



LEVEL OF AWARENESS ON TUBERCULOSIS, ROLES AND FUNCTIONS OF TREATMENT PARTNER AND IMPLEMENTATION OF THE TREATMENT PARTNER STRATEGY.

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ABSTRACT: *This study determined the level of awareness on tuberculosis, roles and functions of treatment partners and Implementation of the treatment partner strategy. It also looked into the significant relationship between the profile of the respondents, the level of awareness on tuberculosis of the respondents, the level of roles and functions of the respondents, the level of implementation of the treatment partner strategy and its significant relationship. This study utilized the descriptive-correlational design utilizing quantitative approach in determining the profile, level of awareness on tuberculosis and level of roles and functions of treatment partners. Furthermore, it will also be used to determine the significant variables correlated. Based on the findings of the study, the following conclusions were drawn: There is no significant relationship between profile variables and level of awareness on tuberculosis and level of roles and functions of the treatment partners. But there is a significant relationship between awareness and roles and functions as well as roles and functions of treatment partners and implementation of the treatment partners program. Based on the results of the study, the following are recommended: The TB patients should be aware of the personal, social and economic consequences of the dreaded disease and that they will live normal lives after TB treatment with the help of their TB treatment partners. Treatment Partners should realize their role in treating TB in their locality and their overall contribution in helping increase cure rate on TB. Moreover, the family members and significant others should understand the importance of having a TB treatment partner. Furthermore, rural health workers should help the frontline workers to really insist on having their community volunteer health workers as the first priority to be the TB patient's treatment partners. And lastly, the Ministry of Health should continuously provide technical assistance to the community volunteer health workers in the form of training packages and other non-monetary benefits such as those provided in the law.*



INTRODUCTION

TB is caused by bacteria (*Mycobacterium tuberculosis*) and it most often affects the lungs. TB is spread through the air when people with lung TB cough, sneeze or spit. A person needs to inhale only a few germs to become infected. Every year, 10 million people fall ill with tuberculosis (TB). Despite being a preventable and curable disease, 1.5 million people die from TB each year – making it the world's top infectious killer. TB is the leading cause of death of people with HIV and also a major contributor to antimicrobial resistance. Most of the people who fall ill with TB live in low- and middle-income countries, but TB is present all over the world. About half of all people with TB can be found in 8 countries: Bangladesh, China, India, Indonesia, Nigeria, Pakistan, Philippines and South Africa. About a quarter of the global population is estimated to have been infected with TB bacteria, but most people will not go on to develop TB disease and some will clear the infection. Those who are infected but not (yet) ill with the disease cannot transmit it.

People infected with TB bacteria have a 5–10% lifetime risk of falling ill with TB. Those with compromised immune systems, such as people living with HIV, malnutrition or diabetes, or people who use tobacco, have a higher risk of falling ill.

Common symptoms of TB disease include: prolonged cough, chest pain, weakness or fatigue, weight loss, fever, and night sweats. Often, these symptoms will be mild for many months, thus leading to delays in seeking care and increasing the risk of spreading the infection to others. If the healthcare provider suspects a patient to have TB disease, they will send the patient for testing. In the case of suspected lung TB disease, patients will be asked to give a sputum sample for testing for TB bacteria. For non-lung TB disease, samples of affected body fluids and tissue can be tested. WHO recommends rapid molecular diagnostic tests as initial tests for people showing signs and symptoms of TB. Other diagnostic tools can include sputum smear microscopy and chest X-rays.

With TB infection, a person gets infected with TB bacteria that lie inactive in the body. This infection can develop into TB disease if their immune system weakens. People with TB infection do not show any signs or symptoms of TB. To identify TB infection, healthcare providers will screen at-risk patients to rule out active TB, and they may use a skin or blood test to check for TB infection

TB disease is curable. It is treated by a standard 6 month course of 4 antibiotics. Common drugs include rifampicin and isoniazid. In some cases the TB bacteria does not respond to the standard drugs. In this case, the patient has drug-resistant TB. Treatment for drug-resistant TB is longer and more complex.

The course of TB drugs is provided to the patient with information, supervision and support by a health worker or trained volunteer. Without such support, treatment adherence can be difficult. If the treatment is not properly completed, the disease can become drug-resistant and can spread.

In the case of TB infection (where the patient is infected with TB bacteria but not ill), TB preventive treatment can be given to stop the onset of disease. This treatment uses the same



drugs for a shorter time. Recent treatment options have shortened the duration of treatment to only 1 or 3 months, as compared to 6 months in the past.

The incidence of TB in Libya is on the rise. The country's health system has been severely disrupted during the decade-long conflict, and its National Tuberculosis Programme has acute shortages of trained staff, specialized equipment and medical supplies.

Libya is particularly vulnerable to the risk of infectious diseases such as TB. The country is hosting more than 570,000 migrants; a recent IOM study showed that 39% of them were living in unsanitary and severely overcrowded conditions (i.e., more than six people per habitable room) and had limited access to health care, creating conditions ripe for the spread of the disease. Other migrants are being held in similarly overcrowded detention centers.

Using the generous contribution from the EU, WHO and IOM will work together to strengthen TB screening, laboratory diagnosis, referral and treatment services for migrants, refugees, internally displaced people and other vulnerable populations.

