Chapter I
INTRODUCTION

1.1. Background of the Problems

Tuberculosis (TB) is one of the most common worldwide infectious diseases and the single largest cause of death in the world, in fact, since 1993, TB has been declared as "global emergency" by the World Health Organization until now (WHO, 2009). Despite the downward trend in the incidence and prevalence of TB, every continent still reports new cases, especially Africa and south-east Asia (WHO, 2008). In 2009, U.S. Global Health policy in Global Tuberculosis Epidemic, declared that about one-third of the world's population or two billion people, carried the TB bacteria, and more than 9 million of whom become sick each year with “active” TB which could be spread to others (WHO, 2009 & 2010).

Although tuberculosis can be cured by regular intake of antimicrobial drugs, it continues to be a serious world public health problem. It was estimated that 8.8 million new TB cases occurred in 2003, of which 1.87 million were fatal due to late diagnosis or non-compliance with treatment (WHO, 2005). Though TB prevalence is declining in many countries, it is estimated that by 2020, there will be over 1 billion new TB infection and, 200 million people will succumb to clinical disease and about 35 million will die if TB control is not further strengthened (WHO, 2005).

According to Global Tuberculosis Control (2006), there were 9.24 million new TB cases (140 per 100,000 populations). Furthermore, 9.27 million people developed active new TB cases in 2007 (139 per 100,000 population). Of these an estimated 44% or
4.1 million (61 per 100,000 population) were new smear positive cases, and 1.37 million of these people also had HIV infections (WHO, 2009). Since 1980s TB has been complicated with the HIV/AIDS co-morbidity. HIV/AIDS contributes to the increase in TB cases due to immuno suppression rendering the patients susceptible to new or reactivation of the latent infections (UNAIDS, 2005). TB has been reported to be the leading killer for the HIV-infected population with weakened immune systems. A quarter of a million TB related deaths were HIV associated, with most of them in Africa (Elizinga, Armstrong, Nguyen, & lasus, 2004). WHO (2009) reported that TB inflicts significant socio-economic costs, 98% of deaths occurring in developing world. Fifty-five percent occurred in Southeast Asia and 31% in sub-Saharan Africa, In addition, the death of TB affects mostly young adults in their most productive age (15-50 years).

In 2005, WHO declared TB an emergency in Africa, 3 million of new TB cases were found in Africa, it is accounts for almost one third of the global total, and has the highest incidence 363 and prevalence 475 per 100,000 inhabitants (WHO, 2008). An estimated 1.7 million people died from TB in 2009 in the world, the highest number of deaths was in the Africa Region. Sub-Saharan Africa is experiencing an escalating number of tuberculosis (TB) incidents annually, although other parts of the world seem to more successful in controlling the epidemic such as in Peru, Uruguay, Cuba, (WHO, 2005; WHO, 2009).

In Burkina Faso, tuberculosis remains a priority health problem, it become a critical issue for the country. In 2007, the detection rate of TB was 63% in the world, compared to a target of 70%, (WHO, 2009). However, the detection rate of TB is 24.40% in 2008 and 24.68% in 2009 in Burkina Faso; it is still much lower below the 70%
recommended by World Health Organization (WHO, 2005). The low detection of TB cases may have adverse consequences in the community, especially in Burkina Faso; it can cause the spread and transmission of the disease and increase the morbidity and the mortality of TB, as well as the burden of family’s expenditure.

Burkina Faso is a landlocked and Sahelian country, located in West Africa. It is a developing country with 15,757,000 inhabitants (census data in Burkina Faso, 2006) and an area of 274,200 km square. The population of 15 to 64 years represents 51.3%. The mortality rate is 13.3 for 1000 inhabitants and life expectancy of 56 years old for men and 58 years old for women. However, the people most affected by TB are those aged 15 to 49 years. The death rate of TB is 12%. This age is the most active population of the country. According to WHO, Global TB report (2009), it is expected to have 226 cases of tuberculosis all forms for 100 000 inhabitants, however, only 96 cases of smear positive tuberculosis was found. Both the incidence and population contamination risks are still high.

In order to deal with TB problems, Burkina Faso government policy makes provision for free care to People with TB, including consultation, laboratory services and non-payment for drugs. Despite the availability of free drugs and laboratory services the DOTS (Directly Observed treatment Short-Course) program, health centers and provision of care, the detection rate remains low. Gelaw, Genebo, Dejene, Lemma, Eyob (2001) found that patients with low knowledge about symptoms of TB are more likely to postpone care –seeking and get tested. Studies revealed misconceptions and limited knowledge TB and its treatment. Stigma and misinformation about TB are still major barriers to TB screening and treatment in Burkina Faso. As many people do not
considered themselves to be a risk, so the chances of identifying people before they reach
the infectious stage of active, smear-positive TB are lessened. People with TB often
suffer from discrimination and stigma, rejection and social isolation. The disease has a
worldwide stigma, which adds to the suffering. Scientifically unfounded beliefs about the
transmission of the disease are the main significant predictor of the instrumental function
of this attitude. To reduce the stigma caused by traditional beliefs passive attitudes
towards TB, basic knowledge about the cause and of transmission is necessary. Despite
the availability of anti TB drug, its treatment programs in most of developing countries
have not succeeded because of poor patient compliance with therapy, emergence of drug-
resistant organisms, and failure to carefully control drug supplies.

Mangesho et al., to assess the knowledge, attitudes and practice as regards to TB
and its treatment in Tanzania (2007), found that health seeking behavior and the
perceived knowledge on causes of TB among community members is very critical and
may increase the transmission of the disease. Certain local practices and beliefs and
failure to recognize symptoms early may delay diagnosis hence increasing the spread of
the disease in the community.

Odusanya & Babafemi (2004) evaluated time interval from onset of symptoms to
initiation of treatment, the result showed, like HIV/AIDS, TB is often associated with
stigmatization and thus may create resistance among patients to seek proper diagnosis
and treatment. Thus, it is important for community members to know and realize the
symptoms of the disease in order to seek treatment promptly. Since TB treatment in
Burkina Faso is provided free of charge, having adequate knowledge and positive
perceptions toward it might encourage community members to seek medical care timely.
The propensity to seek care depends on knowledge about perceived risk of TB within reference groups (families, neighborhood) and communities at large.

Since TB is increased its morbidity and mortality, it is expected to becomes a critical health issue in Burkina Faso, to understand knowledge of TB and attitudes toward TB for all people in Burkina Faso is important. Thus, this study intends to compare the knowledge of TB and attitudes toward TB for both People with TB and non-People with TB in Baskuy District, in Ouagadougou Burkina.

1.2. Purpose of the Study

The purposes of the study are to describe their knowledge and attitudes about TB and to compare People with TB and Non People with TB’ knowledge and attitudes towards TB in the Baskuy district, Ouagadougou, Burkina Faso.

1.2.1. Specifics Objectives

The specific objectives are stated as following.

1. To describe knowledge and attitude of TB in the Baskuy district.

2. To compare knowledge and attitudes towards TB for people with and without TB in the Baskuy district.

3. To examine the relationship among demographic characteristics knowledge and attitude of TB for people with and without TB.

1.3. Research Questions

The research questions for this study are described as following.

1. What is the knowledge and attitudes about TB for both people with and without TB in the Baskuy district in Burkina Faso?
2. What are the differences regarding knowledge and attitudes towards TB for people with and without TB?

3. What is the relationship between demographic variables and knowledge and attitude of TB for both people with and without TB?

1.4. Definition of Variables

For the purposes of this study, the following terms are defined as below.

1.4.1. Knowledge of TB

1.4.1.1. Conceptual definition.

Knowledge of TB was related to what people knew the knowledge of TB including “high risk groups”, “transmission”, “diagnosis and examination” and “prevention”.

1.4.1.2. Operational definition

The questionnaire of TB knowledge designed by Lo, Yang, Chiang, Hsu and Lin (2008) was used to measure patients’ knowledge of TB. This questionnaire is translated in English, then in French. Translation validity is confirmed. The higher the score, the better TB knowledge the subjects have.

1.4.2. Attitudes of TB

1.4.2.1. Conceptual definition

Attitude can be defined as a “complex mental state involving beliefs and feelings and values and dispositions to act in certain ways.”
1.4.2.2. Operational definition

The questionnaire of TB attitude designed by Lo, Yang, Chiang, Hsu and Lin (2008) was used to measure patients’ attitudes toward TB. The attitude of TB includes proactive attitude towards TB. This questionnaire is translated into English, then in French. The higher the score, the more positive attitude towards TB the subjects have.
Chapter II

REVIEW OF LITERATURE

This chapter presented the literature review conducted for this study. A literature review is undertaken to assist researchers to comprehend and extend their knowledge of the phenomenon under study (Polit & Beck, 2008). The literature review contain in this chapter includes introduction to TB, studies related to knowledge and attitudes of TB, and factors influencing knowledge and attitude of tuberculosis.

2.1. Introduction to TB

According to International Union Against Tuberculosis Control and Lung Disease (IUATLD), tuberculosis is an infectious disease caused in most cases by bacteria called Mycobacterium tuberculosis. Humans acquire usually infection by breathing in infectious droplets, which have been expelled from the respiratory tract of infected person. TB diseases mainly infected and damage the lungs, but bacterium may spread to any other part of the body.

2.1.1. History of TB

Tuberculosis is known since the earliest ages of antiquity, and some have even thought about his whereabouts in the literature of Ancient India and China. The Greeks called it "consumption", that is to say, consumption and comparing it to a fire that burned inside the viscera. In 1793, the English physician Ballie described in detail the lesions found in the patients who died of "consumption", he named tubers. At the same time, French Balye tested an initial classification of lesions observed and described six forms of "consumption” that are: tuberculosis, the grainy, the melanin, the ulcer; the calculous
and cancer. In 1865, Villemin demonstrated that TB was a communicable disease. It succeeded in inoculating rabbits tuberculoses lesions to reproduce the disease in them. It also reproduces by injecting sputum consumptive products, and concluded the first this disease is contagious. In 1882, the German physician Robert Koch discovered the bacillus which bears his name, a few years later he managed to cultivate.

In 1909, the tuberculin was used by Charles Mantoux to highlight the allergy to tubercle bacilli. The doctor Albert Calmette (1863-1933) and veterinarian Camille Guérin (1872-1961) had found that the seeding of a virulent strain of Mycobacterium bovis in a medium made of potatoes, beef bile and glycerin did not alter the induction of allergy although it softened its pathogen. In 1921, on a limited basis since 1924 worldwide vaccination with BCG was used in humans and led to the decline in the incidence of tuberculosis in the late 19th century. In 1952, isoniazid and pyrazinamide was introduced but was discovered abandoned because of its side effects. However, he was reintroduced in 1968 at a lower dose which allowed reducing the duration of treatment. In 1956, ethionamide and prothionamide were put on the market. In 1969, rifampicin conferred to anti-tuberculous its current profile.

In recent decades, the gradual and general decline of TB deaths in countries continued industrializes with the advent of DOTS (Direct- Observed Treatment, Short-course) in contrast to emerging economies where it is still difficult to control. If TB treatment poses no more than adherence problems, the development of infection with HIV, increasing poverty and MDR (Multi-Drug Resistant) are a major concern of governments and renewed interest researcher.
2.1.2. Transmission

The contamination is human. It is transmitted by airborne in most cases (97%); hematogenously; digestive mucous way and skin etc. The taking of contaminated milk (pasteurized, not sterilized or not): Mycobacterium bovis TB is transmitted by the inhalation of airborne organisms. The tubercle bacillus will be issued upon coughing, wheezing and speech, the droplets Pflug. These virulent bacilli once inhaled will stay in the pulmonary alveoli, where they will be phagocytosed and give the canker of inoculation. It is the primary infection may be asymptomatic. Once infectious particles are aerosolized, they are spread throughout a room or building by air currents and can be inhaled by another individual. Droplet nuclei are inhaled. One droplet nuclei contains no more than 3 bacilli. Droplet nuclei are so small that they can remain air-borne for extended periods of time. The most infective droplet nuclei tend to have a diameter of 5um. Droplet nuclei are generated by during talking coughing and sneezing. Coughing generates about 3000 droplet nuclei. Talking for 5 minutes generates 3000 droplet nuclei but singing generates 3000 droplet nuclei in one minute. Sneezing generates the most droplet nuclei by far, which can spread to individuals up to 10 feet away. Tuberculosis begins when droplet nuclei reach the alveoli. When a person inhales air that contains droplets most of the larger droplets become lodged in the upper respiratory tract like nose and throat, where infection is unlikely to develop. However, the smaller droplet nuclei may reach the small air sacs of the lung (alveoli), where infection begins.
2.1.3. Clinical types form of tuberculosis

2.1.3.1. Common Pulmonary Tuberculosis

It is the most common and represents 80% of clinical forms. It is the result either of an infection from an exogenous infectious case (primary tuberculosis) or an endogenous re-infection from bacteria after persistent pulmonary TB infection untreated or inadequate, having left in place bacilli. In patients infected with HIV symptoms may be atypical, prolonged fever during short and unexplained weight loss are signs of appeal sufficient to initiate a search for tuberculosis. In Burkina Faso, according to the National program against Tuberculosis (NTP), pulmonary tuberculosis accounted for almost 70% of TB cases in 2009 (NTP BF, Action plan 2010).

