

# **Illiterate Effects and Management of Tuberculosis in the Lower Benue through of West African Sub-Region**

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## **Abstract**

Tuberculosis is an airborne disease and the most common cause of death. People believed person charms other people with tuberculosis. However, whether tuberculosis originated in bovines, or diverged from a common ancestor, is currently clear that tuberculosis is curable. In this study a descriptive survey research design involving the collection of tuberculosis response data from Community, Health Staff, tuberculosis Supervisor, and Community Stakeholders on tuberculosis treatment in the Council were adopted. The survey seeks to evaluate the factors associated with compliance, treatment and awareness of risk factors of tuberculosis in Oyi LGA of Anambra State, Part of the population would be studied and finding is generalised. Instrument for data collection is questionnaire and the result obtained were analysed. The study found that the state agency is operational ready for tuberculosis operation in the LGA. Moreover, no logistics at the community level for drug distribution to villagers. Therefore, communities are not prepared for effective tuberculosis treatment and it problems. The agencies are not properly co-ordinate at the village level. These have negative impact on donor agencies. Thus the community should be overhauled and facilities put in place for detection, identification and administration of the drug.

**Keywords:** Agency, Community, Health, Tuberculosis.

## **1 Introduction**

Oyi is a Local Government Area of Anambra State, southeastern Nigeria. Oyi Local Government Area is in the north senatorial district of Anambra state. Oyi Local Government Area was created in 1983. It took its name from the pacific and famous Oyi River that flows northwards into Ànyịm Oma Mbala (Anambra River). It was carved out of the former Anambra Local Government Area with its headquarters at Nteje. Oyi Local Government Area shares boundaries with Onitsha North Local Government Council, Idemili North Local Government Council, Dunukofia Local Government Council, and Anambra East Local Government Council. Oyi is in the epicenter of the present Anambra

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State and was first created by the Civilian Administration of Chief Jim Ifeanyichukwu Nwobodo in the 1980s with Umuoya as its Headquarters.

It has a land area of approximately 136sq kilometres with projected population of 168,201 people (NPC, 2006). It is one of the largest local government areas and is made up of five autonomous communities with 15 wards. The autonomous communities are Awkuzu, Nkwelle, Nteje, Ogbunike, and Umuoya. Oyi Local Government Area has about 45 primary schools, 10 secondary schools, and 13 recognized private commercial/vocational schools.

Oyi Local Government Area hosts the Tansian University, Diocesan Retreat Centre Ugwunche (Anglican Communion and NYSC Orientation Camp, Umuoya; St Monica's College (formerly, Teachers Training College), and Ogbunike Cave, Ogbunike; Anambra Integrated Agric Farm, St. Christopher Juniorate, Trans Nkisi Housing Estate 33 and St Stephen's Catholic Brotherhood, Nkwelle-Ezunaka (near the Basilica of Holy Trinity, Onitsha); Marist Comprehensive College, and Emeka Okuku Ultra-Modern Poultry Farm Nteje. . Oyi Local Government Area the people are blessed with enviable cultural heritage which has been compromised by the increasing influence of modernity and urbanization, they are proud of their culture. They are also annual festivals like Emennwafor festival Ogbunike that is celebrated after every planting season, Ikpuisi Ogbo festival Nteje that is celebrated to remind the adult members of the community who have not married or built a house that a fool at forty is a fool forever, Mmili festival Nkwelle, Isigwu festival Umuoya that is celebrated in honour of the deity Isigwu, etc.

Oyi Local Government Area is blessed with rich soil, which supports Agriculture. The populace is predominantly Yam and cassava farmers and therefore produces a lot of cassava fufu along with other food crops such as cocoyam, maize, plantain, banana, orange paw-paw coco-nut, mango, bitter-leaf, goat and poultry are also reared in subsistence and commercial quantities like Emeka Okuku farm, at Nteje, etc Onwudiwe's farm at Ogbunike etc. There are many co-operative activities handling commercial and agricultural concern including fish farming.



Figure 1: Map of Nigeria Showing Anambra State.