“TB is the world's top infectious killer. However, with proper treatment, the vast majority of people can be cured of the disease. The EU's timely contribution will help us enhance TB services throughout the country”, said Ms Elizabeth Hoff, Head of Mission and WHO Representative in Libya. “The project will allow WHO to support national efforts to combat TB by training health staff and strengthening TB surveillance and laboratory services. We plan to deliver equipment, medicines and supplies to TB centers across the country. To help reduce the spread of infection, we will support systematic screening and contact tracing in detention centers and communities hosting high numbers of migrants. Lastly, we will work with communities to help them understand the signs and symptoms of TB, the steps they can take to prevent its spread and how, when and where they should seek health care.” (WHO, Eastern Mediterranean Region 2024). p.# 2)

“Migrants and internally displaced populations are often vulnerable to TB due to low immunity caused by lack of adequate nutrition, unhygienic living conditions and lack of access to early detection services. According to IOM assessments, accessing food remains a major constraint for many migrants in Libya,” said Federico Soda, IOM Libya Chief of Mission. “Since the COVID-19 pandemic has caused enormous health, social and economic impacts, which are likely to continue in 2021 and beyond, this funding from the EU to address the burden of TB in Libya comes at a critical time. In partnership with WHO and other humanitarian partners, IOM medical teams will reach migrants and vulnerable host community members, especially in areas heavily affected by armed conflict and displacement, through the provision of nutrient supplements and health promotion sessions to identify and refer suspected TB cases for treatment.” IOM's Displacement Tracking Matrix shows that more than 316,000 Libyans remain displaced, while over 567,000 others have returned to their areas of origin. Most returnees are reported to need food assistance and health services.(WHO, Eastern Mediterranean Region 2024 p. # 3).



Tuberculosis (TB) has been prevalent in Libya for centuries, with an estimated 4,000 cases of TB occurring in 2021, an incidence of 59 cases for every 100 000 people [1]. Libya is categorized as a moderate TB burden country by the World Health Organization (WHO) and the WHO-recommended Directly Observed Treatment-short course (DOTS) has been deployed for TB patients in the country for two decades. The emergence of COVID-19 disrupted TB services in Libya and led to a decrease in the detection and treatment of TB cases. To address this issue, WHO Libya, in collaboration with the International Organization for Migration (IOM) and other partners, mobilized resources to holistically strengthen the management of TB services. Public sector TB services were re-activated and strengthened, resulting in increased health-seeking behavior by the public and a corresponding increase in the notification of TB cases. TB new case notification declined from 2,209 in 2019 to 1,744 in 2020, before increasing again to 1,932 in 2021 across both host and migrant populations, including refugees [2, 3, 4].

TB is caused by bacteria (*Mycobacterium tuberculosis*), and it most often affects the lungs. TB is spread through the air when people with lung TB cough, sneeze, or spit. A person needs to inhale only a few germs to become infected and every year, 10 million people fall ill with TB [5]. The disease can be treated by a standard six-month course of four antibiotics. Common drugs include rifampicin and isoniazid, but in some cases, the TB bacteria does not respond to the standard drugs. In this case, the patient has drug-resistant TB (DR-TB), treatment for which takes longer and is more complex [5].

As the COVID-19 pandemic took hold, health services across Libya became severely disrupted, including for TB. Lockdowns led to reduced health seeking behavior along with cessation of outreach campaigns which would normally seek out and diagnose TB patients. Laboratories previously used for TB diagnoses were repurposed to cater for COVID-19 testing, further limiting access to TB services and as a result, TB diagnostic services decreased. Overall, TB notification declined from 2,209 in 2019 to 1,748 in 2020, a reduction of nearly 20% [2, 3]. Libya is particularly vulnerable to the risk of infectious diseases such as TB, as the country hosts more than 570,000 migrants, many of them living in unsanitary and crowded conditions which can easily lead to disease transmission. Many of the migrants are from TB-endemic countries, further increasing the risk of spread in both migrant and host populations.

In recognition of this, WHO Libya along with IOM sought support from the European Union (EU) to a tune of €3.3 million to strengthen TB screening, laboratory diagnosis, referral and treatment services for migrants, refugees, internally displaced people, and other vulnerable populations. Specifically, WHO Libya in collaboration with IOM and both the Libyan Thoracic Society and Tripoli Medical University trained 277 healthcare workers on TB prevention and care and an additional 110 healthcare workers were given on-the-job-training. WHO Libya contextualized the materials for these trainings and developed a practical guide for the comprehensive management of TB based on latest WHO guidance. WHO Libya, together with headquarters and the regional office of the Eastern Mediterranean, also conducted a workshop for 25 professionals working for the national TB programme to scale up TB preventative treatments for vulnerable population groups such as refugees and migrants.



With the support of the EU, WHO Libya was able to procure 50 patient courses of oral DR-TB drugs which were delivered to TB treatment facilities in Tripoli and Benghazi. Three state-of-the-art portable X-ray machines were sourced and provided to the National Centres for Disease Control (NCDC) in Tripoli, Benghazi, and Tobruk to facilitate the rapid diagnosis of TB patients. To complement this support, a network of 54 national print, radio and TV journalists were trained to increase the awareness of TB through various available electronic and social media platforms. This enabled the dissemination of accurate, evidence-based information to counteract any misunderstandings on TB. In addition, thousands of print materials were also distributed to all health facilities across the country containing TB awareness messages to increase public awareness and to reduce the related stigma.

As a result of these activities, TB services have improved across the 26 specialized units in the country through enhanced diagnosis along with treatment delivery. The country's TB notification increased to 1932 in 2021 from 1744 in 2020 [3, 4]. As WHO Libya has provided technical expertise to develop the TB national strategic plan 2023-2027, it will continue to build capacity of national staff and advocate for additional resources through multisectoral collaboration (WHO, 2022).

Statement of the Problem

This study determined the level of awareness on tuberculosis, roles and functions treatment partners and implementation of the treatment partner strategy.

Specifically, this study seeks to answer the following inquiries:

1. What is the profile of the respondents in terms of:
 - 1.1 age;
 - 1.2 gender;
 - 1.3 civil status;
 - 1.4 highest educational attainment; and
 - 1.5 length of service as a treatment partner?
2. What is the level of awareness on tuberculosis of the respondents?
3. What is the level of roles and functions of the respondents?
4. What is the level of implementation of the treatment partner strategy under the DOTS program as perceived by the patients?
5. Is there a significant relationship between the following:
 - 5.1 profile and level of awareness on tuberculosis;



5.2 profile and level of roles and functions; and

5.3 awareness and roles and functions;

5.4 roles and functions and implementation of the treatment partner strategy?

