PERCEIVED SOCIAL SUPPORTS RECEIVED BY TUBERCULOSIS PATIENTS FROM FAMILY MEMBERS DURING ACTIVE TREATMENT IN SELECTED TUBERCULOSIS TREATMENT CENTRES IN IBADAN, NIGERIA

ROSEMARY ADA ODEGA
Matric №: 181936

MARCH, 2016

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BY

ROSEMARY ADA ODEGA

B.Sc. Nursing Administration (Owerri)

Matric №: 181936

A PROJECT IN THE DEPARTMENT OF HEALTH PROMOTION AND EDUCATION SUBMITTED TO THE FACULTY OF PUBLIC HEALTH, COLLEGE OF MEDICINE, IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE DEGREE OF MASTER OF PUBLIC HEALTH (HEALTH PROMOTION AND EDUCATION) OF THE

UNIVERSITY OF IBADAN

MARCH, 2016

DEDICATION

To the glory of God and the benefits of humanity.

ABSTRACT

Tuberculosis (TB) is a re-emerging infectious disease of international health priority and particularly worrisome in poor resource setting countries including Nigeria. Although treatment for Tuberculosis is free in Nigeria, TB patients face various barriers in day-to-day life; isolation and rejection from families and communities. Concerns and expectations of TB patients such as social support from family members are needed to be understood for improving patients' adherence with and completion of treatment regimens. In Nigeria, patients' perceptions of social support received from their family have not been well explored. This study investigates perceived social supports received by Tuberculosis patients from family members during active treatment in selected tuberculosis treatment centres in Ibadan.

The study was a descriptive cross-sectional survey. Purposive sampling technique was used in selecting 400 consenting TB patients receiving care in four treatment centres in Ibadan North East and Ibadan South West Local Government Areas, Oyo State. A validated interviewer-administered questionnaire was used to collect information on respondents' socio-demographic characteristics, co-morbidity conditions, activities of daily living, history of the disease, perceived needs, perceived social support, typology, sources and adequacy of support, forms of psycho-social support and adequacy of economic and financial support. Activities of daily living were measured on a 20-point functional status rating scale; scores <12 and >12 were categorised as non-functional and functional respectively. Data were analysed using descriptive and inferential statistics at p=0.05.

Respondents' age was 36.4 ± 1.4 years; majority (59.5%) were married, 74.5% had monogamous family and 36.5% were aged 40 years and above. More than half respondents, 54.2%, were male; 33.8% and 51.2% were traders and had secondary school education respectively. Respondents' mean income was N18, 224.00 and ranged between ₦0.00 and ₦600, 000.00. Majority were diagnosed of TB and receiving treatment at government hospitals (62.8% and 68.0% respectively). A few respondents, 16.8%, had co-morbidity conditions; some male and female had family history of Tuberculosis (23.0% and 32.8% respectively). On perception of needs relating to income and food, majority (68.0%) no longer had sources of regular income and 41.5% had difficulties eating three times daily. 48% reported not receiving enough support from family members and 29.5% felt abandoned. More than half (male,

53.5%; female, 54.1%) reported that they could do daily routine at work even with the condition. On perceived social support received, 59.0% respondents reported that family members assisted them to overcome some challenges experienced due to the disease and 57.8% indicated having special persons who were sources of comfort. Level of emotional support received was adequate for majority (72.0%). More than half (53.5%) respondents required assistance to perform their daily chores. There was significant relationship between family type, level of education and functional status. No significant relationship was found between social support received and functional status.

Most respondents had no source of regular income and majority received various forms of supports. However, more than half were non-functional. Advocacy and public enlightenment directed at community members would be useful in addressing this gap.

Keywords: Psycho-social support, Family members, Functional status, Tuberculosis patients

Word count: 496

ACKNOWLEDGEMENT

I acknowledge the good guidance I received from my supervisor, Dr Frederick O. Oshiname, for his advice, care and investing quality time to meticulously guide me in the conduct of this research.

I am indebted to Head of Department, Prof Oladimeji Oladepo, a mentor and teacher, who out of his busy schedule painstakingly gave this study critical appraisal which greatly enhanced the outcome of this work. I would also like to acknowledge the efforts and inputs of Dr O. E. Oyewole who also reviewed the work critically. Thanks to Dr. M. A. Titiloye who came to my rescue when my laptop crashed. The support of Mr. I. O. Dipeolu facilitated and guided me on the use of computer and statistical analysis. To Mr Tope Oyeyemi, and Mr Lanre Quadri - for various forms of assistance rendered during the period of my study.

I wish to register my appreciation to all respondents who gave their time and useful information which resulted in this study. To all my research assistants at Jericho Chest Hospital, Ibadan, Aderogba Oje, Ibadan, DOT Centre, Iwo Road Ibadan, Molete DOT Centre and Adeoyo Maternity Ibadan – thank you for your support, assistance and commitment in the clinics during data collection. In particular, I am much indebted to Mrs A. A. Adebiyi, Mrs O.O. Bello and A. O. Onabule who gave their time for data collection despite their busy clinics schedules.

I am immensely grateful to my family – Chief and Mrs P. Izuegbu and my siblings, for their understanding, encouragement and prayers. To my pastors: Rev and Pastor (Mrs.) Yohanna and members of Bethel Tabernacle Church – thank you for your prayers and spiritual support at all times. I would also like to say a big thank you to all DR-TB Family/Staff members, University College Hospital and in particular Prof. Olusoji Ige, Mrs. M.O. Akindele and Mrs O. Ojedeji for their support, understanding and keen interest towards the success of this MPH programme. Special thanks go to Mr. Bode Olowu and his staff who took care of me during this study. I acknowledge the support, encouragement and useful critique of Dr. Eltayeb Osman (Country Director), Damien Foundation Belgium and Pharm.V. Olughur.

I would like to say thank you to all my colleague's/class mates (2013/2014 set). Special mention must be made of the following friends: Hamid J. B, Yrenkyi Paulina, Faminu O. A., Adetunji Tayo, Ibitoye Segun and Sam Akande.

My heartfelt gratitude goes to my husband: Mr. J. E. Odega and my wonderful children for their love, support and understanding during my absence at home and to Isioma Izuegbu, who kept the home alive in my absence.

Rosemary ODEGA

CERTIFICATION

I hereby certify that this study was carried out by Rosemary Ada ODEGA in the Department of Health Promotion and Education, Faculty of Public Health, College of Medicine, University of Ibadan, Nigeria.

SUPERVISOR

Frederick O. Oshiname

MPH, Ph.D. (Ibadan), M.A (CWRU, Cleveland),

Senior Lecturer, Department of Health Promotion and Education

Faculty of Public Health, College of Medicine,

University of Ibadan, Nigeria

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GLOSSARY/DEFINITION

Social support	-	The social resources that persons perceive to be available or that are actually provided to them by non-professionals in the context of both formal support groups and informal helping relationships.
Social network	-	A unit of social structure composed of the individual's social ties and the ties among them.
Social integration	-	The extent to which an individual participates in private and public social interactions.
Functional support	-	The varied kinds of resources that flow through the network's social ties.
Structural support	-	The number and pattern of direct and indirect social ties that surround the individual.
Types of support	-	Emotional, instrumental, informational, companionate, and esteem support.
Perceived support	-	The individual's beliefs about the availability of varied types of support from network associates.
Received support	-	Reports about the types of support received by the study subjects.
Support adequacy	-	Evaluations of the quantity and/or quality of received support.
Directionality of support	-	Determination of whether support is unidirectional or bidirectional (mutual).

CHAPTER ONE

INTRODUCTION

1.1 Background to study

Tuberculosis (TB) remains one of the world's deadliest communicable diseases caused by the bacteria *Mycobacterium tuberculosis* in humans, and may affect several organs within the body such as the spine, lymph nodes, brain and kidneys (World Health Organisation [WHO], 2014). However, the primary site for active TB infection is the lungs. TB is spread through droplet nuclei that become aerosolized when an infected person coughs, speaks, sings or talks. Although latent infection is possible, the bacteria are inactive in this form and the person is not contagious. If the immune system is compromised as in the case of HIV infection, malnutrition or other conditions the TB bacilli can cause what is known as active TB disease. In 2013, an estimated 9.0 million people developed TB and 1.5 million died from the disease, 360 000 of whom were HIV-positive. TB is slowly declining each year and it is estimated that 37 million lives were saved between 2000 and 2013 through effective diagnosis and treatment. However, given that most deaths from TB are preventable, the death toll from the disease is still unacceptably high and efforts to combat it must be accelerated if 2015 global targets, set within the context of the Millennium Development Goals (MDGs), are to be met. It is therefore the active disease that is referred to as TB within this study (WHO, 2014; White, 2011). The incidence of TB varies with age. In Africa, TB primarily affects adolescents and young adults (World Health Organisation, 2006). However, in countries where TB has gone from high to low incidence, such as the United States, TB is mainly a disease of older people, or of the immune-compromised (Kumar, Abbas, Fausto and Mitchell, 2007; Centres for Disease Control and Prevention [CDC], 2006).

Tuberculosis is endemic in Nigeria and the country ranks 10th among the 22 high-burden TB countries in the world (United States Embassy in Nigeria, 2012). World Health Organisations estimates that 210,000 new cases of all forms of TB occurred in the country in 2010, equivalent to 133/100,000 population. There were an estimated 320,000 prevalent cases of TB in 2010, equivalent to 199/100,000 cases. There were

90,447 TB cases notified in 2010 with 41, 416 (58%) cases as new smear positives, and a case detection rate of 40%. 83% of cases notified in 2009 were successfully treated. The main goal of Nigeria's TB program is to halve the TB prevalence and death rates by 2015. TB death rates have declined from 11% in 2006 to 5% in 2010 (United States Embassy in Nigeria, 2012).

Van den Hof, Collins, Leimane, Jaramillo and Gebhard (2014) reported that Tuberculosis (TB) patients face many psychological, social and economic problems that complicate treatment and care. This may lead to decreasing adherence to prescribed treatment regimens and poorer clinical outcomes, including higher loss-to-follow-up, relapse and mortality rates. Whatever the causes of the psychological, social and economic problems TB patients face, they complicate the care and clinical management of these patients by negatively affecting their quality of life and inducing direct and indirect costs (Tanimura, Jaramillo, Weil, Raviglione and Lönnroth, 2014). These problems can lead to decreasing adherence to prescribed treatment regimens and poorer clinical outcomes, including higher lost to-follow-up, relapse and mortality rates. The need for strong, sustainable and scalable social support mechanisms in Multidrug-TB treatment becomes more evident as countries scale up MDR-TB treatment, while shifting from hospital based (inpatient) to ambulatory (outpatient) models of care. Shifting treatment from inpatient to outpatient services allows for the scaling up of MDR-TB treatment and allows patients to be treated closer to home - at a lower cost to both the health system and patients. Effective social support can help make this shift work and therefore contribute to cost savings which may provide the budget for the social support programs. Evidence of better effectiveness and cost effectiveness for outpatient versus inpatient models of care has been generated elsewhere (Fitzpatrick and Floyd, 2012; Bassili, Fitzpatrick, Qadeer, Fatima, Floyd and Jaramillo, 2013) and is not addressed here. Social support programs usually contain a mix of interventions including patient information, counselling, psychological support, provision of social services, and financial and material support (the latter are also called enablers and incentives) (van den Hof, Collins, Leimane, Jaramillo and Gebhard, 2014). The term "social" support" has two components:

a. Psycho-emotional support, which includes emotional support through psychological interventions; and

b. Socio-economic support, which includes tangible support through interventions delivering services, material goods and/or financial assistance (Taylor, 2011).

It was reported that social support can be measured in terms of individual's perceived support or in terms of the tangible support delivered (van den Hof et al, 2014). An essential element and important challenge for the successful treatment of TB patients is the organization of the additional psychological, social and economic support that individual patients need to enable their adherence to TB treatment; contribute to alleviate the costs patients incur while seeking health care and receiving care and treatment, and to cope with the negative effects of disease and treatment, including the stigmatization and discrimination often exerted on patients and relatives (van den Hof, Collins, Leimane, Jaramillo and Gebhard, 2014). In Ethiopia, where there is an increasing incidence of new infectious of TB cases, quantitative studies from rural areas found that between 6.7% and 20% of patients interrupted treatment and that lack of family support is one of the factors that impede adherence to treatment (Shargie and Lindtjorn, 2007).

Psycho-social support may help patients to endure the long and unpleasant treatment, hereby improve treatment adherence and therefore treatment outcomes, and subsequently the epidemiological (MDR) TB situation (Kaliakbarova, et. al., 2013; Gelmanova, Taran, Mishustin, Golubkov, Solovyova and Keshavjee, 2011). In EKO, very limited local budgets were available for social support for TB patients, and no psychological support was provided anywhere in the country. Social support mechanisms are key in influencing health-seeking behaviour, adherence, and overall patient wellbeing in clinical settings. Social support is of importance for adherence or compliance with given advice about TB management and influence glycaemic control (Carina and Katarina, 2010). A fundamental role of nurses and family members is to provide emotional support, defined as all the strategies that are being employed to assure the psychosocial well-being of the patient. However, neither the forms of emotional support nor the means used by nurses and family members in resource-poor settings such as Nigeria have been well explored.

1.2 Statement of problem

Oyo state is among the top leading states in Nigeria with high cases of TB (United States Embassy in Nigeria, 2012). During active treatment of Tuberculosis patients,

there are several challenges faced by these patients which compromise their ability to meet their activities of daily living and adherence with treatment regimen which ultimately leads to treatment default, relapse and increased resistance to Tuberculosis drugs. An associated challenge is non-provision of social support by family members. The diagnosis, treatment, and recovery of TB can be stressful for both patients and their family members; and quality of life may be adversely affected due to the long duration and complexity of treatment regimen (Schub and DeVesty, 2015; Crane-Okada, Freeman, Kiger, Ross, Elashoff, Deacon and Giuliano, 2012; Kinsinger, Laurenceau, Carver and Antoni, 2011; Knobf, 2007; Salonen, Tarkka, Kellokumpu-Lehtinen, Koivisto, Åstedt-Kurki and Kaunonen, 2011; Schmid-Büchi, Halfens, Dassen and den Borne, 2008; Schmid-Büchi, Halfens, Dassen and den Borne, 2011). In Nigeria, many patients with TB have limited understanding of possible treatment options and outcomes; inadequate communication of information by healthcare workers makes psychological adjustment more difficult (Schub and DeVesty, 2015; Knobf, 2007). Few studies that examine the role of social supports received by TB patients from their families are n6t well documented. Furthermore, the components of social support and care received from family members as well as the benefits and challenges to social support received by TB patients have not been well investigated therefore, this study was designed to determine the perceived social support received by tuberculosis patients from family members during active treatment in selected tuberculosis treatment centres in Ibadan, Nigeria.

1.3 Justification for the study

Research indicates that psychological support from family and friends is linked to better treatment adherence, psychological adjustment and improved treatment outcomes. Literature suggested that psychological support can alleviate the damaging effects of stress, increase self-efficacy, and improve coping ability (Schub and DeVesty, 2015; Cochrane, Lewis and Griffith, 2011; Sammarco and Konecny, 2010; Shiozaki, Hirai, Koyama, Inui, Yoshida and Tokoro, 2011). A patient's perception of the level of social support he or she receives can affect his or her overall quality of life during active treatment for TB, during the period of recovery, and subsequently in their entire life. Perception of support is also associated with sexual adjustment and relationship satisfaction (Kinsinger, Laurenceau, Carver and Antoni, 2011; Sammarco and Konecny, 2010). Patients whose family members or friends attempt to avoid

resolving problems experience worse psychosocial adjustment (Shiozaki, Rai, Koyama, Inui, Yoshida and Tokoro, 2011).

This study focuses on patients in TB treatment centres in Ibadan metropolis. There is evidence that social support is key in influencing health-seeking behaviours, treatment adherence and health outcomes of patients with chronic and stigmatising diseases.

Findings from this study will provide evidence on specific types of social support that Tuberculosis patients on active treatment are receiving from specific family members and the perceived adequacy of such social support. The results are for Tuberculosis facility based workers in promoting care of Tuberculosis patients in active stages by incorporating family members' inputs into the care of their patients. Finally, this study will have implications for policy formulation which could be targeted at patients and family members/relations; this will ultimately influence/improve patients' response and adherence to treatment regimen.

1.4 Research questions

1. What are the challenges faced by TB patients during active treatment?
2. What is the relationship between TB patients' activities of daily living and their functional status?
3. What are the types of social supports (psychological, emotional, economic, and instrumental) received by TB patients from family members during active treatment?
4. How adequate is the social support provided to the TB patients during active treatment?
5. What are the perceived effects of the social support received on functional status of TB patients during active treatment?

1.5 Broad Objective

The broad objective of this study was to investigate perceived social supports received by Tuberculosis patients from family members in selected treatment centres in Ibadan.