2.1.3.2. Extra pulmonary

It’s all remaining form of tuberculosis which is other localization of the disease in the body out the lungs. The forms commonly encountered are: Hepato-splenic tuberculosis, tuberculosis meningitis, tuberculosis pericarditis, tuberculosis adenopathy, tuberculosis of the spine: Pott's disease, pleural tuberculosis. In Burkina Faso the NTP estimated the number 30.61% of extra pulmonary TB in the cohort of 2009 in Burkina Faso (NTP BF, action plan; 2010).

2.1.4. Symptoms

The most common signs of TB include cough with a progressive increase in production of mucus, haemoptysis accompanying cough; night sweats, and temperature range from 38-40 °C. weight loss of 5 to 10 kg occurring in a few months. Apart from these signs other symptoms include the following: asthenia growing, weakness, headache, nausea and insomnia.
2.1.5. Diagnostic

Diagnostic tests include sputum smears and cultures to identify M. tuberculosis, chest X-rays, tuberculin skin test (TST). In developing countries health workers emphasize on the sputum examination, which is in term of cost effectiveness ‘is affordable.

2.1.6. Treatment

The aim of the treatment is to heal the sick, avoid transmission of the disease, its spread and therefore, decrease morbidity and mortality. In Burkina Faso the treatment includes anti tuberculosis therapy with daily oral doses of Streptomycin (S); Isoniazid (INH, H); Rifampin (R; Pyrazinamide (Z); Etambutol (E) for at least 6 months, retreatment required to add injectable drug (streptomycin) during the first two months. Longer courses may be required for patients with AIDS or for patients who respond slowly. After 2 to 4 weeks, the disease generally is no longer infectious. The patient can resume his normal lifestyle while taking medication. Some patient may get side-effects from the antibiotics. The most common side-effects are: nausea, joint pain, visual disturbances, burning sensation in the feet, renal failure, red-orange urine, fever, skin flush, reaction, jaundice (yellow skin or eyes), abdominal pain, dizziness, confessional states Deafness (Le Beau 1994).

2.1.7. TB Prevention

The priority of prevention would be: diagnose patients whose sputum smear is positive and reassuring that patients follow the treatment effective until the end; and sterilize sputum by exposure to sunlight. Insisting on environmental Health: The goal is to reduce the risk from the sputum of patients with undiagnosed contagious; emphasis on
primary prevention by BCG, provide good nutrition but also fight against smoking and alcoholism (WHO/CDS/TB/2002-296.WHO / HIV AIDS, 2002).

A vaccine against M. Tuberculosis is available. It is called BCG (Bacillus of calmette and Guerin, after the two Frenchmen that developed it). BCG consists of a live attenuated strain derived from Mycobacterium Bovis. This strain of Mycobacterium has remained avirulent for over 60 years. The vaccine is not 100% effective. Studies suggest a 60-80% effective rate in children (Blackwell, 1994). BCG is a suspension of Bacillus Calmette-Guerin live but attenuated is the only live bacterial vaccine. This vaccination at birth is under the Expanded Program on Immunization EPI (WHO recommendation) by intradermal injection of the posterior arm and anterior forearm 0.05 ml of heat-dried BCG 0.5 or 1mg/ml. After 1 year of age, the dose is 0.1 ml. A second vaccination is desirable at the age of entering school (E. Pichard et D. MINTA2000).

2.2. Study Related to Knowledge and Attitudes of Tuberculosis

Knowledge and attitudes have played significant roles in prevention of complications and progression tuberculosis disease as reported by previous studies. For example, Mngesho, Shayo, Makunde, Keto, Mandra, Kamugisha, et al (2007), explored to assess the knowledge, attitudes and practice as regards to TB and its treatment in Mpwapwa district, central Tanzania. The result revealed although TB was an important health problem that the communities of the districts have a low knowledge on the causes and the transmission of tuberculosis which is a likely cause of the delay in seeking treatment.

According to Long and Diwan (2003), described knowledge of tuberculosis and associated health-seeking behaviour among rural Vietnamese adults with a cough for at
least three weeks; the result revealed that the lack of TB knowledge limits people’s ability to prevent TB spread and early treatment. In another related study by Bacay-Domingo & Ong-Lim, (2009), described the knowledge, attitudes and practices on tuberculosis among treatment partners of pediatric patients in Tarlac city, the results revealed that most of the respondents were aware that tuberculosis is highly infectious but curable disease. However, still, a significant number would not reveal if they were infected with the disease for fear of being excommunicated by the community. From the study, the researchers claimed that knowledge, attitudes and practices played significant roles in adherence to anti-TB treatment, and thus in the prevention of complications and progression of the disease. The study results were consistent with other studies such as Hoa, Thorson, Long, & Diwan (2003), described knowledge of tuberculosis and associated health-seeking behaviour among rural Vietnamese adults with a cough for at least three weeks where they reported that people with better knowledge of TB were more likely to seek health care and medical treatment.

Hashim, Kubaisy, and Dulayme (2003), to evaluate knowledge, attitudes and practices towards tuberculosis (TB) among health care workers and tuberculosis patients in Iraq. The results showed that 80.2% knew tuberculosis was a highly infectious disease and 90.0% that TB is curable, and 54.8% were reluctant to seek care for fear of being diagnosed with TB. The findings agreed with other studies reporting that knowledge alone is not the only factor determining the health-seeking behavior of patient or their adherence to treatment, but mainly the patient’s attitudes and practices (Rabbami, Siddiqui, Zaidi, Virani, 2003).
Mohamed, Yousif, Ottoa and Bayoumi (2007) in study to measure the patients' knowledge about tuberculosis and its treatment in Omdurman, Sudan, reported that respondent’s satisfactory knowledge was statistically significant when correlated to respondent’s age, gender, and residence, level of education and source of prescription. They also reported that respondents who previously caught the disease knew the duration of the therapy better compared to new cases.

### 2.3. Factors influencing knowledge and attitude of Tuberculosis

Many factors influence knowledge and attitude about tuberculosis. For example, in California, Rubel reported that the fear of social stigma strongly figured Mexican immigrants’ patient’s perceptions of their illness and its implications. Male patients had not discussed to those with whom they lived with the nature of their illness, others reduced contacts with family and friends with whom they had enjoyed extensive relationships, and still others expressed fear that a spouse would discover their illness, refuse to eat or sleep with them, and even break the relationship.

Similarly, Somerville & Orkin, 1989; Steen & Mazonde (1999) to explore health seeking behavior in Batswana with pulmonary tuberculosis and evaluate Human rights, discrimination and AIDS, reported that there is a need to examine the effect of HIV/AIDS on TB-related stigma further, as this may increase delay in health seeking and non-disclosure of status. In areas where antiretroviral treatment is not available, positive messages about TB cure are less likely to be believed by TB-HIV co-infected patients, and this may further increase stigma. TB perception is inherited from one generation to the other, therefore might imply both negative and positive outcomes. Since the infected person and close family members may be segregated by the community, it accelerates
stigma and discrimination, on one hand. On the other hand, it prevents the spread of the infections to the wider community by consciously avoiding to those infected. Mistreating of People with TB in fear of catching the disease has been shown in some studies.

Nyamathi, Sands, Pattatucci-Aragon, Berg, and Leake (2005) to investigate TB knowledge of homeless adults, the result showed that injection drug use were more likely to have histories of daily drug use and alcohol dependency, but were less apt to report recent use of cocaine. TB knowledge deficits centered on lack of knowledge of in relation to mode of transmission and high risk groups for TB infection. The researchers concluded that there is a considerable need for accessible, available, culturally acceptable, and sustained TB screening and intervention programs designed to address multiple high risk groups and knowledge deficits with respect to TB infection in homeless population.

In another study by Alinger, Black, Nguyen and Lsus (2007) to examine the predictors of adherence to latent tuberculosis infection (LTBI) therapy in Latino immigrants at a public health clinic on Latino immigrants predictors of adherence to latent tuberculosis infection (LTBI), reported that adherence was dropped off in a linear fashion from month 1 (84%) to month 8 (34%). None of the demographic factors predicted adherence. Moreover, the lifetime risk for TB disease in people with LTBI varies with risk factors, such as recent known contact to an infectious TB case or having an immunosuppressive health conditions. The researchers assumed that the higher risk TB reactors, the more likely for opt for the treatment and complete than others. Nonetheless, the findings of this study showed that the major risk factor was being foreign-born from a higher endemic country. The drop in adherence from month 1 to month 8 revealed that more culturally relevant interventions need to be addressed.
In a study by Johansson et al (1999) in Vietnam with the aim of exploring gender differences in knowledge, beliefs and attitudes towards TB and its treatment, found that insufficient knowledge and individual cost during treatment were the main obstacles to compliance among men while sensitivity to interaction with health staff, stigma, and society were the main obstacles among women.

Busari, Adeyemi & Busari (2008) assessed and documented the knowledge of TB and its management practices among medical interns in Nigeria. The result revealed gross inadequacies in the knowledge of TB among medical interns. Although the dismal inability of none of the medical interns to correctly state the estimated number of new cases of TB per year is unacceptable, this might not be unconnected with the general absence of accurate data and poor record keeping culture in almost every sphere of the Nigerian state. Khan, et al., (2005), of assessing medical interns knowledge of TB in Pakistan the finding showed a poor recognition of the burden of TB and its public health significance was equally identified among medical interns in that country. There was an understanding of transmission of TB but poor awareness of definitions of MDR-TB and XDR-TB. Only a paltry 16.7% of the interns could correctly define MDR-TB while none was aware of XDR-TB. Ailinger et al., (2004), study findings revealed that ethnic Malayo-Polynesians in Taiwan, similar study from (Nyamathi et al., 2004) to investigate Tuberculosis (TB) knowledge, perceived risk, and risk behaviors in a sample of homeless persons with latent TB in the United States, were somewhat less likely than the general population to perceive themselves as at-risk of contracting TB. Lack of knowledge about TB and a low perceived risk of infection elevate the risk of TB infection and transmission to others. Therefore, one significant component of TB education should focus on
increasing perceived susceptibility from the viewpoint of epidemiological data and then helping at-risk populations to discuss related concerns. This study showed that misconceptions regarding tuberculosis were widespread in Pakistani patients. Poor knowledge of People with TB concerning their disease may contribute to the high burden of TB disease in the country (Ali SS, et al; 2003).

Liam, Lim, Wong, and Tang (1999) explored patients’ attitudes on tuberculosis and their knowledge of the disease, and factors associated with treatment compliance, the result showed that the level of knowledge and awareness about TB is correlated with seeking health care. By educating the patients and removing their misconceptions, patient compliance with therapy and spread of disease is likely to improve. It has been shown that the method of diagnosis, treatment and monitoring of treatment carried out by general physicians was not satisfactory (Manalo, 1998).

Regarding the knowledge about TB and its treatment, Panda concluded that non compliance was more among illiterate patients a small percent 7% was literate among non compliant with TB. It is estimated that probably the Lack of knowledge limits the illiterate patients to understand the ill consequences of irregular treatment. Knowledge and perceptions regarding TB represent a vital preliminary step in TB health education program planning in order to dispel misconceptions and improve both the knowledge and levels of awareness of tuberculosis within society (Ailinger, Lasus, & Dear, 2003) showed that among patient factors, misconceptions about TB, lack of knowledge about duration of treatment, loss of wages lack of funds being ostracized or ill treated by family members or neighbors’ were responsible in discontinuing treatment. Negative social attitudes of family members towards People with TB were noted too.
Yadav, Mathur, and Dixit (2006) tested the knowledge and attitude of sand-stone quarry workers of Jodhpur on tuberculosis in India; showed that literates were better informed and more aware about various aspects of TB as compared to the illiterates, especially with regard to some factors favoring TB development in a person, preventive measures like clean surroundings and few symptoms. Literacy was an important factor for acquiring information on TB. Khan (2006) assessed knowledge of patients with tuberculosis; about their disease and misconceptions regarding TB in Karachi, Pakistan. The finding showed that, almost half of the People with TB in this study were of the view that being infected with TB reduced their chances of getting married. Even though 95% knew that TB was treatable, almost 40% claimed they would not marry their children to someone who was currently diseased, or had been infected in the past and has now been cured of tuberculosis.