Figure 2: Map of Anambra State showing the Council Area

Tuberculosis (TB) is an infection caused by slow-growing bacteria that grow best in areas of the body that have lots of blood and oxygen, (World Health Organization 2010). That's why it is most often found in the lungs. This is called pulmonary TB. But TB can also spread to other parts of the body, which is called extra pulmonary TB. According to Dolin, et al (2010), Tuberculosis may infect any part of the body, but most commonly occurs in the lungs (known as pulmonary tuberculosis). Extra pulmonary TB occurs when tuberculosis develops outside of the lungs, although extra pulmonary TB may coexist with pulmonary TB. If a tuberculosis infection is active, it most involves the lungs. Symptoms include chest pain and a prolonged cough producing sputum. Occasionally, people may cough up blood in small amounts, and in very rare cases, the infection may erode into the pulmonary artery, resulting in massive bleeding (Rasmussen's aneurysm). Tuberculosis may become a chronic illness and cause extensive scarring in the upper lobes of the lungs. The upper lung lobes are more frequently affected by tuberculosis than the lower ones, Dolin, et al (2010).

Jindal, (2011) states that 15–20% of active cases; the infection spreads outside the lungs, causing other kinds of TB. Golden MP, et al (2005), maintained that these are collectively known as "extra pulmonary tuberculosis" Extra pulmonary TB occurs more commonly in immunosuppressed persons and young children. Extra pulmonary infection commonly sites include the pleura (in tuberculous pleurisy), the central nervous system (in tuberculous meningitis), the lymphatic system (in scrofula of the neck), the genitourinary system (in urogenital tuberculosis), and the bones and joints (in Pott's disease of the spine), among others. When it spreads to the bones, it is also known as "osseous tuberculosis". Kabra, et al.(2006). An ulcer originating from nearby infected lymph a node is painless, slowly enlarging and has an appearance of "wash leather".

Burkitt, et al (2007), opined that a potentially more serious, widespread form of TB is called "disseminated" TB, commonly known as miliary tuberculosis. He maintained, Miliary TB makes up about 10% of extra pulmonary cases.

## **2 Materials and Method**

The sample for the study consisted of 583 male and female respondents from five communities in Oyi Local Government Area. Ten percent of the accessible populations were used as sample size. Multi-stage sampling procedure was used for the study. In stage one, all the people in Oyi Local Government Area were clustered into five representing the five communities in Oyi Council Area. In stage two, all the towns were listed out three were randomly drawn using simple random sampling technique by balloting with replacement. In stage three, male and female respondents were chosen from each of the three towns. Non-probability (chance selection) was used in selecting the persons. At the end, 583 respondents were selected and used for the study. The instrument used for data collection was structured interview Protocol. The researcher following review of related literature and personal experiences developed the instrument. Structured interview was used because some of the respondents are illiterates.

The interview protocol was in four sections. Section "A" contained three questions on background information of the respondents. Section "B" contained ten questions on modes of infection of tuberculosis

Section "C" contained ten questions on Use of Tb drugs in treatment of tuberculosis. Section "D" contained ten questions on Use of Medication in the management of tuberculosis. All questions are close-ended

Five hundred and eighty three copies of the structured interview protocol were distributed to male and female respondents in the five communities of Oyi Local Government Area by the researcher and trained research assistants and community town crier who worked in pairs. Distribution and collection of the instrument lasted for three weeks.

Data collected were analysed using descriptive statistics of frequency, percentage and grand mean as well as inferential statistics of chi-square. Percentages were used to answer the research questions while the null hypotheses were tested using  $\chi^2$  (chi-square) at 0.05 level of significance. Appropriate degrees of freedom were used.

## **3 Discussions of the Results**

The socio economic characteristics of the respondents are presented in the following figures: Figure 3 shows the male accounted for 48 percent while 52 percent were female. The high percentage of the female is as a result of sampling of the entire household without exempting any member of the household. Figure 4, shows the age range with the highest frequency is 41 – 50 years which accounted for 40 percent of the respondents while those above 51 years and above accounted for 7 percent. The average age in the study area is 41 years. This implies that respondents are in their active age and therefore can work to earn, more income which can affect their decision to take proper care of their household health.

Figure 5 show the proportion of the married in the study area is 69 percent which may therefore encourage the willingness to treat illness of the members of their household. Figure 6 shows about 13 percent of the respondents represent those without formal education while only 2 percent of the respondents had Tertiary education. The mean years of education in the study area is 6 years. This revealed that a typical household in the study area had at least six years of formal education. Education helps to enlighten the respondents on the need to keep our environment clean, free from germs and healthy for all. Figure 7 show that primary occupation of the respondents revealed that 37, 30 and 22 percents engaged in farming, business and civil service respectively while only about 6 and 5 percents were dependants and students respectively.