1.6 Specific Objectives

The specific objectives were to:

1. Identify types of challenges faced by tuberculosis patients during active treatment
2. Describe the relationship between TB patients' activities of daily living their functional status
3. Identify types of social supports (psychological, emotional, economic, instrumental) received by TB patients from family members during active treatment
4. Assess perceived adequacy of the types of social support received by TB patients during active treatment
5. Describe the perceived effect of the social support received on functional status of TB patients during active treatment

1.7 Research hypotheses

The following null hypotheses were tested in this study:

$H_0$1: There is no significant association between respondents' sex and their functional status

$H_0$2: There is no significant association between respondents' family type and their functional status

$H_0$3: There is no significant association between respondents' level of education and their functional status

$H_0$4: There is no significant association between respondents' marital status and their functional status

$H_0$5: There is no significant association between respondents' age group and their functional status

$H_0$6: There is no significant association between respondents' income and their functional status

$H_0$7: There is no significant association between social support received from family members and their functional status

CHAPTER TWO

LITERATURE REVIEW

2.1 Nature of Tuberculosis

Tuberculosis (TB) is caused by a bacterium called *Mycobacterium tuberculosis*. The bacteria usually attack the lungs, but TB bacteria can attack any part of the body such as the kidney, spine, and brain (Centres for Disease Control and Prevention [CDC], 2015). If not treated properly, TB disease can be fatal. TB is spread through the air from one person to another. The TB bacteria are put into the air when a person with TB disease of the lungs or throat coughs, sneezes, speaks, or sings. People nearby may breathe in these bacteria and become infected. In healthy people, infection with Mycobacterium tuberculosis often causes no symptoms, since the person's immune system acts to “wall off” the bacteria. The symptoms of active TB of the lung are coughing, sometimes with sputum or blood, chest pains, weakness, weight loss, fever and night sweats. Tuberculosis is treatable with a six-month course of antibiotics (Centres for Disease Control and Prevention, 2015).

Roughly one-third of the world's population has been infected with *M. tuberculosis*, and new infections occur at a rate of one per second (World Health Organization, 2010). However, not all infections with *M. tuberculosis* cause tuberculosis disease and many infections are asymptomatic (Centres, 2011). In 2007 there were an estimated 13.7 million chronic active cases (WHO, 2009), and in 2010 there were 8.8 million new cases, and 1.45 million deaths, mostly in developing countries (The sixteenth global report on tuberculosis, 2010). Thirty-five million of these deaths occur in those co-infected with HIV (WHO, 2011).

Tuberculosis is the second most common cause of death from infectious disease (after HIV) (Dolin, 2010). The absolute number of tuberculosis cases has been decreasing since 2005 and new cases since 2002 (The sixteenth global report on tuberculosis, 2011). China has achieved particularly dramatic progress, with an 80 percent decline in its TB mortality rate (WHO, 2011). The distribution of tuberculosis is not uniform across the globe; about 80% of the population in many Asian and African countries test positive in tuberculin tests, while only 5–10% of the U.S. population test positive (Kumar, Abbas, Fausto and Mitchell, 2007).

Tuberculosis has plagued humankind worldwide for thousands of years. John Bunyan (Nov 28, 1628–Aug 31, 1688), an English Christian writer and preacher, described tuberculosis as “The Captain among these men of death” at a time when tuberculosis case rates in London had reached 1000 per 100 000 populations per year (Lawn and Zumla, 2011; Daniel, 2009). Tuberculosis continued to cause many deaths in London during the 19th century and accounted for up to 25% of deaths in Europe. The death toll from tuberculosis began to fall as living standards (housing, nutrition, and income) improved early in the 20th century, well before the advent of anti-tuberculosis drugs. Despite the first anti-tuberculosis drugs being discovered more than 60 years ago, tuberculosis today still kills an estimated 1.7 million people each year (WHO, 2009). Progress in the scaling up of tuberculosis diagnostic, treatment, and control efforts worldwide over the past decade has been associated with improvements in tuberculosis control in many parts of the world, but progress has been substantially undermined by the HIV-1 epidemic, the growing challenge of drug resistance, and other increasingly important epidemiological factors that continue to fuel the tuberculosis epidemic (Dye and Williams, 2010). Greater investment in new technologies, basic science, and translational and applied research has led to progress in the development of improved tuberculosis diagnostics, drugs, treatment regimens, biomarkers of disease activity, and vaccines; new perspectives in the pathogenesis of tuberculosis are also emerging (Lawn and Zumla, 2011).

2.2 Prevalence of TB in Nigeria

The incidence of tuberculosis (TB) is defined as the number of new TB cases in one year per 100,000 populations. The prevalence of tuberculosis is defined as the number of TB cases in a population at a given point in time (sometimes referred to as "point prevalence") per 100,000 populations. Death rates associated with tuberculosis are defined as the estimated number of deaths due to TB in one year per 100,000 populations. A tuberculosis case is defined as a patient in whom tuberculosis has been bacteriologically confirmed or diagnosed by a clinician (WHO, 2013; WHO, 2014).

In 2007, the country with the highest estimated incidence rate of TB was Swaziland, with 1200 cases per 100,000 people. As of 2014, India has the largest total incidence, with an estimated 2.2 million new cases. India has more than 0.3 million deaths and economic losses of $23 billion every year (The Huffington Post, March, 2015; CDC,

2006). Tuberculosis caused the second highest number of deaths in India with 63265 casualties in 2011, 61887 in 2012 and 57095 in 2013 (Delhi Daily News, 2015).

In developed countries, tuberculosis is less common and is mainly an urban disease. In the United Kingdom, the national average was 15 per 100,000 in 2007, and the highest incidence rates in Western Europe were 30 per 100,000 in Portugal and Spain. These rates compared with 98 per 100,000 in China and 48 per 100,000 in Brazil. In the United States, the overall tuberculosis case rate was 4 per 100,000 persons in 2007 (WHO, 2009).

The incidence of TB varies with age. In Africa, TB primarily affects adolescents and young adults (WHO, 2006). However, in countries where TB has gone from high to low incidence, such as the United States, TB is mainly a disease of older people, or of the immuno-compromised (Kumar, Abbas, Fausto and Mitchell, 2007; CDC, 2006). Tuberculosis incidence is seasonal, with peaks occurring every spring/summer (Korthals, Kremer, Erkens, Van Soolingen and Wallinga, 2012). The reasons for this are unclear, but may be related to vitamin D deficiency during the winter (Koh, Hawthorne, Turner, Kunst and Dedicoat, 2013; Korthals, Kremer, Erkens, Van Soolingen and Wallinga, 2012). In Europe, deaths from TB fell from 500 out of 100,000 in 1850 to 50 out of 100,000 by 1950. Improvements in public health were reducing tuberculosis even before the arrival of antibiotics, although the disease remained a significant threat to public health, such that when the Medical Research Council was formed in Britain in 1913 its initial focus was tuberculosis research (Medical Research Council, 2015).

Nigeria ranks 10th among the 22 high-burden TB countries in the world. WHO estimates that 210,000 new cases of all forms of TB occurred in the country in 2010, equivalent to 133/100,000 population. There were an estimated 320,000 prevalent cases of TB in 2010, equivalent to 199/100,000 cases. There were 90,447 TB cases notified in 2010 with 41, 416 (58%) cases as new smear positives, and a case detection rate of 40%. About 83% of cases notified in 2009 were successfully treated however; the main goal of Nigeria's TB program is to halve the TB prevalence and death rates by 2015. With this programme, TB death rates have declined from 11% in 2006 to 5% in 2010.

With increased public awareness, knowledge and understanding of the disease, the discovery and availability of anti TB drugs by 1950s, increased personal and communal hygiene and wide spread use of BCG vaccines the incidence of tuberculosis began to decline in the early 1980s. Hence, medical experts expected its complete elimination by the 2010, especially in the industrial nations (Current Prevalence of TB-Tuberculosis, 2013).

HIV infection is the single most important factor for the resurgence of TB globally and the major reason for failure to achieve set TB control targets especially in areas with high prevalence (Glynn, 1998). HIV and TB have synergistic interactions that speedily accelerate the decline of the host immune system, accentuating the progression of each other. People living with HIV/AIDS (PLWHA) have an exquisite vulnerability to TB and are 30-50 times more likely to progress to active TB, while the likelihood of progressing to full blown AIDS increases by 100 folds in HIVTB co infected patients (De Cock, 2006). HIV/TB co-infection, the presence of the two diseases at the same time in a patient, presently poses serious and major public health challenges especially in the African region, including Nigeria. According to a report from the United State of America embassy in Nigeria, Lagos, Kano, and Oyo have the highest TB prevalence rate in Tuberculosis cases reported in 2010 (United States Embassy in Nigeria, 2012). Other States experienced a drop in cases notified, resulting in a 4% overall decline in 2010. Oyo State increased by 46.5% from 2008 to 2010. Benue State has a high TB burden which is attributable to a high HIV prevalence in Nigeria.

2.3 Challenges faced by TB patients during active treatment

Tuberculosis patients face various barriers in day-to-day life; so also isolation and rejection from families and communities (Aarti, Deepali and Preet, 2012; Auer, Sarol, Tanner and Weiss, 2000). Concerns and expectations of TB patients are required for improving quality of care, their compliance and completion of the treatment (Somma, Thomas, Karim, Kemp, Arias, Auer, *et al, 2008*). Family and society are the major constituents of social structure. Last two decades have witnessed the research on patients 'health seeking behaviour which is influenced by gender, culture and family (Wang, Fei, Shen and Xu, 2008). A chain of events starting from exposure to TB infection, manifestation of symptoms, access to health facility, treatment and recuperation, family support and care play a pivotal role and decide outcome to an

extent (Koller, Nicholas, Goldie, Gearing and Selkirk, 2006). Family and society are the major constituents of social structure. Last two decades have witnessed the research on patients 'health seeking behaviour which is influenced by gender, culture and family (Wang, Fei, Shen and Xu, 2008).

2.4 Conceptual Clarification of Social Support

Social support refers to the availability of interpersonal resources. In order to discuss the role of social support in health, Albrecht and Adelman (1987) defined social support as "verbal and non-verbal communication between recipients and providers that reduces uncertainty about the situation, the self, the other, or the relationship, and functions to enhance a perception of personal control in one's life experience". The National Cancer Institute offers this definition of social support: "a network of family, friends, neighbours, and community members that is available in times of need to give psychological, physical, and financial help." The key features of this definition of social support are: network, psychological help, physical help and financial help. This definition accentuates the network of typical people who are available to provide support and also delineates the types of assistance that can be provided by the network, including psychological support (e.g., a listening ear), physical support (e.g., a ride to the physician's office), and financial assistance (e.g., a short-term loan to pay a health insurance co-payment). One of the advantages of this definition is the recognition of the multiple types of support that can be offered.

Gottlieb (2000) defined social support more broadly as the "process of interaction in relationships which improves coping, esteem, belonging, and competence through actual or perceived exchanges of physical or psychosocial resources". In this definition the key features of social support are: interaction, coping, esteem, belonging, competence and exchange.

The notion of support is defined in literature in various ways. It may be treated as help in dealing with a given situation, as resources provided by others or as an exchange of resources (Sęk and Cieślak, 2012). Social support may be viewed from a structural and functional perspective. Structural support is described as the objectively existing and available social networks, which due to the existing links are helpful to individuals in a difficult situation (Sęk and Cieślak, 2012). The researcher further explained that "objectively existing networks of support are specified as sources of support, i.e.

networks of connections between individuals and groups such as consanguinity, similar functions and social statuses as well as geographical or cultural proximity."

Therefore, apart from family, the circle of an individual's social network is composed of representatives of institutions, professionals and non-professional helpers who have an impact on its functioning and the sources of social support available within the existing social network may be divided into: familial, friendly, social, neighbourly, colleagues or superiors, religious groups, societies and institutions, individuals with professional preparation to provide assistance and self-help groups (Sęk and Cieślak, 2012; Chmielewska, 2012).

Functional support is defined as a type of interaction engaged into as a result of a difficult situation by one or both participants (Chmielewska, 2012). As cited in Sęk and Cieślak (2012), another take on this notion describes social support from the perspective of social interaction which is engaged into in the face of illness and is targeted at specific aims such as generating trust providing motivation to seek treatment (Kurowska and Frąckowiak, 2012). It is obviously not the mere presence of social network members that results in better physical functioning; also, the effect of functional support or lack of it is mediated by internal processes (e.g., emotions, affective states, control beliefs) that follow the individual's perception of the supportive acts. In general, associations between social support and health can be due to direct or indirect effects of social support and these in turn can be beneficial or detrimental. As such, the functional features of support constitute the basis of its division into: perceived and received, and the support perceived is linked to the knowledge and belief of a person concerning where and from whom they may receive help, who they may rely on in a difficult situation. The support received is evaluated by the recipient as the actual type and amount of support received.

2.5 Typology of Social Support Needs among Tuberculosis Patients

One of the aspects stressed in our definition of social support is that support can be either verbal or non-verbal communication. This is just one way to categorize the many types of social support. Schaefer, Coyne, and Lazarus (1981) described five types of social support: emotional support, esteem support, network support, information support and tangible support.

Emotional support: This type of support is what we most often think of when we hear the term social support. Expressions of emotional support do not try to directly solve a problem but serve to elevate an individual's mood. These expressions would be considered emotional support.

Esteem support: is communication that bolsters an individuals' self-esteem or beliefs in their ability to handle a problem or perform a needed task. This type of support refers to encouraging individuals to take needed actions and convincing them that they have the ability to confront difficult problems.

Network support does not focus on emotions or self-concept, but instead refers to communication that affirms individuals' belonging to a network or reminds them of support available from the Network. In other words, network support is communication that reminds people that they are not alone in whatever situation they are facing. Members of a network may offer many types of support but the concept of network support emphasizes that a network is available to provide social support.

Information support is communication that provides useful or needed information. When facing any challenging situation, often information is needed in order to make decisions. Not knowing the details of what one is facing or about the different options available can be a source of upset and stress. An individual just diagnosed with an illness or health problem often needs more information about their condition and treatment options and can be supported by those who provide useful information.

Tangible support which is any physical assistance provided by others. This can range from making a meal for someone who is sick to driving that person to a doctor's appointment. In some situations, individuals need material goods or actions to help them in challenging situations. Other forms of tangible support could be doing laundry or straightening up your friend's apartment.

Zarzycka, Kobos, Czarnecka and Imiela (2015) and Sęk and Cieślak (2012) reported that from various types of support, the most frequently distinguished ones are **emotional support**(the expression of emotions providing support, comfort, showing care, acceptance, and a positive attitude towards a person)**, information support** (the exchange of information which helps understand the problem or situation better; feedback on one's own effectiveness in coping with the situation and sharing one's

experience with people who have similar difficulties), **instrumental support** (providing information about specific courses of action) and **in-kind support** (the provision of material help and services).

Family and friend social support (FSS) is another area that has been associated with Tuberculosis Self-Management (TSM). Several studies of social support on chronic disease have found social support vital to self-management (Ciechanowski, Russo, Katon, Lin, Ludman, Heckbert, Von Korff, Williams, and Young, 2010; Bai, Chiou and Chang, 2009). Tuberculosis self-management is a complex social phenomenon (Anderson and Christison-Lagay, 2008) and Tuberculosis is a multifaceted disease (Vaccaro, Exebio, Zarini and Huffman, 2014). Understanding the role social support plays with self-care behaviour is essential in the development of medical standards of care practices, yet this is not an easy task for numerous reasons. It may be difficult to attribute the degree of behaviour change to social support in consideration of individual factors (motivation, self-efficacy, health beliefs), and other social factors (access to healthcare and resources).

Perceived social support can be either functional (qualitative) or structural (quantitative) (Vaccaro, et.al, 2014). Functional social support may be defined as to the degree to which interpersonal relationships serve the purpose of providing emotional, informational or instrumental quality for the individual (Gamarra, Paz and Griep, 2009). Structural support refers to the types and numbers of social relationships (marital status, number of friends) and the degree of connection among these relationships (social network) (Gamarra, et al., 2009). Social network, an objective measure of the number of relationships, does not take into account the quality or the relationships (Hanna, 2006).

The availability of functional social support (interpersonal relationships with family, friends, and healthcare providers that provide emotional or instrumental support) as well as social networks play vital roles in following and maintaining recommended health behaviour including self-management of Tuberculosis (Gamarra, et.al., 2009). DiMatteo (2004) found that tangible social support from family members was associated with adherence to medical treatment for adults with Tuberculosis.

The types and sources of social support most effective for specific populations with Tuberculosis have not been characterized. Most often social support for persons with chronic disease includes aspects of emotional encouragement and instrumental help with monitoring taking medications, foot and eye care, following meal plans, and increasing physical activity (Ciechanowski, et. al., 2010; Bai, et.al., 2009).

Distinction of the source of social support commonly made in the literature has been between health providers and the intimate network (family and friends) and other environmental influences such as the media and neighbourhood. While some studies of social support measure family and friends separately, others make no distinction. Family and friends, measured together, was the most widely addressed type of social support related to health outcomes (Gleeson-Kreig, 2008). 'Friends and family' was considered a single category for a chronic illness self-management and social support instrument (Vaccaro, et. al. 2014).

Studies of social support and Tuberculosis care by adults' family or combine family and friends; albeit, there have been studies that measure effectiveness of peer support (community leaders trained in coaching health management) (Webel, Okonsky, Trompet and Holzemer, 2010; Funnell, 2010). Despite advances in theory concerning social support and self-care, many patient treatment plans do not routinely involve the family and other support networks.

Social support is a key source of psychological health and has been identified as a specific aid to recovery (Onken, Craig, Ridgway et al., 2007) and whatever the patients' cultural belief may be, social support given to the social support provisions and the societal ascribed roles will determine the way the patient perceive his/her illness, which will in turn affect the rate of recovery and response to treatment (Owadara, 2014). The influence of support on health may be very complex (Chmielewska, 2012) and such support to people affected by disease is a crucial element of treatment – it helps the ill survive the period of recovery or accept the changes in their life resulting from chronic illness. The manner of support ought to be adjusted to the patient's needs. As a result, those who give support should help the person when necessary, but not do everything instead of them.

In a study conducted by Paz-Soldán, Alban Jones and Oberhelman (2013), patients described the need for psychosocial support to mitigate the difficulty of continually going to the clinic to take medications, tending to other family or professional responsibilities while on treatment, and confronting stigma and social isolation within their community. Family members most often contributed to meeting these psychosocial needs, and were also crucial in providing economic support to patients faced with burdensome medical expenses or who were forced to leave their jobs due to being on treatment.