Gelaw, Genebo, Dejene, Lemma, & Eyob (2001) gained a better understanding of the attitude and social consequences of tuberculosis (TB) in Addis Ababa, Ethiopia. The result revealed that evil spirit and sexual intercourse have been found to be incriminated as a cause for TB. Their community also exhibits a great deal of ostracism towards People with TB. "Cold" has been cited as a cause of TB in Ethiopia. Belief in an association between HIV and TB has been found in Zambia and Ethiopia. Metcalf, Bradshaw and Stindt (1990), investigated knowledge and beliefs about tuberculosis among non-working women in Cape Town, the result indicated that alienation of people with TB has also been found in relatively developed countries like South Africa.

Among Mexican immigrants in California, Rubel reported that the fear of social stigma strongly figured in patient’s perceptions of their illness and its implications. Many
patients had not mentioned to those with whom they lived the nature of their illness, others curtailed contacts with family and friends with whom they had enjoyed extensive relationships, and still others expressed fear that a spouse would discover their illness, refuse to eat or sleep with them, and even sever the relationship. One of the most striking features of these interviews was the systematic avoidance by respondents of term ‘tuberculosis’, an illness label familiar to the patients and consistently used by the county nurses and physicians who manage their treatment.

Edginton, Sekatane, & Goldstein (2002) described the beliefs and experiences about tuberculosis of patients and community members; found in the different communities, different cultural beliefs like tuberculosis resulting from sex after the death of a family member and after a woman has a spontaneous abortion are prevalent. People also believe that the resulting disease can only be treated by traditional healers. There is also a belief in a ‘western’ type TB that can spread from sufferers or is due to environmental pollution or to smoking or alcohol excesses. Getahun, Aragaw; Singh, Bano, Pagare, Sharma, Devi & Mehra (2001) assessed the perspective of the rural community towards Tuberculosis (TB) and TB patients in Ethiopia, the finding showed to remove misconceptions about TB community based awareness strategies should be designed, information and education on TB must be disseminated out.

Croft and Croft (1999) assessed and compare the level of knowledge, attitude and practice towards leprosy and tuberculosis (TB) among two communities in Bangladesh, which faces similar social and cultural background, have shown that well conducted community health education campaigns can affect level of knowledge and produce favorable attitudes towards tuberculosis (Croft & Croft, 1999). Wang, Fei, Shen, and Xu
(2008) to investigate the TB knowledge among general population in rural Inner Mongolia of China; also reported that women with less education tended to be less knowledgeable about TB and were less likely to seek care than men though gender difference was not statistically significant the quantitative survey. Demographic variables such as gender, age, education could be positive or negative factors influencing the knowledge and attitudes of People with TB and also to the community about TB. To do this, health education must take into account all these aspects in the campaigns of awareness about TB. Research in many parts of the world has shown that improved knowledge by education and communication between people with TB and community and their families contributes to better therapeutic outcomes, and this can also be applied to case detection. A high degree of knowledge regarding TB and its harmful sequelae of inadequate and incomplete treatment also could contribute to improve people knowledge and awareness about TB. To achieve this, we must emphasize the need for health education to create better awareness of these important aspects of TB early diagnosis, treatment and control.
Figure 1. Conceptual framework

Socio-demographic
- Age
- Gender
- Education
- Ethnicity
- Religion
- HIV Infection

Attitudes on TB
- Proactive
- Passive

Knowledge on TB
- High risk group
- Diagnosis and examination
- Prevention
- transmission
CHAPTER III

METHODOLOGY

This chapter identifies the research design and methodology, including research setting, population and sampling, research instruments, data collection, data analysis, and ethical considerations.

3.1. Research Design

A research design is “an overall plan for collecting and analyzing data, including specifications for enhancing the internal and external validity of the study” (De Vos, Strydom, Fouche & Delport, 2002). Quantitative research deals with quantities and relationships between attributes and involves the collection and analysis of structured data (Bowling, 2002). Because the researcher would like to understand the knowledge of TB and attitudes towards TB between people with and without TB, thus, the researcher chooses a quantitative approach, a cross-sectional and descriptive study design were used to investigate the knowledge and attitudes of TB for both people with and without TB.

3.2. Research Setting

The study was conducted in the Baskuy district which is the capital Ouagadougou in Burkina Faso. Baskuy district is located in the center of the capital, composed of several ethnic groups. The Mossi are the leading ethnic group in the district. The three main religions encountered in Baskuy district are Islam, Christianity and Animism. The economic activity is dominated by trade and the informal sector. The district is served by 13 health centers. Baskuy District was selected conveniently due to moderate number of TB cases and accessibility. The district had a total of 235 TB cases under treatment in
2009 (Baskuy statistic service, 2009). The moderate level of TB burden in Baskuy District was an important criterion to avoid over-or under-estimation of the TB situation when extrapolating the results to other parts of the country. The subjects are French and More (local languish) speakers. The pilot test was set up at the June end and the survey is planned in mid July.

**Figure 2: City of Duagadougou, Burkina Faso**

*Burkina Faso Health District; 2008*
3.3. Sampling

According to De Vos, Strydom, Fouche, & Deport (2002), a sample is a subset of a population selected to participate in a study. Sampling is the process of selecting a portion of the population to represent the entire population. The convenience sampling was used to recruit participants in this study. Participants were selected from people with TB, registered in Baskuy health district tuberculosis register and people without TB living in this district. Due to high illiteracy rate in these areas, the researcher used face to face interview method to do data collection.

The sample size estimation is determined by G-power Version 3.10, with an alpha level at .05, power at 0.80, and an effect size of 0.5. The result reveals that each group
should have 69 subjects. Thus, a total of 138 subjects were recruited, including 69 people with TB who are diagnosed with TB and another 69 people without TB. The inclusion criteria for this study are (1) people aged 18 years and over; (2) people in Baskuy district with diagnosis with TB and without TB; (3) given consent to participate in the study. Subjects are excluded if they have cognitive impairment or any others speech impairment or do not meet the inclusion criteria.

3.4. Research Instrument

Three instruments were used in this study, including one demographic data sheet, the knowledge of TB and the attitude toward TB. The demographic data sheet was developed by the researcher. The original questionnaire of knowledge of TB and the attitude toward TB were designed by Lo, Yang, Chaing, Hsu and Lin (2008) in Chinese.

The Chinese version of knowledge of TB contains 30 items. Each item has a correct answer. If one gets the correct answer on the question, one earned one point; if not, one received zero point. The lowest score in this questionnaire is zero, the highest score is 30. The higher the score, the better knowledge of TB the patients have. Another questionnaire, the Chinese version of attitude toward TB, contains 19 items. Four-point Likert scale was used to evaluation patients’ attitude toward TB, one means “strongly disagree” to 4 “strongly agree”. The lowest score for this questionnaire is 19, the highest score is 88. The higher the score, proactive attitude toward TB the patients have.

The developments of both instruments were based on literature review. They invited 5 experts to examine the content of the instruments, the content validity for these 2 instruments were .96 and .84 respectively. In addition, Lo, et al.(2008) use principle component factor analysis to test the construct validity of questionnaire, four factors were
found, including “prevention”, “transmission”, “high risk group” and “diagnosis and examination”. The total explained variance is 44.89%. The reliability, K-R 20, is .89. Lo, et al. used the same method to test the construct validity of questionnaire, two factors were found, and including “proactive attitude” and “passive attitude”, the total explained variance for this questionnaire is 56.43%. The reliability, Cronbach’s alpha, is .91.

Since there is no questionnaire testing knowledge and attitude of TB in French, therefore, Lo, et al. questionnaires were translated in French with permission (see Appendix A). One PhD prepared scholar who is fluency in both English and Chinese was asked to translate the Chinese version of questionnaires into English. After the instrument was translated in English, another two PhD prepared nursing scholars were asked to exam the content relationship and clarity of translation. The content validity index (CVI) for English version of both questionnaires is 0.97 and 0.95 respectively. After that, the other PhD prepared scholar was asked to do the back translation in order to make sure the translation. The results of back translation support the English version of questionnaire.

After English version of questionnaires are confirmed, the researcher translate English version of questionnaires into French. Three experts, two physicians and one nurse, were asked to exam the translation. Two experts responded in regard to the questionnaire sent with few modifications made, however, one did not respond. The content validity index (CVI) for French version of both questionnaires is 0.83 and 0.89 respectively.

3.5. Data Collection

Prior to conduct this study, the researcher contacted the manager of the Baskuy district and explained the purpose of study. After the agreement of conducting research
and approval from Institutional Review Board are obtained, the researcher was taught to the potential subjects, and explained the purpose and methodology of the study to the subjects. If the subjects agree to participate in this study, they are required to sign the consent form.

All subjects were interviewed through face-to-face at the time of people with TB taken his medication at the health center. People without TB were interviewed across the 13 health centers based on the size of the population for each center; five subjects were recruited for each center. The respondents were allowed to ask questions any time they wanted. The researcher interviewed the subjects by either French or Moore (local language). After the interview was completed, each received small gift as compensation. The length of interview lasted 15 minutes.

3.6. Data Analysis

Data analysis is the process of presenting and interpreting data. Quantitative data analysis involves preparing the data for summarizing. Descriptive statistics was used to evaluate the knowledge and attitudes towards TB for people with and without TB. The independent t-test was analyzed to compare difference of knowledge and attitudes towards TB between people with and without TB. The two-tailed 5% level of significance was used as the cut-off for statistical significance. The analyses were conducted using the statistical packages for Social Sciences (SPSS) for windows, version 18.0 program. While Pearson product-moment correlation coefficient was used for investigating correlation between knowledge of TB and attitudes toward TB. All data were examined for missing values and input errors.
3.7. Ethical Considerations

The permission of conducting this research was obtained by the Institutional Review Board National Taipei University of Nursing and Health Sciences before data collection in Burkina Faso. After that, a permission to conduct this research study was received from the Regional Health Directorate of Ouagadougou and the direction of the health district Baskuy. Then, the researcher contacted the potential subjects and explained the purpose, important and methodology of the study to each individual subject with the information for informed consent. If the subjects agree to participate in this study, they were asked to sign the consent form. All subjects who were participate in this study were voluntary and they were informed to have the right to withdraw from the study at any time, the researcher guarantee that the rejection or withdrawing from this study would not affect their treatment or daily activities. After data collection, the data is pooled and used only for the study. The privacy and confidentiality of respondents are respected.

3.8. Summary

This chapter describes the methodology used by the researcher including sampling instrument data collection, data analysis and ethical consideration. The results of this study were presented in chapter 4.
CHAPTER IV
RESULTS

This chapter describes the characteristics of the study sample’s knowledge and attitude between people with and without TB. It also compares the difference between demographic and study variables, relationship between people with and without TB, relationship between demographic data and study variables.

4.1. Characteristics of the sample study

4.1.1. Demographic Characteristics of Comparing people with and without TB

A total of 138 people from Baskuy health district were enrolled into the study. Of the 138 people interviewed, 69 were people with TB and 69 others were people without TB. The age of the participants ranged 18-80 years with a mean age of 35.42 and standard deviation of 11.58 years. The age range of the people with TB was 18-80 years with a mean age of 39 years and standard deviation of 13.53 years. The age range of the people without TB was 18-52 years with a mean age of 31.84 years and standard deviation of 7.806 years. There is a significant difference in age between people with and without TB (t=3.807, p<.001).

Among the 138 participants, 80(58.0%) subjects were male and 58(42 %) female. 45(65.2%) participants out of 69 people with TB were male and 24(34.8) female. About people without TB, a majority of respondents (n= 35; 50.7%) were male and (n=34; 49.3%) were female. There is no significant difference about gender between people with and without TB ($X^2$= 2.974, p > .05).
The education level for majority participants was secondary school (n= 63, 45.7%), followed by primary (n=29; 21%), illiteracy (n=25; 18.1%) and University (n=21; 15.2%). For people with TB, 33.4% of subjects (n=23) were in secondary level, 30.4% were in illiteracy level (n=21) and 27.5% of subjects (n=19) were primary school. In people without TB, almost respondents were secondary school (n=40; 58.0 %), followed by university level (n= 15; 21.7%). Chi-square test revealed a significant difference of the education level between people with and without TB ($X^2 = 22.798; p<0.001$).

The largest ethnic group was Mossi tribe (n=100; 72.5%), 38 (27.5%) subjects were other ethnic group, no matter people with TB or people without TB, the majority ethnic group is still Mossi tribe, it occupied 55 (79.7%) and 45(65.2%) subjects respectively. There was no significant difference between people with and without TB ($X^2 = 3.632; p>.05$) in terms of ethnicity.