Statement of the Null Hypothesis

1 There is no significant relationship between the following:

1.1 profile and level of awareness on tuberculosis;

1.2 profile and level of roles and functions; and

1.3 awareness and roles and functions; and

1.4 roles and functions and implementation of the treatment partner strategy.

Significance of the Study

Tuberculosis (TB) is not merely a major health problem around the world but has been declared a global emergency by the World Health Organization (WHO) because of worldwide fear of human immunodeficiency virus (HIV) and acute immune-deficiency syndrome (AIDS) epidemic (Raveglione, 2006). Emergence of multidrug resistant tuberculosis (Iseman, 2002).

This study would be beneficial to the following group of people:

TB Patients: They will be aware of the personal, social and economic consequences of the dreaded disease and that they will live normal lives after TB treatment with the help of their TB treatment partners.

TB Treatment Partners: The result of the study will help them realize their role in treating TB in their locality and their overall contribution in helping increase the cure rate of TB.

Family Members and Significant Others: They will understand the importance of having a TB treatment partner.

Health Workers: This will help the frontline workers to really insist on having their community volunteer health workers as the first priority to be the TB patient's treatment partners.

Ministry of Health: For the department to continuously provide technical assistance to the community volunteer health workers in the form of training packages and other non-monetary benefits such as those provided in the law.

The Researcher: This study will enable the researcher to consider the skills and experiences that will improve her job expectations and to share her knowledge and performance in the field of research.



Future Researchers: The result of this study will serve as insight to conduct investigations relative to utilization of community volunteer health workers in various health programs and projects.

RESEARCH METHODOLOGY

Research Design

This study will utilize the descriptive-correlational design utilizing quantitative approach in determining the profile, level of awareness on tuberculosis and level of roles and functions of treatment partners. Furthermore, it will also be used to determine the significant variables correlated.

Research Respondents

The research respondents of this study will be the 60 treatment partners of patients with tuberculosis from different areas of Libya. A purposive quota sampling technique will be employed. The respondents must be at least 1 year in the service as treatment partners. Ten tuberculosis patients will also be employed as research participants to provide the qualitative data. The participants must be at least 3 months on therapy.

Research Instrument

This study utilized a validated tool to determine the awareness of tuberculosis and roles and functions of the treatment partner of the patient with tuberculosis. It is divided into 4 parts wherein; part 1 determines the profile of the respondents. Part 2 will determine the level of awareness on tuberculosis of the treatment partners. It is a 15-item questionnaire with a 4-point likert scale wherein 4 is highly aware, 3 is moderately aware, 2 is aware and 1 is less aware. Part 3 will determine the level of roles and functions of the treatment partners. It has 14 indicators with a 4-point likert scale wherein 4 is almost always, 3 is often, 2 is seldom and 1 is almost never. The last part will measure the level of implementation of the treatment partner strategy which will be answered by the tuberculosis patients.

Research Procedures

Data Gathering

The data gathering procedure for this research will be as follows:

Upon approval of the request to conduct the study, the researcher will then conduct the interview using the validated tool for this study. The researcher will then discuss the categorical responses. A one-on-one interview will also be conducted on the tuberculosis patients. The duration of the interview will last for 15 to 30 minutes. After which the questionnaires will be collected and tallied, and subjected to statistical analysis for further interpretation of data.



Data Analysis

To determine the demographic profile of the public respondents, the Simple Percentage will be used. The Weighted Mean will be utilized to determine the level of awareness on tuberculosis and level of roles and functions of the treatment partners.

Parameter Limits for Level of Roles and Functions

Range	Response Category	Interpretations
3.26-4.00	Almost always	Very satisfactory
2.51-3.25	Often	Satisfactory
1.76-2.50	Seldom	Fair
1.00-1.75	Almost never	Poor

Parameter Limits for Level of Implementation of the Treatment Strategy Partner

Range	Response Category	Interpretations
3.26-4.00	Almost Always	Fully Implemented
2.51-3.25	Often	Moderately Implemented
1.76-2.50	Seldom	Implemented
1.00-1.75	Almost Never	Less Implemented

The Chi-Square is used to determine the relationship between the profile and the level of awareness and profile and level of roles and functions of the treatment partners. Moreover, the Pearson-r is utilized to determine the relationship of awareness and roles and functions. It is also used to determine the relationship between roles and functions and implementation of the treatment partner strategy.

DEFINITION OF TERMS

To enhance understanding of the study, the following terms are operationally defined:

Awareness on Tuberculosis - This refers to their awareness of the signs and symptoms, diagnostic procedures, drugs, duration of therapy, adverse side effects of drugs and roles and functions.

Implementation of the Treatment Partner Strategy - This refers to the execution of one of TB DOTS strategies to help achieve the goals of the program.



Level of Awareness on Tuberculosis - It refers to the degree of the respondent's awareness on the signs and symptoms, diagnostic procedures, drugs, duration of therapy, adverse side effects of drugs and roles and functions.

Level of Implementation of the Treatment Partner Strategy - It refers to the degree of the execution of the TB DOTS strategy.

Level of Roles and Functions - This refers to the degree of the roles and functions of the treatment partner as to weighting the patient before the start of therapy, giving advice especially on the administration of maintenance dose.

PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

This chapter presents the statistical analysis and interpretation of the data gathered for the study. This study determined the profile of the treatment partner, their level of awareness on tuberculosis as well as their roles and functions as treatment partners.

I. Profile of the Respondents

This presents the profile of the respondents according to their age, gender, civil status, highest educational attainment and length of service as treatment partner.