A number of factors have an impact on the experience of illness and they either make it easier or more difficult for quick recovery of the patients from diseases and these factors may be analysed at three levels. The social level concerns the correctness of communication, the second level is the patient, his or her personal resources – maturity, experience, the support received and the material means available; the third level is the disease itself, its course and the prognosis (Zarzycka, Kobos, Czarnecka and Imiela,2015).

Not only do family and relatives contribute to this enormous task, health workers are also involved in bringing social support to these patients when in need. Most healthcare personnel were described as key providers of emotional support and encouragement for patients to successfully adhere to treatment (Paz-Soldán, Jones and Oberhelman, 2013). Nevertheless, during the treatment process, patients are more socially withdrawn as a result of feeling fatigued from their medications, however most participants also described forming new mutually supportive friendships among their fellow patients.

2.6 Sources of Social Support

Chain of events starting from exposure to infection, manifestation of symptoms, access to health facility, treatment and recuperation, family support and care play a pivotal role and decide outcome to an extent (Koller et al., 2006). As such, TB patients face various barriers in day-to-day life; so also isolation and rejection from families and communities (Auer, Sarol, Tanner and Weiss, 2000), yet, many depend on family and society as the major constituents of social structure and social support (Kaulagekar-Nagarkar, Dhake and Jha, 2012).

A similar study conducted in India revealed that TB patients perceived good support and care as receiving necessary attention and help in daily routine, monetary help. As such, 'support' could be measured in terms of accompanying somebody for treatment, reminding about medicines, food and water served in the bed, allowing taking rest and all other care as and when demanded. Finding from this study also show that participants (TB patients) unanimously mentioned that women in the household should take care of TB patients and married female patients face non-cooperation from in-laws and also received unsympathetic treatment (Kaulagekar-Nagarkar et al. (2012)

Despite this unmet care for female patients, most of unmarried female patients have parents or siblings to remind about medicines, serve food in the bed and, if necessary, to take them to hospital. Married women could not expect all this; neither husband nor other members were willing to help because men do not have patience to take care of a sick person, by nature they are rowdy (Kaulagekar-Nagarkar et al., 2012).

Sympathetic environment that is referred to as 'care' and physical help that is 'support' was more readily available for male patients as compared to female patients, as such, lack of support, stigma and discrimination contribute to the existing burden of TB at individual level.

2.7 Importance of Psychosocial care in relationship to Tuberculosis Patients

Approximately 350,000 Australians are diagnosed with each year and as a consequence will experience a variety of psychosocial and emotional responses (Botti et al., 2006). A study by Kenny et al. (2007) found up to 60% of patients diagnosed with BC have major difficulties dealing with psychological issues and these patients report oncology providers do not consider psychosocial support integral to their care and fail to recognize, adequately treat, or offer referral for psychological distress (Muriel et al., 2009). Psychosocial care is important; it has a huge impact on quality of life and encompasses a broad spectrum of issues in care including physical, social, cognitive, spiritual, emotional and role functioning as well as psychological symptomology, pain and other common physical symptoms such as headaches, sleep disturbance and gastrointestinal upset (Carlson and Bultz, 2003). All oncology patients will be affected in some way by their treatment. Structured assessment undertaken by oncology nurses enables us to identify patients at risk for poor adjustment early and can help to direct the use of interventions aimed at fostering a sense of optimism and

ultimately improve health related quality of life during survivorship (Mazanec et al., 2010). As hospital nurses we see the patient and their family throughout their journey and are in a unique position to monitor a patient's psychosocial coping and any distress. Emotional distress can occur at any time along the disease trajectory and is defined as a change in thinking, feelings and behaviours that occur in the response to diagnosis, prognosis, treatment and events that occur in the clinical course of (Grimm, 2005). Just as the patient is an individual, so is the disease trajectory on which they travel and there is no uniform response to treating all patients with the same type of Illness in the same way.

2.8 Social Support and Social Network

Kerlinger (1986) defines a theory as "a set of interrelated concepts, definitions and propositions that present a systematic view of events or situations by specifying relationships among variables in order to explain and predict the events or situations". Theories help us articulate assumptions and hypotheses regarding the strategies and targets of interventions (Fertman and Alliensworth, 2010). In health promotion, we are primarily interested in predicting or explaining changes in behaviours or environments.

The terms **social network** and **social support** describe the structure, processes, and functions of social relationships. Attempts to explain how social networks that provide social support improve health are "rooted in" various theoretical perspectives (such as symbolic interactionism, social cognitive, stress and coping).

It is a theory that deals with interaction of patient's needs and help rendered by their family, friends and neighbours/co-workers etc. These significant orders have powerful effects on important aspects of both physical and mental health of the patient or an individual in need of medical intervention. Social network refers to the existence of social ties. Aspects of social networks influence health positively and negatively, and through this, social ties influence health.

There are at least five primary pathways through which social ties influence health:1) provision of social support; 2) social influence; 3) social engagement; 4) person to person contact and 5) access to resources and materials goods (Fertman and Alliensworth, 2010). Most obviously, the structure of networks ties influences health via the provision of social support. Social support has been defined as the physical and emotional comfort given to us by our family, friends, co-workers, and others (House,

1981). Social support is typically divided into five subtypes constructs: emotional, instrumental, appraisal, sharing points of view, and informational support (Fertman and Alliensworth, 2010). Social support is also an exchange of resources between at least two individuals perceived by the provider or the recipient to be intended to enhance the wellbeing of the recipient (Shumaker, 1984).

There are several ways in which this definition differs from others. First, we include the concept of exchange, the perceptions of at least two participants, and a broad outcome measure. Further, because the outcome is tied to the perceived intentions of either participant, the actual effects of support may be positive, negative, or neutral and do not limit support to network members nor to a stress paradigm (Sumaker, 1984) and has influences on health and behaviour.

2.9. Gains of Social Support

Social support is one of the important factors in predicting the physical health and well-being of everyone, ranging from childhood through older adults. The absence of social support shows some disadvantage among the impacted individuals. In most cases, it can predict the deterioration of physical and mental health among the victims. The initial social support given support significantly predicts the individual's ability to cope with stress. The presence of social valued by others is an important psychological factor in helping them to forget the negative aspects of their lives, and thinking more positively about their environment. Social support not only helps improve a person's well-being, it affects the immune system as well. Thus it also a major factor in preventing negative symptoms such as depression and anxiety from developing

The social support and physical health are two very important factors help the overall well-being of the individual. A general theory that has been drawn from many researchers over the past few decades postulates that social support essentially predicts the outcome of physical and mental health for everyone. There are six criteria of social support that researchers used to measure the level of overall social support available for the specific person or situation. First, they would look at the amount of attachment provided from a lover or spouse. Second, measuring the level of social integration that the individuals involved with, it usually comes from a group of people or friends. Third, the assurance of worth from others such as positive reinforcement that could inspire and boosts the self-esteem. The fourth criterion is the reliable alliance support

that provided from others, which means that the individual knows they can depend on receiving support from family members whenever it was needed. Fifth, the guidance of assurances of support given to the individual from a higher figure of person such as a teacher or parent. The last criterion is the opportunity for nurturance. It means the person would get some social enhancement by having children of their own and providing a nurturing experience.

2.10 Conceptual Framework

The conceptual framework adopted to guide this study is the Social Networks and Social Support model. The social networks and social support conceptual model shows how supportive connections between people (or other entities) influence physical, mental and social health. The model consists of five hypothesised relationships between social networks providing social support and health.

Social networks and the social relationships derived from them have powerful effects on important aspects of both physical and mental health of an individual most especially patients undergoing long treatment regimens such as TB patients.

Social network refers to the existence of social ties. Research into how aspects of social networks influence health (positively or negatively) offer insight into the pathways through which social ties influence health (Fertman and Alliensworth, 2010). There are at least five primary pathways through which social ties influence health: (1) provision of social support; (2) social influence; (3) social engagement; (4) person- to -person contact; and (5) access to resources and material goods (Twoy, Connolly and Novak, 2007; Csorba et al., 2007).

Most obviously, the structure of network ties influences health via the provision of social support. Social support has been defined as the physical and emotional comfort given to us by our family, friends, co-workers, and others (House, 1981). Social support is typically divided into five subtypes (constructs): emotional, instrumental, appraisal, sharing points of view, and informational support. Each of these subtypes is defined in Table 2.1. Equally important are the ways in which social relationships provide a basis for intimacy and attachment. Intimacy and attachment have meaning not only in relationships that are traditionally thought of as intimate (for example, between couples or between parents and children) but also in more extended ties to the

community (Fertman and Alliensworth, 2010). For instance, scholars have recently focused on the role of social capital in overall health (Stephens, 2008).

Social capital refers to the degree to which a community or society collaborates and cooperates (through such mechanisms as networks, shared trust, norms, and values) in order to achieve mutual benefits (Fertman and Alliensworth, 2010). When relationships are solid at the community level, individuals feel strong bonds and attachment to places (for example, a neighbourhood) and organizations (for example, voluntary or religious organizations) bonds that may lead to improvements in psychological and physical health.

Table 2.1: Social Support and Social Network Theory

Subtypes	Definition
Emotional support	Conveying that a person is being thought about, appreciated, or valued enough to be cared for in ways that is health promoting.
Instrumental support	Provision of tangible aid and service such as gifts of money, moving furniture, food, assistance with cooking, or children.
Appraisal	Provision of information that is useful for self-evaluation purposes: constructive feedback, affirmation and social comparison.
Sharing points of view	Offering opinions about how one views a particular situation, in order to suggest ways that a person can address a particular situation.
Informational support	Provision of advice, suggestions or information that a person can use to address a particular situation.

In applying the Social Support and Social Networks Theory, the following concepts in the theory are useful in guiding the present study to better understand issues relating perceived social supports received by Tuberculosis patients from family members during active treatment.

Emotional Support: This entails conveying the thought that a family member cares about TB patients despite the stigma attached to it, it helps to promote their health and enhances adherence to drugs (See Appendix II, Section E, Questions 24.2,24.3, and 24.4, Section G Questions 26.1).

Instrumental Support: There is reduction in the working capacity of TB patients due to the lungs which is mostly affected hence provision of money, food, cooking and helping out of household chores, and transportation is a welcomed idea and health promoting enough to encourage patients endures side effects and completes their treatment regimen (See Appendix II, Section D Questions 23.3,23.4,23.5, 23.8 and 23.10, Section F Questions 25.5,25.6,25.9, Section G Questions 26.2, Section H Questions 27.1,27.2,27.3,27.4,27.5,27.6,27.7,27.8,27.9 and 27.10).

Appraisal: Provision of information on the causes, mode of transmission, treatment and mode of preventing re-infection are vital to TB patients in reaffirming that they have made the right decision in acceptance to take their drugs. being able to get positive feedbacks and encouragement promotes adherence (See Appendix II Section C Questions 22.18 and 22.19, Section E Questions 24.1, 24.6 and 24.9, Section F Questions 25.1, 25.2, 25.3, 25.4 and 25.7).

Sharing point of view: Relations are meant to offer opinion about how TB patients view their treatment and how they handle difficult situations by rendering assistant in coming to pick drugs for their sick folks when it is impossible for them to move due to their state of health (Appendix II Section F Questions 25.7, 25.8, Section G Questions 26.4, 26.5,26.6 and 26.7)

Informational support: knowledge is power the more you seek, the more you find. TB patients tends to take information, suggestions or advice provided by those closer to them as at the time they are sick in view of this they become more informed, aware of their status giving them room to make right choices as it applies to their health (Appendix II section F Questions 25.7, 25.8, section G Questions 26.8, 26.9, 26.10, 26.11, 26.12, 26.13, 26.14 and 26.15).

CHAPTER THREE

METHODOLOGY

3.1 Study design

The descriptive cross-sectional survey design was used in this study. It was aimed at assessing perceived social support received by TB patients from family members during active treatment in Ibadan North East and Ibadan South West Local Government Areas of Oyo State.

3.2 Study Area

This study was carried out in two Local Governments Areas in Oyo State, namely: Ibadan North East (IbNE) and Ibadan South West (IbSW). Two Tuberculosis treatment centres in Ibadan North East (IbNE) and two TB treatment centres in Ibadan South West (IbSW) Local Government Areas were used. These two LGAs have the highest number of TB patients. The four treatment centres used had the highest number of patients hence all of them were recruited for the study (Table 3.1)

Table 3.1: Number of TB patients in the four treatment centres

Treatment centre	**2nd Quarter 2013**	**3rd Quarter 2013**	**4th Quarter 2013**	**1st Quarter 2014**	**2nd Quarter 2014**	**3rd Quarter 2014**	**4th Quarter 2014**	**1st Quarter 2015**	**2nd Quarter 2015**	**3rd Quarter 2015**
North East, Iwo Road	65	50	120	131	142	91	101	81	121	153
Alafara, IBNE	82	130	160	122	121	121	121	117	120	131
Molete, South West	92	92	62	92	72	71	70	106	105	118
Chest Hospital, South West	48	50	82	103	121	55	98	112	120	115
TOTAL	**287**	**322**	**424**	**448**	**456**	**348**	**390**	**416**	**466**	**517**

Source: TB and Leprosy unit, Oyo State Ministry of Health, Agodi, Ibadan.

Ibadan North-East Local Government Area is one of the five urban LGAs in Ibadan. The LGA is bounded in the North by Ibadan North and Akinyele LGAs, and in the west by Lagelu, Egbeda and Ona-Ara LGAs, in the South by Ibadan South-East LGA and in the West by Ibadan North-West LGA. The LGA is multi-ethnic in composition. It is however predominantly dominated by the Yoruba, the Igbo, Edo, Hausa and Fulani also live within the LGA.

The LGA has twelve wards. The public health facilities in the LGA include one secondary health facility and 12 primary health care facilities. There are six Dots centre in this LGA, and these include Aderogba PHC, Alafara Oje, Lagelu PHC, Agugu PHC, Agodi Prison and Catholic Hospital Oke-Ofa, Ibadan. There are myriads of private clinics and patent medicine stores in the LGA. The population is a heterogeneous one made up of predominantly the indigenous people. Major occupations in the LGA include small scale business, trading, civil service job and artisan work.

The second field site was Ibadan South West Local Government Area (IbSWLGA), which is also one of the five LGAs in Ibadan Metropolis. The LGA was created on the 27th of August 1991. The administrative headquarters of the LGA is located in Oluyole Estate within the office complex of the former Ibadan Metropolitan Planning Authority, along M.K.O Abiola way. The LGA is bounded in the north by Ibadan North and Ibadan North East LGAs.in the east, it is bounded by Ibadan South East and Oluyole LGAs; in the South, it shares boundaries with Ido LGA while in the west, it is bounded by Ibadan North West LGA. The LGA comprises 12 political wards and it had a population of 277,047 people (National Population Council [NPC], 1991). The population of the LGA as at 2006 was 283,098 with figures for females and males being 143,476 and 139,622 respectively (NPC, 2006).

Much of the LGA is cosmopolitan in nature with 85% being urban. Based on population density, the LGA can be differentiated into the high, medium and low density areas. The highly populated areas include Foko, Oja-Oba, Agbeni, Idi-Arere, Isale-Osi, Popoyemoja and Bode. The medium density areas include Molete, Oke-Bola, Odo-Ona and Apata. The Government Reservation Area (GRA) of Iyaganku and Oluyole Estate comprises the low density areas. About 90 percent of all the inhabitants of the LGA are Yoruba. There are other ethnic groups like the Igbos and Hausa in the LGA. Foreign nationals, especially the Lebanese live within this area. The common

occupations in the area are trading and craftsmanship. There are many public civil servants in the area as well.

Ibadan South West Local Government Area has a total of 19 health centres. In addition, there are six state Hospitals, numerous private health care facilities and one mission hospital (St. Anne's Anglican hospital). There are seven Dots centres in this LGA, and these include, Molete PHC, Adifase PHC, Apata, Chest Hospital Jericho, Oni Memorial Children Hospital, Teju Specialist Hospital, and Kejide Ring Road Hospital.

3.3 Study Population

The study population are patients with tuberculosis receiving treatment in the four selected treatment centres in Ibadan North East and Ibadan South West local government areas in Ibadan.

3.4 Inclusion and Exclusion Criteria

Inclusion criteria

All diagnosed Tuberculosis patients receiving treatment in a government health facility in Ibadan and who consented to participating in the study.

Exclusion criteria

Persons excluded from participating in the survey were:

1. Respondent who did not give their consent to participate in the study

2. Respondent who are less than fourteen years of age (as they were less likely to assess the types of social support received).

3.5 Sample Size determination

All the patients receiving treatment in the four treatment centres selected in Ibadan North East and Ibadan South West Local Government Areas were recruited for the study. According to the record available, Ibadan North East LGA has about 219 registered patients and Ibadan South West LGA has 409 registered patients. In total, there were 628 registered patients receiving treatment at the two LGAs as at April, 2015 (Damien Foundation Belgium record, April 2015). The patients in the two LGAs were recruited for the study in order to have adequate sample size.

The study sample for this research was calculated using the Kish Leslie (1965) sample size formula for cross-sectional studies. This same formula was also used by Daniel (1978) and Kibikiwa (2008) which is:

$N= Z^2pq /D^2$

N = sample size collected or minimum sample size

D= degree of accuracy set at 0.05 (precision set at 5%)

Z= standard normal deviation set at 1.96 normal interval at 5 % (95% confident interval**)**

p= the proportion of the target population estimated to have a particular phenomenon of interest in the study. This was put at 50 percent.