Out of a total of 138 interviewees, 17(12.3%) participants had a positive HIV serology comprising of 14(20.3%) subject in people with TB and 3(4.3 %) people without TB. A significant difference existed in HIV status between people with and without TB ($X^2 = 8.118; p<0.001$).

In terms of religion, of the138 people interviewed, 73 subjects (52.9%) were Muslims, of them 42 subjects (60.9%) were people with and without TB 31subjects (44.9%). The Catholic occupy second place with 50 subjects (36.2%) of which 23 subjects (33.3%) were people with TB and 27 subjects (39.2%) of people without TB. There was no significant difference in religion between the people with and without TB ($X^2= 5.244; p>0.05$).
Of the total respondents, only 11 respondents (8.0%) had their family members who were ever been diagnosed with TB, these 11 respondents were all People with TB. No subjects’ family member from people without TB has ever been diagnosed with tuberculosis. There was a significant difference between the people with and without TB ($X^2 = 11.953; p<0.001$) by family status.

In the past 6 months, three forth of total participants (78.3%) had ever read or hear education and/or guidance about TB. More than 50 participants either from people with TB or people without TB had heard or read about education/guidance to TB. No significant difference existed in hear or read about education/guidance to TB in the past 6 months between the people with and without TB ($X^2 = .624; p>0.05$).

Eighty nine percent of the participants (n=123) reported that they paid attention to any TB prevention related activities, of which 66 participants (95.7%) were people with TB and 57 participants (82.6%) for people without TB. There was no significant difference about paying attention to any TB prevention related activities between people with and without TB ($X^2 = 6.059; p>0.05$).

Similarly 93% of participants (n=128) planed to participate any TB related test such as chest X-ray, of whom 67 subjects (97.1%) were people with TB and 61 subjects (88.4%) were from people without TB. There was a significant difference in planning to participate any TB related test ($X^2 = 3.881; p<0.05$). All the general characteristics of the participants are presented in Table 1.
Table 1: Demographic and general characteristics among people with and without TB

<table>
<thead>
<tr>
<th>Variables</th>
<th>Total N= 138</th>
<th>People with TB n= 69</th>
<th>People without TB n= 69</th>
<th>t/X²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (M±SD)</td>
<td>35.42±11.58</td>
<td>39.00±13.53</td>
<td>31.84±7.81</td>
<td>3.81***</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>80(58.0)</td>
<td>45(65.2)</td>
<td>35(50.7)</td>
<td>2.97</td>
</tr>
<tr>
<td>Female</td>
<td>58(42.0)</td>
<td>24(34.8)</td>
<td>34(49.3)</td>
<td></td>
</tr>
<tr>
<td>HIV Infection</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infected HIV</td>
<td>17(12.3)</td>
<td>14(20.3)</td>
<td>3(4.3)</td>
<td>8.19*</td>
</tr>
<tr>
<td>Not Infected HIV</td>
<td>121(87.7)</td>
<td>55(79.7)</td>
<td>66(95.7)</td>
<td></td>
</tr>
<tr>
<td>Religion</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Islam</td>
<td>73(52.9)</td>
<td>42(60.9)</td>
<td>31(44.9)</td>
<td>5.24</td>
</tr>
<tr>
<td>Catholic</td>
<td>50(36.2)</td>
<td>23(33.3)</td>
<td>27(39.2)</td>
<td></td>
</tr>
<tr>
<td>Protestant</td>
<td>15(10.9)</td>
<td>4(5.8)</td>
<td>11(15.9)</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Illiteracy</td>
<td>25(18.1)</td>
<td>21(30.4)</td>
<td>4(5.8)</td>
<td>22.80**</td>
</tr>
<tr>
<td>Primary</td>
<td>29(21.0)</td>
<td>19(27.5)</td>
<td>10(14.5)</td>
<td>*</td>
</tr>
<tr>
<td>Secondary</td>
<td>63(45.7)</td>
<td>23(33.4)</td>
<td>40(58.0)</td>
<td></td>
</tr>
<tr>
<td>University</td>
<td>21(15.2)</td>
<td>6(8.7)</td>
<td>15(21.7)</td>
<td></td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mossi</td>
<td>100(72.5)</td>
<td>55(79.7)</td>
<td>45(65.2)</td>
<td>3.63</td>
</tr>
<tr>
<td>Others</td>
<td>38(27.5)</td>
<td>14(20.3)</td>
<td>24(34.8)</td>
<td></td>
</tr>
<tr>
<td>Family members ever been diagnosed with TB</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>127(92.0)</td>
<td>58(84.1)</td>
<td>69(100)</td>
<td>11.95**</td>
</tr>
<tr>
<td>Yes</td>
<td>11(8.0)</td>
<td>11(15.9)</td>
<td>0(0.0)</td>
<td></td>
</tr>
<tr>
<td>Read or heard any education/guidance about TB</td>
<td></td>
<td></td>
<td></td>
<td>.624</td>
</tr>
<tr>
<td>No</td>
<td>34(24.6)</td>
<td>15(21.7)</td>
<td>19(27.5)</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>104(75.4)</td>
<td>54(78.3)</td>
<td>50(72.5)</td>
<td></td>
</tr>
<tr>
<td>Pay attention to any TB prevention related activities</td>
<td></td>
<td></td>
<td></td>
<td>6.06</td>
</tr>
<tr>
<td>No</td>
<td>15(10.9)</td>
<td>3(4.3)</td>
<td>12(17.4)</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>123(89.1)</td>
<td>66(95.7)</td>
<td>57(82.6)</td>
<td></td>
</tr>
<tr>
<td>Plan to participate to any TB related test such as X-ray</td>
<td></td>
<td></td>
<td></td>
<td>3.88*</td>
</tr>
<tr>
<td>No</td>
<td>10(7.2)</td>
<td>2(2.9)</td>
<td>8(11.6)</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>128(92.8)</td>
<td>67(97.1)</td>
<td>61(88.4)</td>
<td></td>
</tr>
</tbody>
</table>

Note: *indicates p<0.05, ** indicates p<0.01 and *** indicates p=<0.001
4.2. Differences in the Knowledge and Attitude of TB between people with and without TB

Among the all participants, the mean score of knowledge of TB was 83.96±10.176 and specifically, 88.71±7.82 for people with TB and 79.21±10.09 for people without TB. The results of independent t-test revealed that there was a significant difference about the knowledge of TB for the people with and without TB (t =6.179; p<0.001). There are 4 categories under knowledge of TB the mean score and standard deviation for each categories are (1) High risk group = 80.87±14.67 (2) Transmission = 84.45±11.16 (3) Diagnosis and examination =93.84±13.78 (4) Prevention =80.68±17.05. The result also showed significant differences in each category between people with and without TB. People with TB have higher score in “High risk group”, “Transmission”, “Diagnosis& Examination”, and Prevention than people without TB. Subjects from people with TB have higher knowledge of TB than people without TB.

Among the all participants, the mean score of TB attitude was 42.56±4.72 and specifically, 65.65±5.18 for people with TB and 64.81±8.20 for people without TB. The mean score and standard deviation for each categories are (1) proactive = 42.56±4.72 (2) passive = 22.67±6.47 (3). The result of independent t-test showed that only proactive factor had a significant difference between people with and without TB (t = 2.67; p< 0.05). Subjects from people with TB have higher knowledge of TB than people without TB.

The differences in the knowledge and attitude of TB in these two groups were presented in table 2.
Table 2 Differences in the knowledge and attitude of TB between people with and without TB

<table>
<thead>
<tr>
<th>Variables</th>
<th>All subject</th>
<th>People with TB(n=69) M±SD</th>
<th>People without TB (n=69) M±SD</th>
<th>Ranki ng</th>
<th>Ranki ng</th>
<th>t-test</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High risk group</td>
<td>80.87±14.6</td>
<td>83.77±12.5</td>
<td>77.97±16.1</td>
<td>7</td>
<td>4</td>
<td>2.36</td>
<td>.020</td>
</tr>
<tr>
<td>Transmission</td>
<td>84.45±11.1</td>
<td>87.75±9.33</td>
<td>81.16±11.1</td>
<td>2</td>
<td>2</td>
<td>3.62</td>
<td>.000</td>
</tr>
<tr>
<td>Diagnosis &amp; examination</td>
<td>93.84±13.7</td>
<td>96.38±9.85</td>
<td>91.30±16.5</td>
<td>1</td>
<td>1</td>
<td>2.19</td>
<td>.030</td>
</tr>
<tr>
<td>Prevention</td>
<td>80.68±17.0</td>
<td>89.21±12.9</td>
<td>72.14±16.4</td>
<td>4</td>
<td>6</td>
<td>6.78</td>
<td>.000</td>
</tr>
<tr>
<td>Total knowledge score</td>
<td>83.96±10.1</td>
<td>88.71±7.82</td>
<td>79.21±10.0</td>
<td>3</td>
<td>9</td>
<td>6.18</td>
<td>.000</td>
</tr>
<tr>
<td>Attitudes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proactive</td>
<td>42.56±4.72</td>
<td>43.61±4.44</td>
<td>41.51 ±4.79</td>
<td>1</td>
<td>1</td>
<td>2.67</td>
<td>.008</td>
</tr>
<tr>
<td>Passive</td>
<td>22.67±6.47</td>
<td>22.04±6.17</td>
<td>23.30±6.74</td>
<td>2</td>
<td>2</td>
<td>-1.15</td>
<td>.254</td>
</tr>
<tr>
<td>Total Attitude</td>
<td>42.56±4.72</td>
<td>65.65±5.18</td>
<td>64.81±8.20</td>
<td></td>
<td></td>
<td>.72</td>
<td>.473</td>
</tr>
</tbody>
</table>

*indicates p<0.05, ** indicates p<0.01 and *** indicates p=<0.001

4.3. The Relationship between Demographic Variables and Knowledge and Attitude towards TB and Between Knowledge and Attitude

Within the demographic variable, only age is a continuous variable, the correlation coefficient relation analysis was used to understand the relationship between age and knowledge of TB and attitude towards TB. The result revealed that there was a positive correlation between age and attitude of TB (r= .248; p < .001) only. On the other hand knowledge had not correlated with attitude towards TB (r = .143; P >.05), as well as knowledge and age (r = .145; P >.05). The result is shown in the table 3.
Table 3: Relationship between age, knowledge and attitude (N=138)

<table>
<thead>
<tr>
<th>variables</th>
<th>Age</th>
<th>Knowledge</th>
<th>Attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knowledge</td>
<td>.145</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Attitude</td>
<td>.248**</td>
<td>.143</td>
<td>1</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

4.4. Relationship between Age and Knowledge and Attitude of People with TB (n=69)

In people with TB, the result revealed that there was a significant positive correlation between attitude and age (r = .341; p < .001). By contrast, there was no significant correlation between age and knowledge (r = .040; p >.05) as well as knowledge and attitudes toward TB (r = .203, p >.05). The result is shown in the table 4.

Table 4: Relationship between age and knowledge and attitude of people with TB (N=69).

<table>
<thead>
<tr>
<th>variables</th>
<th>Age</th>
<th>Knowledge</th>
<th>Attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knowledge</td>
<td>.040</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Attitude</td>
<td>.341**</td>
<td>.203</td>
<td>1</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).
4.5. **Relationship between Age and Knowledge and Attitude of People without TB (N=69).**

In people without TB, the outcome revealed that there was no significant correlation between age and knowledge of TB ($r = -0.063; p > .05$). There was also, no significance correlation between age and attitudes toward TB ($r = 0.197, p >.05$) as well as knowledge of TB and attitude toward TB ($r = 0.095; P > .05$). The result is presented in the table 5

<table>
<thead>
<tr>
<th>variables</th>
<th>Age</th>
<th>Knowledge</th>
<th>Attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knowledge</td>
<td>-0.063</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Attitude</td>
<td>0.197</td>
<td>0.095</td>
<td>1</td>
</tr>
</tbody>
</table>

. Correlation is not significant at the 0.05 level (2-tailed).

4.6. **Difference in Knowledge of TB and Attitude towards by Demographic Feature**

In order to understand whether or not there are differences/relationship among other demographic variables and knowledge/attitude towards TB, either independent t-test or one way ANOVA were used to answer this research question. The result demonstrated that the only variable “family member ever been diagnosed with TB” showed significant difference in knowledge of TB ($t= 6.50, p< .05$), the subjects whose family members had ever been diagnosed with TB had higher TB knowledge than the
subjects whose family members have no TB. Other demographic variables had shown no
difference in TB knowledge. However people with university and secondary education
level had higher knowledge score than primary and illiteracy level.