The general method of management of tuberculosis, its reliability as well as the frequency of treatment of tuberculosis is presented in these figures. Figure 8 shows the result revealed that 32 percent of the respondents claimed that immune status of the exposed individual determines tuberculosis infection especially if the immunity is very low. On another hand, 23 percent of the respondents believe that the infectionness of the person with tuberculosis determines its transmission to other person that come in contact with or closer to him. However, 27 percent of this category indicated that it is the proximity; frequency and duration of exposure while 18 percent of the respondents claimed that environmental factors that affect the concentration of the Tb organisms.

Figure 9, shows the frequency of level of awareness of route of discharging mycobacterium organisms (Bacilli) showed that 14 percent agreed that when affected person shouts, tuberculosis infectious organisms are released. About 24 percent of the respondents believed when affected persons sneezes tuberculosis infectious organisms are discharged. 23 percent agreed that when affected person cough tuberculosis infectious organisms are released. And 19 percent agreed that when affected person sings tuberculosis infectious organisms are released. Given this result, respondents are encouraged to cover their mouths for improved, prompt and regularly.

Figure 10 present the level of awareness of the symptoms of tuberculosis identification and the willingness to treat the household member. The result revealed that 34 percent claimed that a bad cough that last for three weeks or more with pain in the chest is one of the symptoms, 24 percent claimed that coughing up sputum or blood or bloodstain; 19 percent claimed that Fever and sweating at night; 12 percent claimed that weakness or fatigue and weight loss; no appetite and chills respectively. This is an indication that majority of the respondents are already aware of the symptoms of tuberculosis and can identify a tuberculosis patient. Figure 11 present Level of awareness of modes of transmission of tuberculosis base on the level of their education. The result showed that those respondents that attained Tertiary education is 41 percent which means that their academic qualification enlightened them to be able to identify that all actions in Figure 10 are tuberculosis symptoms, Secondary education which is 19 percent of the respondents believed that it is only a bad cough that last for three weeks or more with pain in the chest and coughing up sputum or blood or bloodstain is the symptoms, while those with non-formal and primary education which is 23 and 17 percents of the respondents respectively believe it is only a bad cough that last for three weeks or more with pain in the chest. Given the disadvantages that 40 percent of households in the study are not fully aware of the symptoms of tuberculosis. This contribute to fact that most of the respondents in this category may be suffering from tuberculosis disease without willing to assess medical treatment from the Health facilities. Thereby seeking medication where not necessary and at the same time receiving wrong treatment at the wrong place.  $\chi^2 = 1.96$ ,  $\chi^2$  at 0.05 =

12.59  $df = 6$ ,  $p < 0.05$  see Appendix D for the test of hypothesis vii since  $\chi^2$  calculated of  $1.96 < \chi^2$  table of 12.59, the null hypothesis ( $H_0$ ) is accepted and so it is calculated that there is no significant relationship among respondents in Oyi North Local Government Area on their level of Education.

Figure 12 reveals the Level of awareness of management of tuberculosis base on the respondent's gender and there is no significant relationship between male and female in Oyi Local Government Area in their level of awareness of management of tuberculosis by gender. It shows that 6 percent male possessed high level of awareness, 8 percent possessed moderate level of awareness while 24 percent possessed low level of awareness based on their gender and the total percentage of male is 39 percent; 13 percent possessed high level awareness based on their gender, 15 percent possessed moderate level of awareness while 33 percent possessed low level of awareness and the total percentage of female is 61 percent.  $\chi^2 = 5.22$ ,  $\chi^2$  at 0.05 = 7.83  $df = 3$ ,  $p < 0.05$  see Appendix C for the test of hypothesis since  $\chi^2$  calculated of  $5.22 < \chi^2$  table, the null hypothesis ( $H_0$ ) is accepted and so it is calculated that there is no significant relationship among respondents gender in Oyi North Local Government Area in their level of awareness of management of tuberculosis.

Figure 13 reveals Tuberculosis is spread from person to person through the air. The dots in the air represent droplet nuclei containing tubercle bacilli.