The prevalence of Tuberculosis in the state could not be correctly ascertained, as such, 50 percent was used. Thus, prevalence is 50.0%

The sample size for this study will therefore be calculated using this prevalence (p) value and the following formula:

$N= Z^2pq /D^2$

q= proportions that does not have the characteristics being investigated (q= 1-p)

q= 1-0.5=0.5

Therefore, the sample size

$N= (1.96)^2 \times 0.5 \times 0.5/ (0.05 \times 0.05)$

$N= (3.8416 \times 0.5 \times 0.5)/0.0025$

N= 0.9604/0.0025

N= 384 respondents

The minimum sample size required was 384; however, this was increased by 16 to make 400. The 400 sample size was used to ensure adequate representation of respondents in the study.

3.6 Instrument for Data Collection

Interviewer-administered questionnaire was used for data collection (Appendix II). The questionnaire generated information on the respondents' socio-demographic data,

history of the disease, perceived needs of TB Patients, basic activities of daily living, perceived social support, typology of social support, sources and adequacy, forms of psycho social support and Adequacy and Economic and Financial support and It took an average of 15-20 minutes to administer each questionnaire. The questionnaire developed in English Language has eight sections – Section A focused on respondents socio-demographics while Section B explores question items on history of the disease, Section C focused on perceived needs of TB patients, Section D focused on Activities of daily living, Section E focused on perceived social support, while Section F focused on typology of social support, sources and adequacy, Section G focused on forms of psycho social support and adequacy, and lastly Section H focused on Economic and Financial support.

3.7 Training of Research Assistants

Six Research Assistants (RAs) (female nurses) were recruited for the study. The research assistants were experienced individuals who are conversant with research/fieldwork activities and in dealing with TB patients. They are fluent in English and Yoruba languages. These RAs were trained for two days. The training was focused on understanding the background and objectives of the study, interview techniques and interpersonal communication skills. Demonstrations, return-demonstration and role play were employed to facilitate the conduct of the training. After the training, they were followed to the field a week before the survey to establish rapport with the respondents and brief the staff about the study prior to the conduct of the study.

3.8 Validity of Research Instrument

Several measures were taken to ensure that the instrument was valid. Experts such as medical sociologist, medical statisticians, an epidemiologist and health promotion and education specialists–were consulted to review the instrument for face and content validity. The instrument which was drawn in English was translated to Yoruba. The Yoruba version of the instrument was given to another a new translator entirely who assisted in translating it back to English. This was done in order to ensure that the instrument was well translated and no part of it lose their meaning especially relevant concepts and question items in the questionnaire during the process of translation.

Next an in-house pre-testing of the questionnaire was done among colleagues and lecturers for useful criticisms and suggestions. Another step that was taken to promote the validity of data collected was the training of Research assistants (RAs). A total of six RAs were recruited and trained. The main goal of the training was to equip research assistants with appropriate knowledge on the study tools, process of administration and interviewing skills.

3.9 Reliability of the instrument

The two versions of the instruments i. e. the English and Yoruba versions were pre-tested in TB treatment centre at Adeoyo dot centre which have similar characteristics with the study sites. To confirm the reliability of the instrument, analysis of pre-test data was done using Cronbach's Alpha correlation coefficient of the Statistical Package for Social Sciences (SPSS). This was done to ascertain the psychometric properties of the instrument. According to this approach, a result showing correlation coefficient greater than 0.05 is said to be reliable. A correlation coefficient of 0.72 was obtained which shows that the instrument was reliable.

3.10 Data collection process

The investigator and Research assistants went from one centre to the other to interview the respondent. Eligible tuberculosis patients who voluntarily agreed to participate in the study were interviewed. Each interview started with an introduction and overview of the research including the objectives of the study. Each respondent was assured that participation in the study was voluntary and that information disclosed by the participants would be kept confidential. The respondents were also told that their names would not be written on the questionnaire. Respondents were also encouraged to ask questions on what they did not understand in the questionnaire. Explanations were provided to respondents as required to aid their understanding of the unfamiliar terms.

3.11 Data Management and Analysis

Copies of the administered questionnaire were thoroughly scrutinised by the researcher in the field in order to ensure that they were well completed. Any problem discovered during data collection was resolved immediately in the field. Copies of the questionnaire were then assigned serial numbers for easy identification and recall of

any copy with problems. Copies of the questionnaire were edited and coded by the investigator facilitated by the use of a coding guide. The data in each copy of the questionnaire were entered into a computer system for analysis using SPSS. Data were analysed using both descriptive statistics (mean percentages) and inferential (Chi square, logistic regression). The retrieved copies of the questionnaire were stored in a place safe from destruction by elements of weather and fire and also where unauthorised person would not have access to them. The results of the study are presented in tables and charts in the chapter four.

3.12 Ethical considerations

The study followed the basic ethical principles guiding research involving human participants. Ethical approval was sought from Ethical Review Committee, Oyo State Ministry of Health, Secretariat, and Ibadan (See appendix 1). Adequate information regarding the study was provided to respondents and participation was voluntary. Informed consent was obtained from respondents before they were interviewed, they were told that participation in the survey was voluntary, and that they could withdraw at any time if they so wished without any penalties or loss of privileges. Respondents were assured of the confidentiality of information they provided during and after data collection. They were informed that information obtained from them would be used for research purposes only. Principles of respect of persons, non-maleficence and justice were given due considerations (Appendix I).

3.13 Limitations

The limitation of the study was on the accuracy of the information given by the respondents with special reference to the adequacy of support received from family members which could not be clinically verified. Efforts were made to ensure that questions were simple, clear and devoid of technical terms that the respondents might not understand. Basic ethical guidelines including confidentiality of information and voluntarism were stressed with a view to encouraging respondents to be as honest as possible.

CHAPTER FOUR

RESULTS

4.1 Socio–demographic information of the respondents

The socio–demographic characteristics of the respondents are presented in Tables 4.1, 4.2 and 4.3 respectively. The respondents' aged range from 14–90 years with a mean of 36.4 ± 1.4 years. Many (36.5%) of the respondents were aged 40 years and above while few (11.5%) were aged 25–29 years and there were more males (54.2%) than females (45.8%). Trading (33.8%) top the list of the occupation practiced by the respondents followed by Artisan (18.5%), civil service (8.5%), farming (4.8%), and clergy (0.3%); students were 19.0% (Table 4.1). Slightly over half (51.2%) of the respondents had secondary school education, 22.5% had primary education, (15.2%) had tertiary education and (11.0%) had no formal education. More than half (55.5%) of the respondents were Christians, 44.3% were of Muslim faithfuls. The respondents were predominantly (88.0%) Yoruba.

Table 4.1: Respondents' socio-demographic information

N=400

Characteristics		№	%
Age group			
	≤ 24	85	21.2
	25 – 29	46	11.5
	30 – 34	62	15.5
	35 – 39	61	15.2
	≥ 40	146	36.5
Sex			
	Male	217	54.2
	Female	183	45.8
Occupation			
	None	14	3.5
	Trader	135	33.8
	Farmer	19	4.8
	Artisan	74	18.5
	Self employed	17	4.2
	Civil service	34	8.5
	Housewife	5	1.3
	Student	76	19.0
	Retiree	4	1.0
	Driving	16	4.0
	Clergy	1	0.3
	Health worker	5	1.3
Highest level of education			
	No formal education	44	11.0
	Primary education	90	22.5
	Secondary education	205	51.2
	Tertiary education	61	15.2
Religion			
	Christianity	222	55.5
	Islam	177	44.3
	Traditional African Religion	1	0.3
Ethnic group			
	Yoruba	352	88.0
	Igbo	16	4.0
	Hausa	14	3.5
	Others*	18	4.5

Mean age = 36.39 ± 1.38 years; Median age = 35.0 years; Age range = 14 to 90 years; *Other were ethnic groups from Edo 7 (38.9%), Benue 10 (55.6%) and Togolese 1 (5.5%)

4.2 Respondents' monthly income from all sources

Table 4. 2 show respondents' income from all sources in a month. The mean monthly income earned by the respondents was ₦18, 224.00. However, less than half (47.3%) of the respondents earned ≤ ₦5, 000.00 in a month while 33.0% earned ≥₦16, 000.00 in a month.

Table 4.2: Respondents' monthly income from all sources

	N = 400	
Amount earn from all sources in a month	**№**	**%**
Average income (Naira)		
≤ 5000	189	47.2
6000 – 10000	49	12.3
11000 – 15000	30	7.5
≥ 16000	132	33.0

Mean income: ₦18, 224.00 ± ₦44,548.70

Median income: ₦10, 000.00

Income range: ₦0 to ₦600, 000.00

4.3 Family life demographic information

Table 4. 3 present the marital status, type of marriage and persons with whom respondents were living with. More than half (59.5%) of the respondents were married, 33.5% single, 4.2% divorced and 2.8% were widowed. Majority (74.5%) of the respondents were in monogamous homes and 25.5% were into polygynous homes. About 24.8% of the respondents were living with their both parents, while 19.2% were living alone; 16.5% were living with extended family.

Table 4.3: Marital and Family related information

N=400

Variable		№	%
Marital status			
	Single	134	33.5
	Married	238	59.5
	Divorced	17	4.2
	Widowed	11	2.8
Type of marriage			
	Monogamous	298	74.5
	Polygyny	102	25.5
Persons living with respondents			
	Living alone	77	19.2
	Living with father only	38	9.5
	Living with mother only	21	5.2
	Living with both parents	99	24.8
	Living with extended family	66	16.5
	Others *	99	24.8

* Other person respondents live with include living with partner and children = 385 (96.25%), living with children only 13 (3.25%), living with friend = 1 (0.25%), living with sibling (0.25%).

4.4 Respondents' information on Diagnosis, treatment of tuberculosis and co-morbidity condition

Information relating to the type of health facility where TB diagnosis was made, type of facility where treatment was being received and other respondents who had other co-morbid conditions is presented in Table 4.4. Majority (62.8%) of the respondents were diagnosed of their TB status in government hospitals, while 28.0%had their diagnosis in primary healthcare centre. Majority (68.0%) of the respondents received treatment for tuberculosis in government hospitals, fewer respondents (26.8%) received treatment in health centres (See table for other details).

Table 4.4: Respondents' information on Diagnosis, treatment of tuberculosis and co-morbidity condition

N=400

History of Disease		№	%
Centre of diagnosis:			
	Government hospital	251	62.8
	Private hospital	36	9.0
	Health centre	112	28.0
	Others	1	0.2
Centre of treatment:			
	Government hospital	272	68.0
	Private hospital	19	4.8
	Health centre	107	26.8
	Others	2	0.5
Co-morbidity conditions:			
	Yes	67	16.8
	No	333	83.2

4.5 Mode of procurement of co-morbidity drugs among respondents

Mode of procurement of drugs for managing co-morbidity conditions among respondents is shown in Table 4.5. Many (42.6%) respondents obtained free drugs from government hospitals where free treatment is offered. Some (38.7%) of the respondents bought drugs by themselves while 22.1% of the respondents reported that families/parents/children helped buy such drugs.

Table 4.5: Mode of procurement of drugs for managing co-morbidity conditions among respondents

n=67

Mode of procurement		№	%
Free drug from hospital:			
	Yes	29	42.6
	No	39	57.4
Buy them myself:			
	Yes	27	38.7
	No	41	60.3
Families/parents/children:			
	Yes	15	22.1
	No	53	77.9

4.6 Respondents' family history of tuberculosis by sex

Table 4.6 reveals the respondents' family history of tuberculosis. Fewer (23.0%) male respondents reported that they had family history of tuberculosis compared with their female counterparts (32.0%); the difference was significant.

Table 4.6: Respondents' family history of tuberculosis by sex

N = 400

History of tuberculosis	Yes № (%)	No № (%)	X^2	df	p value
Family history of Tuberculosis					
Male	50 (23.0)	167 (77.0)	4.729	1	0.030*
Female	60 (32.8)	123 (67.2)			

*Significant value at **P<0.05**

4.7 Respondents' Challenges relating to Income and Food

The challenges faced by respondents are presented in Table 4.7. Majority of respondents (67.5%) reportedly experienced inadequate financial support. The proportion of respondents who reported inadequate savings for self – support was 70.8%; only 32.5% reportedly had adequate savings. Sixty-eight per cent of the respondents reported that they no longer had sources of regular income. The proportion of respondents who lack a reliable person to cook food for them was 26.3%. Many (41.5%) of the respondents had difficulty in eating 3 times a day.

Table 4.7: Respondents' Challenges relating to Income and Food

N=400

Challenges relating to income and food	Yes № (%)	No № (%)
Inadequate financial support	270 (67.5)	130 (32.5)
Inadequate savings for self – support	283(70.8)	117 (29.2)
No more source of regular income	272 (68.0)	128 (32.0)
What is earn not enough	262 (65.5)	138 (34.5)
Lack of reliable person to cook foods for you	105 (26.2)	295 (73.8)
Not happy with hygiene situation wherever food is prepared for you	93 (23.2)	307 (76.8)
Inability to access good meals	162 (40.5)	238 (59.5)
Difficulty eating 3 times a day	166 (41.5)	234 (58.5)

4.8 Respondents' Challenges relating to Social Support

The challenges relating to social support experienced by respondents are presented in Table 4.8. More than half (58.5%) of the respondents reported that they were not receiving support from community as they wanted. Fifty-three per cent of the respondents did not receive social support from religious groups to which they belong, while 48.0% of the respondents did not receive social support from family members. Slightly less than half (48.5%) of respondents reported that they did not received social support from friends as they wanted. Respondents who did not receive social support from government constituted 48.8%.

Table 4.8: Respondents' Challenges relating to Social Support

N= 400

Challenges relating to social support	Yes № (%)	No № (%)
Not receiving support from your community as you want	234 (58.5)	166 (41.5)
Not receiving social support from religious group you belong to as you want	212 (53.0)	188 (47.0)
Not receiving social support from family members as you want	192 (48.0)	208 (52.0)
Not receiving social support from friends as you want	194 (48.5)	206 (51.5)
Not receiving social support from the government	195(48.8)	205 (51.2)
Feel abandoned	118 (29.5)	282 (70.5)

4.9 Respondents' Challenges relating to Health Care

Many (43.2%) respondents reported that the health care facility used by them was too far. Thirty-one per cent of the respondents lacked access to regular medical check–up while18.8% reported that healthcare was too expensive. Only15.8% of the respondents reported that the health workers were not friendly (Table 4.9).

Table 4.9: Respondents' Challenges relating to Health Care

N=400

Respondents' Challenges relating to Health Care	Yes № (%)	No № (%)
Health care facility too far	173 (43.2)	227 (56.8)
Lack of access to regular medical check – up	124 (31.0)	276 (69.0)
Healthcare does not suit the needs of TB patients	89 (22.2)	311 (77.8)
Healthcare too expensive/not affordable	75 (18.8)	325 (81.2)
No healthcare facilities in community	81 (20.2)	319 (79.8)
Health workers are not friendly	63 (15.8)	337 (84.2)
Health workers do not give adequate attention	58 (14.5)	342 (85.5)
Health workers do not give adequate information	53 (13.2)	347 (86.8)

4.10 Activities of daily living among the respondents

Activities of daily living which respondents needed assistance to perform are shown in Table 4.10. More males (53.5%) were able to do everything they usually do at work even when they are sick compared to 54.1% among females. Also more males (53.5%) were able to do everything they usually do at home even when they are sick compared to 59.0% among females. Over half (56.2%) of males were unable to work normally and could look after themselves. The proportion of respondents who need help occasionally to look after themselves was more among males (25.3%) compared to among females (24.6%). (See table for details).

Table 4.10: Activities of daily living among the respondents

N=400

Activities		Yes	No	X^2	df	p value
		№ (%)	№ (%)			
Even though one is sick, one can do everything he/she usually do at work						
	Male	116 (53.5)	101 (46.5)	0.016	1	0.898
	Female	99 (54.1)	84 (45.9)			
Even though one is sick, can do everything one usually do at home						
	Male	116 (53.5)	101 (46.5)	1.246	1	0.264
	Female	108 (59.0)	75 (41.0)			
Unable to work normally, but can look after oneself at home						
	Male	122 (56.2)	95 (43.8)	2.822	1	0.093
	Female	118 (64.5)	65 (35.5)			
Need help occasionally to look after oneself (e.g. with getting to the toilet with getting dressed)						
	Male	55 (25.3)	162 (74.7)	0.030	1	0.862
	Female	45 (24.6)	138 (75.4)			
Need help every day to look after oneself (e.g. with getting to the toilet, with getting dressed)						
	Male	45 (20.7)	172 (79.3)	0.000	1	0.995
	Female	38 (20.8)	145 (79.2)			
In bed most of the time						
	Male	44 (20.3)	173 (79.7)	0.725	1	0.394
	Female	31 (16.9)	152 (83.1)			
Can go shopping or going out to market to buy needed goods alone						
	Male	137 (63.1)	80 (36.9)	0.003	1	0.958
	Female	116 (63.4)	67 (36.6)			
Cannot walk around the house without assistance						
	Male	68 (31.3)	149 (68.7)	0.998	1	0.318
	Female	49 (26.8)	134 (73.2)			
Can sweep my surroundings without help or assistance						
	Male	128 (59.0)	89 (41.0)	0.316	1	0.574
	Female	113 (61.7)	70 (38.3)			
Need help to go to far places or travelling						
	Male	61 (28.1)	156 (71.9)	1.851	1	0.174
	Female	63 (34.4)	120 (65.6)			

***P value set at 0.05 in all the crosstabs were not significant (p>0.05)**

4.11 Perceived social support among respondents

Majority of the respondents (65.2%) indicated that someone was always around to assist them to do things. Respondents who were of the view that there was a special person with whom they could share their joys and sorrows constituted 69.5%. Fifty-eight percent of the respondents were of the view that emotional support they needed was given by family members while 59.0% of the respondents were of the view that family members were assisting them to overcome some challenges experienced due to the disease. Twenty-nine percent of the respondents were of the view that their spouses did not give any form of support. Respondents who were of the view that family members avoided them constituted 25.2% (Table 4.11).