To examine the difference in attitude toward TB, similar analyses were applied, the result revealed no significant difference among all demographic variables in attitude
towards TB. However, table 6 showed that illiteracy people and primary education level
people had a proactive attitude in TB than university and secondary education level. In
gender, male had higher score knowledge and proactive attitudes in TB than female. Also
people infected with HIV had higher knowledge and proactive attitudes towards TB than
people not infected with HIV. The difference in knowledge and attitude towards TB among demographic variables were presented in table 6.

Table: 6 Difference in knowledge and attitude about TB towards by
demographic feature

<table>
<thead>
<tr>
<th>Variables</th>
<th>Total N=138</th>
<th>Total knowledge</th>
<th>Total Attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>M±SD</td>
<td>t/F</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>80</td>
<td>84.82±10.53</td>
<td>1.18</td>
</tr>
<tr>
<td>Female</td>
<td>58</td>
<td>82.76±9.62</td>
<td></td>
</tr>
<tr>
<td>HIV Infection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infected</td>
<td>17</td>
<td>87.42±8.17</td>
<td>1.507</td>
</tr>
<tr>
<td>Not infected</td>
<td>121</td>
<td>83.47±10.36</td>
<td></td>
</tr>
<tr>
<td>Religion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Islam</td>
<td>73</td>
<td>83.33±10.59</td>
<td></td>
</tr>
<tr>
<td>Catholic</td>
<td>50</td>
<td>85.59±8.70</td>
<td>1.184</td>
</tr>
<tr>
<td>Protestant</td>
<td>15</td>
<td>81.61±12.48</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Illiteracy</td>
<td>25</td>
<td>84.83±7.38</td>
<td></td>
</tr>
<tr>
<td>Primary</td>
<td>29</td>
<td>81.45±11.60</td>
<td>.943</td>
</tr>
<tr>
<td>Secondary</td>
<td>63</td>
<td>84.07±10.32</td>
<td></td>
</tr>
<tr>
<td>University</td>
<td>21</td>
<td>86.04±10.54</td>
<td></td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mossi</td>
<td>100</td>
<td>84.07±9.67</td>
<td>.207</td>
</tr>
<tr>
<td>Others</td>
<td>38</td>
<td>83.67±11.55</td>
<td></td>
</tr>
</tbody>
</table>

Note: * indicates p < 0.05 and *** indicates p<.001
4.7. Difference in Knowledge and Attitude by Demographic Feature for a Group of People with TB

In order to understand whether or not there is a difference among demographic variables, knowledge of TB and attitude toward TB in people with TB, independent t-test and one way ANOVA were used. From the total of 69 subjects in people with TB, the result revealed that there was no statically difference with all socio demographic status such as the gender, HIV infection, religion, education and ethnicity. People with TB with the university level (92.53±8.84) had higher TB knowledge, followed by secondary level (92.20±7.14), illiteracy people (86.70±3.82) and primary level (85.48±9.72), there is no significant difference between other groups. No significant difference was found in other demographic variable, including gender, HIV infection, religion, and ethnicity, with TB knowledge. Unlike knowledge of TB, there is no significant difference between all demographic variable and attitude toward TB (see table 7).
Table 7 Difference in Knowledge and Attitude by demographic feature for a group of people with TB

<table>
<thead>
<tr>
<th>Variables</th>
<th>Total N=69</th>
<th>Total knowledge M±SD</th>
<th>t/F</th>
<th>Total Attitude M±SD</th>
<th>t/F</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>45</td>
<td>88.97±7.84</td>
<td>.376</td>
<td>65.98±5.22</td>
<td>.712</td>
</tr>
<tr>
<td>Female</td>
<td>24</td>
<td>88.22±7.94</td>
<td></td>
<td>65.04±5.16</td>
<td></td>
</tr>
<tr>
<td><strong>HIV Infection</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infected</td>
<td>14</td>
<td>89.90±6.27</td>
<td>.638</td>
<td>64.71±3.51</td>
<td>-.938</td>
</tr>
<tr>
<td>Not infected</td>
<td>55</td>
<td>88.40±8.19</td>
<td></td>
<td>65.90±5.53</td>
<td></td>
</tr>
<tr>
<td><strong>Religion</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Islam</td>
<td>42</td>
<td>87.85±8.25</td>
<td></td>
<td>65.40±5.25</td>
<td></td>
</tr>
<tr>
<td>Catholic</td>
<td>23</td>
<td>89.81±7.31</td>
<td>.707</td>
<td>65.61±5.45</td>
<td>.646</td>
</tr>
<tr>
<td>Protestant</td>
<td>4</td>
<td>81.61±12.48</td>
<td></td>
<td>68.50±1.30</td>
<td></td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Illiteracy</td>
<td>21</td>
<td>86.70±3.82</td>
<td>4.02</td>
<td>65.33±4.55</td>
<td>.105</td>
</tr>
<tr>
<td>Primary</td>
<td>19</td>
<td>85.48±9.72</td>
<td></td>
<td>65.37±5.20</td>
<td></td>
</tr>
<tr>
<td>Secondary</td>
<td>23</td>
<td>92.20±7.14</td>
<td></td>
<td>66.04±6.37</td>
<td></td>
</tr>
<tr>
<td>University</td>
<td>6</td>
<td>92.53±8.84</td>
<td></td>
<td>66.17±2.32</td>
<td></td>
</tr>
<tr>
<td><strong>Ethnicity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mossi</td>
<td>55</td>
<td>87.84±7.93</td>
<td>-1.86</td>
<td>65.75±5.46</td>
<td>.294</td>
</tr>
<tr>
<td>Others</td>
<td>14</td>
<td>92.19±6.55</td>
<td></td>
<td>65.29±4.04</td>
<td></td>
</tr>
</tbody>
</table>

Note: * indicates p < 0.05 and *** indicates p<.001
1 using One-Way ANOVA and Schaffer’s post hoc comparison procedure

4.8. Difference in Knowledge and Attitude by Demographic Feature for a Group of People without TB

To ascertain if it would be possible to get difference in knowledge and attitude by demographic feature for a group of people without TB, independent t-test or one way ANOVA were used to examine this research question. A total of 69 subjects are in people without TB, the result revealed that there was no statically difference with all socio demographic status such as the gender, HIV infection, religion, education and ethnicity. Although there was no statistically difference among demographic variables, the results revealed that male (n=35) (79.51±11.25) had more TB knowledge than female (n=34)
(78.90±8.90). Female (42.09±4.58) had proactive attitudes toward TB than male (40.94±4.98).

In term of HIV infection, people who are not infected with HIV (n=66) had more knowledge in TB (79.36±10.24) than people who are infected with HIV (n=3) (23.00±1.732). However, people infected in HIV (n=3) (43.00±3.00) had more proactive attitudes toward TB than those are not infected with HIV (n=66) (41.44±4.86).

About education, people without TB at the university level (n=15) had higher knowledge on TB (83.45±10.28), followed by secondary school level (n=40) (79.40±8.89), illiteracy (n=4) (75.00±13.61) and primary level (n=10) (73.79±11.40). However, illiterate people (n=4) (43.25±4.99) and those of university education level (n=15) (41.93±4.54) respectively had proactive attitudes toward TB. The differences in knowledge and attitude by demographic feature for a group of people without TB were shown in table 8.
Table 8 Difference in Knowledge and Attitude by demographic feature for a group of people without TB.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Total N=69</th>
<th>Total knowledge</th>
<th>Total Attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M±SD</td>
<td>t/F</td>
<td>M±SD</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>35</td>
<td>79.51±11.25</td>
<td>63.20±7.01</td>
</tr>
<tr>
<td>Female</td>
<td>34</td>
<td>78.90±8.90</td>
<td></td>
</tr>
<tr>
<td><strong>HIV Infection</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infected</td>
<td>3</td>
<td>75.86±5.97</td>
<td>70.67±5.78</td>
</tr>
<tr>
<td>Not infected</td>
<td>66</td>
<td>79.36±10.24</td>
<td></td>
</tr>
<tr>
<td><strong>Religion</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Islam</td>
<td>31</td>
<td>77.20±10.41</td>
<td>63.97±8.30</td>
</tr>
<tr>
<td>Catholic</td>
<td>27</td>
<td>81.10±8.25</td>
<td>67.20±6.16</td>
</tr>
<tr>
<td>Protestant</td>
<td>11</td>
<td>78.06±12.46</td>
<td>64.27±8.47</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Illiteracy</td>
<td>4</td>
<td>75.00±13.61</td>
<td>65.25±4.57</td>
</tr>
<tr>
<td>Primary</td>
<td>10</td>
<td>73.79±11.40</td>
<td>67.20±6.16</td>
</tr>
<tr>
<td>Secondary</td>
<td>40</td>
<td>79.40±8.89</td>
<td>64.18±8.58</td>
</tr>
<tr>
<td>University</td>
<td>15</td>
<td>83.45±10.28</td>
<td></td>
</tr>
<tr>
<td><strong>Ethnicity</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mossi</td>
<td>45</td>
<td>79.46±9.67</td>
<td>65.58±7.89</td>
</tr>
<tr>
<td>Others</td>
<td>24</td>
<td>78.74±11.03</td>
<td></td>
</tr>
</tbody>
</table>

Note: * indicates p < 0.05 and *** indicates p<.001
Chapter V
Discussion

This chapter discusses the study results with demographic characteristics of respondents, knowledge and attitudes of TB.

5.1. Demographic and General Characteristics Comparing People with and without TB.

The socio-demographic characteristic of subjects in our study showed that the mean age of total sample was 35.42 years (SD= 11.58) with a range from 18-80 years old. The minimum age of participants was 18 years old and 61.1% of subjects were within the age range of 18-35. The average age is significantly different in both groups, people with TB is older than people without TB (t =3.81, p < .001). This significantly could be explained by the fact that, according to the 2008 statistical yearbook of Burkina Faso, the majority of the population is between 15 to 49 (43.7% of total population).

The male subjects accounted for 52% of the total cases. For people with TB, the male participants represented 65.2% while they were 50.7% among people without TB. However, this study didn’t found a significance difference between people with and without TB in gender. The lack of significance in gender could be due to the fact that the size of our sample was not large enough both of people with and without TB. Similar finding was shown in study of gender differences in health care utilization and outcome of respiratory tuberculosis in Alexandria (Kame et al, 2002).

About education, 45.7% of overall participants had secondary education level. The people without TB were 58.0%, while 33.4% were people with TB. High illiteracy
and primary education levels rates are common findings among people with TB patients. The high rate of illiteracy and low education levels was found in the high number of People with TB in this level of the society. Tuberculosis is a disease afflicting the poor and uneducated communities living in overcrowded. However, there was a significant difference in education between people with and without TB. A study conducted in Malaysia by Liam et al. (1997), showed that the educational background and income level of patients are important determinants of patients’ level of knowledge of tuberculosis. In that study, it showed that patients with tertiary education had significantly higher scores in knowledge of TB than the rest, while the knowledge scores of patients with primary and secondary school education and those with no formal education were similar.

According to the WHO/CDS/TB/2002-296, HIV is a major source of gravity of tuberculosis. Tuberculosis is the leading opportunistic infection in AIDS. In this study, 12.3% of participants were HIV infected. Of the 69 in people with TB, 20.3% of subjects had proactive HIV serology, while 4.3% of HIV positives subjects were people without TB. Chi-Square test showed a significance difference between people with and without TB ($X^2 = 8.118, p < 0.05$) in HIV. According to WHO/CDS/TB/2002-296; WHO / HIV AIDS (2002), knowledge of this causal (HIV and TB) relationship is important to prevent any over-infections or complications of tuberculosis disease. A study conducted by Diarra (2005) about knowledge, attitude and practices behavior in Bamako’s people with tuberculosis, the result expressed concern about the ignorance of the relationship between TB and HIV, 85% of respondents did not know that there is a relationship between TB and HIV. According to the Statistical Yearbook of Health of Burkina Faso (2008), of the
2737 new cases of smear-positive of TB (People with TB) diagnosis and on treatment, 19.1% had a positive HIV serology. This finding supports the recent decision of the Ministry of Health to adopt the policy of routinely offering voluntary HIV counseling and testing to all tuberculosis patients in all the country. A finding in India (Dewan et al., 2010) revealed that HIV prevalence among the 1.96 million incident TB cases in 2007 was 4.85%.