Looking at the age, the majority or 27(45%) out of 60 respondents are between 38-47 years, while 21 or 35% are between 28 and 37 years. Five or 8.33% are within 18- 27 years; 4 are between 48-57 years and 3 are aged 58 and above. According to the National Statistics Office (2011), the estimated age distribution prevalent in the province for the year 2010 is characterized by the sizable number of population belonging to the younger generation where 67.25% is below 30 years of age. Only 30.85% comprises those 30 years old up to 69 years old. Citizens 70 years old and above comprise the remaining 2%.

As to gender, 57 (95%) of respondents are females while only 3 or 5% out of 60 respondents are males. In contrast to the findings of the National Statistics Office (2011) that the male population slightly outnumbers the female population, of which 51% comprises the former and only 49% for the latter. This corresponds to a 105:100 male to-female ratio 3.2. This study utilized a convenient sampling technique and during the gathering of the data it happened that the majority are females due to the fact that most the male adults are working. In terms of civil status, the larger number or 43 (71.67%) of the respondents are married; 11 or 18.33% are single while 5 or 8.33% are widowed.

When it comes to the highest educational attainment, 3 or 6.67% out of 60 reached the secondary school level while 4 (6.67%) are primary graduates. Meanwhile, 1 (1.67%) of the respondents have reached primary level; 10 or 5% are secondary school graduates and 42 (16.77%) have reached the college level. The province is proud of its high literacy rate of 90% for people over 10 years and above. However, the figures show that more than half of the 10 years old are literate



and indicative that efforts are exerted in the provision of educational assistance for the minorities in the province (NSO, 2011).

The majority or 22 (36.67%) of those who took part of the study have served as a treatment partner for 4-6 years; 19 or 31.67% for 1- 3 years while 15 or 25% are treatment partners for less than a year. However, only 3 (5%) have served for 7 - 10 years and 1 have served as a treatment partner for 10 years or more.

Table 1: Profile of the Respondents

n=60

Profile	Frequency	Percentage
Age		
18-27	5	8.33
28-37	21	35.00
38=47	27	45.00
48-57	4	6.67
58 and Above	3	5.00
Gender		
Male	3	5.00
Female	57	95.00
Civil status		
Single	11	18.33
Married	43	71.67
Widow	5	8.33
Highest educational attainment		
Elementary level	1	1.67
Elementary graduate	4	6.67
High school level	3	5.00
High school graduate	10	16.67
College level	42	70.00
Length of service as a treatment partner		
Less than 1 year	15	25.00
1-3 years	19	31.67
4-6 years	22	36.67
7-10 years	3	5.00
10 years and more	1	1.67



II. Level of Awareness on Tuberculosis

The following table presents the respondents' level of awareness on tuberculosis. And with an average mean of 3.59, findings suggest that the respondents are fully aware.

This indicates that respondents are fully aware of the signs and symptoms of Tb with a mean of 3.27; fully aware that the main diagnostic procedure of TB is direct sputum smear microscopy with a mean of 3.99. In the same regard, respondents are fully aware that TB drugs are given free in the health center (3.29); fully aware that as community volunteer, they can be a treatment partner if there is a TB patient in their area (3.55); fully aware that the treatment partner will watch the patient as he/she swallows the TB drugs daily (3.60); fully aware that the treatment of a TB patient will last for 6 - 8 months (3.82) and fully aware that the treatment partner and the TB patient will attend a pre- treatment counseling with a mean of 3.28.

Similarly, respondents say that they are fully aware that the first dose of treatment will be taken at the Main Health Center with a mean of 3.55; fully aware that before treatment starts the patient will be weighed to determine the number of tablets to be taken daily (3.42); and they are fully aware that the treatment partner will follow-up the sputum of the TB patient on the 2nd, 4th and 6th month of treatment with a mean of 3.98.

The same as the above, respondents are fully aware that as treatment partner they will get the weekly supply of TB drugs from the midwife or nurse (3.88); fully aware that the treatment partner should sign the treatment card after taking the TB drugs (3.73); fully aware that as treatment partners they will report any adverse side effects on the drugs taken to the health center; will conduct counseling to the TB patient with a mean of 3.45. Furthermore, respondents are fully aware that as treatment partners, they will conduct counseling to the TB patient and that the treatment partner will follow-up if the patient submitted for sputum follow-up with means of 3.66 and 3.45 respectively.

Table 2: Level of Awareness on Tuberculosis

Statement	Mean	Interpretation
I am aware of the signs and symptoms of Tb	3.27	Fully Aware
I am aware that the main diagnostic procedure of TB is direct sputum smear microscopy.	3.27	Fully Aware
I am aware that TB drugs are given free in the health center	3.99	Fully Aware
I am aware that as a community volunteer, I can be a treatment partner if there is a TB patient in my area.	3.29	Fully Aware
I am aware that the treatment partner will watch the patient as he/she swallows the TB drugs daily.	3.55	Fully Aware
I am aware that the treatment of a TB patient will last for 6-8 months.	3.60	Fully Aware
I am aware that the treatment partner and the TB patient will attend a pre-treatment counseling.	3.82	Fully Aware
I am aware that the first dose of treatment will be taken at the	3.55	Fully Aware



Main Health Center.		
I am aware that before treatment starts the patient will be weighed to determine the number of tablets to be taken daily.	3.42	Fully Aware
I am aware that the treatment partner will follow-up the sputum of the TB patient on the 2d, 4th and 6th month of treatment	3.98	Fully Aware
I am aware that the treatment partner will follow-up the sputum of the TB patient on the 2d, 4th and 6th month of treatment	3.88	Fully Aware
I am aware that the treatment partner should sign the treatment card after taking the TB drugs.	3.73	Fully Aware
I am aware that as a treatment partner I will report any adverse side effects on the drugs taken to the health center.	3.45	Fully Aware
I am aware that the treatment partner will follow-up if the patient submitted for sputum follow-up.	3.66	Fully Aware
I am aware that as a treatment partner, I will conduct counseling to the TB patient.	3.45	Fully Aware
Average Mean	3.59	Fully Aware

III. Level of Roles and Functions of the Respondents

This table presents the level of the roles and functions of the respondents as perceived by them.