Table 4.11: Perceived social support among respondents **N=400**

Perceived social support	Strongly Agree № (%)	Agree № (%)	Not Certain № (%)	Disagree № (%)	Strongly Disagree № (%)
Someone is always around who assists to do things	60 (15.0)	261(65.2)	27 (6.8)	40 (10.0)	12 (3.0)
There is a special person with whom one can share his/her joys and sorrows	81 (20.2)	278 (69.5)	26 (6.5)	9 (2.2)	6 (1.5)
Family members are assisting to overcome some challenging experienced due to this disease	80 (20.0)	236 (59.0)	54 (13.5)	23 (5.8)	7 (1.8)
Emotional support needed is given by family members	79 (19.8)	232 (58.0)	72 (18.0)	16 (4.0)	1 (0.2)
Have a special person who is a real source of comfort to me	78 (19.5)	231 (57.8)	72 (18.0)	15 (3.8)	4 (1.0)
Husband/wife does not give any form of support **(n = 365)**	32 (8.0)	106 (29.0)	66 (18.1)	115 (31.5)	46 (12.6)
Can count on brothers/sisters whenever one needs money **(n = 398)**	53 (13.3)	230 (57.8)	61 (15.3)	38 (9.5)	16 (4.0)
Can talk about one's problems with one's parents **(n=383)**	86 (22.5)	208 (54.3)	53 (13.8)	29 (7.6)	7 (1.8)
My children have been a source of help **(n=372)**	48 (12.9)	167 (44.9)	90 (24.2)	49 (13.2)	18 (4.8)
Family members avoid because of disease	19 (4.8)	101 (25.2)	59 (14.8)	155 (38.8)	66 (16.5)
Extended family are not willing to assist as they avoid one	17 (4.2)	102 (25.5)	66 (16.5)	161 (40.2)	54 (13.5)
Relations do not want to get close again	18 (4.5)	97 (24.2)	60 (15.0)	159 (39.8)	66 (16.5)

4.12 Typology of comfort- relating support among respondents

Table 4.12 shows the kinds of comfort relating support received by respondents and those who provided it. Family members from who respondents received comfort when they were sad were father (17.0%), mothers (29.0%), brother (15.0%), wife (26.5%), and children (18.0%). Family members that respondents talked with in order to relieve themselves of their sorrow were father (11.5%), mother (34.8%), brothers (16.0%), husband (18.8%) and children (17.2%). (See table for details).

Table 4.12: Typology of comfort- relating support among respondents

N = 400

Comfort-relating support	Yes № (%)	No № (%)
Comforting one when one is sad		
Father	68 (17.0)	332 (83.0)
Mother	117 (29.0)	283 (70.8)
Brother	60 (15.0)	340 (85.0)
Sister	55 (13.8)	345 (86.2)
Husband	78 (19.5)	322 (80.5)
Wife	106 (26.5)	294 (73.5)
Children	72 (18.0)	328 (82.0)
Uncle	5 (1.2)	395 (98.8)
Talking with one in order to forget one's sorrow		
Father	46 (11.5)	354 (88.5)
Mother	139 (34.8)	261 (65.2)
Brother	64 (16.0)	336 (84.0)
Sister	53 (13.2)	347 (86.8)
Husband	75 (18.8)	325 (81.2)
Wife	103 (25.8)	297 (74.2)
Children	69 (17.2)	331 (82.8)
Uncle	4 (1.0)	396 (99.0)
Praying with/for you		
Father	44 (11.0)	356 (89.0)
Mother	154 (38.5)	246 (61.5)
Brother	53 (13.2)	347 (86.8)
Sister	53 (13.2)	347 (86.8)
Husband	73 (18.2)	327 (81.8)
Wife	99 (24.8)	301 (75.2)
Children	71 (17.8)	329 (82.2)
Uncle	4 (1.0)	396 (99.0)
Keeping you company		
Father	38 (9.5)	362 (9.05)
Mother	126 (31.5)	274 (68.5)
Brother	54 (13.5)	346 (86.5)
Sister	54 (14.5)	346 (86.5)
Husband	67 (16.8)	333 (83.2)
Wife	96 (24.0)	304 (76.0)
Children	88 (22.0)	312 (78.0)
Uncle	6 (1.5)	394 (98.5)

4.13 Typology of material support and tangible assistance among respondents

Material support and tangible assistance received by respondents are presented in Table 4.13. Those who provided respondents with basic needs included: father (14.0%), mother (33.8%), brother (14.0%), sister (11.2%), husband (16.2%), wife (20.5%) and children (21.0%). The reported significant others who reminded respondents of clinic appointment included mother (30.8%), wife (23.5%), children (23.5%) husband (14.8%) brother (13.2%). The significant others who topped the list in reminding respondents to take their medications were mother (31.8%), children (24.0%), wife (22.8%), and Husband (15. 0%).The table also highlights persons who reportedly assisted respondents in doing what they could not do as a result of their TB condition, the respondents mother topped (29.8%) the list, followed by children (25,2%).

Table 4.13: Typology of material-related support and tangible assistance

N=400

Material-related support and tangible assistance	Yes № (%)	No № (%)
Provides you with basic needs		
Father	56 (14.0)	344 (86.0)
Mother	135 (33.8)	265 (66.2)
Brother	56 (14.0)	344 (86.0)
Sister	45 (11.2)	355 (88.8)
Husband	65 (16.2)	335 (83.8)
Wife	82 (20.5)	318 (79.5)
Children	84 (21.0)	316 (79.0)
Uncle	5 (1.2)	395 (98.8)
Reminding you of your clinic appointment		
Father	44 (11.0)	356 (89.0)
Mother	123 (30.8)	277 (69.2)
Brother	53 (13.2)	347 (86.8)
Sister	43 (10.8)	357 (89.2)
Husband	59 (14.8)	341 (85.2)
Wife	94 (23.5)	306 (76.5)
Children	94 (23.5)	306 (76.5)
Uncle	5 (1.2)	395 (98.8)
Reminding you to take your medication		
Father	40 (10.0)	360 (90.0)
Mother	127 (31.8)	273 (68.2)
Brother	49 (12.2)	351 (87.8)
Sister	42 (10.5)	358 (89.5)
Husband	60 (15.0)	340 (85.0)
Wife	91 (22.8)	309 (77.2)
Children	96 (24.0)	304 (76.0)
Uncle	4 (1.0)	396 (92.2)
Helping you to do things which you couldn't do as a result of the disease		
Father	28 (7.0)	372 (93.0)
Mother	119 (29.8)	281 (70.2)
Brother	57 (14.2)	343 (85.8)
Sister	46 (11.5)	354 (88.5)
Husband	61 (15.2)	339 (84.8)
Wife	95 (23.8)	305 (76.2)
Children	101 (25.2)	299 (74.8)
Uncle	3 (0.8)	397 (99.2)

4.14 Typology of psycho–social care received among respondents

Table 4:14 highlights the typology and sources of psycho-social care received by respondents. Family members responsible for providing respondents with a sense of belonging included mother (32.2%), children (25.8%), wife (24.0%) husband (15.5%), brother (14.8%) and sister (13.0%). Family members who reportedly made respondents happy included father (32.2%), children (26.8%) wife (23.5%), husband (14.8%) and mothers (13.2%).

Those who made the respondents felt loved included mother (32.5%) children (25.8%), and wife (24.0%). In addition, mothers (34.5%) topped the list of family members who made respondent felt all was not lost this is followed by children (25.5%).

Table 4.14: Typologies of psycho–social care received by respondents from significant others

N=400

Psycho – social care		Yes № (%)	No № (%)
Making you have sense of belonging			
	Father	36 (9.0)	364 (91.0)
	Mother	129 (32.2)	271 (67.8)
	Brother	59 (14.8)	341 (85.2)
	Sister	52 (13.0)	348 (87.0)
	Husband	62 (15.5)	338 (84.5)
	Wife	96 (24.0)	304 (76.0)
	Children	103 (25.8)	297 (74.2)
	Uncle	5 (1.2)	395 (98.8)
Making you happy			
	Father	35 (8.8)	365 (91.2)
	Mother	129 (32.2)	271 (67.8)
	Brother	53 (13.2)	347 (86.8)
	Sister	48 (12.0)	352 (88.0)
	Husband	59 (14.8)	341 (85.2)
	Wife	94 (23.5)	306 (76.5)
	Children	107 (26.8)	293 (73.2)
	Uncle	4 (1.0)	396 (99.0)
Making you feel loved			
	Father	36 (9.0)	364 (91.0)
	Mother	130 (32.5)	270 (67.5)
	Brother	59 (14.8)	341 (85.2)
	Sister	48 (12.0)	352 (88.0)
	Husband	65 (16.2)	335 (83.8)
	Wife	98 (24.5)	302 (75.5)
	Children	107 (26.8)	293 (73.2)
	Uncle	5 (1.2)	395 (98.8)
Making you feel that all is not lost			
	Father	37 (9.2)	363 (90.8)
	Mother	138 (34.5)	262 (65.5)
	Brother	63 (15.8)	337 (84.2)
	Sister	51 (12.8)	349 (87.2)
	Husband	60 (15.0)	340 (85.0)
	Wife	93 (23.2)	307 (76.8)
	Children	102 (25.5)	298 (74.5)
	Uncle	7 (1.8)	393 (98.2)
	Others (fiancée, friend, pastor, Alfa, self)	25 (6.2)	375 (93.8)

4.15 Respondents' perceived level of adequacy of social support received

Table 4.15 shows the perceived level of adequacy of social support received by respondents. 72% of the respondents perceived the level of emotional support received from family members to be adequate. In addition, 64% perceived the helping hand received to be adequate (See details in table).

Table 4.15: Respondents' perceived level of adequacy of psycho-social support

N=400

Forms of psycho–social support received	Perceived level of adequacy		
	Not adequate № (%)	Adequate № (%)	Not provided at all № (%)
Giving one emotional support	104 (26.0)	288 (72.0)	8 (2.0)
Lending a helping hand	131 (32.8)	256 (64.0)	13 (3.2)
Counselling you that all will be well	91 (22.8)	291 (72.8)	18 (4.5)
Assuring you of cure when you take your medicines	95 (23.8)	289 (72.2)	16 (4.0)
Does not show any sign of stigmatization	108 (27.0)	256 (64.0)	36 (9.0)
Paying attention to every details about you	94 (23.5)	266 (66.5)	40 (10.0)
Gives advice most of the time	87 (21.8)	283 (70.8)	30 (7.5)
Creates time for you when you need them	90 (22.5)	274 (68.5)	36 (9.0)
Builds yourself esteem	89 (22.2)	286 (71.5)	25 (6.2)
Accommodates all your excesses due to the disease	85 (21.2)	282 (70.5)	33 (8.2)
Corrects one with love	83 (20.8)	292 (73.0)	25 (6.2)

4.16 Forms of economic/financial support provided to respondents relating to feeding, transport, drug expenses and communication

Forms of economic/financial support provided to respondents relating to transport, drug expenses and communication by significant others are presented in Table 4.16. fathers (23.0%), topped the list of the persons who provided respondents with money with which to feed, this is followed by mother (21.0%), and husband (20.0%), respondents who relied on their mothers, fathers, husbands for money with which to take transport to the clinic were. 25.0%,15.2%,19.5% respectively. Details of persons who provided respondents with financial assistance to buy drugs, recharge cards are highlighted in the table under reference.

Table 4.16: Forms of economic/financial support provided to respondents relating to feeding, transport, drug expenses and communication

N=400

Forms of economic/financial support received	Yes № (%)	No № (%)
Money to feed		
Father	97 (23.0)	308 (77.0)
Mother	84 (21.0)	316 (79.0)
Children	44 (11.0)	356 (89.0)
Uncle	8 (2.0)	392 (98.0)
Aunt	12 (3.0)	388 (97.0)
Husband	80 (20.0)	320 (80.0)
Wife	47 (11.8)	353 (88.2)
Sibling	30 (7.5)	370 (92.5)
Self	96 (24.0)	304 (76.0)
Money to transport to the clinic		
Father	61 (15.2)	339 (84.8)
Mother	100 (25.0)	300 (75.0)
Children	43 (10.8)	357 (89.2)
Uncle	9 (2.2)	391 (97.8)
Aunt	11 (2.8)	389 (97.2)
Husband	78 (19.5)	322 (80.5)
Wife	48 (12.0)	352 (88.0)
Sibling	26 (6.5)	374 (93.5)
Self	100 (25.0)	300 (75.0)
Money to buy other drugs		
Father	56 (14.0)	344 (86.0)
Mother	95 (23.8)	305 (76.2)
Children	43 (10.8)	357 (89.2)
Uncle	8 (2.0)	392 (98.0)
Aunt	9 (2.2)	391 (97.8)
Husband	78 (19.5)	322 (80.5)
Wife	49 (12.2)	351 (87.8)
Sibling	31 (7.8)	369 (92.2)
Self	97 (24.2)	303 (75.8)
Money to buy recharge cards		
Father	46 (11.5)	354 (88.5)
Mother	91 (22.8)	309 (77.2)
Children	42 (10.5)	358 (89.5)
Uncle	10 (2.5)	390 (97.5)
Aunt	9 (2.2)	391 (81.8)
Husband	73 (18.2)	327 (81.8)
Wife	49 (12.2)	351 (87.8)
Sibling	22 (5.5)	378 (94.5)
Self	112 (28.0)	288 (72.0)

4.17 Forms of economic/financial support provided to respondents relating to payment of house rent, school fees and medical test

Table 4.17 shows forms and sources of economic/financial support provided to respondents relating to payment of house rent, school fees, and medical test. Mother topped (20.5%)the list of persons who provided Money to respondents to pay house rent, this was followed by husband (18.8%), and father (13.2%). The sources of money to pay for school fees included mother (21.5%), husband (15.8%), and father (15.2%). Mothers (23.5%) also topped the list of persons who made money available to respondents to carry out other required tests. This is followed by father (14.8%) and children (14.8%).

Table 4.17: Forms of economic/financial support provided to respondents relating to payment of house rent, school fees, and medical test

N=400

Forms of economic/financial support received	Yes № (%)	No № (%)
Money to pay house rent		
Father	53 (13.2)	347 (86.8)
Mother	82 (20.5)	318 (79.5)
Children	50 (12.5)	350 (87.5)
Uncle	4 (1.0)	396 (99.0)
Aunt	8 (2.0)	392 (98.0)
Husband	75 (18.8)	325 (81.2)
Wife	39 (9.8)	361 (90.2)
Sibling	21 (5.2)	379 (94.8)
Money for school fees		
Father	61 (15.2)	339 (84.8)
Mother	86 (21.5)	314 (78.5)
Children	49 (12.2)	351 (87.8)
Uncle	4 (1.0)	396 (99.0)
Aunt	6(1.5)	394 (98.5)
Husband	63(15.8)	337 (84.2)
Wife	40 (10.0)	360 (90.0)
Sibling	20 (5.0)	380 (95.0)
Money to carry out other test in case of co-morbidity		
Father	61 (15.2)	339 (84.8)
Mother	94 (23.5)	306 (76.5)
Children	59 (14.8)	341 (85.2)
Uncle	12 (3.0)	388 (97.0)
Aunt	13 (3.2)	387 (96.8)
Husband	57 (14.2)	343 (85.8)
Wife	39 (9.8)	361 (90.2)
Sibling	22 (5.5)	378 (94.5)

4.18 Forms of economic/financial support provided to respondents relating to clothing, pocket money and general upkeep

Forms of economic/financial support provided to respondents relating to clothing, pocket money and general upkeep are shown in Table 4.18. Clothing expenses were provided to the respondents by mother (24.0%), children (15.5%), husband (15.5%), and father (13.8%). Respondents got their pocket money from their mothers (23.0%), children (15.0%), husband (14.5%) and fathers (14.0%). The sources of money for general upkeep are also presented in the table.

Table 4.18: Forms of economic/financial support provided to respondents relating to clothing, pocket money and general upkeep

N=400

Forms of economic/financial support received	Yes № (%)	No № (%)
Money for clothing		
Father	55 (13.8)	345 (86.2)
Mother	96 (24.0)	304 (76.0)
Children	62 (15.5)	338 (84.5)
Uncle	7 (1.8)	393 (98.2)
Aunt	5 (1.2)	395 (98.8)
Husband	62 (15.5)	338 (84.5)
Wife	41 (10.2)	359 (89.8)
Sibling	18 (4.5)	382 (95.5)
Pocket money		
Father	56 (14.0)	344 (86.0)
Mother	92 (23.0)	308 (77.0)
Children	60 (15.0)	340 (85.0)
Uncle	7 (1.8)	393 (98.2)
Aunt	9 (2.2)	391 (97.8)
Husband	58 (14.5)	342 (85.5)
Wife	39 (9.8)	361 (90.2)
Sibling	18 (4.5)	382 (95.5)
General upkeep		
Father	55 (13.8)	345 (86.2)
Mother	105 (26.2)	295 (73.8)
Children	63 (15.8)	337 (84.2)
Uncle	11 (2.8)	389 (97.2)
Aunt	8 (2.0)	392 (98.0)
Husband	57 (14.2)	343 (85.8)
Wife	40 (10.0)	360 (90.0)
Sibling	21 (5.2)	379 (94.8)

Functional status of respondents

Figure 4.1 shows the respondents' functionality status in respect to their daily activities. More than half (53.5%) of respondents indicated that they required assistance to perform their daily activities while 46.5% reported that they can do things independently without having to depend on anybody for help.

