Awareness and Source of Information

Most participants (82%) mentioned that they usually obtain information about TB from health workers and 68% of them from TV. A little percentage (10%) stated Internet as their usual source of information about TB (figure 45). Approximately 42% of participants stated that they received IEC messages about TB during the last six months. The majority of those who received IEC messages (99%) mentioned that the IEC message was clearly understood. Of those who said they received information during the last six months, around 88%, 51% and 24% of them received information from health workers, TV and friends, respectively (Figure 46).

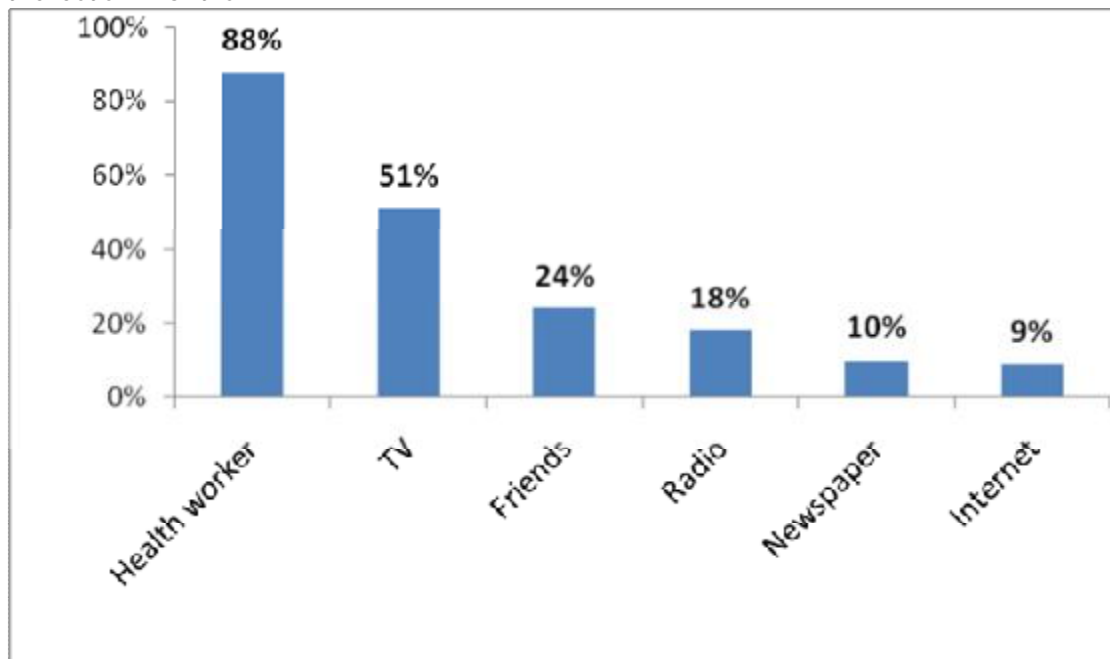
All participants were asked if they feel well-informed about TB, if they want to know more about TB and what source of information they prefer to receive information from. Approximately half of the participants stated they feel well-informed about TB. From all participants, 90% mentioned they would like to be informed more about TB and of those; 50% prefer TV to be the source of information and only 45% prefer health workers (Figure 47).

Figure 45: TB patients' regular source of information about TB



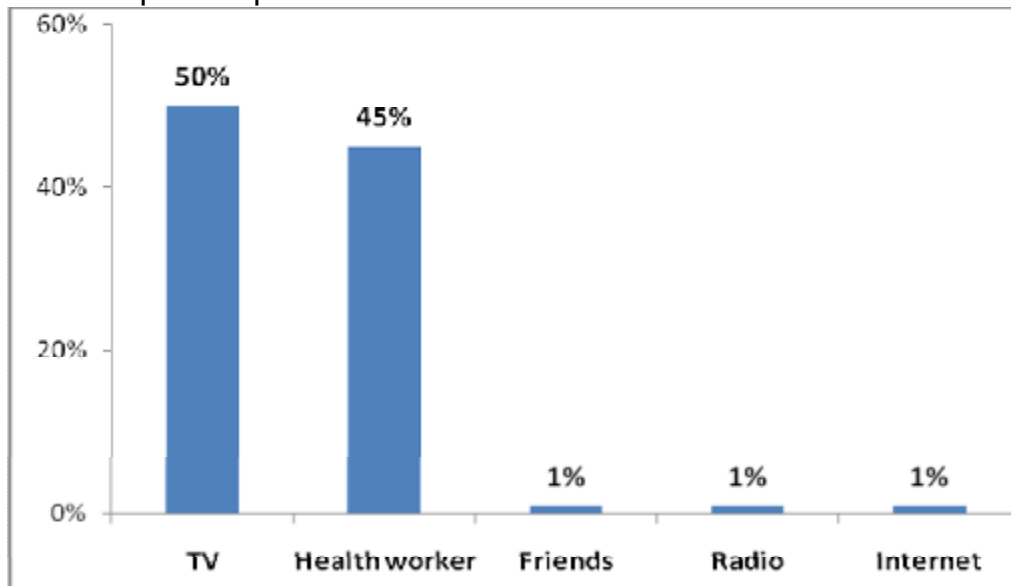
Note: total not equal to 100%; participants can choose more than one answer.

Figure 46: Sources of information TB patients' received information from about TB during the last six months



Note: total not equal to 100%; participants can choose more than one answer.

Figure 47: TB patients' preferred sources of information about TB



#### VII. TB patients' satisfaction with provided health care

The final part of this survey is related to TB patients' satisfaction with health services they receive. All participants were first asked if they receive free medical care. Almost all of them (99.5%) reported that they receive free medical care. TB patients were asked if they regretted receiving medical care and if this medical care made their health condition worse. Analysis shows that around 96% do not regret receiving medical attention. In general, almost 98% of TB patients are satisfied with health care services provided for them. About 66% of TB patients are very satisfied with health care services provided for them (figure 48). Around 63% and 20% of them attribute their satisfaction to the good quality of services provided and to the positive and supportive attitude of physicians towards them, respectively (Table 20). A little percentage of participants (2%, a total of 13 participants) is not satisfied with the provided services for reasons (table 21).

Figure 48: TB patients' satisfaction with provided services

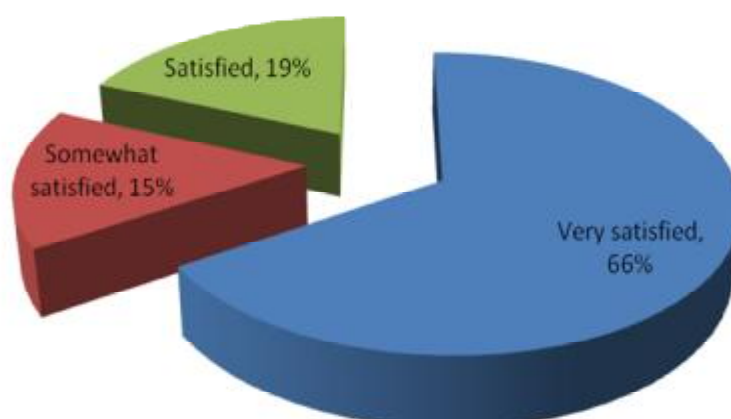


Table 20: Reasons stated by TB patients regarding their satisfaction with services provided for them

Reasons of satisfaction	N	%
The provided services are good	472	63.3
The physicians have positive and supportive attitudes towards me	146	19.6
The waiting time in the health facility is short	32	4.3
The health facility is well-prepared	34	4.6
The services are always available	59	7.9

Table 21: Reasons stated by TB patients regarding their dissatisfaction with services provided for them

Reason	N	%
The provided services are poor	7	46.7
The waiting time in the health facility is too lengthy	3	20.0
The health facility is poorly prepared	4	26.7

## VIII. Scores:

### 1- Knowledge score:

In general, it is defected (average score is 26.8 out of a total score of 45) (table 22, figure 49), i.e. patients carries 59.6% of inquired knowledge about TB and TB control. Knowledge score varies in little extents with education, occupation, residence and markedly increase with incomes higher than million ( $P < 0.05$ , table 23), while age group, sex and distance to health facility showed no significant influence on mean knowledge score ( $P > 0.05$ , table 23).

### 2- Negative attitudes score:

It was found that average negative attitude score was 3.5 out of a total score of nine (table 22, figure 50) illustrating a considerable prevalence of negative attitudes among TB patients. This score slightly increases in urban settings ( $P < 0.05$ , table 23). Generally other factors did not significantly influence attitudes score ( $P > 0.05$ , table 23).

### 3- Correct Practices score:

Average score for correct practices was 2.2 out of a total score of five (table 22, figure 51), i.e. TB patients practice only 44% of verified correct practices. Age and urban settings significantly slightly increased practice score ( $P < 0.05$ , table 23). Other factors showed no significant impact on practice score ( $P > 0.05$ , table 23).

### 4- Wrong beliefs:

Average score for wrong beliefs was high (4.5 out of a total score of six) (table 22, figure 52), i.e. patients carry 75% of inquired wrong beliefs. Minor increments in this score observed in presence of low education level and urban settings ( $P < 0.05$ , table 23).

Table 22: Descriptive statistics for patients' scores

Patients' Scores	N	Minimum	Maximum	Mean	SD
Knowledge Score (out of 45)	783	0	43	26.8	6.5
Negative Attitudes Score (out of 9)	783	0	9	3.5	1.7
Practice Score (out of 5)	783	0	5	2.2	1.1
Wrong Beliefs Score (out of 6)	783	0	6	4.5	1.9



Table 23: Knowledge, attitude, practice and belief scores of sampled TB patients.

Variables	N	Score <sup>A</sup>							
		Knowledge		Attitude <sup>B</sup>		Practice		Belief <sup>C</sup>	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD
Age Group									
≤ 14	3	33.3	2.1	3.0	1.0	1.3	1.2	4.7	1.5
15-25	202	27.0	6.4	3.4	1.7	2.0	1.0	4.6	1.8
26-35	195	27.5	6.4	3.4	1.5	2.2	1.1	4.7	1.7
36-45	129	27.0	6.6	3.7	1.8	2.1	1.1	4.3	1.9
46-55	96	26.3	7.5	3.5	1.7	2.2	1.0	4.8	1.8
56-65	99	25.8	6.1	3.5	1.8	2.5	1.1	4.3	2.1
66-75	45	25.4	6.1	3.4	1.7	2.2	1.0	4.1	2.1
≥ 76	12	25.1	5.3	3.3	1.1	2.3	5	4.5	2.0
P value		0.115		0.790		0.003		0.235	
Sex									
Male	447	26.9	6.5	3.5	1.7	2.2	1.1	4.6	1.8
Female	335	26.8	6.4	3.4	1.6	2.1	1.0	4.5	1.9
P value		0.916		0.164		0.344		0.430	
Education									
Illiterate	172	26.0	6.5	3.4	1.7	2.2	1.0	4.4	1.9
Read & write	68	25.3	6.0	4.0	1.7	2.2	1.1	5.0	1.6
Primary	329	27.5	5.9	3.4	1.7	2.2	1.1	4.6	1.8
Intermediate/secondary	149	27.7	6.4	3.5	1.6	2.0	1.0	4.5	1.9
Higher than secondary	46	27.9	5.6	3.1	1.7	2.1	0.9	4.3	1.7
Others	13	25.8	6.5	3.5	1.2	2.0	1.0	5.6	0.7
P value		0.008		0.066		0.412		0.038	
Occupation									
Employed	88	27.6	6.1	2.2	1.0	4.6	1.3	4.3	1.8
Skilled worker	38	28.7	6.7	2.5	1.0	4.7	1.4	4.7	1.6
Unskilled worker	58	28.1	6.1	2.0	1.2	4.4	1.4	5.2	1.4
Professional	81	25.3	5.8	2.3	0.9	4.6	1.3	4.4	1.9
Retired	38	27.5	5.1	2.2	0.9	4.3	1.5	4.5	1.9
Free work	6	31.8	8.4	2.0	1.3	4.5	1.4	4.7	2.0
Student	54	28.5	6.0	2.0	0.9	4.2	1.3	4.7	1.6
Unemployed	141	26.3	6.0	2.2	1.0	4.5	1.6	4.7	1.8
Housewife	260	26.8	6.4	2.1	1.1	4.3	1.5	4.4	1.9
Others	13	24.7	5.9	2.5	1.8	4.9	2.1	4.5	2.1
P value		0.006		0.241		0.493		0.200	
Monthly income (ID)									
< 250,000	376	27.1	6.6	3.6	1.6	2.2	1.0	4.7	1.8
250,000 - Million	231	26.8	5.9	3.5	1.7	2.3	1.1	4.5	1.9
> Million	10	31.9	7.3	2.9	1.8	2.0	1.2	3.8	1.5
P value		0.046		0.417		0.436		0.092	

<sup>A</sup> Maximum possible scores are 45 for knowledge, 9 for negative attitude, 5 for practice, and 6 for negative Beliefs.

<sup>B</sup> Negative attitudes

<sup>C</sup> Wrong beliefs

Table 23: Continue.

		Score <sup>A</sup>							
		Knowledge		Attitude <sup>B</sup>		Practice		Belief <sup>C</sup>	
Variables	N	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Area of Residence									
Urban	593	27.3	6.2	3.5	1.6	2.1	1.1	4.7	1.8
Rural	158	25.9	6.1	3.2	1.7	2.3	1.1	4.2	2.0
Semi-urban	26	25.1	5.1	3.2	1.5	2.5	0.8	4.5	1.7
P value		0.012		0.029		0.048		0.015	
Distance to nearest health facility									
≤ 10 Km	718	27.1	6.1	3.5	1.7	2.2	1.1	4.6	1.8
11-20 Km	50	26.0	6.6	3.0	1.7	2.0	1.0	4.4	1.9
21-30 Km	3	28.7	7.6	4.0	1.7	1.3	0.6	5.0	1.7
> 30 Km	7	24.9	7.4	3.3	2.0	1.7	1.0	5.0	1.9
P value		0.491		0.206		0.225		0.854	

<sup>A</sup> Maximum possible scores are 45 for knowledge, 9 for negative attitude, 5 for practice, and 6 for negative Beliefs.