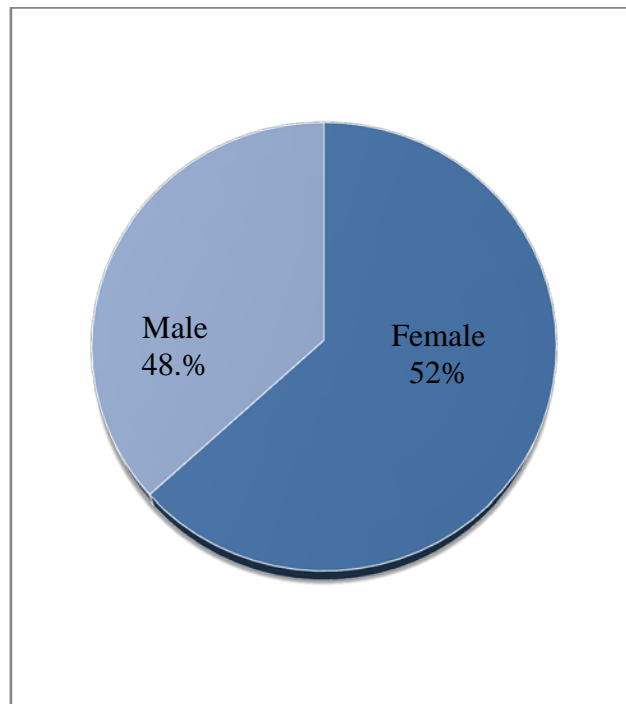


Figure 3: Distribution of respondent's gender

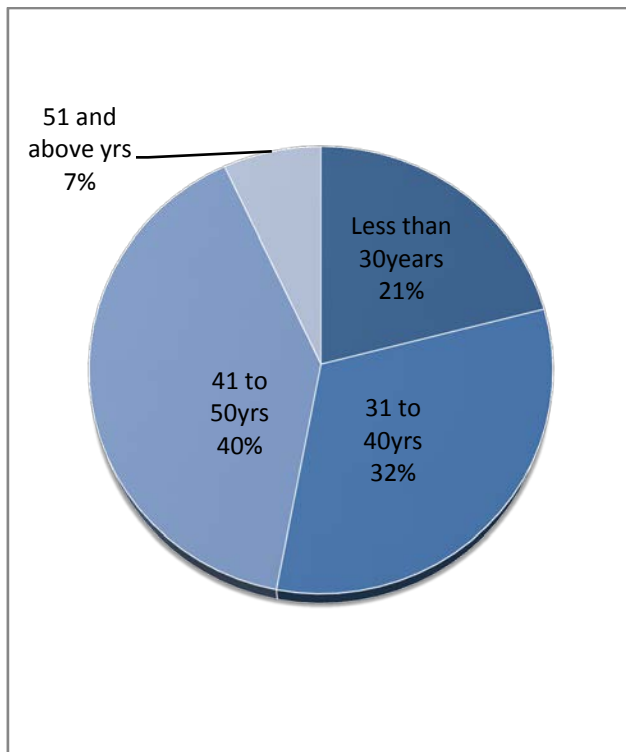


Figure 4: The respondents' age distribution

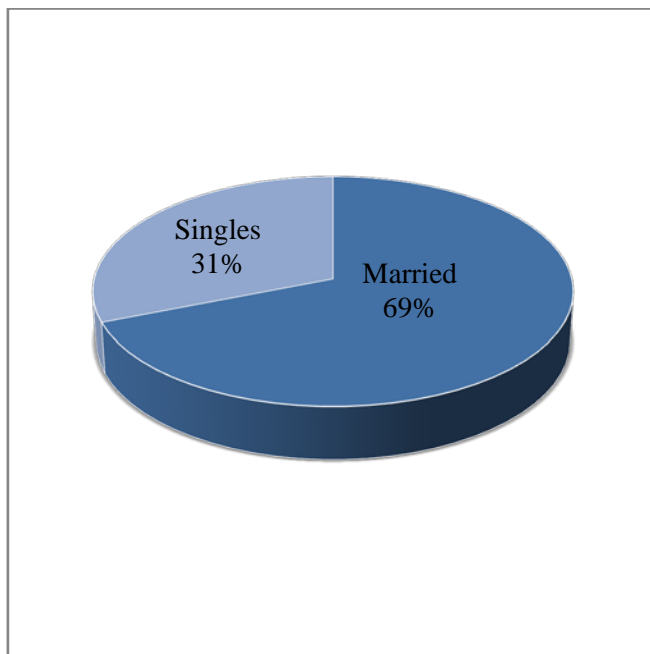


Figure 5: The proportion of the married in the study area

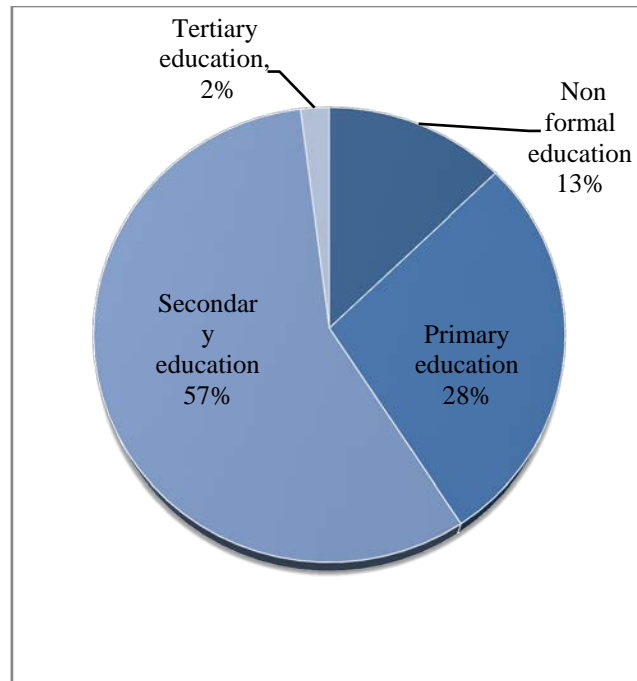