Gathering an average mean of 3.51, respondents rated themselves as very satisfactory. This means that respondents almost always attend the pre-treatment counseling together with the TB patient in the health center with a mean of 3.33 and they almost always weighed the TB patient before the first dose was taken to determine the number of drugs to be taken daily with a mean of 3.75.

Pursuing this further, respondents are very satisfactory as they almost always get the weekly supply of TB drugs from the midwife or nurse (3.49); almost always go to the house of the TB patient daily to supervise the treatment (3.60); almost always sign the treatment card daily as the TB patient takes the drugs (3.37); almost always remind the TB patient to submit sputum the 2nd, 4th and 6th month of treatment (3.51); almost always ask the TB patient if there is adverse reaction on the drugs taken (3.45); almost always report to the midwife or nurse every time the patient has a complaint whether or not it is related to the treatment (3.39); almost always remind the TB patient to avoid draft or take alcoholic beverages or smoke during the entire treatment period (3.64) and almost always advise the TB patient on the importance of proper nutrition and rest in the treatment of TB (3.44).

In the same manner, the respondents rated as very satisfactory as they almost always properly handle and store the TB drugs at home with a mean of 3.31; almost always instruct any of the family members if they cannot supervise the intake of the drug on a particular day for whatever reason (3.33); almost always follow-up immediately if the patient did not take his drug for that day (3.70) and they almost always follow-up immediately if the patient did not submit sputum at a specified date having a mean of 3.80.



The role of community healthcare partners is vital to successful TB treatment, especially in helping patients comply with strict chemotherapy regimens. In fact, the DOTS strategy recommends that a treatment partner be available to ensure all patients take their medication daily for six months or until they recover from the disease.

The Department for Partnerships and the Legal Unit of the WHO were developing a standard set of documents, aimed at ensuring a uniform approach in the hosting arrangements for all partnerships. The resolution on partnerships the World Health Assembly (WHA) endorsed a very specific new policy on formal partnerships that requires, among other things, that the function of the (partnership) secretariat be, and be seen as, part of the functions of WHO." (Section 13). This is a fairly radical redefinition that will have implications far beyond the Stop TB Partnership, and directly affects the autonomy and function of what were meant to be inclusive and innovative bodies. From what we have been told, the WHO has begun internal discussions on guidelines and operating procedures to implement this new policy and is drafting agreements to be negotiated and signed with the governing bodies of the hosted partnership.

Table 3: Level of Roles and Functions of the Respondents

Statements	Mean	Interpretation
1. I attend the pre-treatment counseling together with the TB patient in the health center.	3.33	Very Satisfactory
2. I weighed the TB patient before the first dose was taken to determine the number of drugs to be taken daily.	3.75	Very Satisfactory
3. I get the weekly supply of TB drugs from the midwife or nurse.	3.49	Very Satisfactory
4. I go to the house of the TB patient daily to supervise the treatment.	3.60	Very Satisfactory
5. I sign the treatment card daily as the TB patient takes the drugs.	3.37	Very Satisfactory
6. I remind the TB patient to submit sputum the 2, 4 and 6 month of treatment	3.51	Very Satisfactory
7. I ask the TB patient if there is an adverse reaction to the drugs taken.	3.45	Very Satisfactory
8. I report to the midwife or nurse every time the patient has a complaint whether or not it is related to the treatment.	3.39	Very Satisfactory
9. I remind the TB patient to avoid draft or take alcoholic beverages or smoke during the entire treatment period.	3.64	Very Satisfactory
10. I advise the TB patient on the importance of proper nutrition and rest in the treatment of TB.	3.44	Very Satisfactory
11. I properly handle and store the TB drugs at home.	3.31	Very Satisfactory
12. I instruct any of the family members if I cannot supervise the intake of the drug on a particular day for whatever reason.	3.33	Very Satisfactory



13. I follow-up immediately if the patient did not take his drug for that day.	3.70	Very Satisfactory
14. I follow-up immediately if the patient did not submit sputum at a specified date.	3.80	Very Satisfactory
Average mean	3.51	Very Satisfactory

IV. Level of Implementation of the Treatment Partner Strategy under the DOTS Program as Perceived by the Patients

This table shows the level of implementation of the treatment partner strategy under the WHO programs as perceived and rated by the patients.

Gathering an average mean of 3.41, patients suggest that the above-mentioned is fully implemented. This means that the patients treatment partners almost always attend the pre-treatment counseling in the health center and they almost always remind the patient to submit sputum the 2nd, 4th and 6th month of treatment having means of 3.33 and 3.37. In the same regard, the treatment partners almost always asked their patients if there is adverse reaction on the drugs taken (3.28); almost always reported to the midwife or nurse every time patient has a complaint whether or not it is related to the treatment (3.64); almost always reminded patients to avoid draft or take alcoholic beverages or smoke during the entire treatment period (3.63) and advised patients on the importance of proper nutrition and rest in the treatment of TB (3.66). Similarly, patients say that their treatment partners almost always instructed any of their family members if he/she cannot supervise their intake of the drug on a particular day for whatever reason (3.45); almost always followed up immediately if they did not take their drug for that day (3.97) and patients say that their treatment partners almost always followed up immediately if they did not submit sputum at a specified date gathering a mean of 3.72.

On the other hand, there are areas that were only moderately implemented or only often done by the treatment partners. Patients indicated that their treatment partners often weigh them before the first dose to determine the number of drugs to be taken daily (3.21); often get the weekly supply of TB drugs from the midwife or nurse (3.11); and patients say that their treatment partners only often went to their house daily to supervise their treatment showing a mean of 3.00. Likewise, patients say that their partners moderately implemented or often signed their treatment card daily as they took the drugs (2.95) and often properly handled and stored the TB drugs at home with a mean of 2.99.