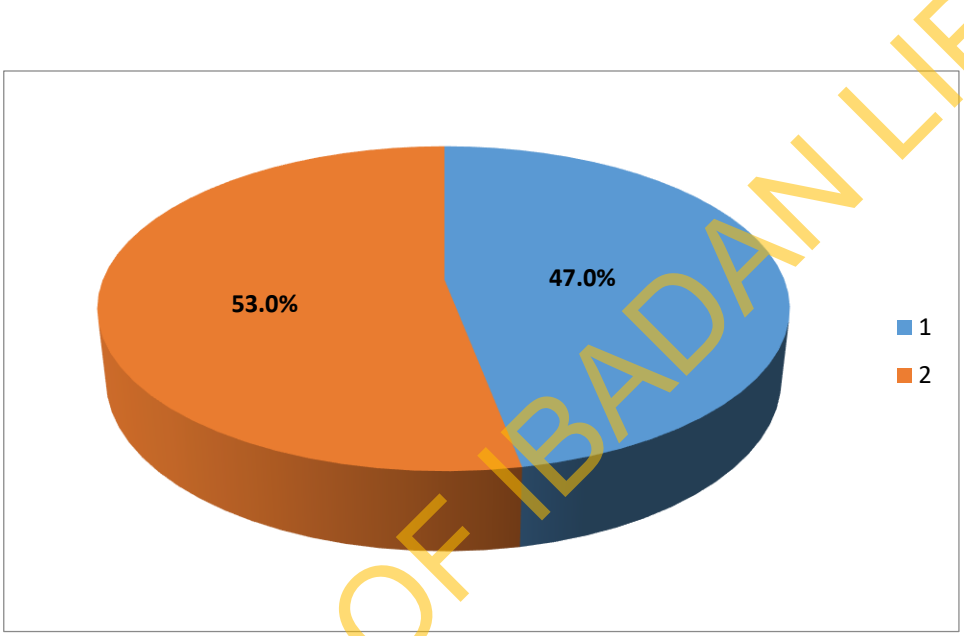

Figure 4.1: Functional status of respondents

Mean functional score = 12.61 ± 3.6

Median = 12.0

Range = 2.0 to 20.0

Test of Hypotheses

Hypothesis 1

The first hypothesis states that there is no significant association between respondents' sex and their functional status.

Table 4.19 shows the cross tabulation of respondents' sex and their functional status. More than half, (56.7%), of the male respondents were non-functional (i.e. they need help to carry out their day to day activities) while 43.3% could carry out their daily activities without the help of other people (functional). Among the female respondents, almost half (49.7%) were non-functional while 50.3% were functional. The result of a one-tailed Chi-square test for statistical significance showed a not significant association ($p>0.05$). Null hypothesis is therefore, not accepted.

Table 4.19: Respondents' functional status by sex

N=400

Sex	Functional status		Subtotal	df	X^2	P-value
	Non–functional	Functional				
	№ (%)	№ (%)	№ (%)			
Male	123 (56.7)	94 (43.3)	217 (54.2)			
Female	91 (49.7)	92 (50.3)	183 (45.8)	1	1.93	0.165**
Total	214 (100	186 (100)	400 (100)			

**Not significant (P>0.05)

Hypothesis 2

The second hypothesis states that there is no significant association between respondents' family type and their functional status.

Table 4.2 shows that a little above half, (50.3%), of the respondents who belonged monogamous family type was non-functional while 49.7% were functional. Majority of respondent (62.7%) that were in polygyny family type were non-functional while the rest (37.3%) were functional. The result showed that there was a significant association between respondents' family type and their functional status ($p<0.05$). Therefore, the null hypothesis was rejected.

Table 4.20: Respondents' functional status by family type

N=400

Family type	Functional status: Non–functional № (%)	Functional № (%)	Subtotal № (%)	df	X^2	p value
Monogamous	150 (50.3)	148 (49.7)	298 (74.5)			
Polygyny	64 (62.7)	38 (37.3)	102 (25.5)	1	4.71	0.030*
Total	214 (53.5)	186 (46.5)	400 (100)			

* Significant (P<0.05)

Hypothesis 3

The third hypothesis states that there is no significant association between respondents' level of education and their functional status.

The table shows that majority of respondents with no formal education, (65.9%) were non-functional. Majority respondents (60.0%) with primary education and (52.2%) with secondary education were non-functional. Most respondents with tertiary education (60.7%) were functional with respect to their daily activities. The result of a one-tailed Chi-square test for statistical significance shows a significant association between respondents' level of education and their functional status ($p<0.05$). Therefore, the null hypothesis was rejected. ($p<0.05$) (Table 4.21).

Table 4.21: Respondents' functional status by level of education

N=400

Educational level	Functional status: Non–functional № (%)	Functional № (%)	Subtotal № (%)	df	X^2	p value
No formal education	29 (65.9)	15 (34.1)	44 (11.0)			
Primary	54 (60.0)	36 (40.0)	90 (22.5)			
Secondary	107 (52.2)	98 (47.8)	205 (51.2)	3	9.31	0.025*
Tertiary	24 (39.3)	37 (60.7)	61 (15.2)			
Total	214 (53.5)	186 (46.5)	400 (100)			

* Significant (P<0.05)

Hypothesis 4

The fourth hypothesis states that there is no significant association between respondents' marital status and their functional status.

Table 4.22 presents respondents' marital status and their functional status. Among respondents who were single, 55.2% were non-functional; more than half, (54.2%), of those who were married were non-functional and 45.8% were functional. Among respondents who were divorced or widowed, 70.6% and 45.5%, respectively, were functional in their daily activities. The result of a one-tailed Chi-square test for statistical significance showed that there was no significant association between respondents' marital status and their functional status ($p>0.05$). Therefore, based on this value, the null hypothesis was rejected (Table 4.22).

Table 4.22: Respondents' functional status by marital status

N=400

Marital status	Functional status: Non-functional № (%)	Functional № (%)	Subtotal № (%)	df	X^2	p value
Single	74 (55.2)	60 (44.8)	134 (33.5)			
Married	129 (54.2)	109 (45.8)	238 (59.5)			
Divorced	5 (29.4)	129 (70.6)	17 (4.2)	3	4.18	0.243**
Widowed	6 (54.5)	5 (45.5)	11 (2.8)			
Total	214 (53.5)	186 (46.5)	400 (100)			

**Not significant (P>0.05)

Hypothesis 5

The fifth hypothesis postulates that, there is no significant association between respondents' age group and their functional status.

Table 4.23 shows respondents age group and their functional status of respondents. Results shows that 63.5% of respondents aged 24 years or less were non-functional. Among respondents who were aged 25 – 29 years, majority (60.9%) were functional. The result of a one-tailed Chi-square test for statistical significance showed that there was no significant association between respondents' age group and their functional status ($p>0.05$). Therefore, based on this value, the null hypothesis was rejected.

Table 4.23: Respondents' functional status by age group

N=400

Age group (years)	Functional status: Non–functional № (%)	Functional № (%)	Subtotal № (%)	df	X^2	p value
≤ 24	54 (63.5)	31 (36.5)	85 (21.2)			
25 – 29	18 (39.1)	28 (60.9)	46 (11.5)			
30 – 34	34 (54.8)	28 (45.2)	62 (15.5)	4	8.81	0.066**
35 – 39	28 (45.9)	33 (54.1)	61 (15.2)			
≥ 40	80 (54.8)	66 (45.2)	146 (36.5)			
Total	214 (53.8)	186 (46.5)	400 (100)			

**Not significant (P>0.05)

Hypothesis 6

The sixth hypothesis states that there is no significant association between respondents' level of income and their functional status.

Table 4.24 shows the cross tabulation of respondents' income and their functional status**.** Among respondents who earned ₦5000 or less, 58.7% of was non-functional while more than half, (55.1%) and 53.3%, of those who earned between ₦6000-₦10000 and ₦11000-₦15000, respectively were functional. Among respondents who earned ₦16000 and above, about half (50.8%) were non-functional. The result of a one-tailed Chi-square test for statistical significance showed that there was no significant association between respondents' marital status and their functional status ($p>0.05$). Based on this value, the null hypothesis was rejected.

Table 4.24: Respondents' functional status by income level

N=400

Income level	Functional status		Subtotal	df	X^2	p value
	Non–functional	Functional				
	№ (%)	№ (%)	№ (%)			
≤ 5000	111 (58.7)	78 (41.3)	189 (47.2)			
6000 – 10000	22 (44.9)	27 (55.1)	49 (12.2)			
11000 – 15000	14 (46.7)	16 (53.3)	30 (7.5)	3	4.498	0.212**
≥16000	67 (50.8)	65 (49.2)	132 (33.0)			
Total	214 (53.5)	186 (46.5)	400 (100)			

** Not Significant (P>0.05)

Hypothesis 7

Hypothesis seven states that there is no significant association between social support received by respondents and their functional status.

The table shows that more than half respondents, (57.8%), who had received social support from family members, were non-function. However, among those that had not received any form social support from family about half (50.5%) were functional. The result of a one-tailed Chi-square test for statistical significance showed that there was no significant association ($p>0.05$). Therefore, the null hypothesis was rejected.

Table 4.25: Functional status by social support received from family members

N=400

Receiving social support from family	Functional status		Subtotal	df	X^2	p value
	Non–functional	Functional				
	№ (%)	№ (%)	№ (%)			
Yes	111 (57.8)	81 (48.0)	192 (48.0)			
No	103 (49.5)	105 (50.5)	208 (52.0)	1	2.760	0.097**
Total	214 (53.5)	186 (46.5)	400 (100)			

**Not significant (P>0.05)

CHAPTER FIVE

DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

This chapter is organised into the following sections: social-demographic characteristics; respondents perceived needs relating income and food; respondents perceived needs relating to social support; respondents perceived needs relating to health; activities of daily living; perceived social support among respondents; typology of comfort relating support among respondents; typology of material support and tangible assistance among respondents; typologies of psycho-social care among respondents; respondents perceived level of adequacy of social support; forms of economic and financial support provided to respondents relating to feeding, transport, drug expenses and communication; forms of economic/financial support provided to respondents relating to payment of house rent, school fees, and medical test; forms of economic/financial support provided to respondents relating to clothing, pocket money and general upkeep and functional status of respondents.

5.1 Socio-demographic Characteristics of Respondents

The respondents' age range from 14 – 90 years with a mean age of 36.4 ± 1.4 years. Most respondents were aged 40 years and above. According to the WHO (2006), TB primarily affects adolescents and young adults in Africa; however, in countries where TB has gone from high to low incidence such as the United States, TB is mainly a disease of older people, or the immune-compromised (Kumor, Abbas, Faustoa and Mitchell, 2007; CDC, 2006).

More than half of respondents were male, this, however was in contrast with a similar study by Winnie et al (2006) which showed a higher proportion of respondents to be females. Most respondents were traders and they were closely followed by students and artisans. Tuberculosis affects people from all walks of life. It has been reported that TB case rates vary widely by country, age, race, sex, and socio-economic status (Tierney and Nardell, 2015). More than half of respondents were Christians and most were of Yoruba ethnic extraction. This might not be surprising as the study was carried out in an indigenous Yoruba urban setting.

This study showed that most respondents earn about ₦5,000.00monthly, this implies respondents were predominantly low income earners. It has been reported that TB is a disease of the poor (WHO, 2006; WHO, 2008). The International Federation of Red Cross and Red Crescent Societies (2015) also pointed out that although Tuberculosis is a disease of poverty which can be treated easily with antibiotics, many of the people affected cannot afford these TB drugs. It was reported that a symbiotic relationship exists between TB and poverty. New TB infection is not just the product of poverty, but also creates poverty. It is well-known that TB can contribute to poverty by reducing patients' physical strength and ability to work (Barter, Agboola, Murray and Bärnighausen, 2012; WHO, 2005; Hansel, Wu, Chang and Diette, 2004; Paton and Ng, 2006; Sagbakken, Frich and Bjune, 2008).

Results also revealed that most of the respondents were married; this is in agreement with findings from a study conducted by Kaulagekar-Nagarkar et al. (2012) with TB patients. Findings from this study showed that most of respondents had their TB status diagnosed in government hospitals. This is not surprising as some government health facilities are supported and equipped for this role in Nigeria. They have been equipped with conventional TB diagnostics, which are newest tools, aimed at providing quality-assured TB laboratory services (Parsons, Somoskövi, Gutierrez, Lee, Paramasivan, Abimiku, Spector, Roscigno and Nkengasong, 2011).

Many private healthcare facilities might not be well equipped for the delivery of these services; some respondents (male and female) reported history of tuberculosis in some family members. This is similar to the findings from a study conducted in the Gambia by Hill, Jackson-Sillah, Donkor, Adegbola and Lienhardt (2006) which showed a history of TB in patient's families. According to Lienhardt, Donkor, Fielding, Diallo, Sillah, Manneh, Bah, Adegbola, Gustafson, Aaby, Warndorff, Bah-Sow, Palayew, Bennett, Lisse and McAdam (2005), a former episode of TB in a family, strongly increases the risk of getting the disease in other members of the family.

5.2 Challenges faced by TB patients during active treatment

Findings from this study shows that various perceived needs mentioned by respondents can be categorised into needs relating to income and food, needs relating to social support and needs relating to health care. Majority of respondents reported inadequacy of these needs; they also indicated the desire for all these to be met. These findings are similar to the ones obtained by Morris, Quezada, Bhat, Moser, Smith, Perez, Laniado-

Laborin, Estrada-Guzman and Rodwell (2013). They reported that while some participants were able to maintain their pre-multi-drug resistant TB lives to a limited extent, most patients reported losing their sense of identity due to their inability to work, social isolation, and stigmatisation from significant others. Olmink and Garner (2006) has noted the role of healthcare staff in the management of TB. According to them the quality of their interactions with TB patients is needed to improve adherence to treatment, thereby meeting the unmet health needs of TB patients. Patient and health provider interactions, including basic communication skills, could be helpful. Morris et al (2013) reported that the majority of participants in their study were assisted to adjust to life after being enrolled in a treatment and welfare package where their needs were taken care of. Most time, patients find the need for psychosocial support useful in mitigating the difficulty of continually going to the clinic to take medications, tending to other family or professional responsibilities while on treatment, and confronting stigma and social isolation within their community. Family members most often contributed to meeting these psychosocial needs, and were also crucial in providing economic support to patients faced with burdensome medical expenses or who were forced to leave their jobs due to being on treatment.

Findings from a study conducted by Islam, Ahmed, Islam, Kamruzzaman and Rifat (2013) reveal that many TB patients were malnourished before treatment. The BMI of patients from all socio-economic groups improved at various points in time during treatment, but the vast majority remained malnourished at the end of treatment. In a similar study, van den Hof, Collins, Leimane, Jaramillo and Gebhard (2014) found that comprehensive psycho-socio–economic support interventions are effective and feasible in both high and low income settings. Systematic reviews suggest that well-designed and effectively implemented programmes that reduce or remove psycho-emotional and socio-economic problems may improve treatment adherence (Volmink and Garner, 2000; Munro, Lewin, Smith, Engel, Fretheim et al. 2007; M'imunya, Kredo and Volmink, 2012; Lutge, Wiysonge, Knight and Volmink, 2012).

5.3 Respondents' activities of daily living in relation to their functional status

It was observed that some respondents were able to engage in some activities of daily living independently. However, there are few respondents who need assistance in getting some activities done. For instance, few respondents needed help every day to look after them. Findings also showed that a few respondents were in bed most of the

time. Recent studies have revealed the importance of activities of daily living (ADL) in evaluating TB patients (Horita, Miyazawa, Yoshiyama, Tsukahara, Takahashi, Tsukiji, Kato, Kaneko and Ishigatsubo, 2013; de Valliere and Barker, 2006).

5.4 Reported social support received by respondents from family members

Findings from this study also revealed that respondents received one form of care or the other from family members. This finding is similar to what was noted in Peru by Paz-Soldán et al. (2013) they found that despite the general reluctance of patients to disclose their disease status, patients received a significant amount of psychosocial support from both family members to whom they disclosed their condition and healthcare providers. Compared to other social groups, families were the most highly involved groups of persons in terms of supporting and caring for patients of TB; they provide regular encouragement to patients to eat, take their medications, and maintain a positive outlook (Long, Johansson, Diwan and Winkvist, 2001; Ganapathy, Thomas, Jawahar, Selvi, Sivasubramaniam, Weiss, 2008).

It has been noted that many patient treatment plans do not routinely involve the family and other support networks (Webel, Okonsky, Trompet and Holzemer, 2010; Funnell, 2010; Onifade, Bayer, Montoya, Haro, Alva, Franco, Sosa, Valiente, Valera, Ford, Acosta and Evans, 2010).

5.5 Typology of social support, sources and adequacy of the support received by respondents

The Typologies of support identified in this study include comfort-related support, material-related support and tangible assistance and psycho–social care support. Findings showed that, with regards to comfort-related support, not many respondents received this type of support from members of their family (immediate or extended). In addition to this, a few respondents received material related support from members of their family.

As earlier mentioned, immediate family members are the focus of this study and respondents received supports from them. According Gottlieb and Bergen (2010) and Barrera (1986), it is important to identify the sources of support in terms of different categories of social ties with lay people (e.g., family members, friends, neighbours), and the types of support, including emotional, instrumental, companionship, informational, and esteem support. He also distinguished between measurements of

perceived versus actual or enacted support, a distinction that has proved critical because perceived support, not its actual materialisation, has been found to be largely responsible for the much-heralded buffering effects of support (Cohen and Wills, 1985).

It appears that people who have a strong psychological sense of support fare better in the face of adversity than those who are less sanguine about the support they can garner. Paradoxically, strong senses of support seem to give people the confidence to cope without needing to marshal their network's resources. Hence, perceived support is essentially the belief or faith that support is available from network members, whereas actual support is its mobilization and expression. Taking into account this distinction. Cohen, Gottlieb and Underwood (2000) defined social support as "the social resources that persons perceive to be available or that are actually provided to them by non-professionals in the context of both formal support groups and informal helping relationships".