Figure 6: The respondents' level of education

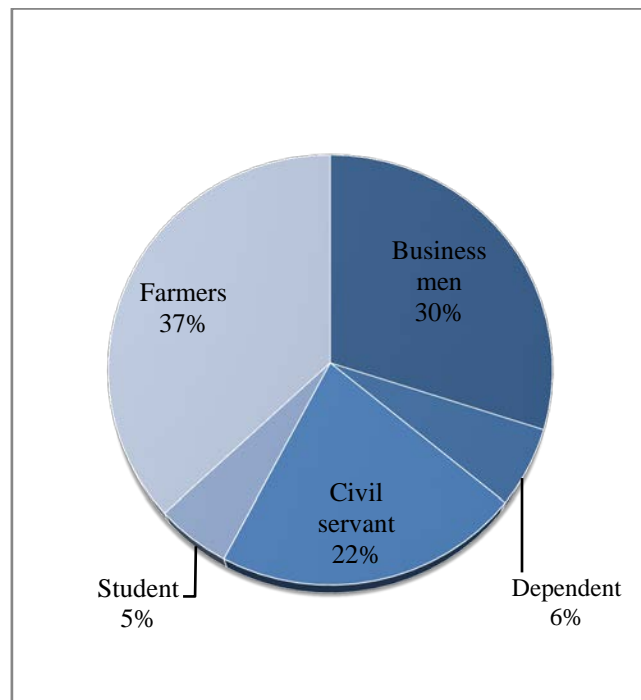


Figure 7: The respondents' occupation



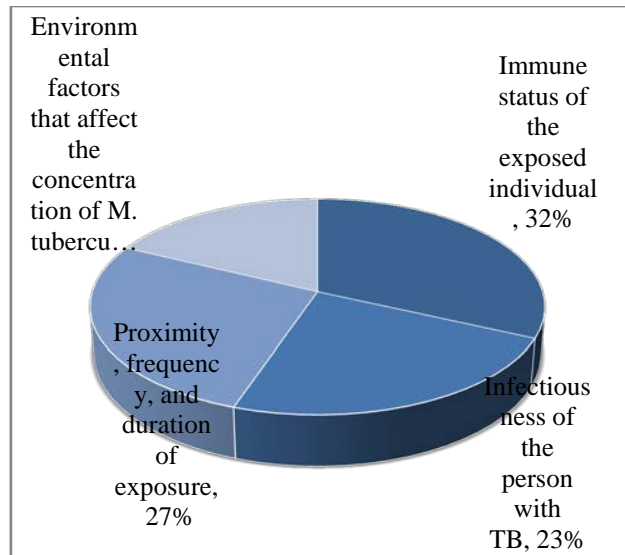


Figure 8: Level of awareness of mode of transmission of tuberculosis

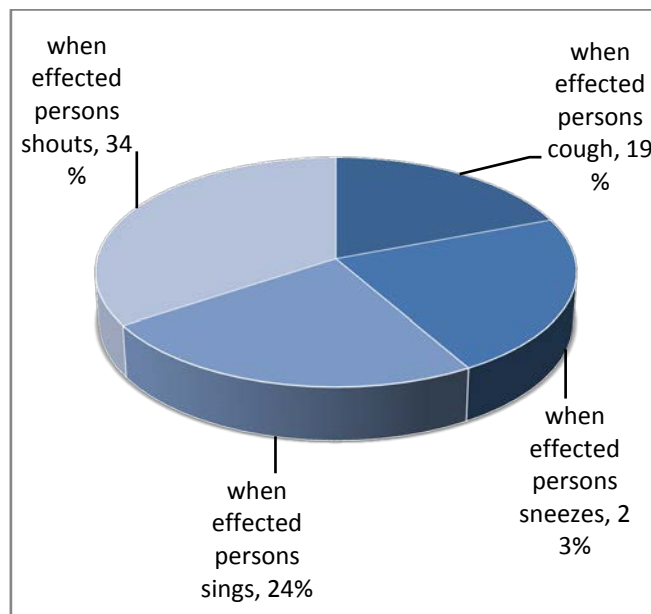