5.2. Differences in the Knowledge and Attitude of TB Between People with and without TB

The result of this study showed that people with TB had higher knowledge score and positive attitude than people without TB with a significance difference of (t=6.18; p= .000). However, no significance difference in attitude between people with TB and people without (t=.72; p=.473). The knowledge score for people with TB was M=88.71 SD = 7.82. Our findings were similar to those of surveys done elsewhere in developing countries such as study by Lo et al., (2008) of comparing knowledge, attitude and health promotion behavior between tuberculosis (TB group) patients and non-tuberculosis patients (non-TB group) in Taiwan, their results revealed TB group subject was found to have more knowledge of TB than the Non-TB group. Also, Ottmani et al. (2008), sought to characterize conceptions of tuberculosis (TB) in an urban population in Morocco, indicated, not surprisingly, that people with TB, although with some real gaps in knowledge about TB, had higher knowledge in TB than people without TB. (Kiefer et al, 2009). Abebe, et al., 2010, assessed knowledge about and stigma towards TB and their health seeking behavior among TB suspects in Ethiopia, the result revealed that about
83% of TB suspects had (knowledge) heard of TB, which is similar also, to a study done in north Ethiopia by Mesfin, et al., (2005) where 86.8% of the study participants were aware of TB, but lower than the 99.1% reported from India (Sharma et al, 2007).

Although, our study reported a high knowledge score about TB for majority of the participants, 14% of people with TB and 16% of people without TB in this study did not recognized that receiving BCG immunization can prevent TB. Similar finding from Pakistan by Agboatwalla et al. (2003) investigated gender differences in knowledge of and attitude towards tuberculosis (TB) in urban and rural communities in Pakistan reported that knowledge about bacilli Calmette-Guérin (BCG) vaccination as a preventive measure was very limited, in males, only 1.7% in urban men. In a study in Pakistan (Mushtaq et al, 2010), explored knowledge, attitudes and practices regarding TB in the general population of two districts of Punjab province, the result revealed that only 42% of the surveyed population had good knowledge about TB. A study conducted by Khan et al (2006), assessed knowledge of patient with TB in Pakistan, showed the alarming lack of knowledge on tuberculosis in Pakistani people with TB. Poor knowledge of people with TB concerning their disease may contribute to the high burden of TB disease in the country. Almost the participants had high score in attitude in this study.

When asked the question “whether participant will visit doctor for further examination immediately if I have the symptoms of cough, sputum, poor appetite, weight loss, night sweating and coughing up of blood” 79.7% of people with TB and 88.4% of people without TB responded by strongly agree. In term of medication, when asked “if respondents will take medication as prescribed by doctors and/or nurses if I am diagnosed with TB”, the results of our study showed that 91.3% of people with TB and 94.2% of
people with TB responded by strongly agree. Similar study done in Punjab, Pakistan, comparing knowledge, attitudes and practices regarding tuberculosis in two districts of Punjab, Pakistan (Mushtaq et al., 2010), showed that “when asked what they would do if they thought they had TB symptoms”, the majority 95.3% answered they would go to a health facility. In a study done in Pakistan, the seeking of TB participant’s treatment was compared between urban and rural participants (Mushtaq et al. 2011). Most of the respondents 83.6% said they would seek treatment as soon as they realized that they had symptoms of TB.

Regarding treatment, our study showed that 100% of people with TB and 94.2% of people without TB knew that TB treatment last 6 months. It is of great importance for the people with TB to know that TB is curable with regular treatment, as this will psychologically encourage them to abide by their treatment instructions. Patients’ knowledge about the duration of treatment needed to cure the disease is an important educational message. As the bacteria needs 6 months for full clearance from host tissues, here refers to the 6-month short-course regimen recommended by the people without TB in Burkina Faso, the majority of patients may think that when the initial symptoms subside this marks the end of treatment. Ignorance of the fact that the TB is an infectious and contagious has the consequence of contributing to increase transmission of the disease. As a result of this ignorance, patients will not care of adopting control measures in their households and/or workplace. Our result differs also from other study conducted in Mwanza, Tanzania (Wandwalo et al., 2000) in which 50.7% of the people with TB knew the correct duration of treatment. Also, study in Morocco (Ottmani et al., 2008), showed that only 38% of non patients were aware about TB of Mekonnen, 2002), assessed the level of patients’
knowledge on the cause, mode of transmission and preventive methods of tuberculosis and to determine the socio-demographic profiles of patients that influence their knowledge revealed that 43% knew the duration of treatment; these findings were difference from our study. This difference could be explained by the fact that many respondents are illiterate or have low levels of education. In addition, methods and tools differ from one country to another, the mass education campaigns are not conducted in the same way.

In term of attitudes, we found a significant difference in positive attitude of TB between people with and without TB (t = 2.67; p < .008), in addition, the results of this study showed that people with TB had a higher positive attitude score of TB than people without. People with TB had higher positive attitude and lower negative attitude of TB than people without. People with a positive attitude should help prevent the spread of the disease, effective monitoring of treatment and especially avoid the isolation and stigma. It may help to better control the disease for its eradication by the national program against TB. Concerning negative attitudes, this study revealed that people with TB had less negative attitudes than those without TB. This is similar to those study done in Malaysia, by Rundi, (2006), assessed the knowledge and perceptions of TB patients and the community about TB, also to know the experiences of healthcare services, and to examine the impact of TB on patients and families, East Malaysia, found a difference in attitudes between people with TB and those without TB. Unlike our study where only people with TB had higher score of positive attitude, the finding of a study conducted by Lo et al., (2008) of comparing knowledge, attitude and health promotion behavior between tuberculosis (TB group) patients and non-tuberculosis patients (non-TB group) in Taiwan, their results revealed all the three groups showed positive attitude about TB.
Some reasons for the adequate higher score knowledge on TB among TB patients could be due to the availability of information and sufficient publicity surrounding TB everywhere in the country and especially in the different health centers in Baskuy district. Also, good knowledge and positive attitudes of participants towards TB could also be explained by the fact that the health district Baskuy is located in the heart of the capital Ouagadougou, with many advantages such as communications facilities, TV, Radio; easy accessibility in all the health centers and hospital, and with a population well educated and were aware about TB.

The high level score for people with TB of TB knowledge and positive attitudes reported in this study can probably be attributed to the high level of educational activities carried out by the national TB programme through mass media (television, radio, newspapers, opinion leaders, associations of patient support and fight against tuberculosis and NGOs) and face-to-face health education with caregiver. These activities emphasized the seriousness of TB, mode of transmission, the sequelae of treatment interruption, and curability of TB treatment. However, the negative attitude of people without TB could be explained by the fact that when people have no symptoms of TB, it is considered that is healthy and behavior is not always good.

In term of knowledge of Risk factor about TB, people with TB recorded higher score knowledge in risk factor in TB (83.77±12.50) than people without TB (77.97±16.14). There was a significant different in knowledge of risk factor of TB towards TB between people with TB and people without with (t=2.36, p= .020). Regarding contamination, the findings showed that people with TB had high knowledge of contamination score of TB than people without TB, with a significance difference of (t=3.62; p= .000)
There was a significant difference in TB knowledge about diagnosis & examination between people with TB and people without (t=2.19; p=.030). The result showed that people with TB had higher knowledge in diagnosis & examination (96.38±9.85) than people without (91.30±16.51).

As for prevention, the result indicated that people with TB had higher score in knowledge of TB prevention (89.21±12.92) than people without (72.14±16.46). A significant different existed in TB prevention knowledge between people with TB and people without with (t=6.78; p=.000). This could be explained by the fact that people with TB have already contracted tuberculosis, receive health education with caregivers since the process of diagnosis and treatment until recovery. From this fact they acquire important knowledge about TB.

Only the positive attitude has a significantly different between people with TB and TB without people, with (t =2.67 p =.008). However, the results showed that people with TB had a higher score of positive attitudes (43.61 ± 4.44) than those without TB (41.51 ± 4.79). This could be explained by the fact that, the efforts in the health education of patients by care givers have improved patients knowledge that may play a positive effect on their behavior.

Most of the subject in this survey showed a high level of awareness of tuberculosis as a problem in the community and most respondents had a good knowledge of the important aspects of the disease. However, knowledge alone is insufficient and needs to be accompanied by a positive attitudes towards tuberculosis which promote appropriate behaviour in the event of symptoms developing, tuberculosis being diagnosed, and in relating to members of the family and community who have the disease.
5.3. The Relationship among Demographic Variables, Knowledge and Attitude Toward TB

Our study revealed that within the demographic variables, age knowledge, attitudes and age, and knowledge and attitudes, all showed positive correlation, however, only age with attitude presented significant correlation (p < .01). Previous studies applying the health belief model, indigenous nursing students in Taiwan (Chang et al., 2003) and knowledge, attitudes, and practices about tuberculosis from Vietnam (Hoa et al., 2005) differs from our result. This could be explained by the fact that most of elder were aware and had a focus on the disease than young people who are more interested in profit-making activities and seeking employment. The Ministry in charge of health and health care workers should focus on health education, because tuberculosis affects people in their reproductive age.

5.4: Relationship among Age and Knowledge and Attitude of TB for People with TB (n=69)

In term of relationship among age and knowledge and attitude of TB for people with TB, the results were similar to whole study population. This finding concurs with another report that demographic factors (as education, religion, ethnicity,) did not correlated with age (Chang et al., 2003). However, another study conducted in Malaysia by Liam et al. (1999) revealed a negative correlation between knowledge of TB and age (r = -0.18), which differs from our study results. This difference could be explained by the fact that the young population even if, more educated and are favorable to education for behavior change more than the elderly.
5.5. **Relationship Among Age and Knowledge and Attitude of People without TB (n=69)**

This study didn’t find any significant correlation between age and knowledge, age and attitudes and also knowledge and attitude. This lack of correlation could be explained by the fact that the size of our sample was not very great, and did not allow us to perform many tests to find the most significantly. Our study is similar with Mushtaq et al. (2009), that the study population’s knowledge about TB was not significantly associated with age.

5.6. **Difference in Knowledge of TB and Attitude toward by Demographic Feature**

This study revealed that there was significance difference in knowledge and attitudes about TB by gender. However, it showed that male subjects had higher knowledge and proactive attitudes than females. This could be explained by the social conditions which arise from poverty, the lack of women education, the importance weight of tradition have long been known to provide a unfavorable environment for the women development. Similar findings of study in knowledge of TB, attitudes, and practices about tuberculosis and choice of communication channels in a rural community in Vietnam (Hoa et al., 2005), this study reported that men had a significantly higher knowledge score than women. Other study conducted in Americans in the Marinac et al. (1998) have also shown not surprisingly, that the overall correct response score for the objective knowledge queries for male respondents was significantly higher (63%) than that for women (60%, \( P = 0.00311 \)).This could be explained by the fact that traditionally, people prefer to enroll boys to school than girls, limiting women to a low of education
level. In addition, the socio-economic power and decision of the women are low compared to men, which affects passively on their knowledge.

In term of attitudes, a study in gender perspectives on knowledge and practices regarding tuberculosis in urban and rural areas in Pakistan (Agboatwalla et al., 2003), the result revealed that male’s subjects followed the advice of the doctor be stopped than female’s in the rural areas. It also revealed that most people would be supportive if a family member got TB; moral support provided by families often plays a vital role in early diagnosis and treatment adherence.

Regarding HIV, this study did not find a significant difference in knowledge and attitudes of TB. However, the results showed that people with HIV have substantially higher knowledge and attitudes score than HIV negative subjects. This could be explained by the fact that the health care providers pay more attention on education and follow up treatment for people with TB. Although there was no significance difference between People with TB infected with HIV and uninfected, the study revealed that people with TB diagnosed with HIV had high knowledge than People with TB without HIV. This knowledge of people with TB living with HIV is also crucial, because the national program against tuberculosis emphasizes the awareness that could help patients understand very well not only in the dimension of infection, spread and transmission of the disease to their surroundings, but also to carefully follow the treatment and advice from health workers for a total cure.

About education, our study showed a slight significant difference in attitudes towards TB. Nevertheless, this study revealed that patients who have university education level had higher knowledge in TB than others, followed by illiteracy people and
secondary education level. Educational background was an important determinant of the patients’ level of knowledge of tuberculosis; those with a higher level of education had better score than those with lower or no formal education.

This could be associated with more awareness in the urban areas due to access to basic communication facilities such as electricity and television than rural areas. The study findings also revealed that generally, the knowledge about TB and its treatment significantly increased with educational level (Mohamed et al., 2004). This was consistent to previous studies (Mushtaq et al., 2009; Liefooghe et al., 1997; Hashim et al., 2003) which reported the similar findings among TB patients. In term of attitudes, a study from Mushtaq et al. (2009) revealed that good health-seeking behavior was associated with better education, good housing and good knowledge, in line with findings from previous studies (Liefooghe et al., 1997; Hoa et al., 2003).