Another aspect of support which is of importance to patients is measurement of its quantitative and qualitative adequacy from the recipient's perspective. The former evaluates the amount of support provided, ranging from too little to too much, whereas the latter inquiries about the quality of support, including the manner and covert message associated with its delivery. For example, the provider may have rendered support in a grudging way; attached strings that limit the recipient's freedom of action, or made the recipient feel indebted or incompetent. Indeed, more recent studies suggest that well-intentioned but clumsy, unsuitable, or over-controlling support renders it neutral or even psychologically damaging (Rook, 1984; Steinberg and Gottlieb, 1994).

In addition, findings from this study also showed that many of the respondents were of the opinion that the level of emotional support received from family members was adequate. Many of the study participants also indicated that attention received from family member was adequate. However, this finding was at variance with some literature. For instance, it has been reported that recipients do not always interpret support as helpful (Gardner and Cutrona, 2004), and that support adequacy contributes to individual and dyadic outcomes (e.g., marital satisfaction and physical health (Frazier, Tix and Barnett, 2003). Researchers also routinely distinguish between received support—the amount of support a person perceives receiving—and observed

support—the amount of support a person receives based on an observed or objective index (e.g., a behavioural coding task).

5.6 Forms of economic and financial support received by respondents from the family

Finding from this study show that there were various forms of economic/financial support provided to respondents; this relates to clothing, pocket money and general upkeep. However, few of the respondents received these forms of support.

The literature reveals that the total cost of treating TB can be catastrophic. Income loss often constitutes the largest financial risk for patients. Apart from ensuring that healthcare services are financed and delivered in a way that minimises direct and indirect costs, there is a need to ensure that TB patients and affected families receive appropriate income replacement and other social protection interventions (Tanimura, Jaramillo, Weil, Raviglione and Lo¨nnroth, 2014).

The financial burden of TB for a patient and his/her family already affects their overall economic welfare as well as their ability to maintain treatment until cure. Even when diagnosis and treatment services are provided free of charge, additional costs related to accessing and maintaining treatment, such as transport, foods, and upkeep of both the patient and guardian, have to be met. It has been noted that, TB patients in low- and middle income countries face medical expenses, costs for seeking/staying in care, and income loss equivalent to more than 50% of their annual income (WHO).

In general patient's financial support systems aim to enable patients to access treatment without negative financial consequences and to avert further slide into poverty by protecting and building their financial, physical and human capital assets. Some examples of direct economic assistance are program incentives, transport reimbursements and treatment allowances.

5.7 Conclusion

Various types of support play a significant role in patients' recovery and treatment outcomes and the family is a key social support provider to respondents in the study, Families, friends, and healthcare providers all contributed to the patients' support system in different ways; However, there is still unmet need for adequate psychological support to help patients cope with anxiety, depression, and frustration associated with their TB diagnosis.

5.8 Implication of Findings for Health Education

Findings from this study have implications for health promotion and education which are discussed in this subsection. It was noted that awareness about social support for patients with the disease was low.

The use of well-tailored information on the importance of social support in the treatment of TB disseminated through public enlightenment is needed. Public enlightenment materials that can be considered useful are leaflets, posters, radio jingles, bill boards, radio drama and street campaigns aimed at increasing the awareness of members of the community on the issues associated with Tuberculosis. The role of public enlightenment will be to upgrade people's knowledge relating to the curability of the disease, the pivotal role of social support in the treatment, adherence and recovery from TB. Public enlightenment is also needed to facilitate the demystification of the disease, reduce stigmatisation and increase the awareness against TB.

It was noted that there are stakeholders who have key roles to play in enhancing positive outcome of TB treatment and care through social support; but these units of identity were not doing enough to support TB patients. Advocacy is needed to gain the support of these people in the management of the disease through provisions of various forms of social support. The targets of the advocacy efforts should include the following: patients' families, employers of labour, governments, donor agencies, labour unions, various associations, community heads and the wider community. When these people lend their voices and supports, TB patients can be assisted to assess prompt medical care and social supports needed for quick recovery.

5.9 Recommendations

Based on the findings of this study, the following recommendations are offered

1. There should be advocacy for financial support or temporary disability allowances for TB patients with no stable job
2. There is the need for Improvement of employment protection to enable patients to be able to return to previous positions once they are cured and clinically fit to perform their assignments
3. There should be a new regulation and policy that mandate employers to pay employees (a portion of) their designated salary while they are on sick leave
4. Engagement of social workers and social welfare systems to assist TB patients to navigate stigma and discriminatory obstacles while they are receiving care and after.
5. There is need to establish social support services and social support network for TB patients in order to reduce the burden of the disease on patients and their immediate family members

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Appendix I

Informed Consent

PERCEIVED SOCIAL SUPPORTS RECEIVED BY TUBERCULOSIS PATIENTS FROM FAMILY MEMBERS DURING ACTIVE TREATMENT IN SELECTED TUBERCULOSIS TREATMENT CENTRES IN IBADAN

Consent form for Survey Respondents

Name of Investigator: Rosemary Ada Odega

Name of Organisation: University of Ibadan

Greetings. My name is Rosemary ODEGA and I am a graduate student of the department of Health Promotion and Education, College of Medicine, University of Ibadan. I am conducting a research study on "Perceived social support received by TB patient from Family Members during active treatment". The purpose of this research is to assess the type and quality of care social support and care out-patients attending TB treatment Centre's received from family members in relation to their treatment outcomes. This study has implications for policy development and formulation; if effective, it will serve as evidence in the formulation of policy that will contribute to the treatment outcomes which has implications for reduction in morbidity and mortality of tuberculosis diseases.

1. Purpose of the research

I am carrying out a study to investigate the "Perceived social support received by TB Patients from Family Members during active treatment". The purpose of this research is to assess the type and quality of care social support and care out-patients attending TB treatment Centre's received from family members in relation to their treatment outcomes.

2. Duration of the research

The duration of this research, which you are being requested to participate in is 1 month.

3. Procedures

We invite you to take part in this research project and participate in the questionnaire. If you accept, you will be asked to participate in the filling of the questionnaire which will be given to you. If you do not wish to answer any of the questions posed in the

questionnaire, you may say so and can move on to the next question. No one else but the researcher alone will be present. The information recorded is considered confidential, and no one else except Mrs. Rosemary Odega and her colleagues will have access to the information documented during the research. We will record your answers to these questions on this questionnaire. This is done so that we can remember everything that you have told us. Although it is important for the research that you answer all questions, if you do not wish to answer any of the questions included in the survey, you may ask to move on to the next question. Filling the questionnaire will last for approximately 25 minutes.

4. Risks and Discomforts

There is a slight risk that you any feel uncomfortable talking about some of the topics. However, we do not wish this to happen, and you may refuse to answer any question or not take part in a portion of the interview if you feel the question(s) makes you uncomfortable.

5. Benefits

There will be no direct benefit to you but the information obtained from this study will help to provide suggestions in the formulation of policy that will contribute to the uptake of routine immunisation which has implications for reduction in morbidity and mortality of tuberculosis patients. Evidence from the study will also allow for public enlightenment both at the facility and community levels on the effectiveness of social support and care provided by family members and relations.

6. Confidentiality

We have taken the following steps to ensure that are safe and that the information you provide is confidential.

1. Filling of questionnaire will take place in a private place
2. The information that we collect from this research project will be kept confidential.
3. Information collected from you will be stored in a file that will not have your name on it, but a number assigned to it instead.
4. The questionnaire containing the interview will be stored for the duration of 2 years after which it would be destroyed.

5. The name associated with the number assigned to each file will be kept under lock and key and will not be disclosed to anyone except those who are directly working on this study.

6. You may talk to the leader of the research team in case you have any concern or question.

7. Alternative to participation

You do not have to take part in this research if you do not wish to do so. Even if you do not wish to answer these questions you may still benefit from the study. You may stop participating in the interview at any time that you wish, and there will be no negative consequences for you in any way.

8. Who to contact

If you have any question you may ask those now or later. If you wish to ask questions later, you may contact any of the following:

Rosemary Odega
Address: Department of Health Promotion and Education, Faculty of Public Health, College of Medicine, University of Ibadan, Ibadan.
0803 386 6675
e-mail: adarossy20@yahoo.com

or

Dr. Frederick Oshiname
Address: Department of Health Promotion and Education, Faculty of Public Health, College of Medicine, University of Ibadan, Ibadan.
0803 500 1060
e-mail: foshiname@yahoo.com

9. Certificate of Consent for Quantitative Study

I have been invited to take part in the research on the "Perceived social support received by TB Patients Family Members during active treatment in Selected Tuberculosis Treatment Centre's in Ibadan". The purpose of this research is to assess the type and quality of care, social support and care out-patients attending TB treatment Centre's receive from family members in relation to their treatment outcomes. I have read the foregoing information, or it has been read to me. I have had the opportunity to ask questions and had been answered to my satisfaction. I consent voluntarily to be a participant in this study and understand that I have the right to

withdraw from the interview at any time without in any way affecting my medical care.

Print name of Respondent	Date and Signature of Respondent
----------	----------
	------/ -----/ ---------- (dd/mm/yy)
Print Name of Researcher/Moderator	Date and Signature of researcher/moderator
----------	----------
	------/ -----/ ---------- (dd/mm/yy)

Appendix II

Questionnaire

PERCEIVED SOCIAL SUPPORTS RECEIVED BY TUBERCULOSIS PATIENTS FROM FAMILY MEMBERS DURING ACTIVE TREATMENT IN SELECTED TUBERCULOSIS TREATMENT CENTRES IN IBADAN

Introduction

My name is Rosemary Odega, I am a graduate student from the Department of Health Promotion and Education, Faculty of Public Health, College of Medicine, University of Ibadan. I am conducting a research on the "Perceived social supports received by TB patients from family members during active treatment in selected tuberculosis treatment Centre's in Ibadan". The purpose of this research is to assess the type and quality of care, social support and care out-patients attending TB treatment Centre's received from family members in relation to their treatment outcomes. The findings from this study will be helpful in designing interventions aimed at improving treatment of TB patients.

Your participation in this interview is voluntary and your answers to all the questions that I will ask you will be kept secret. There is no right or wrong answer so you are encouraged to make your contributions. I shall be grateful if you are honest in answering all the questions. Whatever is learnt will be useful for future plan. The discussion will take about 30 minutes and you are free to terminate the discussion at any point you wish without any repercussion. I do not require your name for this interview but whatever information you supply will be kept confidential.

Thank you.

Serial №: …….

LGA: 1. Ibadan. North East ☐ 2. Ibadan South West ☐

Treatment centre: 1. IBNE LGA, Iwo Rd ☐ 2. Aderogba, Oje ☐

3. Molete DOT Centre ☐ 4. Jericho Chest DOT Centre ☐

Name of Interviewer: ……

Date of interview:……

Section A: Social-demographic Characteristics

Instruction: for the questions in this section, please tick ☑ the appropriate alternative response(s); in some cases, however simply supply the needed information in the blank spaces provided.

1. Gender: 1. Male ☐ 2. Female ☐
2. Marital status: 1. Single ☐ 2. Married ☐ 3 Divorce/Separated ☐
   4. Widowed ☐
3. Religion: 1. Christianity ☐ 2. Islam ☐ 3. Traditional religion ☐
   4. Others (please specify): ……
4. Age of respondents (as at last birthday) ……
5. Ethnic group: 1. Yoruba ☐ 2. Igbo ☐ 3. Hausa ☐

4. Others: …….

6. Level of education: 1. No formal education ☐ 2. Primary education ☐
   3. Secondary education ☐ 4. Tertiary education ☐
   5. Others (specify) ……
7. Family type: 1. Monogamous ☐ 2. Polygynous ☐
8. If polygynous, how many wives does your husband have? … (**Female only**)
9. If polygynous, how many wives do you have? …… (**Male only**)
10. Whom do you live with? 1. Living alone ☐ 2. Living with father only ☐ 3. Living with mother only ☐ 4. Living with both parent ☐ 5. Living with extended family member ☐ 6. Others (please specify) ...…
11. Occupation: ……
12. On the average, how much do you earn from all sources in a month? ……..…

Section B: History of the Disease

13. What year did this disease (TB) begin? ……
14. How old were you when this sickness started? ……
15. Where was it diagnosed that you have TB?1. Government hospital ☐
    2. Private hospital ☐ 3. Health centre ☐ 4. Others (specify) ……
16. Has any of your family members or relatives (either nuclear or extended) ever had TB? 1. Yes ☐ 2. No ☐
17. Where have you been going for treatment? 1. Government hospital ☐
    2. Private Hospital ☐ 3. Health centre ☐ 4. Others (specify) ……
18. When did you start receiving treatment in this centre? ……

19. Apart from TB, are you taking drugs for other treatment 1. Yes ☐ 2. No ☐

If "No", please skip to Question 21

20. If "Yes" to Question 20, what is the ailment? (Please specify) ……

21. How have you been getting drugs in respect of this other ailment?

1. I get free drugs from hospital 1.Yes ☐ 2. No ☐
2. I buy them myself 1.Yes ☐ 2. No ☐
3. My families/parents/children buy them for me 1.Yes ☐ 2. No ☐
4. Others (please specify) ……

Section C: Perceived Challenge of TB patients

Instruction: Table 1 contains questions related to perceived needs of TB patients in the community. For each need in the table below, please tick ☑ whether it applies to you or not.

Table 1

S/№	Perceived challenge	Yes	No
	Economic		
22.1	Inadequate financial support		
22.2	Inadequate savings for self–support		
22.3	No more source of regular income		
22.4	What is earn not enough		
	Social		
22.5	Not receiving support from your community as you want?		
22.6	Not receiving social support from religious group you belong to as you want?		
22.7	Not receiving social support from family members as you want?		
22.8	Not receiving social support from friends as you want?		
22.9	Not receiving social support from the government?		
22.10	Feel abandoned		
22.11	Felt stigmatised/discriminated against		
	Health		
22.12	Health care facility too far?		
22.13	Lack of access to regular medical check-up?		
22.14	Health care does not suit the needs of TB patients?		
22.15	Health care too expensive/not affordable?		
22.16	No health care facilities in community?		
22.17	Health workers are not friendly?		
22.18	Health workers do not give adequate attention?		
22.19	Health workers do not give adequate information?		
22.20	Felt stigmatised by health workers' attitude?		

	Food		
22.21	Lack of reliable person to cook foods for you?		
22.22	Not happy with hygiene situation wherever food is prepared for you?		
22.23	Inability to access good meals?		
22.24	Difficulty eating 3 times a day?		

Section D: Activities of Daily Living

Instruction: Table 2 contains a list of activities of daily living (functional status). For each statement, tick ☑ whether in spite of tuberculosis, you can still perform it on your own or you need someone's assistance to do them.

Table 2

S/№	Activities of daily living	Yes	No
23.1	Even though I am sick, I can do everything I usually do at work		
23.2	Even though I am sick, I can do everything I usually do at home		
23.3	I am unable to work normally, but can look after myself at home		
23.4	I need help occasionally to look after myself (e.g. with getting to the toilet; with getting dressed)		
23.5	I need help every day to look after myself (e.g. with getting to the toilet; with getting dressed)		
23.6	I am in bed most of the time		
23.7	I can go shopping or going out to market to buy needed goods alone		
23.8	I cannot walk around the house without assistance		
23.9	I can sweep my surroundings without help or assistance		
23.10	I need help to go to far places or travelling		

Section E: Perceived Social Support

Instruction: We are interested in how you feel about the statements in Table 3. For each statement, indicate how you feel about it by ticking ☑ either you strongly agree, agree, uncertain disagree or strongly disagree.

Table 3

S/№	Perceived Social Support	Strongly Agree	Agree	Not Certain	Disagree	Strongly Disagree
24.1	Someone is always around who assists you to do things					
24.2	There is a special person with whom I can share my joys and sorrows					
24.3	Family members are assisting me overcome some challenges experienced due to this diseases					

24.4	Emotional support needed is given by my family					
24.5	I have a special person who is a real source of comfort to me					
24.6	My husband/wife does not give any form of support					
24.7	I can count on my brothers/sisters whenever I need money					
24.8	I can talk about my problems with my parent					
24.9	My children have been a source of help					
24.10	Family members avoid me because of disease					
24.11	My extended family are not willing to assist me as they avoid me					
24.12	Relations do not want to get close to me again					

Section F: **Typology of Social Support, Sources and Adequacy**

Instruction: Table 4 contains a list of forms of psychosocial support. For each tick☑ the family members who provide it.

Table 4

S/№	Forms of Psychosocial Supports	Family members providing it								
		Father	Mother	Brother	Sister	Husband	Wife	Children	Uncle	Others
25.1	Comforting you when you are sad									
25.2	Talking to you in other to forget your sorrow									
25.3	Praying with /for you									
25.4	Counselling you as the need arises									
25.5	Keeping you company									
25.6	Provides you with basic needs									
25.7	Reminding you of your clinic appointment									
25.8	Reminding you to									

	take your medication									
25.9	Helping you to do things which you couldn't do as a result of the disease									
25.10	Making you have a sense of belonging									
25.11	Making you happy									
25.12	Making you feel loved									
25.13	Making you feel that all is not lost									

SECTION G: **Forms of Psycho Social Support and Adequacy**

Instruction: Table 5 contains a list of forms of psycho-social support by at least a family member for each tick ☑ to indicate the adequacy of the support. **(Please tick ☑ appropriate responses that apply to you)**

Table 5

S/№	Forms of Psychosocial Supports	Perception of Adequacy		
		Not adequate	Adequate	Not provided at all
26.1	Giving you emotional support			
26.2	Lending a helping hand			
26.3	Counselling you that all will be well			
26.4	Assuring you of cure when you take your medicines			
26.5	Does not show any sign of stigmatisation			
26.6	Members afraid of taking care of you in view of infection			
26.7	Paying attention to every details about you			
26.8	Gives Advice most of the time			
26.9	Creates time for you when you need them			
26.10	Scolds you when you are wrong			
26.11	Tells you the truth no matter what			

26.12	Builds your self esteem			
26.13	Accommodates all your excesses due to the disease			
26.14	Gets mad at you when you are wrong			
26.15	Corrects you in love			

Section H: Economic and Financial Support

Instruction: Table 6 contains a list of forms of economic and financial support. For each, tick ☑ the family members that provide it.