The first TB screening for both men and women should be done in a private ward. While nearly all men and women who visited the RHUS said staff was respectful, there was a noted lack of regard for the privacy needs of female patients. Only 32 percent of women versus 78 percent of men reported the presence of privacy during consultation, the lack of privacy could be significantly hampering the desire to seek care and subsequently the detection of TB, particularly among women. A recent study in Vietnam indicated that social stigma is an important barrier to accessing TB treatment among rural folk (Johansson, 2000). While social isolation resulting from TB stigma affects both sexes, the consequence may be harsher for women and girls.



In exit interviews, both men and women tended to delay treatment in hopes their symptoms would go away. However, while men were more likely to self-medicate first before seeking care, women said shame deterred them from seeking treatment. Therefore, the issue of privacy and the assurance that information on their TB status will be safeguarded cannot be underestimated in improving care and treatment of both men and women. In exit interviews, both men and women tended to delay treatment in hopes their symptoms would go away. However, while men were more likely to self-medicate first before seeking care, women said shame deterred them from seeking treatment. Therefore, the issue of privacy and the assurance that information on their TB status will be safeguarded cannot be underestimated in improving care and treatment of both men and women.

Free transportation from remote communities to health centers. Because access to clinics as well as the affordability of treatment often poses a barrier to TB treatment, it is not enough to simply make available free drugs and transportation services; they must also be widely advertised. Interviews with healthcare workers confirmed that the distance of the health center hampered the decision of both men and women to effectively comply with treatment instructions. In Zambia, China and other high-burden countries, it is common for people who live in rural areas to walk more than two hours to reach the nearest health center for treatment. Such transportation assistance is more likely to bring women from unserved barangays into RHUs since they are less likely than men to use self-propelled modes of transportation, such as walking or bicycles, to reach the clinics. And because of women's economic disadvantage, easing transportation costs could lift a significant barrier to their seeking and complying with treatment.

Table 4: Level of Implementation of the Treatment Partner Strategy under the DOTS Program as Perceived by the Patients

Statements	Mean	Interpretation
My Treatment Partner.....		
1. attended the pre-treatment counseling in the health center.	3.33	Fully Implemented
2. weighed me before the first dose to determine the number of drugs to be taken daily.	3.21	Moderately Implemented
3. get the weekly supply of TB drugs from the midwife or nurse.	3.11	Moderately Implemented
4. went to our house daily to supervise my treatment.	3.00	Moderately Implemented
5. signed my treatment card daily as I take the drugs.	2.95	Moderately Implemented
6. Reminds me to submit the 2, 4 and 6 months of treatment.	3.77	Fully Implemented
7. Asked me if there is adverse reaction to the drugs taken.	3.28	Fully Implemented
8. reported to the midwife or nurse every time I have a complaint whether or not it is related to the treatment.	3.64	Fully Implemented



9. Reminded me to avoid draft or take alcoholic beverages or smoke during the entire treatment period.	3.63	Fully Implemented
10. advised me on the importance of proper nutrition and rest in the treatment of TB.	3.66	Fully Implemented
11. properly handled and stored the TB drugs at home.	2.99	Moderately Implemented
12. instructed any of my family members if she cannot supervise my intake of the drug on a	3.45	Fully Implemented
13. Followed up immediately if I did not take my drug for that day.	3.97	Fully Implemented
14. Followed up immediately if I did not submit a sputum at a specified date.	3.72	Fully Implemented
Average Mean	3.41	Fully Implemented

V. A Relationship between Profile and Level of Awareness on Tuberculosis

This table presents the relationship between the variables of the profile of the respondents and their level of awareness on tuberculosis. And the table shows that not one variable of the profile correlates with the level of awareness on tuberculosis.

As to the relationship between age and the level of awareness on tuberculosis, it gathered a computed chi-value of 0.10, lower than the critical chi-value of 3.84 indicating that it failed to reject the null hypothesis and showing that there is no correlation between the two variables.

Accumulating a computed chi-value of 0.22, lower than the critical chi-value of 3.84, gender proved to have no correlation with the level of awareness on tuberculosis, thus also failing to reject the null hypothesis. Civil status, with a computed chi-value of 0.41 lower than its critical chi-value of 5.99 also failed to reject the null hypothesis. This also means that civil status has no correlation with the level of awareness on tuberculosis.

Furthermore, highest educational attainment also failed to reject the null hypothesis as it shows a computed chi-value of 0.16, lesser than its critical chi-value of 5.99, thus also showing no correlation with the level of awareness on tuberculosis.

Lastly, the relationship between length of service as treatment partner and level of awareness on tuberculosis showed no correlation by having a computed chi-value of 0.56 lower than the critical chi-value of 5.99. There is also failure in rejecting the null hypothesis.

**Table 5.1: Relationship Between Profile and Level of Awareness on Tuberculosis**

Variables correlated	Computed chi-value	Critical chi- value	Decision on Ho	Interpretations
Age and Level of Awareness	0.10	3.84	Failed to Reject	No Correlation
Gender and Level of Awareness	0.22	3.84	Failed to Reject	No Correlation
Civil Status and Level of Awareness	0.41	5.99	Failed to Reject	No Correlation
Highest Educational Attainment and Level of Knowledge	0.16	5.99	Failed to Reject	No Correlation
Length of Service as Treatment Partner and Level of Awareness	0.56	5.99	Failed to Reject	No Correlation

Table V. B Relationship between Profile and Level of Roles and Functions

The table presented below shows the relationship between the profile of the respondents and the level of roles and functions. The results show that not one variable of the profile correlated with the level of roles and functions.

Looking at the relationship between age and the level of roles and functions, it gathered a computed chi-value of 1.34, lower than the critical chi-value of 3.84. This means that there is failure upon the rejection of the null hypothesis, thus the two variables are not correlated.

Gender, similarly, shows no correlation with the level of roles and functions. The computed chi-value is 0.38, lower than the critical chi-value of 7.82. It failed to reject the null hypothesis.