The present study revealed that among demographic feature for a group of people with TB, only education was significant difference between knowledge and attitudes about TB. This could be explained by the fact that our sample size is not large, besides, the national programme against TB has highlighted the education of the people with TB and also with the public through the mass media, associations support patients and caregivers in Burkina Faso. However, this study showed that men not only had high knowledge, but also proactive attitudes than females. This was congruent with an earlier study conducted by Mohamed et al. (2004) in Sudan. According to a study conducted by Kamel et al. (2002), people with TB women had significantly lower scores in knowledge, beliefs and attitudes about tuberculosis than men in Egypt. This study revealed a slight difference in attitudes between male’s subject and females. This is consistent with other
studies in Morocco of knowledge, attitudes and beliefs about tuberculosis in urban Morocco (Ottmani et al., 2000), and also in study of the knowledge, attitudes and practices on TB among treatment partners in Philippine (Christina et al., 2005), male subject had proactive attitudes than female. This could be explained by the weight of tradition on women, the low percentage of education and low economic power of women, males subject have better access for health care, and are loosely attached with traditional beliefs of cause of disease than females. A study conducted by Mesfin et al., (2002) among community members in Tigary region reveled that females had lower level of Tuberculosis knowledge. Similarly, other studies have indicated that knowledge of tuberculosis was associated with higher educational status to the exclusion of other demographic and socio economic factors. A study conducted at Kansas City showed that sex, income and age were related with Tuberculosis knowledge.

The study findings also revealed that there is no different in knowledge no matter people infected HIV or not. Nevertheless, this study showed that people with TB infected with HIV had higher knowledge than not infected with HIV. This could be due to the fact that the national program against TB and HIV have focused on awareness and education of people suffering from these diseases during the consultations, treatment and awareness campaigns of the population. However the result of the study showed that the uninfected with HIV have a proactive attitude than infected with HIV. In Burkina Faso according to UNGASS (United Nations General Assembly Special Session on HIV/AIDS) prevalence of co-infection tuberculosis/ HIV was 20.30% for 782 cases of People with TB tested about HIV in 2009. A study conducted by Mark et al. (1999) at Grady Memorial Hospital,
Atlanta, revealed that among 175 TB patients, 43(24.6%) was co-infected with tuberculosis and HIV.
CHAPTER VI

Study Limitation, implications, Conclusion and Recommendations

6.1 Study Limitations

The study was conducted in the Baskuy district of Ouagadougou at Burkina Faso. Accordingly, the findings cannot be generalized to other districts or the whole country context considering the small sample size. Further studies should be implemented for all five health district of Ouagadougou. The population for this study was generated from the health facility of Baskuy district. Convenient sampling method was used for people with TB and people without TB recruitment due to limited time for data collection, thus, some minimal biasness cannot be ruled out. Another limitation is that the study instruments have never been validated for use with Burkina Faso People with TB or other target population, the questionnaire was translated from Chinese into English and from English to French, which could produce bias and even the reliability of the questionnaire were .644 for knowledge of TB and .814 for attitudes towards TB. In addition, we cannot find an appropriate instrument to measure practices of TB. Thus develop and valid the instruments based on the culture of Burkina Faso are demanded

6.2 Conclusion

Research in study knowledge and attitudes of tuberculosis in Burkina Faso is still in infancy, this study provides baseline information on knowledge and attitudes towards tuberculosis for people with and without TB in the new health district of Baskuy in Burkina Faso. Despite the difficulties faced in Burkina Faso to eradicate TB, the
educational and other activities of the national TB control programme have had beneficial effects on the knowledge of TB. Although, the knowledge of People with TB was significantly higher than people without TB, however, the attitudes of TB revealed opposite results for people with TB. This study confirmed that the attitudes of People with TB contribute to the low TB screening in Ouagadougou and in particular in the health district Baskuy. The study suggests paying more attentions to this category in order to prevent this kind of behavior. Males’ knowledge as observed in the study was better than females. Age is related to the knowledge of TB and it is the only factor positively influencing knowledge for both groups. Indeed, with people with TB, age had a negative influence on the attitudes of patients, whereas it had no effect on knowledge and attitudes of TB for People without TB. In term of difference in knowledge and attitude about TB towards by demographic feature, age, sex, religion, ethnicity or HIV did not influence the knowledge of tuberculosis. However, people living with HIV and was diagnosed with TB have a high knowledge compared to those with a negative TB serology. Our study found that education also had an influence on the attitudes of participants. In term of difference in knowledge and attitudes by demographic feature for a group of people with TB, sex, religion, ethnicity had no difference relationship between knowledge and attitudes of TB onTB, only the education had a positive influence on knowledge and attitudes of people with TB regarding TB. As for the difference in knowledge and attitudes by demographic characteristic for the group of people without TB, our study did not find a difference relationship in knowledge and attitudes of TB for either people with TB or people without TB.
The study highlighted the people with and without TB disparities in knowledge and attitudes regarding TB and its implications on TB control should not be underestimated. On one hand there is need to train health workers and involve private practitioners while on the other hand it is necessary to health educate the masses especially those infecting with TB. It is necessary to propagate awareness in the communities especially those infecting with TB that they should report cough lasting longer than 3 weeks to the nearest health facility and the diagnosis and treatment of TB are free of charge. Males ‘knowledge as observed in the study was higher than females; this finding in agreement with a study done in Vietnam. Education level of the respondents seems to be the determining factor in the overall process of health education. Higher educational level, no doubt, helps the patients to understand the educational messages.

6.3 Implications for Clinical Practice.

In this study, we compare knowledge and attitudes towards TB for the both People with and without TB in a Baskuy health district, which we believe when people do not have enough knowledge about the disease that could bring potential barriers to control TB. Hence, we suggest offering health care provider’s information about the knowledge and attitudes of TB for the residents living in the Baskuy health district.

Lack of knowledge or insufficient knowledge of People with TB could favor the spread and transmission of disease within the population and thus compromise the effectiveness of the fight against tuberculosis. Therefore, it is incumbent on the responsibility of NTP and the head of the health district to focus on training of medical staff (physician, nurse) as well as education and awareness of population and patients.
Education messages in simple language should be developed for the population to facilitate their understanding about TB. Treatment centers for tuberculosis need for nursing care and education given the number of People with TB. However, the reward of the best centers, fighting effectively against tuberculosis by a certificate of recognition and encouragement, could be a motivation for the team in their effort to combat tuberculosis.

The issue of knowledge is crucial not only for people with and without TB but also for their families and communities. To prevent TB, patients should have good knowledge about the infection in order to have good attitudes to stay healthy and limit the spread of the disease. Health worker need to emphasize the importance of knowledge and having proactive attitudes of TB infection. To effectively combat tuberculosis, health professionals must be knowledgeable about the disease and competent in fundamental management principles. Thus these study findings on knowledge and attitudes should help provide baseline information for TB education curriculum and health education program planners. In terms of educational process, encourage knowledge and information sharing, promote reflection and analysis, improve critical thinking, and erroneous beliefs.

**6.4. Recommendation**

Based on the study finding, the following recommendations emanate from our study:

1. To the Baskuy health district, continuous training of the health care providers to upgrade their scientific knowledge is vital for educating patients and community. The design of health educational program to increase patients' general awareness
about the disease is crucial to the control of the infection. To the regional health direction, provide training, regular supervision, and support of health care providers of People with TB for good management are strongly recommended.

2. To the Ministry of Health, availing of competent staff in treatment centers for tuberculosis, to render effective care of patients, education and the prevention of population against TB infection.

The result of this study showed that people either in people with TB or have good knowledge and attitudes towards TB, this might due to the data collection was in the Baskuy Health district, which is the only one health center covering TB. People with TB are referred to take medication in front of health care providers. However, it is not convenience for all People with TB in the Baskuy health district, thus we suggested increasing more TB center in the district, son TB will be managed

6.5. Further research

Further research is recommended as following: 1-To develop and validity a cultural-based instrument to measure knowledge, attitude and practices of TB through understand people’s knowledge, attitudes and practices of TB, TB has a chance to be controlled in the Baskuy health district and also in Burkina Faso. 2-This study was conducted only in Baskuy health district, which is located in the capital Ouagadougou, Burkina Faso. People live in the urban area may receive more information than people living in the rural area their socio economic status may be different. Further research can involve the location and economic status as well as their health seeking behavior in order to understand the problems in controlling TB.
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AUTORISATION D’ENQUETE

Je soussigné, Directeur Régional de la Santé du Centre, autorise Monsieur SAWADOGO Amadé, étudiant au « National Taiwan University of Nursing and Health Sciences /Taipei /Taiwan » à effectuer une enquête sur la prise en charge des patients tuberculeux suivis dans le district sanitaire de Baskuy du 20 juillet au 05 août 2010, ceci dans le cadre de la rédaction de sa thèse de Master en science de soins infirmiers.

La présente autorisation est délivrée sur demande de l’intéressé qui devra déposer un exemplaire de son rapport d’enquête auprès de la Direction Régionale de la Santé du Centre.

Améliorations :
- MCD
- Archives/Chrono

Le Directeur Régional de la Santé du Centre

Dr. Amédée Prosper DJIGUEMDE
Chevalier de l’Ordre National
Part I: Demographic data

1. Date of Birth: _____________________
2. Sex: □ Male □ Female
3. Medical Diagnosis: _______________________________
4. Diagnosed with TB: □ No □ Yes
5. Infected HIV: □ No □ Yes
6. Religion: □ No □ Yes (□ Islam □ Catholic □ Protestant □ Traditional belief □ )
7. Education: □ None/illiteracy □ Primary school □ Secondary school □ University □ Master □ Doctoral
8. Ethnicity: □ No □ Yes (□ Dagara □ Mossi □ Dioula □ Peulh □ Gourmache □ Samo □ Bobo □ Gourrounsi) □ other
9. Have you ever get Tuberculosis? □ No □ Yes (If you answer “Yes”, please answer the following questions.)
10. Disease control Status? □ Regular follow up □ sometimes follow up □ Never follow up
11. Have your family members ever been diagnosed with Tuberculosis? □ No □ Yes (If you answer “Yes”, please answer the following questions.)
12. Where do you learn knowledge of Tuberculosis? □ Doctors □ Nurses □ Relatives □ TV/Media □ Newspapers and/or magazines
13. In the past 6 months, have you ever read or heard any education guidance/commercial related to Tuberculosis? □ No □ Yes
14. Do you pay attention to any Tuberculosis prevention related activities? □ No □ Yes
15. Do you plan to participate any Tuberculosis related tests, such as chest X-ray? □ No □ Yes
Part II: Knowledge of Tuberculosis

This part of questionnaire is to understand your knowledge of Tuberculosis, after every item has two choices, “yes” and “no”. Please read it carefully, and mark your answer which is according to the truth of your understanding in □. If you think the answer of the question is correct, please make “yes” in □. If you think the answer of the question is wrong, please mark “no” in □. Please answer all the items; each item has only one answer. Thank you so much for your cooperation’s.