<sup>B</sup> Negative attitudes

<sup>C</sup> Wrong beliefs

Figure 49: TB patients' knowledge score

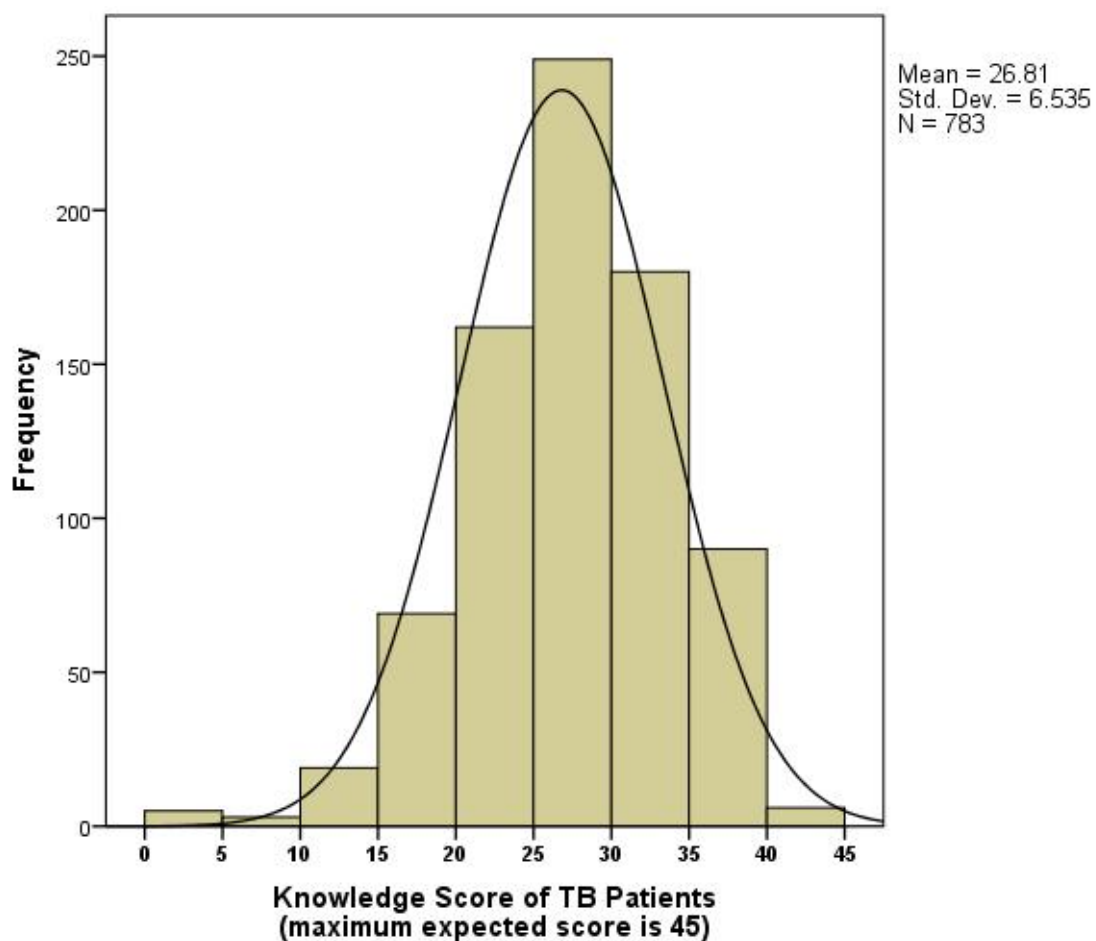


Figure 50: TB patients' negative attitudes score

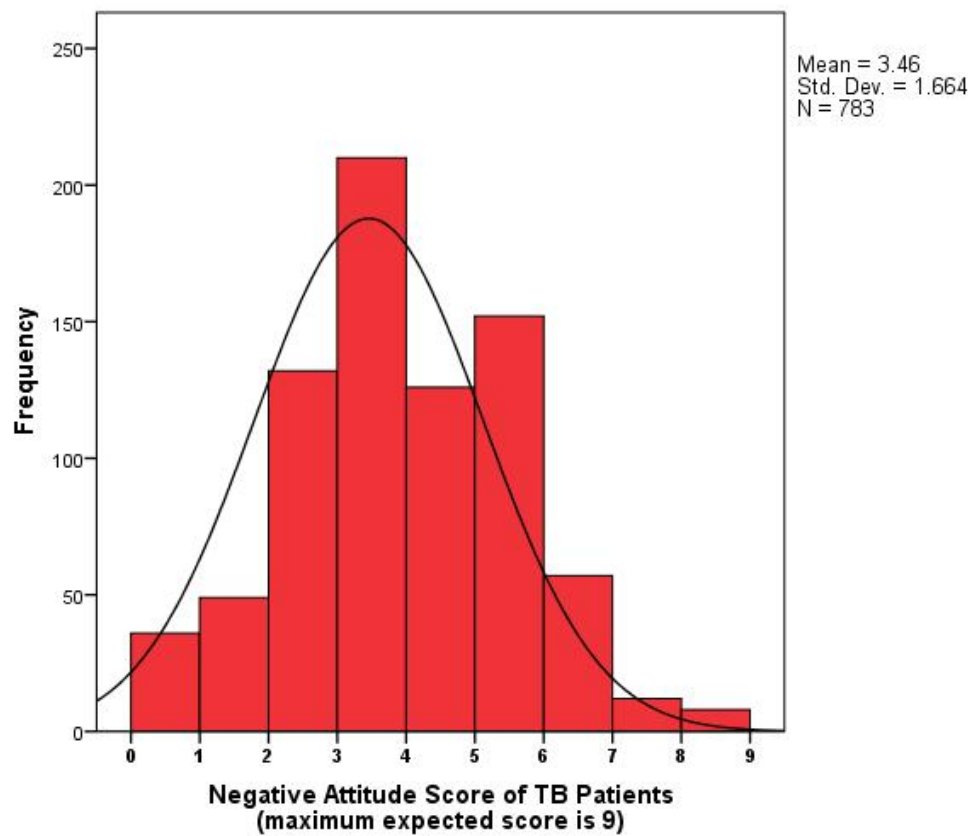


Figure 51: TB patients' practice score

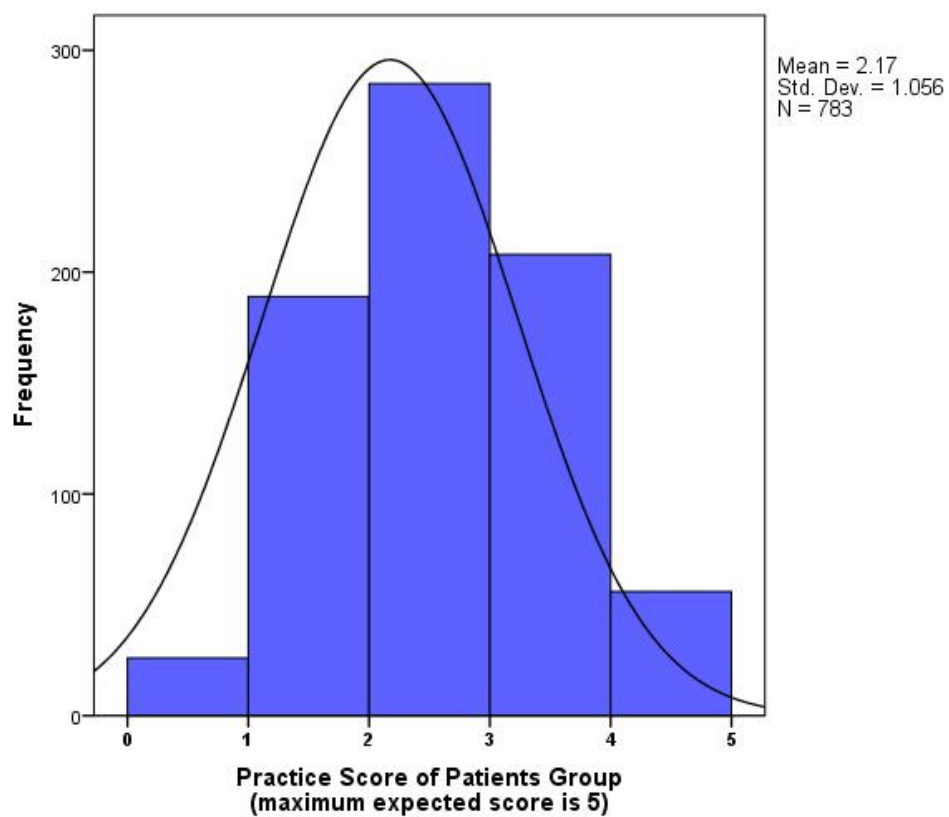
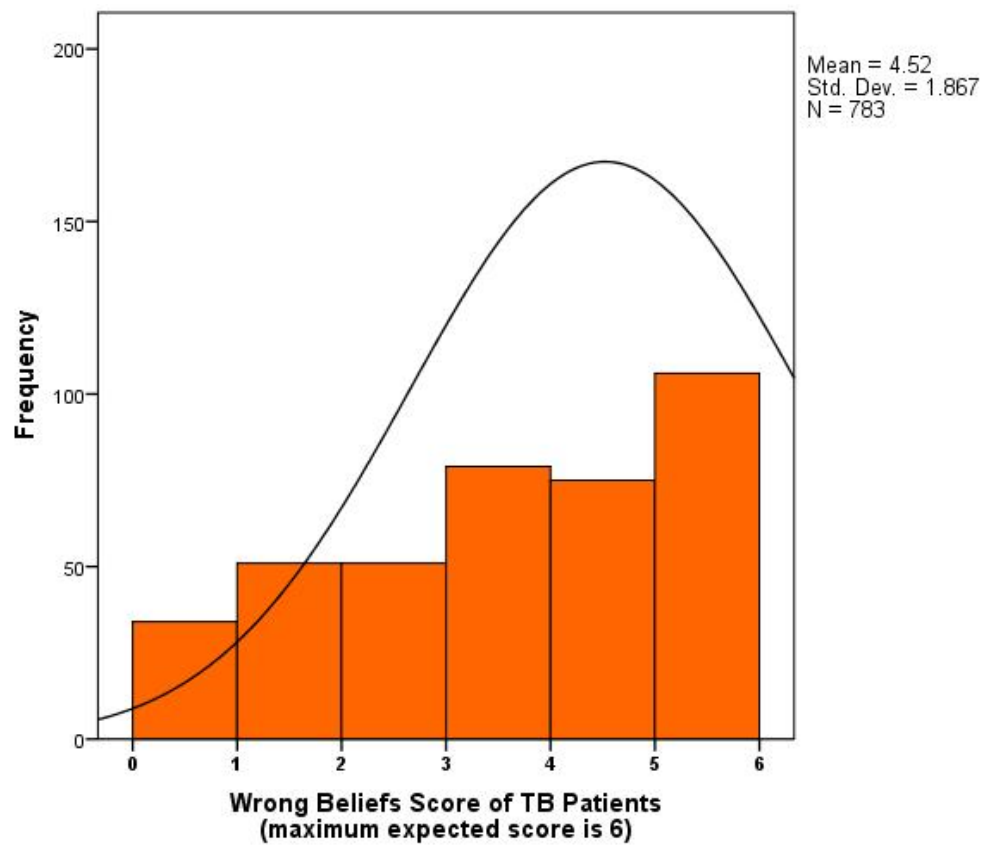


Figure 52: TB patients' wrong beliefs score



### Third: Health Care Providers (Physicians)

Respondent physicians (HCPs) were 866 physicians who were recruited in varying proportions from 15 governorates (around one third from Baghdad) (figure 53). Males contributed to 62% of the sample (figure 54). Specialties of respondents were: General Practitioners (40%), Pulmonologists (1%), Gynecologists (9%), Internists (8%), Pediatricians (8%), Surgeons (5%), Orthopedics (3%) and other specialties (26%) (figure 55).

Figure 53: Physicians' distribution by governorates

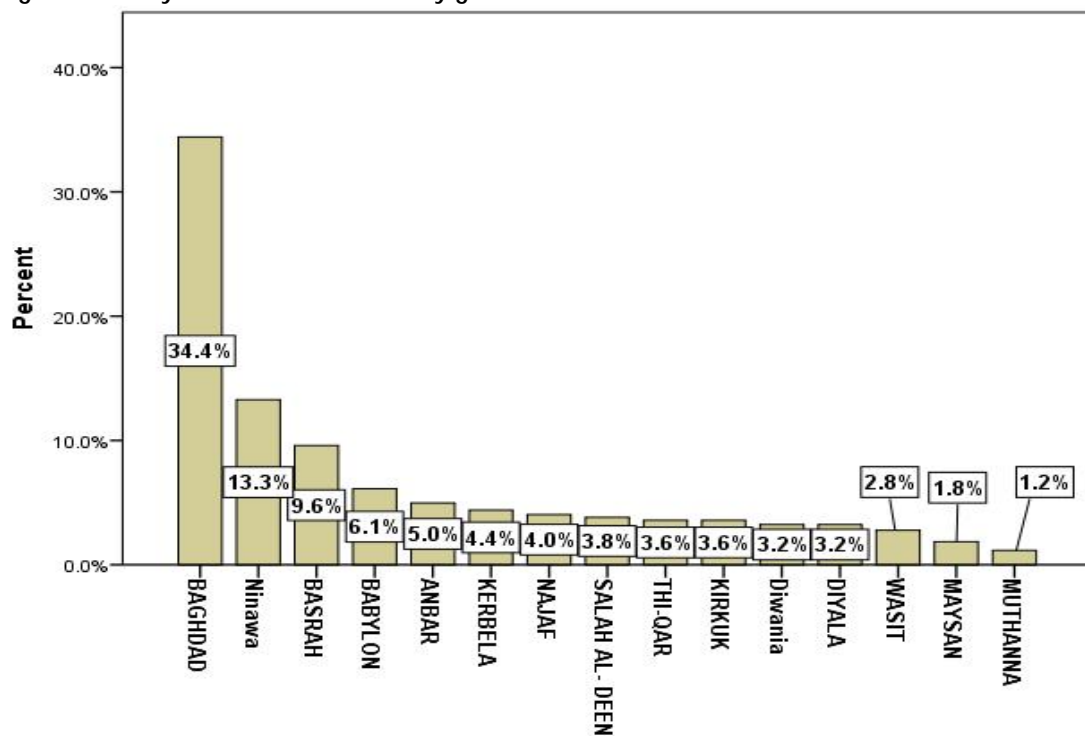
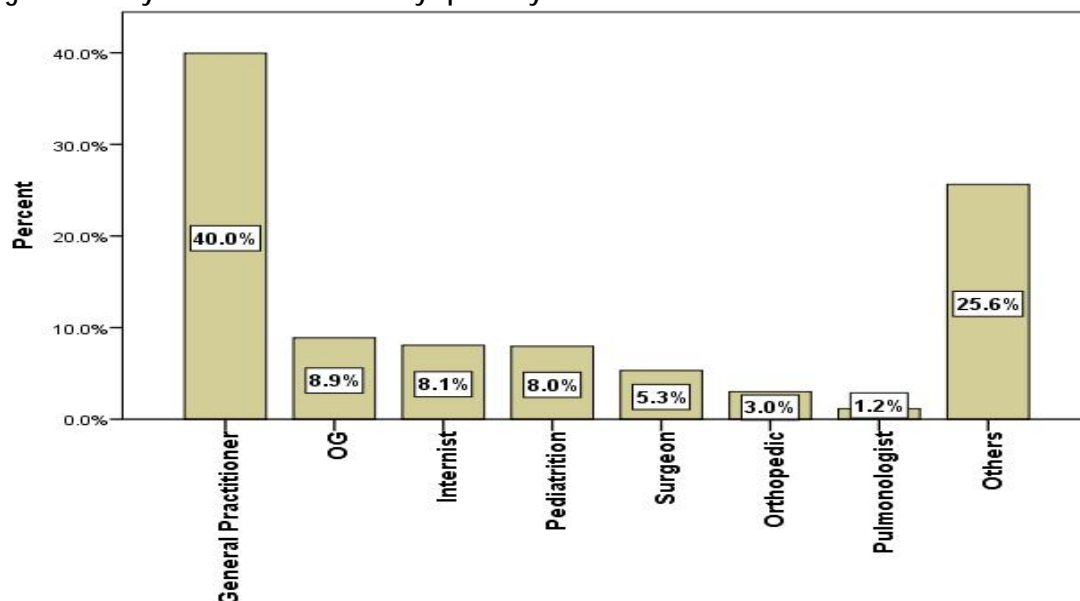


Figure 8: Physicians' distribution by gender



Figure 55: Physicians' distribution by specialty



Around 46% of enrolled physicians have 1-3 years of experience while 26% of them have more than 10 years (Figure 56). Regarding sources of knowledge about TB: Approximately 72% stated the academic college preparation or training as the main source of information and knowledge about TB, 45% attended on-job training conducted by NTP and 35% participated in medical conferences and seminars. Noteworthy, 32% of surveyed physicians mentioned the internet as a source of TB knowledge (Figure 57). Physicians were asked about the number of training courses (other than academic preparation) they attended about TB, around 62% of them didn't attend any training; however, 28% attended one to two courses (Figure 58).