Moreover, gathering a computed chi-value of 1.42 and a critical chi-value of 9.49, there is failure in rejecting the null hypothesis therefore, there is no correlation between the respondents' civil status and the level of roles and functions.

Highest educational attainment, still, appears to have no correlation with the level of roles and functions with its computed chi-value of 0.19 which is lower than the critical chi-value of 3.84. The result also means that it failed to reject the null hypothesis.

Finally, with a mean of 1.35, lower than the critical chi-value of 6.64, length of service failed to reject the null hypothesis, also showing that it has no correlation with the level of roles and functions.

**Table 5.2: Relationship Between Profile and Level of Roles and Functions**

Variables Correlated	Computed Chi-Value	Critical Chi- Value	Decision on Ho	Interpretations
Age and Level of Roles and Functions	1.34	3.84	Failed to Reject	No Correlation
Gender and Level of Roles and Functions	0.38	7.82	Failed to Reject	No Correlation
Civil Status and Level of Roles and Functions	1.42	9.49	Failed to Reject	No Correlation
Highest Educational Attainment and Level of Roles and Functions	0.19	3.84	Failed to Reject	No Correlation
Length of Service as Treatment Partner and Level of Roles and Functions	1.35	6.64	Failed to Reject	No Correlation

V.C Relationship between Awareness and Roles and Functions

This table presents the relationship between the level of awareness on tuberculosis and the level of roles and functions of the respondents. Results show that it accumulated a computed r-value of 0.823, greater than the critical r-value of 0.622; indicating that the null hypothesis is rejected and that there is a significant relationship between the two variables.

Knowledge is an important factor in people's ability to improve their health; once equipped with correct information, people are more likely to take correct actions. This means that the higher the awareness the better are the treatment partners performance to their roles and functions or vice versa.

Table 5.3: Relationship between Awareness and Roles and Functions

Variables Correlated	Computed r-value	Critical r-value	Decision on Ho	Interpretations
Awareness and roles and function	0.823	0.622	Reject	Significant

IV. D Relationship between Roles and Functions and Implementation of the Treatment Partner Strategy

This table presents the relationship between the roles and functions of the respondents and the implementation of the treatment partner strategy. And the findings show a computed r- value of 0.997, greater than the critical r-value of 0.737, indicating that the null hypothesis is rejected and



that there is a significant relationship between the two variables. This means that roles and functions influence the implementation of the tuberculosis treatment partner program.

Table 5.4: Relationship between Roles and Functions and Implementation of the Treatment Partner Strategy

Variables Correlated	Computed r-Value	Critical r-Value	Decision on Ho	Interpretation
Roles and Functions and Implementation of the Treatment Partner Strategy	0.997	0.732	Reject	Significant

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

Summary of Findings

The majority of the respondents belonged to the age group of 38-47 years old with the majority being females. Most of them are married in terms of marital status. Looking into the respondent's highest educational attainment, the majority of them are college level with 4 to 6 years of experience as tuberculosis treatment partners.

The study showed that the respondents were fully aware of tuberculosis. Their roles and functions as treatment partners were very satisfactory as well as the implementation of the treatment partner program was fully implemented.

Variables were correlated and it revealed that there is no significant relationship between profile and their level of awareness and level of roles and functions.

CONCLUSION

There is no significant relationship between profile variables and level of awareness on tuberculosis and level of roles and functions of the treatment partners. But, there is a significant relationship between awareness and roles and functions as well as roles and functions of treatment partners and implementation of the treatment partners program.



RECOMMENDATIONS

Based on the conclusion of the study, the following are recommended:

1. The TB patients should be aware of the personal, social and economic consequences of the dreaded disease and that they will live normal lives after TB treatment with the help of their TB treatment partners.
2. Treatment partners should realize their role in treating TB in their locality and their overall contribution in helping increase cure rate on TB.
3. The family members and significant others should understand the importance of having a TB treatment partner.
4. Rural health workers should help the frontline workers to really insist on having their community volunteer health workers as the first priority to be the TB patient's treatment partners.
5. The Ministry of Health should continuously provide technical assistance to the community volunteer health workers in the form of training packages and other non-monetary benefits such as those provided in the law.

There are five components to the program, namely: Political or management commitment, TB diagnosis through sputum microscopy (X-ray is only a secondary diagnostic tool), availability of complete and quality anti-TB medications, supervised treatment (a responsible person making sure that the patient takes the anti-TB medication everyday), and recording and reporting of cases and outcomes.

Despite the availability of drugs to cure tuberculosis (TB) since the 1940s, TB remains an important cause of death from an infectious agent, second only to the human immunodeficiency virus, or HIV (WHO, 2004f). TB control is high on the international public health agenda, not only because of the enormous burden of disease, but also because short-course chemotherapy (SCC) is recognized as one of the most cost-effective of all health interventions (Jamison et al., 1993). That recognition is partly attributable to an influential series of studies done in three of the poorest countries of southeastern Africa (Malawi, Mozambique, and Tanzania), which suggested that a year of healthy life could be gained for less than about US\$5 (de Jonghe et al., 1994; Murray et al., 1991). This evidence has been central to the global promotion of the DOTS strategy, the package of measures combining best practices in the diagnosis and treatment of patients with active TB, in which direct observation of treatment during SCC is a key element (WHO, 2002a, 2004c).

Although the World Health Organization (WHO) has fostered the implementation of DOTS over the past decade, four recent developments have drawn attention to a wider range of options for TB control: First, many more studies have investigated the costs, efficacy, and cost-effectiveness of different approaches to TB control. They are mostly studies of ways to improve the delivery of first-line drug treatment for active disease, but they include some investigations of preventive therapy (treatment of latent infection), treatment of multidrug-resistant TB (MDR-TB) using



both first-and second-line drugs, and different approaches to diagnosis. They have been carried out in a variety of settings, in richer as well as poorer countries. The results have not been fully synthesized but may suggest ways to enhance DOTS.