Figure 9: Level of awareness of route of discharging of tuberculosis organisms

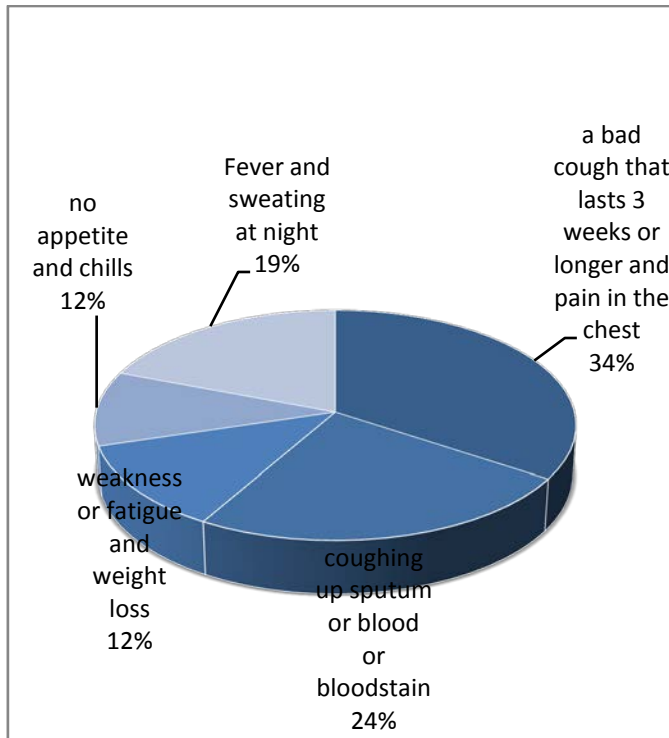


Figure 10: Level of awareness of symptoms of tuberculosis

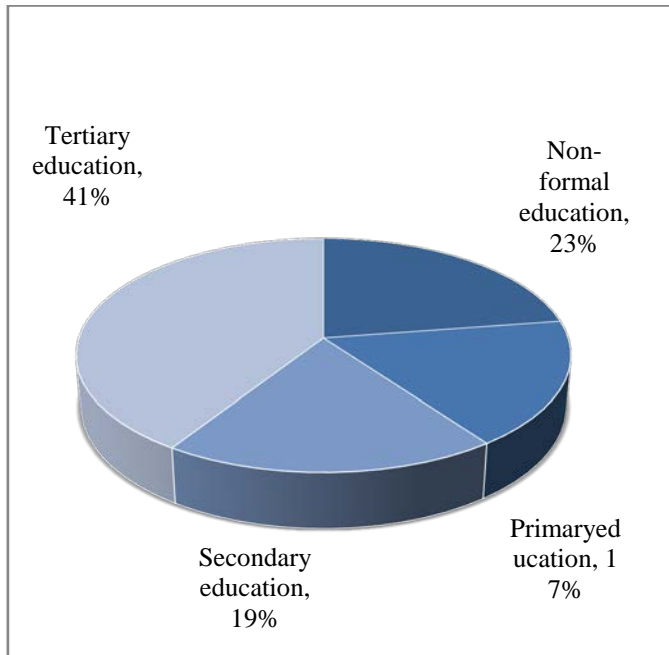


Figure 11: Level of awareness of mode of transmission of tuberculosis base on the level of their education