Figure 56: Physicians' distribution by years of experience

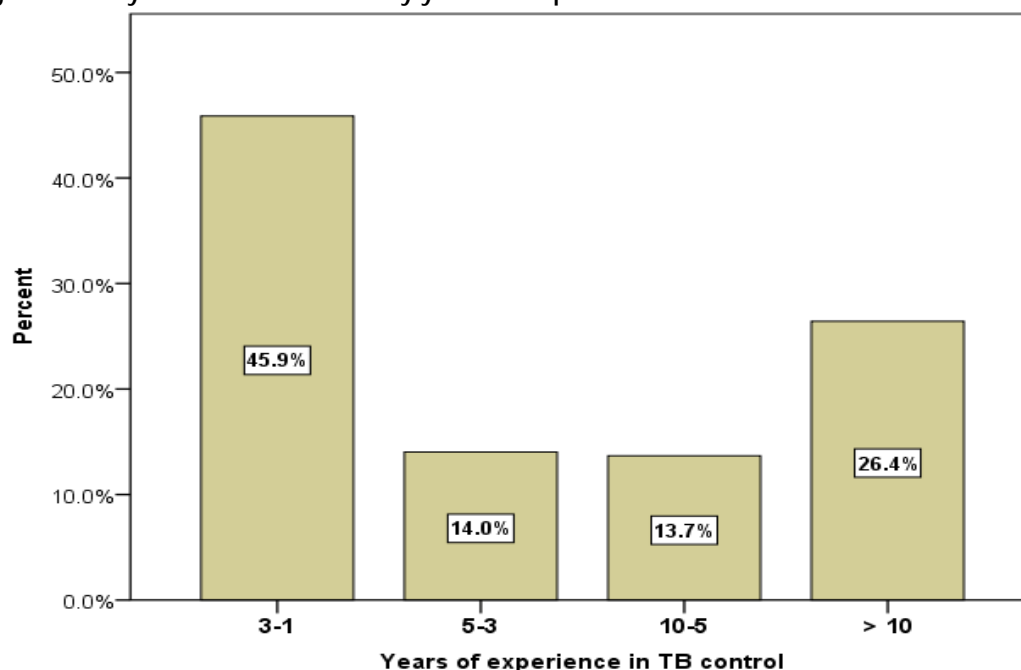
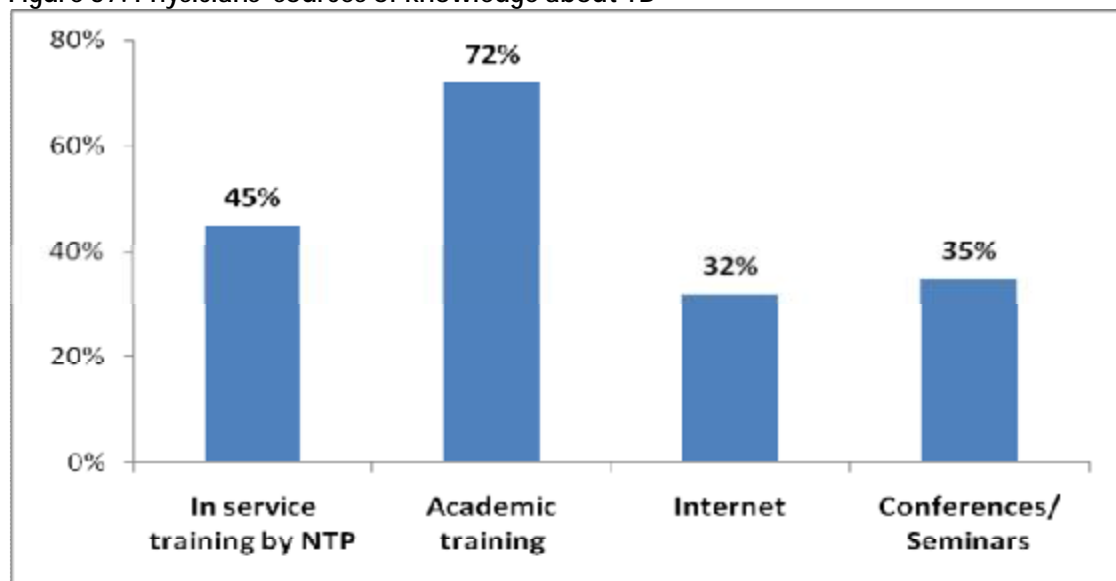
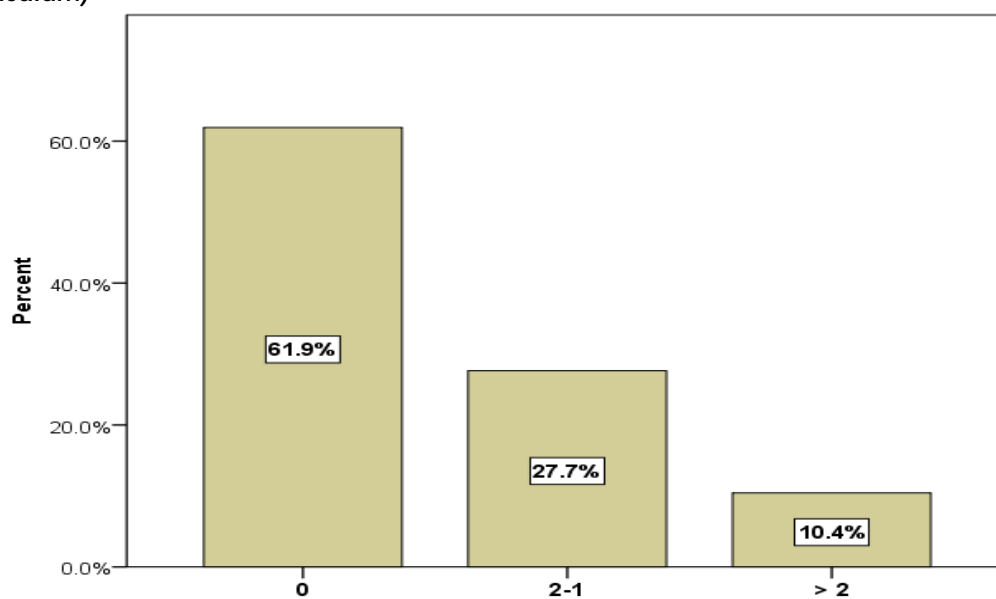


Figure 57: Physicians' sources of knowledge about TB



Note: total not equal to 100%; participants can choose more than one answer.

Figure 58: Number of training courses physicians attended about TB (other than academic curriculum)



Around 70% of health providers stated that TB is a serious health problem in Iraq, while 10% of them reported that TB is not a major problem in Iraq (Figure 59). Around 86% of health providers perceive TB as a public health emergency in Iraq. Worth mentioning, surveyed physicians declared lack of knowledge about: TB prevalence in Iraq (56%), number of MDR reported cases (63.4%) and TB mortality rate (63.5%), (Table 24). 46.3% of physicians who attended trainings by NTP recorded "didn't know" about TB prevalence in Iraq. Surgeons, among physicians, recorded the highest percentage (73%) of lack of knowledge regarding TB prevalence in Iraq, followed by pediatricians (68%) and gynecologists (64%), while the lowest percentage was pulmonologists (33%) (figure 60).

Figure 59: Physicians' perception on how serious a problem is TB in Iraq

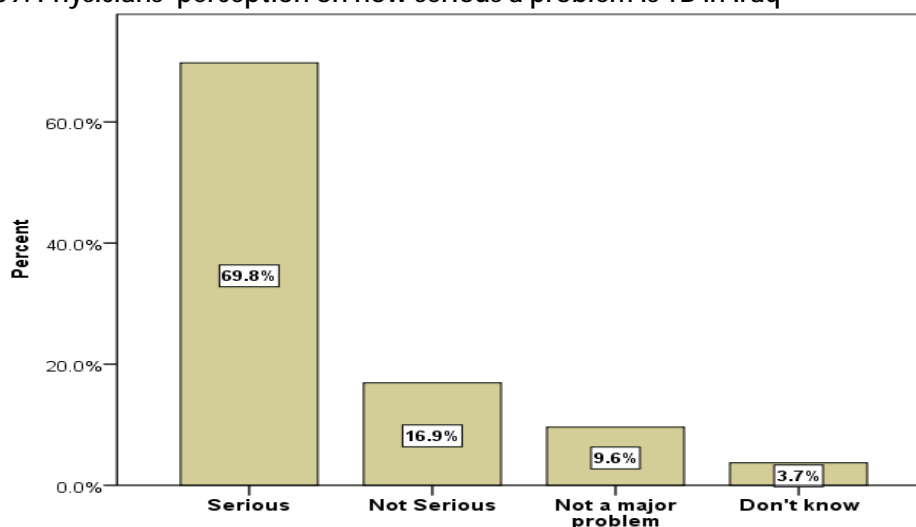
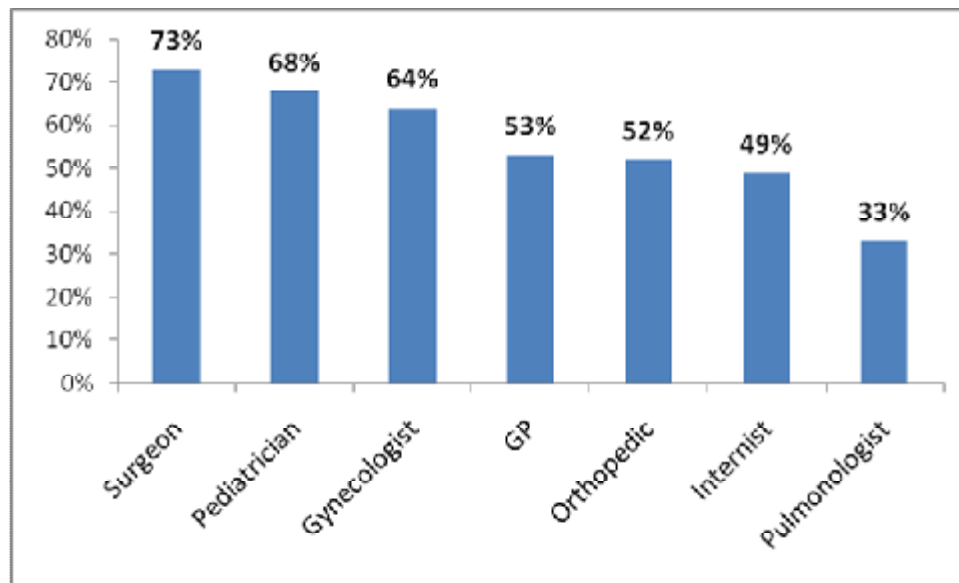


Table 14: Physicians' perception regarding some facts about TB situation in Iraq

Knowledge Question	Yes		No		Don't know	
	N	%	N	%	N	%
TB is a public health emergency in Iraq	742	85.9	100	11.6	22	2.5
The estimated prevalence of TB in Iraq is 200/100000 population	202	23.8	171	20.2	475	56.0
The most common age group affected is 15-54	697	82.4	81	9.6	68	8.0
Around 250 cases of MDR are reported every year	156	18.4	154	18.2	537	63.4
About 8000 people die of the disease every year in Iraq	129	15.2	180	21.3	537	63.5

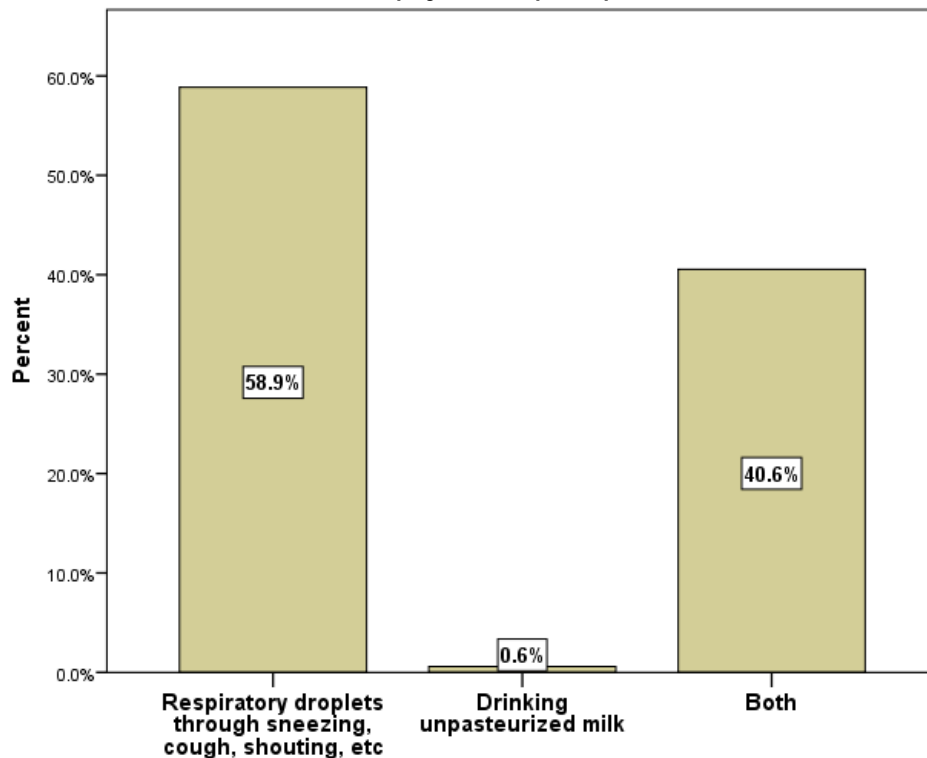


Figure 60: Percentage of physicians who don't know TB prevalence in Iraq as distributed by their specialties



Awareness of physicians about the mode of transmission of TB disease: Results show that almost all physicians are aware about the role of respiratory droplets in TB transmission (Figure 61).

Figure 61: TB transmission modes from physicians' perceptions



Regarding how to diagnosis TB; approximately 81% of physicians answered 'No' when they were asked if they should suspect all patients who have cough that they're infected with TB, around 18% of them said 'Yes' and 1.2% responded with 'don't know' to this question. Almost all surveyed physicians (99.5%) mentioned that they will suspect all persons with unexplained productive cough, which lasts two to three weeks or more, that they may have TB. Participants then were asked how they specifically diagnose TB. Around 20% of respondents said that they will depend on sputum smear examination and 2% on chest x-rays, while 52% of them stated that they depend on both sputum smear examination and chest x-rays for specific diagnosis (Figure 62). Around 66% of physicians said that 3 sputum samples are needed to diagnose TB, and 21% said 2 sputum samples are needed for TB diagnosis, while 7% of surveyed physicians stated 'don't know' (Figure 63).

Figure 62: TB diagnosis procedures as mentioned by physicians

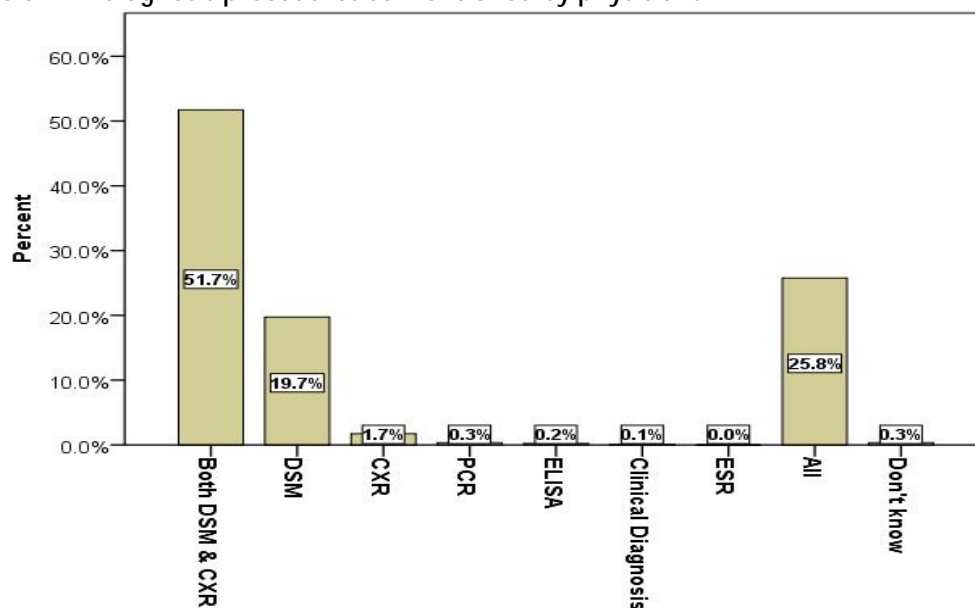
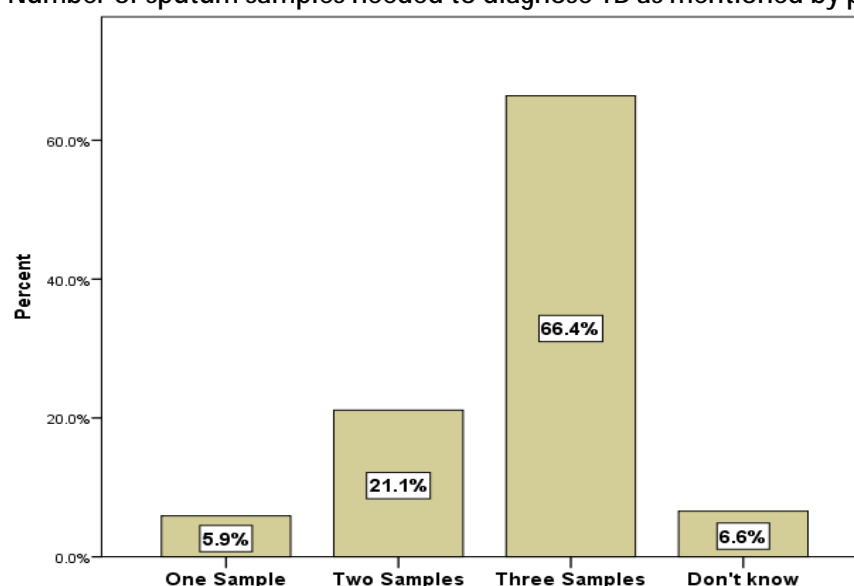


Figure 63: Number of sputum samples needed to diagnose TB as mentioned by physicians



Surveyed physicians' perception regarding TB prevention: findings show that 69.3% of respondent physicians stated that all children under five and all persons who have cough and live in the same household with smear-positive TB person should be encouraged to check for TB. It is important to mention that 38 (4.4%) of the physicians recorded 'don't know' when asked who should check for TB of those who are exposed directly to TB patients (all of them did not receive training on TB control) (Table 25).