Table 6

S/№	Forms of economic/financial support	Family members providing it. Tick ☑more than one family member providing it as the case may be								
		Father	Mother	Children	Uncle	Aunt	Husband	Wife	Sibling	Others
27.1	Money to feed									
27.2	Money to transport self to the clinic									
27.3	Money to buy other drugs									
27.4	Money to buy recharge cards									
27.5	Money to pay house rent									
27.6	Money for school fees									
27.7	Money to carry out other test in case of comorbidity									
27.8	Money for ones up keep									
27.9	Money for clothing									
27.10	Pocket money									

Thank you for participating in this important study.

Appendix III

Questionnaire (Yoruba version)

IWE-BEERE

AKIESI AWON AMUNHAN IRANLOWO LATI ODO AWON EBI ATI BI IPO AWON ALAISAN IKOOFE NI AWON ILE-ITOJU IKOOFE NI IBADAN

Ifaara,
Oruko mi ni Rosemary ODEGA, moje akekogboye lati Ipolongo Ilera ati Eko, Eka Ilera-Ilu, Eko-isegun, Unifasiti Ibadan. Mo nse iwadi lori "Akiesi awon amunhan iranlowo lati odo awon ebi ati bi ipo awon alaisan Ikoofe ni awon Ile-Itoju ikoofe ni Ibadan" Koko iwadi yi ni lati sewadi iru ati didangagia si iru itoju, amunhan iranlowo ati itoju ti awon alaisan ikoofe ti ara won tinya rigba lowo awon eniyan ebi won tirigba si abajade itoju won. Awon arigbamun lori iwadi yi yio wulo fun lati wa fin idi-koko si idagbasi itoju awon tonba aisan ikoofe finra.

Kikopa ninu iwadi yi je fifinufindo si ati gbogbo idahun yin si awon ibeere ti noma biyin yio wa ni idabobo. Kosisi idahun ti otona abi kotona, fundi eyi, aroyin latikopa tie yin. Inu mi yio si dun ti ebafi otito dahun awon ibeere wonyi. Awon nkan ti abarigbamun yio wa fun eto fun aato ojo- ola. Ipa yi yio gba bi ogbon iseju, esi ni oreofe lati makopamo ni asikokasiko tobawoyin laini egbo eyin. Nkofe ki eko oruko yin lorin iwadi yi, ti gbogbo nkan ti ebafunwa yio wa ni ipamo.

Ese pupo.

FUN LILO OFISI NIKAN

Nomba……

Ijoba Ibile: 1. Ila-oorun Ariwa Ibadan ☐ 2. Iwo-oorun Gusu Ibadan ☐

Ile-itoju: 1. Ila-oorun Ariwa Ibadan, Iwo road ☐ 2. Aderogba, Oje ☐

3. Molete Dot Centre ☐ 4. Jericho Chest DOT Centre ☐

Oruko Oluwadi: ……..

Ojo Iwadi: ……..

Eka A: Awon oun idamo oludahun

Ifaara: si awon ibeere ni eka yi, maaki idahun toye si okokan ibeere towa ni eka yi.

1. Eda: 1. Okunrin ☐ 2. Obinrin ☐

2. Ibagbeposi loko/niyawo 1. Apon ☐ 2. Tiloko/niyawo ☐ 3. Tikora/Tituka ☐
3. Opo ☐

3. Esin: 1. Igbagbo ☐ 2. Musulumi ☐ 3. Esin-ibile/abalaye ☐
4. Omiran, salaye ☐

4. Odun oludasi (ni ojo-ibi tokoja)…….

5. Eya: 1. Yoruba ☐ 2. Igbo ☐ 3. Hausa ☐ 4. Omiran, salaye……

6. Iru-iwe ti ogaju ti eka: 1. Nkolo ile-iwe ☐ 2. Iwe-alakobere ☐ 3. Iwe-grama ☐
4. Iwe-giga akogboye ☐ 5. Omiran, salaye ☐

7. Iru ebi: 1. Okokan ati ayakan ☐ 2. Okokan ati aya pupo ☐

8. Tobaje Okokan ati aya pupo, iye iyawo melo ni oko yin ni?.....**(obinrin nikan)**

9. Tobaje Okokan ati aya pupo, iye iyawo melo ni eni?.....**(okunrin nikan)**

10. Tani e nbagbe? 1. Mo ndaagbe ☐ 2. Mo ngbe pelu baba nikan ☐ 3. Mo ngbe pelu omo nikan ☐ 4. Mo ngbe pelu baba ati momo ☐ 5. Mo ngbe pelu ebi opo ☐
6. Omiran, salaye……..

11. Ise ayo…….

12. Eelo ni e ma nri ni apapo nibi ise yin?.....

Eka B: Itan nipa aisan.

13. Ni odun wo ni aisan (iko-awule) yi bere gan?.....

14. omo odun melo ni yin nigba ti aisan yi bere?.....

15. Nibo ni wanti sewadi re pe eni aisan iko-awule 1. Ile-iwosan ijoba ☐
2. Ileiwosan aladani ☐ 3. Ile itoju ilera ☐ 4. Omiran, salaye……

16. Nje okankan ninu awon ebi abi ara yin (boya ebi yin kekere abi ninla) ti ni aisan iko-ife ri bi? 1. Beeni ☐ 2 Beeko ☐

17. Nibo ni e ma nlo lati gba itoju? 1. Ile-iwosan Ijoba ☐ 2. Ile iwosan-aladani ☐
3. Ile-igboogun ☐ 4. Omiran (Saleye……)

18. Nigbawo ni eberesini gba iwosan ni ile-itoju yi?.....

19.Yatosi iko-ife, nje e ma nlo oogun fun aisan miran bi?
1. Beeni ☐ 2. Beeko ☐

Tobaje "Beeko" jowo fo lo si ibeere 21

20. Tobaje "Beeni" si ibeere 20, kinni ailera naa? Saleye……

21. Bawoni e se ma nri awon oogun si aisan miran yi?

1. Nri awon oogun lati ile-iwosan 1. Beeni 2 Beeko
2. Mo rawon funra mi 1. Beeni 2 Beeko
3. Awon ebi/obi/omo mi rawon fun mi 1. Beeni 2 Beeko
4. Omiran (jowo salaye) ……

Eka D: Ero nipa awon ounti alaisan iko-ife nilo

Ifaara: Awon ibeere towa ninu ate-kinni ni oun nse pelu oun inilo fun awon alaisan iko-ife ni awujo. Fun okokan oun ini wonyi ninu ate isale yi, efi ami yi ☑ si eyi tobajemoyin abi kojemoyin.

Ate Kinni

S/No	Awon oun-inilo	Beeni	Beeko
	Nipa oro-aje/Isuna		
22.1	Ito iranlowo nipa owo		
22.2	Ito ifowopamo fun riran ara eni lowo		
22.3	Sise ona ti owo ngbawole		
22.4	Ito owo tinwole		
	Ibasepo		
22.5	Airigba iranlowo lati awujo bi motife?		
22.6	Airigba iranlowo nipa ibagbe lati owo elesin ti mo nse bi etife?		
22.7	Airigba iranlowo nipa ajosepo lati owo ebi bi etife?		
22.8	Airigba iranlowo nipa ajosepo lati owo awon ore bi etife?		
22.9	Airigba iranlowo nipa ajosepo lati owo ijoba?		
22.10	Rope wondamida temi?		
22.11	Momope ikorirami/ikeganmi ni nitori ipo mi?		
	Ilera		
22.12	Ile-itoju ti jina ju?		
22.13	Aini anfani si ayewo ilera ara?		
22.14	Itoju-ilera koye fun inilo awon alaisan iko-ife		
22.15	Eto-ilera tiwonju/gajaralo?		

22.16	Kosi awon ile-itoju ilera ni agbegbe?		
22.17	Awon eleto ilera tisanju/tidaju ju?		
22.18	Awon eleto ilera kifunwa ni ikobiorasi toye?		
22.19	Awon eleto-ilera kifuni ni iroyin tokun?		
22.20	Momope ikorira ni?		
	Ounje-jije		
22.21	Aini eniyan to dangajia ti yio se ounje funwa?		
22.22	Inu kodun si imototo ayika ibigbogbo ti wonti nse ounje fun yin?		
22.23	Ini anfani lati ri/je awon ounje gidi?		
22.24	Inira ati ri ounje emeta je lojumo?		

Eka E: Awon ise tianse ti o nmun ounti anje wa

Ifaara: Ate-keji ni ato awon ise tianse ti o nmun ounti anje wa (biose nsise si). Fun okokan ibeere, maaki ☑ boya si iko-ife, ositunlese funra alarare abi enikan ma nbaose won

Ate-keji

23.1	Funpe arami koya, molese awon nkan timoma nse ni enu ise	Beeni	Beeni
23.2	Funpe arami koya, molese awon nkan ti mo ma nse ni ile		
23.3	Miole sese dede mo, sugbon mole toju arami ni ile		
23.4	Monilo iranlowo ni ekokan (apere bi kinfelo segbonse, kinfe wo aso)		
23.5	Monilo iranlowo latitoju ara mi ni ojo-kookan.		
23.6	Ori beedi ni mo ma nwa fun gbogbo ojo		
23.7	Mole dajade lo latira nkan abi lo si oja latilora awon nkan ti mofe funra mi		
23.8	Nkole darin ninu ile laijepe mori oluranlowo		
23.9	Molegba awon ayika mi laini iranlowo abi oluranlowo		
23.10	Monilo iranlowo latilo awon ibitojina abi rinrin-ajo		

Eka E: Ifarahan si iranlowo nipa ibasepo

Ifaara: amanife si bi iru ero yin si awon gbolohun ni ate-keta. Fun okokan, so ero yin si nipa mi maaki ☑ boya figbogbo aramo, faramo, kodaju, miofaramo abi mokoojale.

Ate-keta

S/No		Figbogbo aramo	Faramo	Kodaju	Miofaramo	Mokoojale
24.1	Enikan ma nwa nile lati ranyin lowo latise awon nkan					
24.2	Enikanwa nile ti mo ma nbaso awon idunnu ati ibanuje mi					
24.3	Awon ebi mi ma nranmilowo lati bori awon ipenija ti monkoju nipa ailera yi					
24.4	Ebi mi ma nfunmi ni iranlowo nipa ifokanbale					
24.5	Moni enikan pataki tomanje ifokanbale funmi					
24.6	Oko/iyawo mi kofunmi ni iranlowo Kankan					
24.7	Mole gbokanle awon egbonmi okunrin/obinrin nigbati mobani iranlowo owo					
24.8	Moleso nipa awon ipenija mi fun awon obi mi					
24.9	Awon omo mi je orisun iranlowo					
24.10	Awon ebi mi pamiti nitori aisan mi					
24.11	Ebi mi ninla kofe lati ranmilowo					
24.12	Awon alabagbemi kofe sunmomi mo					

Eka F: Iru ifanimorairanlowo nipa ibasepo, awon orirun won ati bosekun ojuosuwon si

Ifaara: Ate-kerin ni oniruru iranlowo ni ona itura eni ninu. Fun okokanmaaki ☑ si okokan ninu ebi ti opesi iru eyi

Ate-kerin

S/№	**Awon iranlowo nipa ibasepo si ibale okan**	**Awon ebi mi ni o pesere**								
		Baba	**Iya**	**Egbon okunrin**	**Egbon obinrin**	**Oko**	**Iyawo**	**Awon omo**	**Aburo baba/iya loninrin**	**Awon yoku**
25.1	Dunmi ninu nigbati inu mi baje									
25.2	Ma nbamisoro kinle ba gbagbe ironu mi									
25.3	Ma ngba adura pelu/fun mi									
25.4	Ma ngbami nimoran nigba ti iwulore batunde									
25.5	Kiifimi sile nikan									
25.6	Ma npese awon nkan ti mo nilo funmi									
25.7	Ma nranmi leti ojo timo ni ile iwosan									
25.8	Ranmileti lati ma lo oogun mi									
25.9	Ma nranmilowo latise awon nkan ti mikolese si ipa aisan mi									
25.10	Ma nje ki okan mi bala									
25.11	Ma nje ki inu mi kodun									
25.12	Ma nje ki won feran mi									
25.13	Ma nje kinro pe atunse situn wa si ipo mi									

Eka G: Iru awon iranlowo nipa ibasepo si ibale okan ati bosekun ojuosuwon si

Ifaara: Ate-karun ni oniruru iranlowo siIru awon iranlowo nipa ibasepo si ibale okan lati owo okereju enikan ninu ebi okokanmaaki ☑ latifi kikajure iranlowo (**Jowo maaki ☑ siidahun tise regi ti o bayin mun**)

Ate-karun

S/No	Awon iranlowo nipa ibasepo si ibale okan	Ero bosekun ojuosuwon si		
		Kokoju osuwon	**kojuosuwon**	**Kosinibe rara**
26.1	Ma nfunmi ni ifokanbale okan			
26.2	Ma nkunmi lowo			
26.3	Ma ngbami nimoran pe ongbogbo yio dara			
26.4	Ma nfiidamiloju pe yo san ti mobati nlo awon oogun mi			
26.5	Kiifi iyasoto/pamiti-segbekan			
26.6	Awon ebi ma nyeba lati toju mi nitori aisan mi			
26.7	Ma nfi arabale lati toju nkankinkan tobasuyo nipa ti temi			
26.8	Ma ngbamini imoran ni gbogbo igba			
26.9	Ma nfi aayesile funmi ti tinbati nilo won			
26.10	Pegan mi timbati sasise			
26.11	Ma nso otito funmi bosewule kori			
26.12	Ma nje ki n niyi			
26.13	Ma ngba gbogbo asisemi mora nitori aisan mi			
26.14	Ma nfe sinwin pelumi tinbati se asise			
26.15	Ma ntomisona pelu ife			

Eka Gb: Iranlowo nipa isowona ati isuna

Ifaara: Ate-kefa ni ounse pelu orisirisi siseto iranlowo nipa isowona ati isuna. Fun okokan, maaki ☑ iru eniyan inu ebi re tosewon

Ate-karun

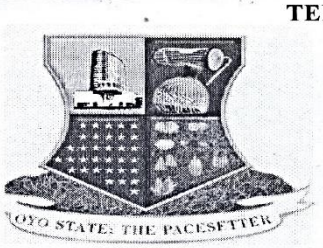
S/No	Awon iranlowo orisirisi nipa siseto iranlowo nipa isowona ati isuna	Awon ebi mi nima npese eyi. E le maaki eyi toju enikan ninu ebi yin tima npese eyi boselewu kori								
		Baba	Iya	Awon omo	Aburo baba/ iya kunrin	Aburo baba/ iya binrin	Oko	Iyawo	Awon omo iya mi	Awon yoku
27.1	Owo latije ounje									
27.2	Owo lati losi ile-itoju									
27.3	Owo latira awon oogun miran									
27.4	Owo latira kaadi-ipe									
27.5	Owo latisan owo-ile									
27.6	Owo latisan owo ile-iwe									
27.7	Owo latise awon ayewo miran ki ara aiya komobaa yowo-lile									
27.8	Owo fun igbayegbadun mi									
27.9	Owo fun aso rira									
27.10	Owo idakonko fifuni fun nina									

Modupe lowoyin fun kikopa ninu iwadi tose pataki yi.

Appendix IV

Ethical Approval

TELEGRAMS…….. **TELEPHONE……..**



MINISTRY OF HEALTH

DEPARTMENT OF PLANNING, RESEARCH & STATISTICS DIVISION

PRIVATE MAIL BAG NO. 5027, OYO STATE OF NIGERIA

Your Ref. No. ……..
All communications should be addressed to
the Honorable Commissioner quoting
Our Ref. No. AD 13/ 479/____ October, 2015

The Principal Investigator,
Health Promotion and Education,
Faculty of Public Health,
College of Medicine,
University of Ibadan.
Attention:Odega Rosemary

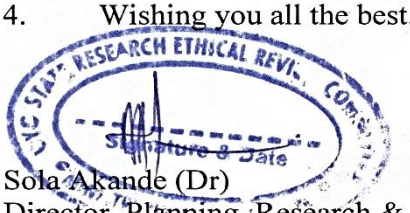
ETHICAL APPROVAL FOR THE IMPLEMENTATION
OF YOUR RESEARCH PROPOSAL IN OYO STATE

This is to acknowledge that your Research Proposal titled: "Perceived Social Supports Received from Family Members and Functional Status of Tuberculosis Patients in Selected Tuberculosis Treatment Centres in Ibadan." has been reviewed by the Oyo state Review Ethical Committees.

2. The committee has noted your compliance. In the light of this, I am pleased to convey to you the full approval by the committee for the implementation of the Research Proposal in Oyo State, Nigeria.

3. Please note that the National Code for Health Research Ethics requires you to comply with all institutional guidelines, rules and regulations, in line with this, the Committee will monitor closely and follow up the implementation of the research study. However, the Ministry of Health would like to have a copy of the results and conclusions of findings as this will help in policy making in the health sector.

4. Wishing you all the best.



Sola Akande (Dr)
Director, Planning, Research & Statistics
Secretary, Oyo State, Research Ethical Review Committee