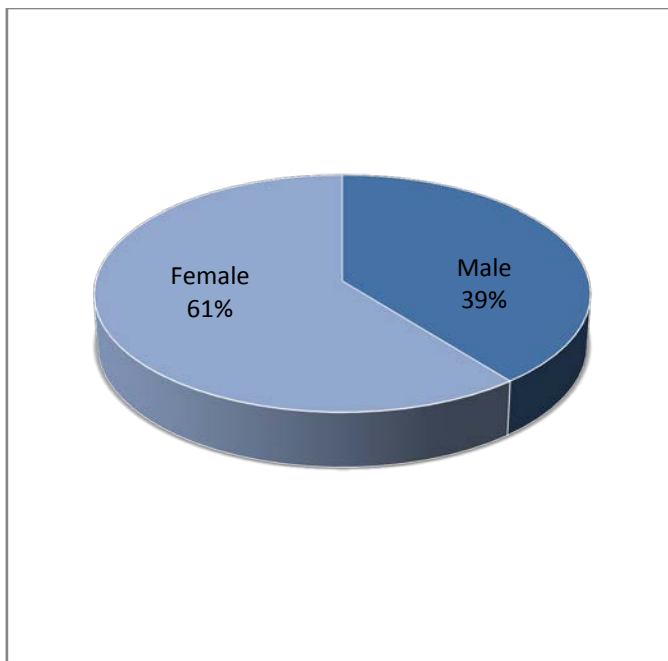


Figure 12: Level of awareness of mode of transmission of tuberculosis base on gender

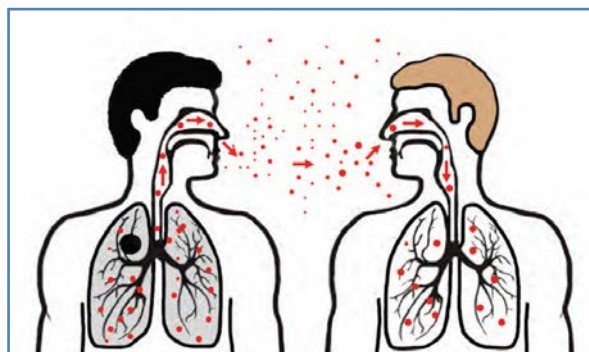


Figure 13: Transmission of Tuberculosis.

#### **4 Conclusion and Recommendations**

The study revealed that knowledge of tuberculosis is not a new idea in the study area, however, majority of the respondents have low level awareness of management services available, particularly when it is going to be an improvement on the existing means of services. Sex, education and household awareness of symptoms of tuberculosis were discovered to be determinants of household willingness for improved management services in the study area. It is recommended that programmes facilitating public awareness of signs and symptoms of tuberculosis; availability of health facilities for treatment and management of tuberculosis be initiated while patients should be made to know that treatment of tuberculosis is free of charge. Directly Observed Treatment short

(DOTS) treatment and microscopic centres should be created and TB care units should be created in the various localities of the community. This will encourage those households that are willing to receive treatment. In addition, public enlightenment campaign through mass media could also be adopted in order to properly inform the citizens on the need to receive treatment at the health centres and government hospitals. Moreso, make entire residents know that tuberculosis is not a curse nor a punishment from the gods neither is it a hereditary disease, however, tuberculosis is completely curable. Health worker or community volunteer should be trained as a DOT provider.

TB is spread through the air from one person to another. The Tuberculosis bacteria are put into the air when a person with Tuberculosis disease of the lungs or throat coughs, sneezes, speaks, or sings. People nearby may breathe in these bacteria and become infected.

Tuberculosis is NOT spread by

- shaking someone's hand
- sharing food or drink
- touching bed linens or toilet seats
- sharing toothbrushes
- kissing

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