Regarding physicians' perception of who should receive Isoniazid chemoprophylaxis, results show that 26% of surveyed physicians recommend that any child aged less than 5 years who lives in the household of a TB patient and does not have TB should receive Isoniazid as preventive therapy. It is worth mentioning that 114 (13.2%) participants stated 'don't know' when they were asked this question (Table 26).

Table 15 Persons who are in physical contact with smear-positive pulmonary TB patients should be encouraged to check TB infection from physicians' perspective

Response	N	%
All children aged less than 5 years living in the household	65	7.5
Any person living in the same household and has a cough	163	18.8
1 and 2	600	69.3
I do not know	38	4.4

Table 16: Persons who should receive Isoniazid medication as a TB prevention procedure according to physicians

Response	N	%
Any child aged less than 5 years who lives in the household of a TB patient and who does not have TB should receive Isoniazid medication as preventive therapy.	224	26.0
All children and adults who live in the household	123	14.3
1 and 2	345	40.0
Diabetes patient	13	1.5
HIV/AIDs patient	43	5.0
I do not know	114	13.2

The majority of participants agree on the aims of TB treatment. Almost all of them (99.7%) mentioned that the aims of TB treatment is to cure patients and restore quality of life and productivity, to prevent relapse of TB (98%) and to reduce TB transmission to others, (97.8%) (Table 27).

Table 17: Aims of TB treatment from physicians' perspective

Statements	Yes		No		Don't know	
	N	%	N	%	N	%
To cure the patient and restore quality of life and productivity	859	99.7	2	0.2	1	0.1
To prevent death from active TB or its late effects	836	97.5	18	2.1	3	0.3
To prevent relapse of TB	837	98.0	10	1.2	7	0.8
To reduce transmission of TB to others	838	97.8	15	1.8	4	0.5
To prevent the development and transmission of drug resistance	763	90	48	5.7	37	4.4

Not all surveyed physicians are aware of the National Tuberculosis Program in Iraq, as only around 65% of respondents reported that they are familiar with NTP (figure 64). When respondents were asked if they were familiar with the DOTS (directly observed treatment, short-course), around 65% of them response was 'Yes'. Further analysis shows that internists (81.4%) recorded the highest percentage of physicians who know about DOTS, followed by pulmonologists (80%), pediatricians (72.5%) and general practitioners (70%). In addition to that, analysis shows that around 87% of physicians who attended training courses on TB (outside academic curriculum) were more familiar with the DOTS than the ones who didn't attend TB training courses (54.4%). More analysis was run to look into gender differences, no significance was found. An additional question was asked to respondents about the most important aspect of the DOTS. Results illustrate that around 43% of providers consider the most important aspect of the DOTS is watching TB patients swallow TB medication, 33% said talking to and supporting patients, and 14% to provide medication for TB patient. It is worth mentioning that 8% of them answered with 'don't know' to the same question (Figure 65). Again, further analysis was conducted, it illustrates that 50% of providers who attended training about TB declare that the most important aspect of the DOTS is to watch patients take TB medicine. Pulmonologists recorded the highest percentage between physicians with regards to that.

Figure 64: Percentage of physicians familiar with DOTS

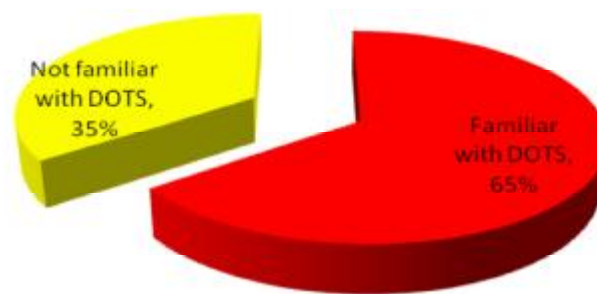
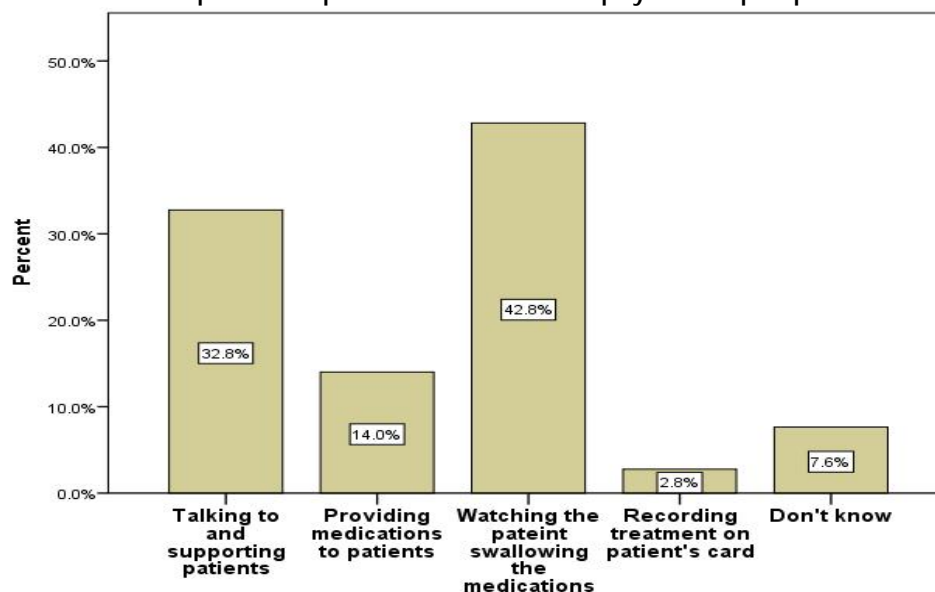
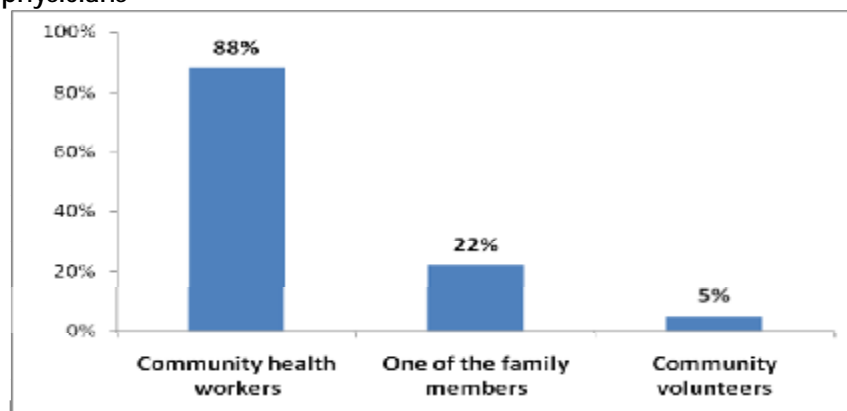


Figure 65: The most important aspect of the DOTS from physicians' perspective



A question was asked to physicians about the presence of TB patient treatment supporters in the catchment area of health centers. Around 76% of them stated the presence of the community supporters; whereas 16% responded with 'don't know' to this question. Approximately 88% of physicians reported that TB patient treatment supporters are from the community healthcare workers, 22% family members and 5% community volunteers (Figure 66).

Figure 66: TB patient treatment supporters in the catchment area of health centers as stated by physicians



Half of the surveyed physicians believe that the first follow-up sputum examination for new smear-positive pulmonary patients (category I), should be carried out during the last week of the second month of treatment (end of the initial phase of Category I treatment), but 15.9% of them said it should be during the first week of the second month of treatment (end of the initial phase of Category I treatment). However, 30% of them stated that they 'don't know' (Table 28).

Table 18: Time for a new smear-positive pulmonary patient (Category I) to get the first follow-up sputum examination

Response	N	%
During the last week of the second month of treatment (end of the initial phase of Category I treatment).	468	54.0
During the first week of the second month of treatment (end of the initial phase of Category I treatment).	138	15.9
I do not know	260	30.0

Approximately, 41.5% of the surveyed physicians stated that the first follow up sputum examination for a relapse patient (smear- positive pulmonary Category II) should be during the last week of the third month of treatment (end of the initial phase of Category II treatment). Noteworthy, around 39% of them recorded 'don't know'. When participants were asked how many times TB patients should have follow-up sputum examinations, 66.9% suppose that most cases should have 3 follow up sputum examination and 14.8% of them said TB patients should have 2 follow-up sputum examinations, while around 18% of them recorded 'don't know' (Table 29).

Table 19: Time for a relapse patient (smear-positive pulmonary TB; Category II) to get the first follow-up sputum examination

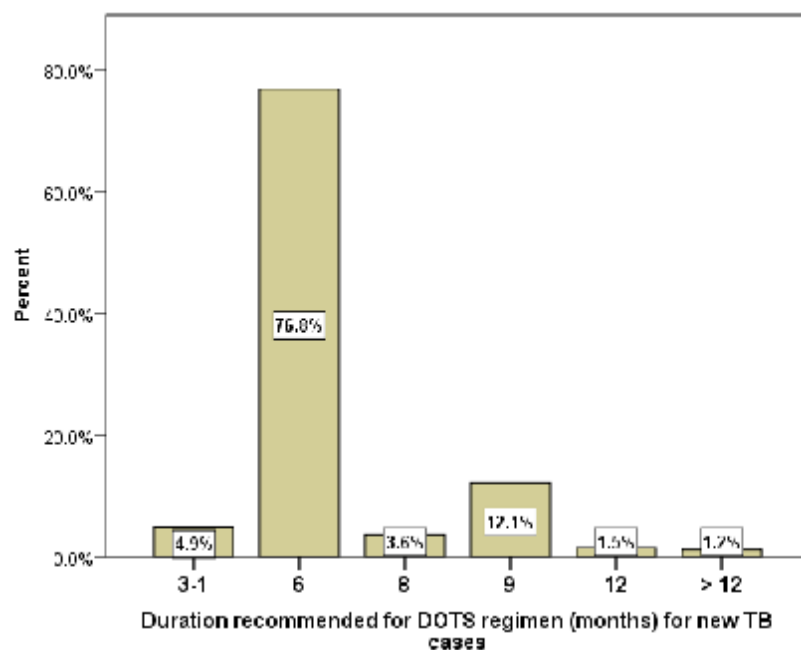
Response	N	%
During the last week of the third month of treatment (end of the initial phase of Category II treatment).	356	41.5
During the first week of the third month of treatment (end of the initial phase of Category II treatment).	171	19.9
I do not know	331	38.6

Most of the respondents (93%) select Streptomycin, Isoniazid, Rifampicin, Pyrazinamide, Ethambutol as the first line anti-TB drugs (Table 30). Approximately 77% of physicians mentioned that the recommended treatment duration for new TB cases is six months as (Figure 67). Further analysis shows that 89% of them attended training courses related to TB outside academic curriculum. The survey tried to identify the reasons behind TB patients not taking medicine regularly. Roughly 76% reported poor awareness as the main reason. , 10% attribute it to patients feeling recovery and 2% attribute it to the side effects of TB medicines.

Table 30: The first line anti-TB drugs as mentioned by physicians

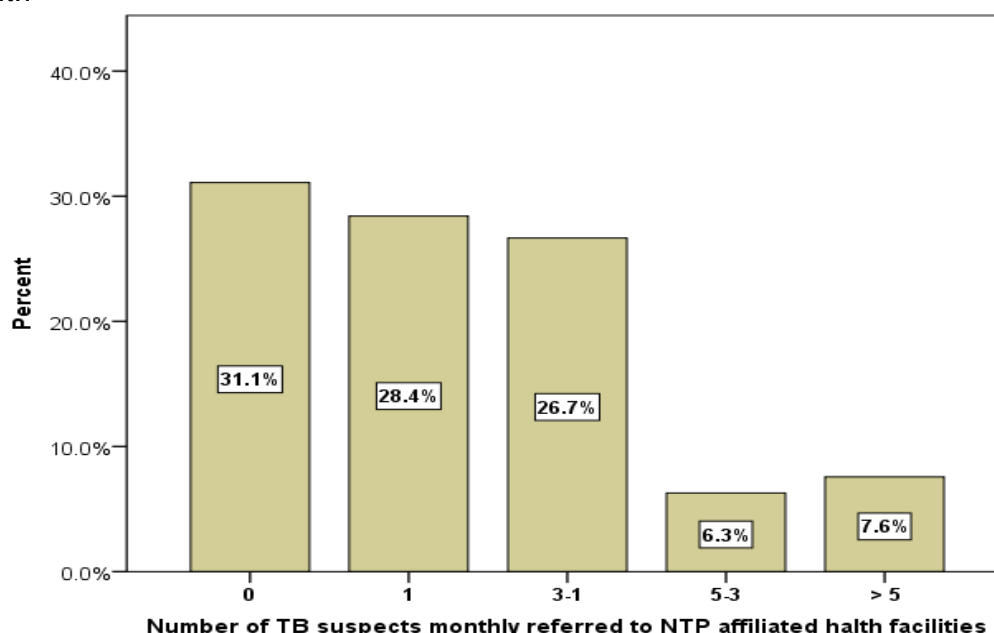
Response	N	%
Streptomycin, Isoniazid, Rifampicin, Pyrazinamide, Ethambutol	799	93.0
Streptomycin, Isoniazid, Rifampicin, Pyrazinamide, Ethambutol, Cycloserine	23	2.7
Streptomycin, Isoniazid, Rifampicin, Pyrazinamide, Ethambutol, Cycloserine, Kanamycin	12	1.4
Streptomycin, Isoniazid, Rifampicin, Pyrazinamide, Ethambutol, Para-amino Salicylic Acid (PAS)	15	1.7
Streptomycin, Isoniazid, Rifampicin, Pyrazinamide, Ethambutol, Ofloxacin	10	1.2

Figure 67: The recommended treatment duration for new TB cases as mentioned by physicians



When surveyed physicians were asked how many TB suspected cases they generally refer to specialized clinics per month, around 55% of them stated referring 1 to 3 persons (28% said 1 , 27% said 1-3, Figure 68). Although around 31% of surveyed physicians reported that they have no TB suspected cases to refer to the specialized clinics.

Figure 68: Number of suspected TB cases referred to specialized clinics by physicians per month



When physicians were asked how they feel while examining TB patients; around 38% fear infection, while 61% do not.

Almost half of the respondents (50.7%) received IEC training (Information, Education and Communication) (figure 69). Of all respondents, 58% said they deliver TB IEC messages as part of their job description. Further analysis was conducted and results show that around 78% of those who received IEC training stated they deliver TB IEC messages as part of their job description. Additionally, 38% of those who reported not receiving any IEC training stated that they deliver TB IEC messages as part of their job description. About 86% of physicians mentioned that they deliver TB IEC messages to TB patients in examination rooms (Table 31).