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<table>
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<tbody>
<tr>
<td>1.</td>
<td>Tuberculosis is caused by <em>Mycobacterium tuberculosis</em> invading into human body.  □ Yes ; □ No</td>
</tr>
<tr>
<td>2.</td>
<td>Any parts of the body can be affected by TB, but the majority organ is lung. □ Yes ; □ No</td>
</tr>
<tr>
<td>3.</td>
<td>Regardless of one’s age and gender, anyone can be affected by TB. □ Yes ; □ No</td>
</tr>
<tr>
<td>4.</td>
<td>People with low body resistance are easier to be affected by TB. □ Yes ; □ No</td>
</tr>
<tr>
<td>5.</td>
<td>Most people infected by <em>Mycobacterium tuberculosis</em> would trigger the onset of TB. □ Yes ; □ No</td>
</tr>
<tr>
<td>6.</td>
<td>People infected by <em>Mycobacterium tuberculosis</em> will immediately present the symptoms of TB. □ Yes ; □ No</td>
</tr>
<tr>
<td>7.</td>
<td>One who is infected by TB should receive 6 months of TB treatment in order to be fully recovered. □ Yes ; □ No</td>
</tr>
<tr>
<td>8.</td>
<td>When People with TB are feeling better, they can stop taking TB medicines at any time. □ Yes ; □ No</td>
</tr>
<tr>
<td>9.</td>
<td>Open TB will spread to others, so one should take medicines immediately. □ Yes ; □ No</td>
</tr>
<tr>
<td>10.</td>
<td>One is easily infected by TB, when one has close and long contact with infected People with TB. □ Yes ; □ No</td>
</tr>
<tr>
<td>11.</td>
<td>Active TB is spread by cough, sneeze, and talk. □ Yes ; □ No</td>
</tr>
<tr>
<td>12.</td>
<td>People with TB can be categorized as open TB and non-open TB. □ Yes ; □ No</td>
</tr>
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</table>
13. Open TB means when result of sputum test shows *Mycobacterium tuberculosis.* □Yes; □No

14. No matter it is open or non-open TB, it will spread to others. □Yes; □No

15. No compliance or take medicines irregularly will easily become chronic open TB. □Yes; □No

16. Sunshine or ultraviolet rays can kill *Mycobacterium tuberculosis* easily. □Yes; □No

17. TB is non-symptom at the early phase; it could be found through chest X-ray test. □Yes; □No

18. Sputum test can diagnose TB. □Yes; □No

19. If one has the symptoms of frequent cough, and cough with sputum, one should take sputum test soon. □Yes; □No

20. One should take chest X-ray test if coughing for a long period of time. □Yes; □No

21. Adults of age 40 years old and above should receive chest X-ray test annually. □Yes; □No

22. Receiving BCG immunization can prevent TB. □Yes; □No

23. Early phrase of TB has no symptoms, nor discomfort. □Yes; □No

24. Moderate or severe People with TB will have the symptoms of coughing, coughing with sputum, poor appetite, losing weight, midnight sweat, coughing up of blood. □Yes; □No

25. TB is an infectious disease and required to report by law. □Yes; □No

26. To prevent TB, one should keep balanced nutrition and have regular lifestyle. □Yes; □No

27. To prevent the spread of TB, open People with TB should receive medication treatment regularly. □Yes; □No

28. To prevent TB, one should receive BCG vaccine in one’s adulthood. □Yes; □No

29. To prevent the spread of TB, open People with TB should wear masks. □Yes; □No
30. To prevent TB, one should keep good air circulation and sufficient sunshine indoor. □Yes □No
Part III: Attitude toward Tuberculosis

This part of questionnaire is to understand your opinions toward tuberculosis. There is no right or wrong answers. Please read it carefully, mark your answer which can describe your feeling in □. All items have only one answer. “1” means “Strongly disagree”; “2” means “disagree”; “3” means “agree”; “4” means “strongly agree”.

1. I will take medication as prescribed by doctors and/or nurses if I am diagnosed with TB. □ □ □ □
   I will visit doctor for further examination immediately if I have the symptoms of cough, sputum, poor appetite, weight loss, night sweating and coughing up of blood. □ □ □ □
2. In order to be healthy, I will read TB-related journal reports. □ □ □ □
3. I will pay attention to the condition of my lungs in order to find out whether I have TB or not. □ □ □ □
4. Chest x-ray test can find out TB early and to avoid lifting the potential burdens to the family. □ □ □ □
5. I will do chest x-ray test in the coming year. □ □ □ □
6. I will encourage my family members to take chest X-ray tests regularly. □ □ □ □
7. Everyone should actively educate friends and family members the methods of TB prevention. □ □ □ □
8. Everyone should understand knowledge of TB. □ □ □ □
9. Everyone should take the responsibility to prevent TB. □ □ □ □
10. Every family should keep good air circulation and sufficient sunshine indoor. □ □ □ □
11. I will encourage him/her to receive medical treatment continuously if my family members are diagnosed with TB. □ □ □ □
12. I am worried that I may be infected if my family member has TB. □ □ □ □
13. I am worried other people may know his/her conditions if my family member has TB. □ □ □ □
14. I am worried that other people may laugh at me if I have TB. □ □ □ □
16. I am worried that the medical fee will cause lots of economic burdens to my family if I have TB.
17. If I am diagnosed with TB, I am worried that the symptoms will disturb my daily life if I am diagnosed with TB.
18. If I am diagnosed with TB, I am worried that my whole life will be changed.
19. The endless process of TB treatment makes me feel so complicated.
20. I have fears when thinking about TB.
21. TB is a serious infectious disease.
22. TB cannot be completely cured.
Partie I: Les données démographiques

1. Date de naissance: _____________________

2. **Sexe**: □ Femme ; □ Homme

3. Diagnostique médical: _______________________________

4. **Infectés par le VIH**: □ Oui ; □ Non

5. **Religion**:

   □ Non, □ Oui (□ Islam ; □ catholique ; □ protestante ; □ croyance traditionnelle)

6. **Education**:

   □ analphabète ; □ primaire □ niveau secondaire ; □ Université

7. **Ethnie**:

   □ Mossi □ autres __________________

8. Avez-vous déjà fait la tuberculose? □ Non, □ Oui (Si vous répondez "Oui", s'il vous plaît répondez aux questions suivantes.)

   A. Statut de contrôle des maladies? □ suivi régulier □ parfois suivi □ Ne jamais suivi
9. Demandez à vos membres de la famille déjà reçu un diagnostique de la tuberculose? □ Non ; □ Oui (Si vous répondez "Oui", s'il vous plaît répondez aux questions suivantes.)

10. Qui voulez-vous apprendre les connaissances de la tuberculose? Médecins ; □ Des parents ; □ infirmières et infirmiers ; □ TV / Médias Journaux □ et / ou magazines

11. Au cours des 6 derniers mois, avez-vous déjà lu ou entendu des conseils d'éducation / liée à la tuberculose? □ Non, □ Oui

12. Faites vous attention aux activités de prévention sur la tuberculose? □ Non, □ Oui

13. Avez-vous l'intention de participer aux essais de diagnostique sur la tuberculose tels que la radiographie pulmonaire? □ Non □ Oui ?

Si non pourquoi ?
Connaissances sur la tuberculose

Cette partie du questionnaire est de comprendre vos connaissances sur la tuberculose. Chaque item a deux choix, «oui» et «non». S'il vous plaît lisez-le attentivement, et marquez votre réponse qui est selon votre compréhension la bonne réponse. Si vous pensez que la réponse de la question est correcte, s'il vous plaît cochez «oui» dans la case. Si vous pensez que la réponse de la question n’est juste, s’il vous plaît marque «non» dans la case. S’il vous plaît répondre à tous les questions, chacune à une réponse à une seule réponse. Merci beaucoup pour votre participation.

1 La tuberculose est causée par l’invasion de l’organisme humain par le mycobacterium tuberculosis □Oui □Non

2 Toutes les parties de l’organisme peuvent être affectées par la tuberculose mais le poumon est l’organe le plus souvent atteint □Oui □Non

3 Toute personne (être humain) peut attraper la tuberculose quelque soit son âge ou son sexe □Oui □Non

4 Les personnes présentant une faible immunité développent plus facilement la tuberculose. □Oui □Non

5 Beaucoup de personnes tombent malade de la tuberculose des qu’elles sont infectées par le mycobacterium. L’infection à MT chez la plupart des personnes infectées suffiraient à développer l’apparition de la tuberculose. (++++) □Oui □Non

6 Les personnes infectées par le mycobacterium développent immédiatement les symptômes de la tuberculose □Oui □Non
7 Celui ou celle qui est infecté par la tuberculose devrait recevoir 6 mois de traitement antituberculeux afin d’être complètement rétabli.
8 Une fois que le malade de la tuberculose se sent mieux, il/elle peut arrêter le traitement à tout moment.
9 Au cas où un malade de la tuberculose tousse sur des gens, on doit immédiatement prendre des médicaments.
10 On contracte facilement la tuberculose lorsqu’on a un contact proche et prolongé avec un malade de la tuberculose.
11 A la phase active, la tuberculose se transmet par la toux, les éternuements et en parlant.
12 Le malade de tuberculose se catégorise en tuberculose productive et non productive.
13 La tuberculose est dite productive quand le mycobacterium tuberculosis est identifié dans l’examen de crachat.
14 Que ce soit une tuberculose productive ou non elle est transmissible.
15 Le non observance ou la prise irrégulière des médicaments conduit facilement à la chronicité d’une tuberculose productive.
16 Les rayons solaires et le rayon ultra violet peuvent détruire facilement le mycobacterium tuberculosis.
17 La tuberculose est asymptomatique dès le début, il est habituellement diagnostiqué à l’aide d’une radiographie thoracique.
18 On peut diagnostiquer la tuberculose par l’examen de crachat.
19 Lorsque qu’une personne présente des symptômes d’une toux fréquente, et tousse en émettant des crachats, elle devrait rapidement faire un
examen de crachat

20 On doit faire une radiographie (thoracique) lorsqu’on tousse depuis Longtemps
☐ Oui ☐ Non

21 Les adultes de 40 ans et plus doivent faire une radiographie thoracique chaque année
☐ Oui ☐ Non

22 Le vaccin BCG immunise contre la tuberculose
☐ Oui ☐ Non

23 Au début de la tuberculose, il n’ya ni symptômes, ni gêne particulière
☐ Oui ☐ Non

24 La tuberculose modérée ou sévère se manifeste par la toux, des expectorations (crachats), un manque d’appétit, une perte de poids, des sueurs nocturnes, une toux qui ramène du sang
☐ Oui ☐ Non

25 La tuberculose est une maladie infectieuse et doit être régie par une loi
☐ Oui ☐ Non

26 Pour prévenir la tuberculose, on doit avoir une alimentation équilibrée et une bonne hygiène de vie.
☐ Oui ☐ Non

27 Pour empêcher la propagation de la tuberculose, les malades de la tuberculose productive doivent recevoir un traitement médical régulier
☐ Oui ☐ Non

28 Pour prévenir la tuberculose, on doit recevoir du vaccin BCG à l’âge adulte
☐ Oui ☐ Non

29 Pour empêcher la propagation de la Tuberculose, les malades diagnostiqués tuberculeux doivent porter un masque
☐ Oui ☐ Non

30 Pour prévenir la tuberculose, on doit assurer une bonne aération et un ensoleillement suffisant dans la maison
☐ Oui ☐ Non
Attitudes sur la Tuberculose

Cette partie du questionnaire est de comprendre vos opinions sur la tuberculose. Il n'y a pas de bonnes ou mauvaises réponses. S'il vous plaît le lire attentivement, cocher la réponse qui peut décrire votre sentiment □. Tous les articles ont une seule réponse.

1. Je prendrai (prendre) les médicaments tel que prescrit par les médecins ou infirmiers si je suis diagnostiqué tuberculeux □ □ □ □

2. J’irai en consultation (je consulterai le docteur) pour des examens approfondis dès que j’ai des manifestations telles que la toux, des expectorations (crachat), le manque d’appétit, une perte de poids, des sueurs nocturnes, une « toux qui ramène du sang » □ □ □ □

3. Afin de rester bien portant (d’être sain), je lirai des journaux parlant de la tuberculose □ □ □ □

4. Je ferai attention à l’état de mes poumons afin de savoir si je suis atteint ou non de la tuberculose □ □ □ □

5. La radiographie thoracique (des poumons) permet de diagnostiquer assez tôt la tuberculose et d’éviter ainsi □ □ □ □
d’augmenter les charges de la famille.

6 Je ferai une radiographie du poumon l’année prochaine

□ □ □ □

J’encouragerai les membres de ma famille à faire une radiographie du poumon

□ □ □ □

7 Chacun devrait activement éduquer ses amis et les membres de sa famille sur les méthodes de prévention contre la tuberculose

□ □ □ □

Tout le monde doit avoir des connaissances sur la tuberculose

□ □ □ □

8 Chacun devrait prendre la responsabilité de prévenir la tuberculose

□ □ □ □

□ □ □ □

9 Chaque famille devrait assurer une bonne aération et un ensoleillement de la maison

□ □ □ □

Si les membres de ma famille sont diagnostiqués tuberculeux, je les encouragerai continuellement à suivre le traitement médical

□ □ □ □

10 J’aurai peur d’être contaminé si un membre de ma famille est malade de la tuberculose

□ □ □ □

Si un membre de ma famille a la tuberculose je serai inquiet que d’autres personnes le sachent. J’ai peur que d’autres personnes soient au courant au cas où un membre de ma famille attrapait la tuberculose

□ □ □ □

□ □ □ □

11 J’ai peur que quelqu’un (e) se moque de moi au cas où je serais atteint de la tuberculose

□ □ □ □

12 J’ai peur que les frais médicaux soit un fardeau économique a
ma famille si je suis atteint de tuberculose

J’ai peur que ma vie quotidienne soit perturbée par les symptômes de la maladie si je suis diagnostiqué tuberculeux

J’ai peur que toute ma vie change si je suis diagnostiqué tuberculeux.

Le traitement antituberculeux me paraît trop compliqué à cause de sa longue durée. La longue durée du traitement contre la tuberculose me panique

J’ai peur lorsque je pense à la tuberculose

la tuberculose est une maladie infectieuse grave

On ne peut pas complètement guérir de la tuberculose

Merci de votre participation