Second, striking increases in TB have been associated with the spread of HIV infection and drug resistance, suggesting that DOTS alone may not be enough to bring TB under control, especially in Africa and in the countries of the former Soviet Union.

Third, there is now substantial investment in new tools for TB control, including multimillion-dollar initiatives to develop better diagnostics, drugs, and vaccines, many of which operate under the umbrella of the Stop TB Partnership (<http://www.stoptb.org>). Some of the possible products of this new research would stimulate re-evaluations of the current reliance on chemotherapy, especially the development of a new high-efficacy vaccine.

Fourth, interest in TB is prevalent, not simply as the outcome of mycobacterial infection, but also as the consequence of exposure to exacerbating risks, such as tobacco smoke, air pollution, malnutrition, overcrowding, and poor access to health services. Research directed at quantifying these risks will also suggest ways to minimize them.

These developments set a big agenda for analysis. To make some inroads, this chapter presents an overview of the value for money and potential effect of the principal modes of TB control around the world. The starting point is a review of the natural history and clinical characteristics of TB and the geographical distribution of and trends in TB cases and deaths. This introduction sets the context for a discussion of the interventions that are now available to control TB and of how they have been used. We use a new method for evaluating the cost-effectiveness of infectious disease control and apply this method systematically to four groups of TB interventions as they could be implemented in six regions of the world.

The rising incidence of tuberculosis has economic repercussions not only for the patient's family but also for the country. Eighty percent of people afflicted with tuberculosis are in the most economically productive years of their lives, and the disease sends many self-sustaining families into poverty. The rise in the incidence of tuberculosis has been due to the low priority accorded to anti-tuberculosis activities by many countries. The unavailability of anti-TB drugs, insufficient laboratory networking, poor health infrastructures, including a lack of trained health personnel, have also contributed to the rise in the incidence of the diseases.

The rural health workers and other community volunteer workers who are the first priority as TB treatment partners perform the above roles in helping out TB patients understand that compliance is very important in the treatment of tuberculosis. There are two important reasons why TB patients are immediately treated on Short Course Chemotherapy; one is to stop spreading the disease into others in the community and to cure the patient within the treatment period. Clients as well as healthcare providers should understand the importance of compliance to treatment and to provide a better understanding to help the clients' emotional response to illness, to understand about his/her treatment to take regularly and consistently daily, to formulate action to attain system's stability (Harris, 2002). Peplau's theory (2001) viewed the health care providers and clients relationship that health personnel should provide a better understanding, good



communication and interaction; these are elements in therapeutic relationships. For example, as counselor, the treatment partner's role is to help interpret reality and the client's emotional response to illness, to understand about the treatment to take regularly and consistently every day for six months. Motivating, teaching the importance of compliance to treatment, understanding and talking to the clients are acts of verbalizing and symbol to convey thoughts, feelings and ideas (Aligood, 2002).

The primary prevention is a primary health care approach initiating networking with the hospitals and other agencies while the secondary prevention aims at providing early diagnosis and prompt treatment and tertiary prevention are rehabilitation services that Integrate all related services from both the government and private agencies (Reyala, 2000). The Barangay health workers and other community volunteer workers are the priorities to be treatment partners of TB patients. Thus, it is within the realm of primary prevention by networking with local health workers as a link of TB patients to the formal health sectors. They help health professionals in providing early diagnosis, prompt treatment against tuberculosis and subsequent follow-up of all TB cases by being TB treatment partners.

Among the things the treatment partners should know are the following: signs and symptoms of TB; the main diagnostic procedure of TB s direct sputum smear microscopy (DSSM); TB drugs are given free in the health center; as community volunteer worker, can be a treatment partner if there is a TB patient in his/her area; watch the patient as he/she swallow the TB drugs daily; treatment will last for 6 - 8 months; the treatment partner and the TB patient will be weighed to determine the number of tablets to be taken daily; the treatment partner will follow-up the sputum of the TB patient on the 2nd, 4th and 6th month of treatment; will get the weekly supply of TB drugs from the midwife or nurse; the treatment partner should sign the treatment card after taking the TB drugs; treatment partner will report any adverse effects of the drugs taken to the health center; and will conduct counseling to the TB patient; treatment partner will follow-up if the patient submitted for sputum follow-up. All of these fall within the realm of cognitive domain and that the treatment partners should be fully aware of.

Among the roles and functions of the TB treatment partners that is affective in nature are the following: acknowledging to be a treatment partner of a TB patient in her/his area; attending the pre-treatment counseling together with the TB patient in the health center; weighing the TB patient before the first dose was taken to determine the number of drugs to be taken daily; going to the house of the TB patient daily as the TB patient take the drugs; reminding the patient to submit sputum the 2nd, 4th and 6th month of treatment; asking the TB patient if there is adverse reaction from the drugs taken; reporting to the midwife or nurse every time the patient has a complaint whether or not it is related to treatment; reminding the TB patient to avoid draft or take alcohol beverages or smoke during the entire treatment period; advising the TB patient on the importance of proper nutrition and rest in the treatment of TB; properly handling and storing the TB drugs at home; instructing any of the family members if cannot supervise the intake of the drug on a particular day for whatever reasons; follow-up immediately if the patient did not take his drug for that day; and follow-up immediately if the patient did not submit sputum at a specified date.



Another finding for poor compliance to treatment according to Lee (2001) is the irregular and incomplete intake of TB drugs. This poor compliance to treatment leads to three probable outcomes, tuberculosis patients may become chronically ill and continue to spread the tubercle bacilli, may die or may become resistant to one or more of the anti-TB drugs. Drug resistant cases are very difficult to treat and drugs are very expensive. The above literature will serve as backbone of the current endeavor aimed at assessing the effectiveness of TB treatment partners in the outcome of the disease.

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