Figure 69: Percentage of physicians who received IEC training

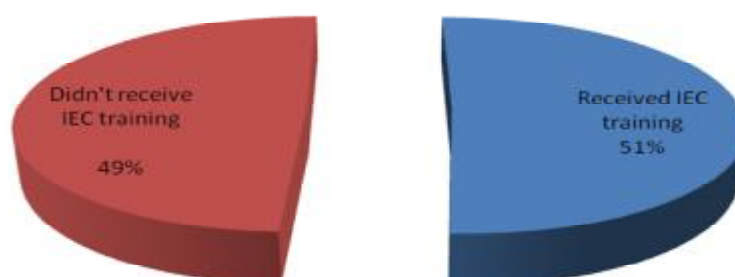
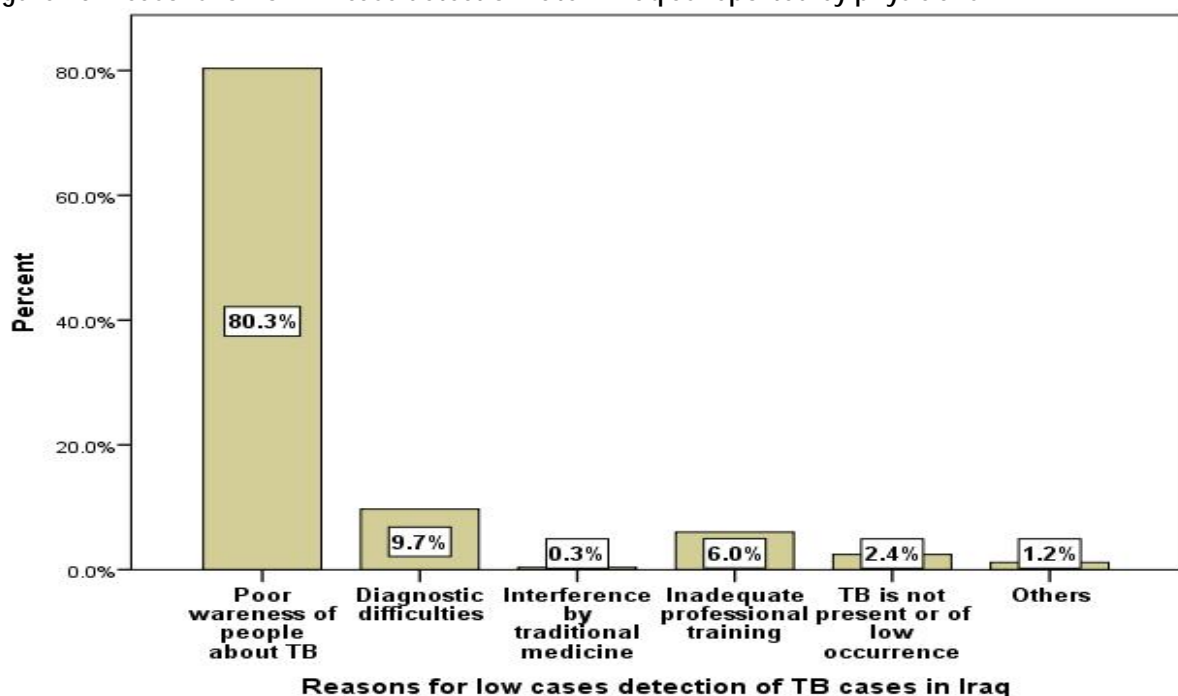


Table 31: Frequency of delivering IEC messages to TB patients

Response	N	%
When I see the patient in the examination room	441	85.8
I used to organize IEC sessions for a group of TB patients in clinics/hospitals	27	5.3
I encourage TB patients to participate in public lectures/sessions outside clinics/hospitals	28	5.4
I participate in mass media programs	5	1.0

Around 80% of providers attribute the low TB case detection rate in Iraq to the lack of population awareness, 10% said the disease is difficult to diagnose and 6% to lack of professional training. A little percentage (2%) attributes it to the absence of TB in their governorates (Figure 70).

Figure 70: Reasons for low TB case detection rate in Iraq as reported by physicians



Knowledge score of HCP:

Average score was 18.1 out of a total score of 26 (or 69.5% of inquired information about TB) (figure 71, table 32). Minute changes in score were influenced by sex, specialty, and experience in TB control (Table C)

Table 32: Knowledge score (out of 26) of sampled health care providers

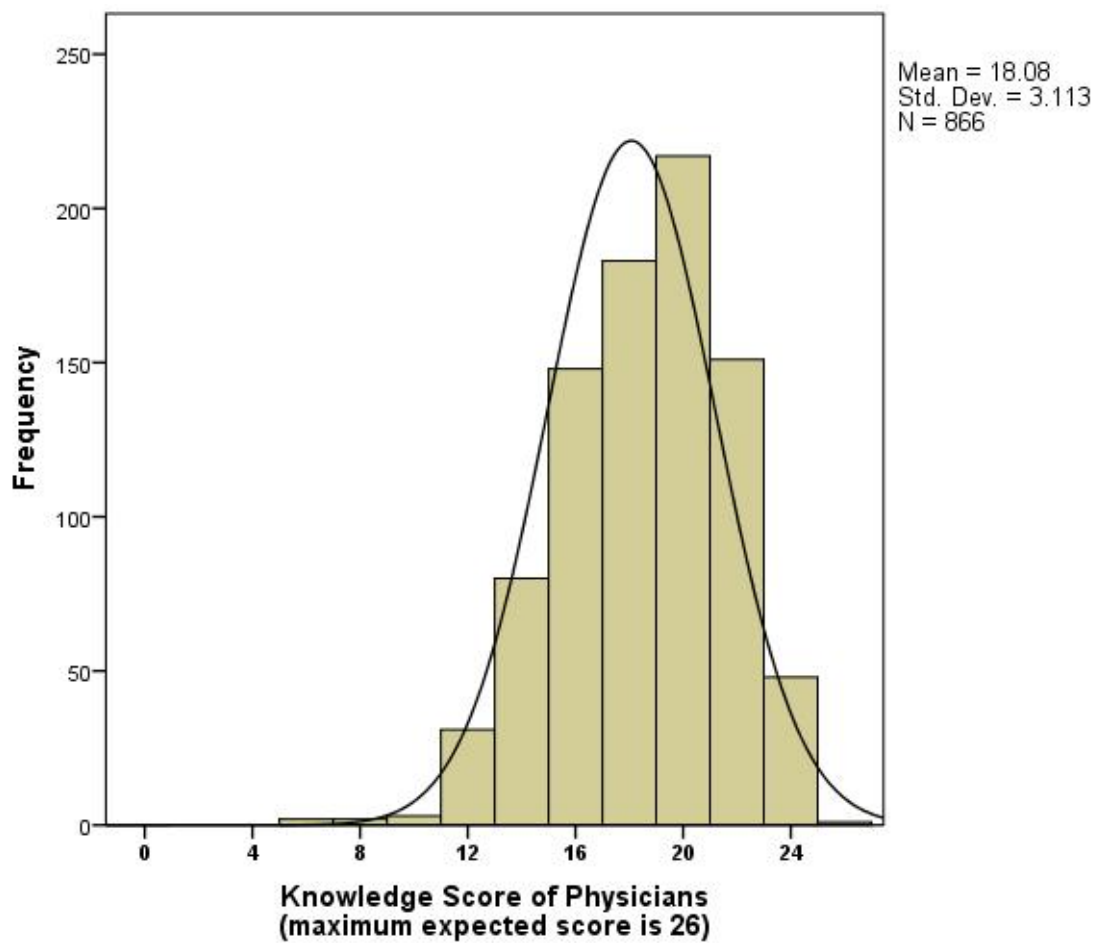
Score	N	Minimum	Maximum	Mean	SD
Knowledge Score (out of 26)	866	5	25	18.1	3.1
Knowledge Score Percent	866	19.2	96.2	69.5	12.0



Table 33: Knowledge score (out of 26) of sampled health care providers

Variables	N	Mean	SD	P value
Sex				0.001
Male	533	18.4	3.0	
Female	333	17.6	3.3	
Specialty				< 0.001
General Practitioner	346	18.7	3.0	
Pulmonologist	10	18.2	4.5	
Genealogist	77	16.7	3.8	
Internist	70	19.0	2.7	
Pediatrician	69	18.3	2.2	
Surgeon	46	16.4	2.8	
Orthopedic	26	17.4	3.8	
Others	222	17.7	3.0	
Experience in TB control				< 0.001
1-3 years	389	17.5	3.1	
4-5 years	119	18.6	2.9	
6-10 years	116	18.7	3.0	
> 10 years	224	18.6	3.0	

Figure 71: Reasons for low TB case detection rate in Iraq as reported by physicians



# Conclusions & Recommendations

## Conclusions:

1. Knowledge, attitudes and practices of both community members and TB patients regarding TB need further efforts from ministry of health and other partners to improve them.
2. Stigmata of TB is prominent in Iraqi population and may halt TB control.
3. Media considered the main source for educating community members' knowledge of TB.
4. Most of physicians at PHC level have acceptable knowledge of TB.

## Recommendations:

1. Utilizing mass media is advised to deliver information, education and communication messages regarding TB to the general population and in decreasing the stigma of TB.
2. Develop a health education plan targeting all of community members, TB patients and health care workers to improve their knowledge, attitudes and practices regarding TB.

# References

1. WHO. Global Tuberculosis Report 2013.WHO: 209.
2. WHO. ADVOCACY, COMMUNICATION, & SOCIAL MOBILIZATION [ACSM] FOR TUBERCULOSIS CONTROL A HANDBOOK FOR COUNTRY PROGRAMMES. WHO, 2007: 3.
3. WHO.Advocacy, communication and social mobilization for TB control- A GUIDE TO DEVELOPING KNOWLEDGE, ATTITUDE AND PRACTICE SURVEYS.WHO, 2008: 6.
4. WHO. Global Tuberculosis Report 2013.WHO: Box 1.2. Accessed on 5 Mar 2015 at [http://www.who.int/tb/publications/global\\_report/en/](http://www.who.int/tb/publications/global_report/en/)

### Annex 1: Sampling & Sample Size

Province & Population	Sampled districts	Households per district	TB patients per governorate	Health care providers per governorate
Baghdad 7,348,471	Abu Ghraib Mada'in Baladiat Karkh Dorah Sadr City Al Rashid Rusafa Total=8	36 46 106 70 59 124 50 28 Total=519	224	298
Basra 2,608,601	Almidaina Al-Zubair Basra 1 ShatalArab Total =4	28 66 73 18 Total=185	62	83
Ninewa 3,047,094	Ayman Shikhan Baaj Sinjar Tel Keef Total = 5	89 59 21 25 22 Total=216	48	114
Misan 962,565	Amara Qal'atSaleh Total = 2	55 18 Total=73	28	16
Dewanyia 1,124,516	Shamiya Hamza Total =2	42 38 Total=80	41	28
Diala 1,361,149	Al-Khalis Ba'quba Khanaqin Total= 3	24 53 19 Total=96	63	28
Anbar 1,478,226	Al-Ka'im Ana District Haditha Ramadi 1 Total= 4	30 8 15 52 Total=105	24	43
Babil 1,715,748	Mahawil Hashimiya Total= 2	50 71 Total=121	64	53
Kerbala 993,903	Al-Hindiya Kerbala-center Total= 2	27 43 Total=70	35	38

### **Annex 1: Sampling & Sample Size**

Karkuk 1,226,177	Hawiga 2 Kirkuk 1 Total= 2	24 63 Total=87	30	31
Wasit 1,155,698	Na'maniya Kut 1 Total= 2	31 51 Total=82	37	24
Thiqar 1,839,640	Chibayish Rifa'i Suq Al- Shoyokh Total= 2	33 52 45 Total=130	52	31
Muthenna 710,700	Rumaitha Simawa Total= 2	21 29 Total=50	12	10
Selahaddin 1,253,536	Al-Daur Shirqat Samarra Tooz Total= 4	9 21 36 23 Total=89	25	33
Nejef 1,215,937	Manathera Najaf North Total= 2	38 47 Total=85	38	35
<b>Total</b>	46	1988	783	865

## Annex 2: Questionnaire-community members and TB patients form

### استبيان لأفراد المجتمع و مرضى التدرن

#### تعليمات عامة:

- الرجاء تعبئة كافة البيانات المناسبة.
- قبل البدء بإجراء المقابلة، عرف عن نفسك و اشرح أهداف الدراسة ومحتويات الموافقة المطلعة وفي حال موافقة المستجيب، عندها أطلب منه التوقيع على الموافقة المستنيرة.
- تأكد من فهم المستجيب للسؤال.
- قم بطرح كافة الأسئلة على كافة المستجيبين باستخدام عبارات موحدة.
- تأكد من قيام المستجيب بالإجابة عن كل سؤال. تأكد من أن إجابات المستجيب موضوعة في الأماكن المناسبة.
- راجع الاستبيان في نهاية المقابلة ثم قم بالتوقيع عليه.
- سلم كافة الاستبيانات المعبئة إلى المشرف الميداني بصورة يومية.

--	--	--	--

--	--

السنة

--	--

تاريخ المقابلة: اليوم الش

--	--	--

الرقم التسلسلي:

--	--

اسم المحافظة:

--	--

اسم القضاء:

--	--

اسم الناحية:

--	--	--	--

اسم القطاع:

عنوان المستجيب (اقرب نقطة دالة):

توقيع القائم بالمقابلة \_\_\_\_\_ اسم القائم بالمقابلة: \_\_\_\_\_

توقيع المشرف الميداني: \_\_\_\_\_ اسم المشرف الميداني: \_\_\_\_\_

توقيع المشرف المحلي: \_\_\_\_\_ اسم المشرف المحلي: \_\_\_\_\_

توقيع المشرف المركزي: \_\_\_\_\_ اسم المشرف المركزي: \_\_\_\_\_

## Annex 2: Questionnaire-community members and TB patients form

### الموافقة المستنيرة لأفراد المجتمع

١. **عنوان الدراسة:** المعرفة والاتجاهات والممارسات لدى أفراد المجتمع، والمرضى بالسل، ومقدمي الرعاية الصحية حول مرض السل في ١٥ محافظة
٢. **الغرض من الدراسة:** يتمثل الهدف الرئيسي للدراسة في معاينة المعرفة والاتجاهات والممارسات لأفراد المجتمع، المصابين بمرض السل، مقدمي الرعاية الصحية حول مرض السل من أجل الحصول على المعلومات لتعزيز عملية الكشف عن حالات المرض من خلال تقديم المعالجة القصيرة الأمد تحت الإشراف المباشر بشكل صديق للمريض وسهل وممكن للمرضى.
٣. **الإجراء** نود التعرف على المعرفة والاتجاهات والممارسات لديكم حول مرض السل. ونود التعرف على احتياجاتك وأفضل الطرق لتقديم المعلومات لك، بالإضافة إلى العوائق أمام الحصول على الرعاية الطبية. وستستخدم المعلومات التي تقدمها لتحسين دحر مرض السل.
٤. **المخاطر/المتاعب** لا توجد مخاطر ناتجة عن مشاركتك في هذه الدراسة حتى وإن قررت عدم الإجابة عن أي سؤال أو قررت إيقاف المقابلة في أي وقت.
٥. **الفوائد** لا توجد فوائد شخصية لك من المشاركة في الدراسة. ومن المتوقع وجود منافع مجتمعية عن الدراسة حيث ستعمل السلطات الصحية على الاستفادة من معلومات الدراسة لتحسين الخدمات الصحية المقدمة لمرضى السل والمجتمع.
٦. **حقوق المشاركين** تعد مشاركتك طوعية وقد تختار إيقاف المقابلة في أي وقت ودون شروط.
٧. **السرية** لن يتم التصريح عن إجاباتك لأي شخص وستبقى مجهولة الهوية. ولن تتم كتابة اسمك على الاستبيان أو الاحتفاظ بها في أي سجلات أخرى. وسيتم إتلاف البيانات في حال الانسحاب من المقابلة. ويمكن الوصول إلى المعلومات فقط من قبل أعضاء فريق البحث ولأغراض البحث فقط.



## Annex 2: Questionnaire-community members and TB patients form

### نموذج الموافقة

#### موافقة المشارك

أعلن أنه قد تم تزويدي بالمعلومات أعلاه وتم شرحها لي وكان لدي كامل الفرصة في طرح الأسئلة وحصلت على إجابات كافية حول كافة الأسئلة التي طرحتها. وأعلن عن مشاركتي الطوعية في هذه الدراسة وأنا على معرفة بحقي الكامل في الانسحاب من الدراسة دون أي شروط.

اسم المشارك:-----

توقيع المشارك:-----

في حال عدم قدرة المشارك على قراءة النموذج وحاجته لشخص لشرح/ترجمة النموذج.

اسم الشخص الذي قام بشرح/ترجمة النموذج:-----

عنوان الشخص الذي قام بشرح/ترجمة النموذج:-----

توقيع الشخص الذي قام بشرح/ترجمة النموذج:-----

توقيع القائم بالمقابلة:-----

## Annex 2: Questionnaire-community members and TB patients form

### ١. الخصائص السكانية الشخصية

--	--

السؤال (١) ما هو عمرك بالسنوات؟

السؤال (٢) الجنس ؟

1	ذكر	
2	أنثى	

السؤال (٣): ما هو أعلى مستوى تعليمي حصلت عليه؟

1	لا يقرأ ولا يكتب	
2	لا يوجد تعليم نظامي لكن أستطيع القراءة والكتابة	
3	التعليم الابتدائي	
4	التعليم الإعدادي	
5	شهادة جامعية فما فوق	
6	أخرى (الرجاء التحديد.....)	

