



Awareness Of Tuberculosis Transmission And Prevention In Ahoada Town In Ahoada East Local Government Area Of Rivers State

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ABSTRACT

This study examined tuberculosis transmission mode awareness in Ahoada town in Ahoada East Local Government Area of Rivers State. The research design used was descriptive survey. The population for this study was estimated at 12,171 based on NPC 2016 projected population of Ahoada East LGA. A sample size of 243 persons was selected using simple random sampling technique. A self-structured questionnaire was used to collect data for the study. Analysis of the data was done using simple percentages. Results of the study showed that male are unable to combat the deadly disease due to fearful nature of it, helpless and apprehensive, while coughing people with it are not able to think of solution of adaptive measures in combating the disease. On the part of the females, they bear the bronze because they do not have the stamina to withstand the stress unlike their male counterparts, hence they are more involved in death than the males. Another finding indicated that the disease is a bed predictor due to the level of unperceived preparedness, previous exposures of victims are significant to this regards, so it was concluded that females are more affected with the deadly disease than males and this indicate that there is no significant difference between males and females having preventive measures towards enhancing tuberculosis in the Local government. Several recommendations were made among which are: Government to promote more sensitization campaigns in the State on transmission of tuberculosis, and establish more health centers/hospitals in Ahoada town due to her thick population; tuberculous patients should not be stigmatized within the family circles; the inhabitants of Ahoada town should accord high priority towards immunization against tuberculosis; and companies operating within the communities should be integrated in respect of projects geared towards the modification of tuberculosis transmission in Ahoada town..

Keywords: Awareness; Tuberculosis; Transmission Mode; Ahoada Town

INTRODUCTION

The pre-historic era and modern man from every society has always attached high priority to human health. A universally accepted maxim has it that a healthy man is a happy man, in the same way as a healthy society is a happy one. Tuberculosis is one of the deadly diseases that plague our contemporary society. Thus every society strives to apply precautionary measures towards curbing the transmission mode of tuberculosis. In Africa and other continents from the distant past, tuberculosis has been a dreaded, deadly bacterial disease claiming a very high death toll across the globe (Zumia & Lawn, 2011). In some of the pre-colonial African societies including Nigeria, tuberculosis was perceived as the wrath of the gods that is associated

with supernatural causes. The people resorted to oracles to provide cure for the disease. Modernization and development have greatly emasculated this antiquated belief of the disease by the people. This situation has attracted international concerted efforts to tackle the occurrence of the disease. In the contemporary society, the awareness level of tuberculosis as contagious disease has mounted over the years. This has also motivated medical scientists to invent curative drugs for the disease, being currently in existence.

Transmissions occur from only people with active tuberculosis. However, people with latent tuberculosis do not spread the disease. Each of infectious aerosol droplets may transmit the disease, since the infectious dose of tuberculosis is very small that the inhalation of fewer than 10 bacteria may cause an infection. When people with active pulmonary tuberculosis cough, sneeze, speak, sing, or spit, they expel infectious aerosol droplets of 0.5 to 5.0µm in diameter; and a single sneeze can release up to 40,000 droplets (Behera, 2010; Elegonye, 2008) Notable extra pulmonary infection sites with 15-20% of active cases of tuberculosis includes: the pleura (in tuberculosis pleurisy), the central nervous system in tuberculosis meningitis, the lymphatic system (in scrofula of the neck), the genitourinary system (in urogenital tuberculosis) and the bones and joints (in Potts' disease of the spine) among others (Bekker, Hawn, Day & Evans, 2014). Those with prolonged, frequent or close contact with people with tuberculosis are at particularly high risk of becoming infected with an estimated 22% infected rate. A person with active but untreated tuberculosis may infect 10-15 or more other people per year. The cascade of person-to-person spread can be circumvented by segregating those with active (overt) tuberculosis and putting them on anti-tuberculosis drug regimens. (WHO, 2006a) The causative agent of tuberculosis is *Mycobacterium Tuberculosis* (MTB), which is a small aerobic non-mobile *bacillus*. The Mycobacteria Tuberculosis Complex (MTBC) includes four other tuberculosis-causing mycobacteria (*Mycobacterium bovis*, *Mycobacterium africanum*, *Mycobacterium canetti*, and *Mycobacterium microti*) (Behera, 2010).

According to the World Health Organization (WHO, 2002), the US National Health Interview Survey stipulates that one-third of rural habitants in China were not aware of the main tuberculosis symptom; this lack of knowledge could delay or prevent suspected infected people from seeking medical care. Some health practitioners expressed opinions that tuberculosis patients should be isolated. However, in Karnataka, nearly four-fifths of Doctors and Nurses were of the opinion that tuberculosis patients should not be isolated from society (Lu et al, 2009). This has become necessary to provide health education programmes with information on the mode of transmission of the disease and to develop a series of policies and measures to fight against tuberculosis in China. China's Ministry of Health (2015), x-raying or auditing the effectiveness of a National Tuberculosis Prevention and Control Plan between 2011 and 2015 noted that a public awareness of infectious diseases played an important role in disease control; a lack of reasonable knowledge of infectious diseases leads to low detection rates, the interruption of treatment, discrimination and stigma. Liu et al. (2011) study stated that infections with the human immunodeficiency virus, tuberculosis (TB) and hepatitis B virus infection are major public health problems in many parts of China. In China, approximately 780,000 people live with human immunodeficiency virus; 26,000 died from Acquired Immune Deficiency Syndrome in 2009, while 4.5 million Chinese have been infected with active pulmonary tuberculosis, 1.5 million of whom are smear-positive; meanwhile 120 million people have been chronically infected with HBV, and more than 300,000 people die from HBV-related diseases every year.