السؤال (٤): هل تقوم بالسفر خلال العام إلى أماكن أخرى؟

	الإجابة	الجهة	
1	نعم		
2	لا		

السؤال (٥): هل تقوم حالياً بعمل مأجور؟

1	نعم	
---	-----	--

## Annex 2: Questionnaire-community members and TB patients form

	لا	2
--	----	---

### السؤال (٦): ما هو نوع العمل؟

	موظف	1
	عامل ماهر	2
	عامل غير ماهر	3
	صاحب مهنة	4
	متقاعد	5
	تاجر	6
	طالب	7
	عاطل عن العمل	8
	ربة بيت	9
	أخرى (الرجاء التحديد.....)	10

### السؤال (٧): كم يبلغ دخلك الشهري، بالدينار العراقي؟

	اقل من ٢٥٠,٠٠٠ د	1
	بين ٢٥٠,٠٠٠ – ١٠٠٠,٠٠٠ د	2
	اكثر من ١٠٠٠,٠٠٠ د	3

### السؤال (٨): ما هو مكان إقامتك الحالي؟

	حضر	1
	ريف	2

## Annex 2: Questionnaire-community members and TB patients form

شبه حضر	3
نازح/مخيم لاجئين	4

السؤال (٩): كم يبعد مكان سكنك عن أقرب عيادة صحية أو مستشفى؟

١٠-٠ كم	1
٢٠-١١ كم	2
٣٠-٢١ كم	3
أكثر من ٣٠ كم	4

٢. المعرفة والوعي بمرض السل

السؤال (١٠): هل سمعت يوماً عن مرض السل؟

نعم	١
لا	٢

السؤال (١١): هل سمعت يوماً عن وجود برنامج لمكافحة السل؟

نعم	١
لا	٢

السؤال (١٢): من وجهة نظرك، ما مدى خطورة مرض السل في العراق؟

خطير جداً	١
خطير	٢
ليس خطير	٣

## Annex 2: Questionnaire-community members and TB patients form

٤	لا أعرف	
---	---------	--

السؤال (١٣): ما مدى خطورة مرض السل في محافظتك؟

١	خطير جداً	
٢	خطير	
٣	ليس خطيراً	
٤	لا أعرف	

السؤال (١٤): من الأشخاص الذين يمكن أن يصابوا بمرض السل؟ (الاجابة على اكثر من حقل )

1	أي شخص	
2	الفقراء	
3	معاقرو الخمور	
4	متعاطو المخدرات	
5	المتشردون	
6	الأطفال	
7	أخرى (الرجاء التحديد.....)	

السؤال (١٥): ما هي أنواع السل التي تعرفها؟

1	السل الرئوي	
2	السل غير الرئوي	

## Annex 2: Questionnaire-community members and TB patients form

	٢، ١	3
	لا أعرف	4

السؤال (١٦): ما هي أعراض مرض السل التي تعرفها؟ (الاجابة على اكثر من حقل )

	السعال	1
	الحمى	2
	فقدان الشهية	3
	التعرق الليلي	4
	التعب/الإجهاد	5
	فقدان الوزن	6
	لا أعرف	7
	أخرى (الرجاء التحديد.....)	8

السؤال (١٧): ما هي الفحوص المختبرية الضرورية لتشخيص مرض السل؟

	فحص عينات القشع	1
	الأشعة السينية	2
	٢، ١	3
	لا أعرف	4

السؤال (١٨): حسب وجهة نظرك، هل يعتبر مرض السل قابل للشفاء؟

	نعم	1
--	-----	---

## Annex 2: Questionnaire-community members and TB patients form

2	لا (انتقل إلى السؤال ٢٣)	
3	لا أعرف (انتقل إلى السؤال ٢٣)	

### السؤال (١٩): كيف يمكن الشفاء من مرض السل؟

١	الأعشاب	
٢	الاستراحة في المنزل دون أخذ علاج	
٣	الدعاء	
٤	أدوية معينة مقدمة من المركز الصحي	
٥	المعالجة القصيرة الأمد تحت الإشراف المباشر	
٦	لا أعرف	
٧	أخرى (الرجاء التحديد.....)	

### السؤال (٢٠): إلى أين يجب أن يذهب المرضى لتلقي العلاج باعتقادك؟

1	العيادة الاستشارية للأمراض الصدرية والتنفسية	
2	عيادات خاصة	
3	مستشفيات / المركز الصحي	
4	المنزل	
5	لا يحتاجون إلى علاج	
6	أخرى (الرجاء التحديد.....)	

## Annex 2: Questionnaire-community members and TB patients form

السؤال (٢١): هل تعتبر معالجة مرض السل في محافظتك مجانا؟

1	نعم
2	لا
3	لا أعرف

السؤال (٢٢): ما هي المدة الزمنية اللازمة لأخذ الأدوية من قبل مريض السل؟

1	أقل من شهر
2	١-٣ أشهر
3	٣-٦ أشهر
4	٦-٨ أشهر
5	سنة أو أكثر
6	لا أعرف

السؤال (٢٣): هل يعتبر مرض السل معدي؟

1	نعم
2	لا
3	لا أعرف

السؤال (٢٤): كيف يمكن أن يصاب الشخص بمرض السل؟

1	العدوى بالرذاذ عن طريق العطاس، السعال، الصراخ
2	شرب الحليب غير المعقم



## Annex 2: Questionnaire-community members and TB patients form

٢،١	3
تناول الطعام مع أشخاص مصابين بمرض السل	4
المصافحة بالأيدي مع أشخاص مصابين بمرض السل	5
لا أعرف	6
أخرى (الرجاء التحديد.....)	7

السؤال (٢٥): هل من الممكن الوقاية من مرض السل؟

نعم	1
لا (انتقل إلى السؤال ٢٩)	2
لا أعرف (انتقل إلى السؤال ٢٩)	3

السؤال (٢٦): كيف يمكن للشخص تجنب الإصابة بمرض السل؟

تجنب المصافحة بالأيدي مع أشخاص مصابين بمرض السل	1
تغطية الفم والأنف عند السعال أو العطاس	2
تجنب التشارك في الصحون	٣
غسل الأيدي بعد ملامسة أشياء في الأماكن العامة	٤
التهوية الجيدة في المنزل	٥
التغذية الجيدة	٦
الدعاء	٧
لا أعرف	٨
أخرى (الرجاء التحديد.....)	٩

## Annex 2: Questionnaire-community members and TB patients form

السؤال (٢٧): هل سمعت يوماً عن لقاح لمرض السل (BCG)؟

1	نعم	
2	لا (انتقل إلى السؤال ٣٠)	
3	لا أعرف (انتقل إلى السؤال ٣٠)	

السؤال (٢٨): إذا كانت الإجابة عن السؤال (٢٧) نعم، متى يتم في العادة إعطاء لقاح مرض السل؟

1	عند الولادة	
2	في أي عمر	
3	لا أعرف	

٣. الاتجاهات حول مرض السل وسلوك طلب الرعاية

السؤال (٢٩): هل تلقيت يوماً لقاح (BCG)؟

1	نعم	
2	لا	
3	لا أعرف	

السؤال (٣٠): ماذا سوف تعمل إذا اعتقدت أن لديك أعراض مرض السل؟

1	الذهاب إلى مركز صحي عام	
2	الذهاب إلى عيادة/مستشفى خاص	

## Annex 2: Questionnaire-community members and TB patients form

3	الذهاب إلى مركز تابع لبرنامج مكافحة مرض السل	
4	الذهاب إلى صيدلية	
5	الذهاب إلى عطار	
6	البحث عن خيارات أخرى للعلاج الذاتي (أعشاب،...الخ.)	
7	أخرى (الرجاء التحديد.....)	

**السؤال (٣١): إذا كانت لديك أعراض مرض السل، في أي مرحلة ستذهب إلى المركز الصحي؟**

1	عندما لا تصبح المعالجة الذاتية مجدية	
2	عندما تستمر الأعراض التي تشبه علامات مرض السل لمدة ٢-٣ أسابيع	
3	حالما أدرك أن العوارض قد ترتبط بمرض السل	
4	لن أذهب إلى الطبيب	

**السؤال (٣٢): إذا أردت عدم الذهاب إلى المركز الصحي، فما هو السبب وراء ذلك؟**

1	لست متأكداً إلى أين سأذهب	
2	الكلفة	
3	الصعوبات المتعلقة بالمواصلات/البعد عن العيادة	
4	عدم الثقة بالكادر الطبي	
5	لا أحب معاملة الكادر الطبي	

## Annex 2: Questionnaire-community members and TB patients form

6	لا أستطيع مغادرة العمل (التعارض بين ساعات العمل وساعات عمل المركز الطبي)
7	لا أريد معرفة أن هنالك شيء سيء بالفعل
8	أخرى (الرجاء التحديد.....)

السؤال (٣٣): لماذا تعتقد أن المرضى يقومون في بعض الأحيان بالتوقف عن أخذ الدواء المطلوب لعلاجهم؟ (الاجابة على اكثر من حقل )

1	الخجل من المرض
2	الثقافة
3	الضغط من الرفقاء
4	اليأس
5	أخرى (الرجاء التحديد)

السؤال (٣٤): هل تعرضت للإصابة بمرض السل؟

1	نعم
2	لا (انتقل إلى السؤال ٤١)

السؤال (٣٥): إذا كانت الإجابة عن السؤال (٣٤) نعم، أي من الأعراض التالية هي التي دفعتك لطلب الرعاية؟ (الاجابة على اكثر من حقل )

١	السعال
٢	الحمى
٣	فقدان الشهية
٤	التعرق الليلي
٥	التعب/الإجهاد
٦	فقدان الوزن

## Annex 2: Questionnaire-community members and TB patients form

٧	جميع ما ذكر	
٨	أخرى (الرجاء التحديد.....)	

السؤال (٣٦): ما هو الاجراء الذي اتخذته عند بداية ظهور الاعراض (قبل التشخيص الاولي) وكم كانت تكلفة نفقات هذا الاجراء؟

الرمز	الإجراء الأول	التاريخ (اليوم/الشهر/السنة)	مجموع النفقات
0	مقدم رعاية صحية		
1	الطب الذاتي		
2	الطب التقليدي		
3	مقدم رعاية صحية في المنزل		
4	مستودع أدوية (صيدلية)		
5	أخرى (الرجاء التحديد.....)		

السؤال (٣٧): ما هي الجهات الصحية التي سعت في البداية الى استشارتها بعد ظهور الاعراض؟ ( الاجابة على اكثر من حقل )

الترتيب	اسم الجهة الصحية	التاريخ اليوم/الشهر/السنة)
الأول		
الثاني		
الثالث		
الرابع		
الخامس		

السؤال (٣٨): إذا كنت مصاباً بمرض السل، كيف تعامل المجتمع معك؟

## Annex 2: Questionnaire-community members and TB patients form

1	قام المجتمع بتجنبي	
2	قام معظم أفراد المجتمع بتجنبي	
3	لم يتم تجنبي على الإطلاق	
4	تعامل كافة أفراد المجتمع مع بشكل اعتيادي	
5	قام معظم أفراد المجتمع بدعمي	

السؤال (٣٩): هل حصلت على دعم مالي خلال فترة مرضك؟

1	نعم	
2	لا	

السؤال (٤٠): إذا كانت الإجابة عن السؤال (٣٩) نعم، من أين حصلت على الدعم المالي؟

1	مؤسسة حكومية	
2	منظمة غير حكومية	
٣	المجتمع	
٤	٢، ١	
٥	أخرى (الرجاء التحديد.....)	

السؤال (٤١): في مجتمعك، كيف يتم التعامل في العادة مع الشخص المصاب بمرض السل؟

1	يقوم معظم الأشخاص بنبذه	
---	-------------------------	--

## Annex 2: Questionnaire-community members and TB patients form

معظم الأشخاص ودودين، لكنهم يحاولون بشكل عام تجنبه	2
يعامل معاملة الشخص غير المصاب	3
أخرى (الرجاء التحديد.....)	4

السؤال (٤٢): إذا أصيب أحد أقاربك بمرض السل، هل ستقوم بدعّمه للحصول على العلاج الطبي؟

نعم، بالتأكيد	1
نعم، ولكنني أخشى العدوى	2
لا، سألجأ إلى المعالجات الأخرى	٣
لا أعرف	٤

السؤال (٤٣): هل يجب عزل المصابين بمرض السل؟

نعم	١
لا	٢
لا أعرف	٣

السؤال (٤٤): هل يجب أن تتجنب الأشخاص الذين تعافوا من مرض السل؟

نعم	١
لا	٢
لا أعرف	٣

السؤال (٤٥): هل يستطيع المصاب بمرض السل أن يعيش مستقبلاً واعدّاً كما هو حال الآخرين؟

نعم	١
لا	٢

## Annex 2: Questionnaire-community members and TB patients form

٣	لا أعرف	
---	---------	--

السؤال (٤٦): هل تعتقد أن الأشخاص المصابين بمرض نقص المناعة المكتسبة (الايدز) يجب أن يقلقوا من الإصابة بمرض السل؟

1	نعم	
2	لا	
3	لا أعرف	

السؤال (٤٧): إذا كانت الإجابة عن السؤال (٤٦) نعم، فلماذا؟

1	من المرجح أن يصاب الشخص المصاب بمرض نقص المناعة المكتسبة (الايدز) بمرض السل	
2	لا أعرف (انتقل إلى السؤال ٤٩)	
3	أخرى (الرجاء التحديد.....)	

السؤال (٤٨): إذا كانت الإجابة عن السؤال (٤٦) لا، فلماذا؟

1	ليس من المرجح أن يصاب الشخص المصاب بمرض نقص المناعة المكتسبة بمرض السل أكثر من غير المصابين بمرض نقص المناعة	
2	لا أعرف	
3	أخرى (الرجاء التحديد.....)	

السؤال (٤٩): ما هي الممارسة المباشرة في عائلتك عندما يصبح أحد أفرادها مريضاً؟

1	طب تقليدي	
---	-----------	--



## Annex 2: Questionnaire-community members and TB patients form

2	الراحة	
3	اخذ الدواء من الصيدلية مباشرة	
4	مركز صحي	
5	نصيحة صديق	
6	عيادة/مستشفى خاص	
7	مستشفى حكومي	
8	أخرى (الرجاء التحديد.....)	

السؤال (٥٠): ما هي المدة الزمنية التي ستحتاجها لرؤية موظف صحي إذا كان لديك أعراض مرض السل؟

1	١-٣ أيام	
2	١-٣ أسابيع	
3	١-٢ شهرين	
4	لن أذهب (الرجاء شرح السبب)	

### ٤. وصمة الخجل من مرض السل (مقياس ليكرت)

الرجاء استخدام مقياس ليكرت للإجابة عن العبارات التالية:

موافق بشدة = ٠

موافق = ١

متوسط = ٢

غير موافق = ٣

غير موافق على الإطلاق = ٤

السؤال (٥١): هل تشعر بالخجل للإصابة بمرض السل؟

## Annex 2: Questionnaire-community members and TB patients form

	موافق بشدة	0
	موافق	1
	متوسط	2
	غير موافق	3
	غير موافق على الإطلاق	4

السؤال (٥٢): يجب عليك إخفاء تشخيص مرض السل عن الآخرين؟

	موافق بشدة	٠
	موافق	١
	متوسط	٢
	غير موافق	٣
	غير موافق على الإطلاق	٤

السؤال (٥٣): يؤثر مرض السل على العلاقات مع الآخرين؟

	موافق بشدة	٠
	موافق	١
	متوسط	٢
	غير موافق	٣
	غير موافق على الإطلاق	٤

## Annex 2: Questionnaire-community members and TB patients form

السؤال (٥٤): يعتبر علاج مرض السل مكلف للغاية بسبب طول مدة الإصابة ؟

٠	موافق بشدة	
١	موافق	
٢	متوسط	
٣	غير موافق	
٤	غير موافق على الإطلاق	

السؤال (٥٥): تفضل العيش منعزلاً منذ تم تشخيص المرض على أنه السل ؟

٠	موافق بشدة	
١	موافق	
٢	متوسط	
٣	غير موافق	
٤	غير موافق على الإطلاق	

الشكل (٥٦): يؤثر مرض السل على أداء في العمل ؟

٠	موافق بشدة	
١	موافق	
٢	متوسط	
٣	غير موافق	
٤	غير موافق على الإطلاق	

## Annex 2: Questionnaire-community members and TB patients form

الشكل (٥٧): يؤثر مرض السل على العلاقة الزوجية ؟

٠	موافق بشدة	
١	موافق	
٢	متوسط	
٣	غير موافق	
٤	غير موافق على الإطلاق	

الشكل (٥٨): يؤثر مرض السل على المسؤوليات العائلية ؟

٠	موافق بشدة	
١	موافق	
٢	متوسط	
٣	غير موافق	
٤	غير موافق على الإطلاق	

الشكل (٥٩): تعتقد أن فرص الزواج تقل بسبب الإصابة بمرض السل ؟

٠	موافق بشدة	
١	موافق	
٢	متوسط	
٣	غير موافق	

## Annex 2: Questionnaire-community members and TB patients form

غير موافق على الإطلاق	٤
-----------------------	---

السؤال (٦٠): يؤثر مرض السل على العلاقات العائلية؟

موافق بشدة	٠
موافق	١
متوسط	٢
غير موافق	٣
غير موافق على الإطلاق	٤

### ٥. النوع الاجتماعي

الرجاء استخدام مقياس ليكرت للإجابة عن العبارات التالية (٦١-٦٦)

موافق بشدة = ٠

موافق = ١

متوسط = ٢

غير موافق = ٣

غير موافق على الإطلاق = ٤

الشكل (٦١): تذهب النساء في العادة لوحدهن إلى مركز الرعاية الصحية ؟

موافق بشدة	0
موافق	1
متوسط	2

## Annex 2: Questionnaire-community members and TB patients form

	غير موافق	3
	غير موافق على الإطلاق	4

السؤال (٦٢): يرافق الرجال في العادة زوجاتهم عند مراجعة مركز الرعاية الصحية ؟

	موافق بشدة	0
	موافق	1
	متوسط	2
	غير موافق	3
	غير موافق على الإطلاق	4

السؤال (٦٣): يصاب الرجال أكثر من النساء بمرض السل ؟

	موافق بشدة	0
	موافق	1
	متوسط	2
	غير موافق	3
	غير موافق على الإطلاق	4

السؤال (٦٤): ما الذي سيفعله رجل في مجتمعك إذا أصيبت زوجته بمرض السل؟

	سيقوم بتطليقها على الفور	0
	سيدعمها كي تتعافى	1

## Annex 2: Questionnaire-community members and TB patients form

2	سيرسلها إلى منزل والدها لحين تعافيتها	
3	سيتزوج من أخرى	
4	لا أعرف	
5	أخرى (الرجاء التحديد.....)	

السؤال (٦٥): ماذا سيكون رد فعلك إذا علمت أن خطيبة ابنك مصابة بمرض السل؟

1	لن أدم أن تصبح زوجته	
2	سأدم أن تكون زوجته	
3	لن أهتم بها	
4	لا أعرف	
٥	سأدم أن تكون زوجته بعد الشفاء	
٦	أخرى (الرجاء التحديد.....)	

السؤال (٦٦): ماذا سيكون رد فعلك إذا علمت أن خطيب ابنتك مصاب بمرض السل؟

١	لن أدم أن يصبح زوجها	
٢	سأدم أن يكون زوجها	
٣	لن أهتم به	
٤	لا أعرف	
٥	سأدم أن يكون زوجها بعد الشفاء	
٦	أخرى (الرجاء التحديد.....)	

### التوعية ومصادر المعلومات حول مرض السل

السؤال (٦٧) ما هو المصدر المعتاد لديك لتلقي المعلومات حول مرض السل؟ (الاجابة على اكثر من حقل )

## Annex 2: Questionnaire-community members and TB patients form

1	التلفاز	
2	الإذاعة	
3	موظف صحة	
4	الأصدقاء	
5	الانترنت	
6	الصحف	
٧	المدرسة	
٨	رجال الدين	
٩	أخرى (الرجاء التحديد.....)	

السؤال (٦٨): هل تلقيت يوماً أي رسالة معلومات وتثقيف وتواصل حول مرض السل خلال الأشهر الست الماضية؟

1	نعم	
2	لا (انتقل إلى السؤال ٧٢)	

السؤال (٦٩)، إذا كانت الإجابة نعم، ما هو مصدر الرسالة؟ (الإجابة على أكثر من حقل )

١	التلفاز	
٢	الإذاعة	
٣	موظف صحة	
٤	الأصدقاء	
٥	الانترنت	
٦	الصحف	
٧	أخرى (الرجاء التحديد.....)	

السؤال (٧٠): إذا كانت الإجابة على السؤال ٦٨ نعم، هل كانت الرسالة واضحة؟



## Annex 2: Questionnaire-community members and TB patients form

	نعم	1
	لا	2

السؤال (٧١): إذا كانت الإجابة على السؤال ٧٠ لا، فلماذا؟ ( الإجابة على أكثر من حقل )

	لغة الرسالة صعبة	1
	محتويات الرسالة غير واضحة	2
	محتويات الرسالة تفصيلية للغاية	3
	محتويات الرسالة غير كاملة	4
	محتويات الرسالة غير صحيحة في أغلبها	5
	محتويات الرسالة لا يمكن تصديقها	6

السؤال (٧٢): هل تعتقد أنك على دراية كافية بمرض السل؟

	نعم	1
	لا	2

السؤال (٧٣): هل تود الحصول على المزيد من المعلومات حول مرض السل؟

	نعم	1
	لا	2

## Annex 2: Questionnaire-community members and TB patients form

إذا كانت الإجابة على السؤال ٧٣ نعم، ما هو مصدر المعلومات الذي تفضله؟

١	التلفاز	
٢	الإذاعة	
٣	موظف صحة	
٤	الأصدقاء	
٥	الانترنت	
٦	الصحف	
٧	أخرى (الرجاء التحديد.....)	

### نتيجة المقابلة

١- تمت المقابلة بشكل كامل

٢- تمت المقابلة بشكل جزئي (انسحب اثناء المقابلة ولم يكمل الاجابة )

٣- رفض المشاركة

### Annex 3: Questionnaire-Physicians form

#### استبيان مقدمى الرعاية الصحية

#### تعليمات عامة:

- الرجاء تعبئة كافة البيانات المناسبة.
- قبل البدء بإجراء المقابلة، عرف عن نفسك و اشرح أهداف الدراسة ومحتويات الموافقة المطلة وفي حال موافقة المستجيب، عندها أطلب منه التوقيع على الموافقة المستنيرة.
- تأكد من فهم المستجيب للسؤال.
- قم بطرح كافة الأسئلة على كافة المستجيبين باستخدام عبارات موحدة.
- تأكد من قيام المستجيب بالإجابة عن كل سؤال. تأكد من أن إجابات المستجيب موضوعة في الأماكن المناسبة.
- راجع الاستبيان في نهاية المقابلة ثم قم بالتوقيع عليه.
- سلم كافة الاستبيانات المعبئة إلى المشرف الميداني بصورة يومية.

تاريخ المقابلة: اليوم		الشهر		السنة	
الرقم التسلسلي:					
اسم المحافظة:					
اسم القضاء:					
اسم الناحية:					
اسم القطاع:					
عنوان المستجيب (اقرّب نقطة دالة):					

توقيع القائم المقابلة \_\_\_\_\_ اسم القائم المقابلة: \_\_\_\_\_

توقيع المشرف الميداني: \_\_\_\_\_ اسم المشرف الميداني: \_\_\_\_\_

توقيع المشرف المحلي: \_\_\_\_\_ اسم المشرف المحلي: \_\_\_\_\_

توقيع المشرف المركزي: \_\_\_\_\_ اسم المشرف المركزي: \_\_\_\_\_

## الموافقة المستنيرة لمقدمي الرعاية الصحية:-

١. **عنوان الدراسة:** المعرفة والاتجاهات والممارسات لدى أفراد المجتمع، والمرضى بالسل، ومقدمي الرعاية الصحية حول مرض السل في ١٥ محافظة
٢. **الغرض من الدراسة:** يتمثل الهدف الرئيسي للدراسة في معاينة المعرفة والاتجاهات والممارسات لأفراد المجتمع، المصابين بمرض السل، مقدمي الرعاية الصحية حول مرض السل من أجل الحصول على المعلومات لتعزيز عملية الكشف عن حالات المرض من خلال تقديم المعالجة القصيرة الأمد تحت الإشراف المباشر بشكل صديق للمريض وسهل وممكن للمرضى.
٣. **الإجراء** نود التعرف على المعرفة والاتجاهات والممارسات لديكم حول مرض السل. ونود التعرف على احتياجاتك وأفضل الطرق لتقديم المعلومات لك، بالإضافة إلى العوائق أمام الحصول على الرعاية الطبية. وستستخدم المعلومات التي تقدمها لتحسين دحر مرض السل.
٤. **المخاطر/المتاعب** لا توجد مخاطر ناتجة عن مشاركتك في هذه الدراسة حتى وإن قررت عدم الإجابة عن أي سؤال أو قررت إيقاف المقابلة في أي وقت.
٥. **الفوائد** لا توجد فوائد شخصية لك من المشاركة في الدراسة. ومن المتوقع وجود منافع مجتمعية عن الدراسة حيث ستعمل السلطات الصحية على الاستفادة من معلومات الدراسة لتحسين الخدمات الصحية المقدمة لمرضى السل والمجتمع.
٦. **حقوق المشاركين** تعد مشاركتك طوعية وقد تختار إيقاف المقابلة في أي وقت ودون شروط.
٧. **السرية** لن يتم التصريح عن إجاباتك لأي شخص وستبقى مجهولة الهوية. ولن تتم كتابة اسمك على الاستبيان أو الاحتفاظ بها في أي سجلات أخرى. وسيتم إتلاف البيانات في حال الانسحاب من المقابلة. ويمكن الوصول إلى المعلومات فقط من قبل أعضاء فريق البحث ولأغراض البحث فقط.

## نموذج الموافقة

### موافقة المشارك

أعلن أنه قد تم تزويدي بالمعلومات أعلاه وتم شرحها لي وكان لدي كامل الفرصة في طرح الأسئلة وحصلت على إجابات كافية حول كافة الأسئلة التي طرحتها. وأعلن عن مشاركتي الطوعية في هذه الدراسة وأنا على معرفة بحقي الكامل في الانسحاب من الدراسة دون أي شروط.

----- اسم المشارك:-----

----- توقيع المشارك:-----

في حال عدم قدرة المشارك على قراءة النموذج وحاجته لشخص لشرح/ترجمة النموذج.

----- اسم الشخص الذي قام بشرح/ترجمة النموذج:-----

----- عنوان الشخص الذي قام بشرح/ترجمة النموذج:-----

----- توقيع الشخص الذي قام بشرح/ترجمة النموذج:-----

----- توقيع القائم بالمقابلة:-----

**السؤال (١) الجنس؟**

1	ذكر
2	أنثى

**السؤال (٢) ما هو تخصصك؟**

1	طبيب عام
2	طبيب أمراض صدرية داخلية
3	طبيب أمراض نسائية
4	طبيب أمراض باطنية
5	طبيب أطفال
6	جراح
7	طبيب عظام
8	أخرى (الرجاء التحديد)

**السؤال (٣): كم عدد سنوات الخبرة لديك حول مرض السل؟**

1	١-٣ سنة
2	٣-٥ سنة
3	٥-١٠ سنة
4	أكثر من ١٠ سنة

**السؤال (٤): كيف تقدر حجم مشكلة مرض السل في العراق؟**

1	خطيرة
2	ليست خطيرة
3	ليست مشكلة كبيرة
4	لا أعرف

**السؤال (٥): ما هو مصدر معرفتك حول مرض السل؟ ( الإجابة على أكثر من حقل )**

1	التدريب أثناء الوظيفة عن طريق البرنامج الوطني لبحر السل
2	الإعداد الأكاديمي
3	الانترنت
4	المؤتمرات/الندوات الطبية
5	أخرى (الرجاء التحديد)

السؤال (٦): كم عدد الدورات التدريبية التي التحقت بها حول مرض السل (خارج إطار الخبرة الأكاديمية)؟

0	1
٢-١	2
أكثر من ٢	3

السؤال (٧): ما هي وجهة نظرك حول الحقائق التالية حول مرض السل في العراق؟ (الاجابة على كافة الحقول)

العدد	البيان	نعم	لا	لا أعرف
1	يعتبر مرض السل قضية خطيرة على الصحة العامة في العراق			
2	يبلغ معدل الانتشار المقدر لمرض السل في العراق ١٠٠٠٠٠/٢٠٠			
3	الفئة العمرية الأكثر تعرضاً للمرض هي ١٥-٥٤ عاماً			
4	يتم التبليغ حالياً عن نحو ٢٥٠ حالة للسل المقاوم للأدوية المتعددة			
5	يموت نحو ٨٠٠٠ شخص سنوياً بسبب مرض السل في العراق			

السؤال (٨): ما هي أنماط انتقال مرض السل؟

1	العدوى بالزئاذ عن طريق العطاس، السعال، الصراخ
2	شرب الحليب غير المعقم
3	٢، ١
4	لا أعرف

**السؤال (٩): كيف تشتهبه في حالات مرض السل؟**

1	كافة الأشخاص الذين يعانون من سعال غير مبرر يستمر لمدة ٢-٣ أسابيع أو أكثر
2	كافة الأشخاص الذين يسعلون لفترة قصيرة
3	لا أعرف

**السؤال (١٠): هل يجب الاشتباه في جميع الأشخاص الذين يسعلون في أنهم مصابون بمرض السل؟**

1	نعم
2	لا
3	لا أعرف

**السؤال (١١): كيف تقوم بالتحديد بتشخيص مرض السل؟**

1	فحص البلغم المباشر
2	فحص الأشعة السينية للصدر
3	١، ٢
4	(ELISA)
5	بوليميرز سلسلة من ردود الفعل
6	معدل ترسب كريات الدم الحمراء
7	سريريا
8	جميع ما ذكر
9	لا أعرف

**السؤال (١٢): كم عدد عينات البلغم الضرورية للتشخيص؟**

1	عينة
2	عينتان
3	ثلاث عينات
4	لا أعرف



السؤال (١٣): الشخص المصاب بمرض السل الإيجابي القشع قد عدى أشخاصاً آخرين. من الذين يجب تشجيعهم على مراجعة المركز الصحي للفحص حول مرض السل؟

1	كافة الأطفال دون ٥ سنوات ويعيشون في الأسرة
2	أي أشخاص آخرين يعيشون في المنزل ويسعلون
3	١، ٢
4	لا أعرف

السؤال (١٤): من يجب أن يعطى دواء الإيزونيازيد كإجراء وقائي من مرض السل؟

1	يجب أن يأخذ كافة الأطفال دون ٥ سنوات ويعيشون في أسرة مريض السل ولا يعانون من مرض السل دواء الإيزونيازيد كعلاج وقائي
2	كافة الأطفال والبالغين في الأسرة
3	١، ٢
٤	مريض السكري
٥	مريض نقص المناعة (ايدز)
٦	لا أعرف

السؤال (١٥): ما هي أهداف معالجة مرض السل؟ (الاجابة على كافة الحقول)

العدد	البيان	نعم	لا	لا أعرف
1	معالجة المريض واستعادة جودة الحياة والإنتاجية لديه			
2	منع حدوث الوفيات للسل الفعال أو آثاره لاحقاً			
3	منع الانتكاس بسبب المرض			
4	تقليل انتقال المرض للآخرين			
5	منع تطویر ونقل مقاومة الأدوية			

السؤال (١٦): هل أنت على دراية بالبرنامج الوطني لدحر السل في العراق؟

١	نعم
٢	لا

السؤال (١٧): هل أنت على دراية بالمعالجة القصيرة الأمد تحت الإشراف المباشر؟

١	نعم
٢	لا

السؤال (١٨): ما هو الجانب الأكثر أهمية في المعالجة تحت الإشراف المباشر؟

١	التحدث مع المريض وتقديم الدعم
٢	تقديم الأدوية للمريض
٣	مراقبة المريض عند تناول الأدوية
٤	تسجيل المعالجة على بطاقة المعالجة
٥	لا أعرف

السؤال (١٩): متى يجب أن يجرى للمصاب بمرض السل الرئوي الإيجابي القشع (الفئة ١) أول فحص متابعة القشع؟

1	خلال الأسبوع الأخير من الشهر الثاني للعلاج (نهاية المرحلة الأولى من معالجة الفئة ١)
2	خلال الأسبوع الأول من الشهر الثاني للعلاج (نهاية المرحلة الأولى من معالجة الفئة ١)
3	لا أعرف

السؤال (٢٠): متى يجب أن يجرى للمريض المنتكس (مرض السل الرئوي الإيجابي البصاق (الفئة ٢)) أول فحص متابعة القشع؟

1	خلال الأسبوع الأخير من الشهر الثالث للعلاج (نهاية المرحلة الأولى من معالجة الفئة ٢).
2	خلال الأسبوع الأول من الشهر الثالث للعلاج (نهاية المرحلة الأولى من معالجة الفئة ٢).
3	لا أعرف

السؤال (٢١): كم عدد مرات إجراء فحوص متابعة القشع لمعظم المصابين بمرض السل الرئوي؟

١	يجب أن يجرى لمعظم الحالات ٣ فحوص
٢	يجب أن يجرى لمعظم الحالات فحوصتين
٣	لا أعرف

السؤال (٢٢): أي دواء مما يلي يعد الخط الأمامي المضاد للسل؟

1	Streptomycin, Isoniazid, Rifampicin, Pyrazinamide, Ethambutol
2	Streptomycin, Isoniazid, Rifampicin, Pyrazinamide, Ethambutol, Cycloserine
3	Streptomycin, Isoniazid, Rifampicin, Pyrazinamide, Ethambutol, Cycloserine, Kanamycin
4	Streptomycin, Isoniazid, Rifampicin, Pyrazinamide, Ethambutol, Para amino Salicylic Acid (PAS)
5	Streptomycin, Isoniazid, Rifampicin, Pyrazinamide, Ethambutol, Ofloxacin

السؤال (٢٣): ما هي مدة المعالجة الموصى بها للحالات الجديدة المصابة بمرض السل؟

1	١-٣ أشهر
2	٦ أشهر
3	٨ أشهر
4	٩ أشهر
5	١٢ شهراً
6	أكثر من ١٢ شهراً

السؤال (٢٤): هل يوجد نظام لمتابعة الملامسين في المركز الصحي؟

1	نعم
2	لا
3	لا أعرف

السؤال (٢٥): كم عدد المشتبه بأنهم مصابون بمرض السل وتحولهم إلى العيادات الاختصاصية شهرياً؟

1	0
2	1
3	١-٣
4	٣-٥
5	أكثر من ٥

**السؤال (٢٦): من وجهة نظرك، أي مما يلي قد يكون السبب وراء تغيب مريض السل عن العلاج؟**

١	قلة الوعي
٢	الشعور بالتحسن
٣	الكلفة العالية للخدمات
٤	الآثار الجانبية للأدوية
٥	أكثر من سبب (تذكر)
٦	أخرى (الرجاء الشرح)

**السؤال (٢٧): هل يوجد مجهزي العلاج لمرضى السل في دائرة نشاط المركز الصحي؟**

١	نعم
٢	لا
٣	لا أعرف

**السؤال (٢٨): إذا كانت الإجابة على السؤال ٢٧ نعم، ما هي أنواع مجهزي العلاج؟ (الإجابة على كافة الحقول)**

1	المتطوعين المجتمعيين
2	موظفي الرعاية الصحية المجتمعية
3	أحد أفراد العائلة
4	أخرى (الرجاء التحديد.....)

**السؤال (٢٩): كيف يكون شعورك عند فحص المصابين بمرض السل؟**

1	عادي
2	خائف من العدوى
3	أخرى (الرجاء التحديد.....)

**السؤال (٣٠): هل تلقيت يوماً تدريباً حول المعلومات والتثقيف والاتصال؟**

١	نعم
٢	لا

**السؤال (٣١): هل تقوم حالياً بإيصال رسائل معلومات وتثقيف واتصال حول مرض السل كجزء من عملك؟**

١	نعم
٢	لا

**السؤال (٣٢): إذا كانت الإجابة على السؤال ٣١ نعم، ما مدى تكرارية قيامك بإيصال رسائل معلومات وتثقيف واتصال لمرضى السل؟**

1	عندما أقابل المريض في غرفة الفحص
2	اعتدت تنظيم جلسات للمعلومات والتثقيف والاتصال لمجموعة من مرضى السل في العيادة/المستشفى
3	اعتدت المشاركة في محاضرات/ندوات عامة حول مرض السل خارج العيادة/المستشفى
4	اعتدت المشاركة في البرامج الإعلامية واسعة النطاق
5	أخرى (الرجاء التحديد.....)

**السؤال (٣٣): ما هو السبب وراء تدني معدل اكتشاف حالات مرض السل في العراق؟**

1	قلة وعي الناس بالتدري
2	الصعوبات المتعلقة بالتشخيص (المختبر، العيادة،...الخ.)
3	الطب الشعبي
4	قلة التدريب المهني
5	يوجد في محافظتنا معدل اكتشاف أقل بسبب اختفاء مرض السل
6	أخرى (الرجاء ذكرها)

### **نتيجة المقابلة**

١- تمت المقابلة بشكل كامل

٢- تمت المقابلة بشكل جزئي (انسحب اثناء المقابلة ولم يكمل الاجابة )

٣- رفض المشاركة

## **Annex 4: Scoring Technique**

**Scoring technique for knowledge, attitude, practice and believes scores for study groups:**

### **I) TB Patients:**

#### **A) Knowledge Score(maximum expected score is 45):**

- Ever heard about tuberculosis? 1 if yes, 0 if no
- Ever heard about tuberculosis? 1 if yes, 0 if no.
- How serious is TB in Iraq? 2 if serious, 1 if very serious, 0 for other responses.
- How serious is TB in Iraq? 2 if serious, 1 if very serious, 0 for other responses.
- Who could get TB? 1 If any person, poor people, alcohol drinkers, drug addicts, homeless and 2 for children, 0 for other responses.
- Types of TB (site of TB in the body)? 1 for pulmonary, 1 for extrapulmonary, 0 for other responses.
- Clinical Features of TB? 1 for each of cough, fever, loss of appetite, night sweats, fatigue, and loss of weight, 0 for other responses.
- How to diagnose TB? 2 for any response included DSM. 1 if response included X ray without DSM, 0 for other responses.
- Is TB a curable disease? 1 if yes, 0 for other responses.
- How to cure from TB? 2 if using DOTS, 1 if medication from PHCC, 0 for other responses.
- Where to get TB treatment? 2 if response includes NTP/NTP related health facilities, and 1 for other public health facilities. 0 for other responses.
- Is treatment of TB is free in your governorate? 1 if yes, 0 for other responses.
- Period needed for treatment of TB is \_\_\_\_\_. 2 if response was "6-8 months", 0 for other responses.
- Is TB a contagious disease? 1 if yes, 0 for other responses.
- How to get infected with TB? 1 for each of respiratory droplets and unpasteurized milk, 0 for other responses.
- Is TB preventable? 1 if yes, 0 for other responses.
- How to prevent TB? 2 for protected cough/sneezing, 1 for each of good indoor ventilation, and good nutrition, 0 for other responses.
- Ever heard about BCG? 1 if yes, 0 for other responses.
- When to immunize with BCG? 1 if after birth, 0 for other responses.
- If having symptoms of TB; when to visit a PHCC? 2 if symptoms exceed 2-3 weeks or there was no response to self treatment, 1 if clinical features linked to TB, 0 if will not visit a physician.
- Should TB patients get isolated? 1 if yes, 0 for other responses.
- Should HIV patients be worried of TB? 1 if yes, 0 for other responses.
- Why should HIV patients be worried of TB? 1 if TB patient is HIV increases the risk of TB, 0 for other responses.

## **Annex 4: Scoring Technique**

### **B) Negative Attitude Score(maximum expected score is 9):**

- If one of your relatives got TB will you support him to get treatment? 1 if no, 0 for other responses.
- Feel shy for having TB? 1 if yes, 0 for other responses.
- Do you need to hide your illness with TB from others? 1 if yes, 0 for other responses.
- Prefer to live isolated if diagnosed with TB? 1 if yes, 0 for other responses.
- What a man do if wife got TB? 1 if response does not include supporting her, 0 for other responses.
- How to react if son engaged to a TB patient? 1 if response does not include supporting him, 0 for other responses.
- How to react if daughter engaged to TB patient? 1 if response does not include supporting her, 0 for other responses.
- Want to get more information about TB? 1 if no, 0 for other responses.
- Regretted treated for TB/ worsen by this treatment? 1 if yes, 0 for other responses.

### **C) Practice Score (maximum expected score is 5):**

- What will you do if you have symptoms like those of TB? 1 if visit NTP related health facilities, 0 for other responses.
- If having symptoms of TB; when to visit a PHCC? 1 if Symptoms pass 2-3 weeks or realize linkage to TB, 0 for other responses.
- Measure taken before definite TB diagnosis? 1 if Visit primary health care facilities, 0 for other responses.
- Women attend PHCCs themselves? 1 for any degree of disagreement, 0 for other responses.
- Men accompany their wives on attending a PHCC? 1 of any degree of agreement, 0 for other responses.

### **D) Negative Belief Score(maximum expected score is 6):**

- Will TB affect your relationships with others? 1 if yes, 0 for other responses.
  - TB affects work performance? 1 if yes, 0 for other responses.
  - TB affects marital relationship? 1 if yes, 0 for other responses.
  - TB affects family responsibilities? 1 if yes, 0 for other responses.
  - Chances of marriage decrease after having TB? 1 if yes, 0 for other responses.
  - TB affects family relationships? 1 if yes, 0 for other responses.
- 

## **II) Community Members:**

### **A) Knowledge Score (maximum expected score is 46):**

- Ever heard about TB? 1 if yes, 0 for other responses.
- Ever heard about NTP? 1 if yes, 0 for other responses.
- How serious is TB in Iraq? 2 if serious, 1 if very serious, 0 for other responses.

## **Annex 4: Scoring Technique**

- How serious is TB in your governorate? 2 if serious, 1 if very serious, 0 for other responses.
- How could have TB? 1 if any person, Poor people, Alcoholic people, Drug addicts, and Homeless people, 2 if children.
- Types of TB you know (site of TB)? 1 for pulmonary TB and 1 for extrapulmonary TB, 2 if both, 0 for other responses.
- Clinical features of TB? 1 for each of cough, fever, loss of appetite, night sweats, fatigue, and weight loss.
- How to diagnose TB? 2 if response included sputum examination, 1 if chest X ray, 0 for other responses.
- Is TB curable? 1 if yes, 0 for other responses.
- How to cure TB? 2 if response was DOTS, 1 if medication from PHCCs, 0 for other responses.
- Where to get treatment of TB? 2 if response included NTP/NTP related health facilities, 1 if public hospitals/PHCCs, 0 for other responses.
- Period required treating with DOTS? 1 if 6-8 months, 0 for other responses.
- Is TB a contagious disease? 1 if yes, 0 for other responses.
- How to catch TB infection? 1 for response included respiratory droplets and 1 for unpasteurized milk, 2 if both, 0 for other responses.
- Is TB preventable? 1 if yes, 0 for other responses.
- How to prevent TB? 2 if protected cough, 1 if good ventilation, 1 if good nutrition, 0 for other responses.
- Ever heard about BCG? 1 if yes, 0 for other responses.
- When to immunize with TB? 1 if after birth, 0 for other responses.
- Should avoid cured TB patients? 1 if no, 0 for other responses.
- Can a TB patient have a future like others? 1 if yes, 0 for other responses.
- Should HIV patient concern about TB? 1 if yes, 0 for other responses.
- Why should HIV patient concern about TB? 1 HIV patient is more prone to have TB than others, 0 for other responses.
- When to seek help on having symptoms of TB? 1 if 2-3 weeks, 0 for other responses.
- Men are more frequent to have TB than women? 1 for any degree of disagreement, 0 for other responses.

### **B) Negative Attitude Score (maximum expected score is 5)**

- Will you support one of your relatives if s/he got TB? 1 if no, 0 for other responses.
- Feel shy if have/had TB? 1 if yes, 0 for other responses.
- Should you hide your disease from others? 1 if yes, 0 for other responses.
- Prefer to live isolated if got TB? 1 if yes, 0 for other responses.
- Would you like to have more knowledge of TB? 1 for any degree of disagreement, 0 for other responses.



## **Annex 4: Scoring Technique**

### **C) Practice Score (maximum expected score is 10):**

- What will you do if having TB symptoms? 1 for attending public health facility and 2 for attending NTP related health facility, 0 for other responses.
- If having TB symptoms; when will you visit PHCC? 1 if Pass 2-3 weeks or realize symptoms are related to TB, 0 for other responses.
- What help you sought on having TB symptoms? 1 if Attend PHCC, 0 for other responses.
- What to do if one of family members got TB? 0 if attending private health care provider and 1 if attending a public health care provider, 0 for other responses.
- Women attend PHCCs themselves? 1 if any degree of disagreement, 0 for other responses.
- Men accompany their wives on attending a PHCC? 1 if any degree of disagreement, 0 for other responses.
- What will a man do if women Got TB? 1 if response included supporting her, 0 for other responses.
- What to do if son engaged to TB patient? 1 if response included supporting him, 0 for other responses.
- What to do if daughter engaged to TB patient? 1 if response included supporting her, 0 for other responses.

### **D) Score of Negative Beliefs(maximum expected score is 10):**

- TB affects relationships with others? 1 if yes, 0 for other responses.
  - TB affects work performance? 1 if yes, 0 for other responses.
  - TB affects marital relationship? 1 if yes, 0 for other responses.
  - TB affects tackling family responsibilities? 1 if yes, 0 for other responses.
  - TB affects chances of marriage? 1 if yes, 0 for other responses.
  - TB affects family relationships? 1 if yes, 0 for other responses.
- 

## **III) Knowledge Score of HCP (maximum expected score is 26):**

- TB is a serious public health concern in your governorate? 1 if serious, 0 for other responses.
- TB is a serious public health concern in Iraq? 1 if serious, 0 for other responses.
- Age 15-54 is the most affected age group with TB? 1 if yes, 0 for other responses.
- There are about 250 reported cases of DR-TB? 1 if yes, 0 for other responses.
- Annually, 8000 persons die in Iraq because of TB? 1 if no, 0 for other responses.
- How does TB spread? 1 for each; respiratory droplets and unpasteurized milk, 0 for other responses.
- How to suspect TB cases? 1 if included unexplained cough for more than 2-3 weeks, 0 for other responses.
- Can we label all people who cough as TB suspects? 1 if no, 0 for other responses.

#### **Annex 4: Scoring Technique**

- How to diagnose TB? 1 if answer included sputum examination for AFB, 0 for other responses.
- How many sputum samples needed to diagnose TB? 1 if 2-3 samples, 0 for other responses.
- Which contacts you will encourage excluding TB infection? 1 if House-hold contacts, 0 for other responses.
- To whom ITP should be given? 1 if U5 children, 0 for other responses.
- DOTS aims at improving patient productivity and quality of life? 1 if yes, 0 for other responses.
- DOTS aims at preventing deaths or complications related to TB? 1 if yes, 0 for other responses.
- DOTS aims at preventing relapse? 1 if yes, 0 for other responses.
- DOTS aims at preventing spreading TB to others? 1 if yes, 0 for other responses.
- DOTS aims at preventing drug resistance? 1 if yes, 0 for other responses.
- Are you familiar with NTP? 1 if yes, 0 for other responses.
- Are you familiar with DOTS? 1 if yes, 0 for other responses.
- What is the most important part of DOTS? 1 if observed patient swallow anti-TB, 0 for other responses.
- When to do first follow up sputum examination for Cat I patient? 1 if at end of month 2, 0 for other responses.
- When to do first follow up sputum examination for Cat II patient? 1 if at end of month 3, 0 for other responses.
- How many follow up sputum samples are needed for a TB patient? 1 if 3 samples, 0 for other responses.
- Which of the followings are FLD anti-TB? 1 if HRZES, 0 for other responses.
- Period required treating using DOTS? 1 if 6-8 months, 0 for other responses.