Prevention of tuberculosis involves screening those at high risk, early detection and treatment of cases and vaccination with the *Bacillus Calmette-Guerin* (BCG) vaccine. Those at high risk include persons in household, at workplace, and social contacts of people with active tuberculosis. The propensity to seek care depends on knowledge and perceived risk of tuberculosis within reference groups (families, neighbourhoods) and communities at large. As demonstrated in studies in Ethiopia, India, Mexico, Pakistan, Thailand and Nigeria, patients with low knowledge about symptoms are more likely to postpone care-seeking and get tested. Tuberculosis prevention and control efforts rely primarily on the vaccination of infant and the detection and appropriate treatment of active cases.

The World Health Organization has achieved some success with improved treatment regimens, and a small decrease in case numbers. As of 2011, the only available vaccine is *Bacillus Calmette-Guerin* (BCG). In children, it decreases the risk of infection turning into disease by nearly 60%. The vaccine is most widely used worldwide with more than 90% of all children being vaccinated. However, the immunity it induces decreases after about ten years (WHO, 2013). Anjum, Khan, Han and Abi (2005) opined that, keeping body and house clean, avoiding infected people, regular exercise, eating clean food, drinking clean water, clean dishes, eating healthy food, avoiding dusty air and stop smoking can help to prevent one from being infected. The finding indicates that Directly Observed Treatment Short Course (DOTS) if implemented effectively can achieve its targets of detection of tuberculosis among symptomatic and their treatment. In this sense, a vast majority of the Nigerian populace are warned to keep clean dwellings and environment, with a view to averting or emasculate the rate of tuberculosis transmission (Mandell, Benneth & Raphael, 2010).

Tuberculosis exists everywhere across the globe, and every country always strives to curb it. In spite of the international concerted efforts put in place to checkmate tuberculosis, it is still infecting the population to some extent. (WHO, 2013; Harris, 2013; Tamba & Sichinga, 2005) All things being equal, the extent to which the people are aware of tuberculosis transmission is also the extent to which they can apply precautionary measures to checkmate the disease. The view that most people living within the Ahoada town are not aware of the mode of transmission of tuberculosis points to the fact that they are vulnerable to the disease. It becomes expedient for the researchers to investigate the level of awareness of tuberculosis transmission mode in Ahoada town in Ahoada East Local Government Area of Rivers State.

Statement of the problem

Tuberculosis exists everywhere across the globe, and every country always strives to curb it. In spite of the international concerted efforts put in place to checkmate tuberculosis, it is still infecting the population to some extent. All things being equal, the extent to which the people are aware of tuberculosis transmission is also the extent to which they can apply precautionary measures to checkmate the disease. The view that most people living within the Ahoada town are not aware of the mode of transmission of tuberculosis points to the fact that they are vulnerable to the disease. It becomes expedient for the researchers to investigate the level of awareness of tuberculosis transmission mode in Ahoada town in Ahoada East Local Government Area of Rivers State.

Purpose of the Study

The purpose of this study is to examine awareness of tuberculosis transmission and prevention in Ahoada town in Ahoada East Local Government Area of Rivers State.

This research articulates to fulfill the following specific objectives:

1. To identify the awareness of tuberculosis generally among the people of Ahoada town.
2. To determine the awareness of transmission mode of tuberculosis in Ahoada town.
3. To ascertain the preventive measures put in place in Ahoada town against transmission mode of tuberculosis.

Research Questions

This research shall be guided by the following research questions:

1. What is the awareness on tuberculosis generally by the inhabitants of Ahoada town?
2. What is the awareness of tuberculosis transmission mode among the inhabitants of Ahoada town?
3. What preventive measures had been put in place against tuberculosis transmission mode in Ahoada town?

METHODOLOGY

Study Area: The study was conducted in Ahoada town in Ahoada East Local Government Area of Rivers State. Ahoada (Ahuda, Ehuda) is a city in Orashi Region of Rivers State, Nigeria, located northwest of Port Harcourt. Ahoada is one the industrialized town in Rivers State which lies in a geographical co – ordinate of Latitude: 5° 04' 58.08" N in the Niger Delta region of Nigeria. (South South Geopolitical

Zone). It shared common boundaries with Ula - Ehoada town in the North, Ula Upata and Ubuke Communities in the West, Edeoha town in the South and Odemeneni Community in the East respectively. The main occupations of the people are; farming, trading, self-employed, civil service, commercial and industrial activities.

Research Design: The type of research design which was adopted in this study was a descriptive survey method and it was a retrospective study that took place in February, 2022 - March, 2022 to examined awareness of tuberculosis transmission and prevention in Ahoada town in Ahoada East Local Government Area of Rivers State.

Study Population: The population of this study was 12,848 which were drawn from all the inhabitants of Ahoada town in Ahoada East Local Government Area of Rivers State who are within the age bracket of 15 - 70 years irrespective of their Sex, educational status, cultural inclination or religious denominations.

Sample Size and Sampling Technique: The sample size for this study is 360 persons which were determined by stratified random sampling, Ahoada town was grouped according to its sub-Communities: Ahoada was chosen out of these Communities by a systematic simple random sampling technique was applied to select buildings/households to study and was made realizable by balloting method which gives everyone in the study population equal opportunity of being chosen in the sample size.

Instrument for Data Collection: A self-structured, validated and pre-tested, questionnaire was the main instrument for data collection.

Method of Data Collection: The questionnaire numbering 265 copies were administered to the respondents'' directly (face-face) and are collected the same day after completion and 260 were retrieved.

Method of Data Analysis: The data obtained from the questionnaire are analyzed using statistical parameters such as frequency tables and simple percentage with the aid of SPSS, in analyzing the research questions, Pearson product moment correlation for research question 1, linear regression for research question 2 and t-test for research question.

Ethical Approval: An approval letter was received by the researcher from the ethical committee, department of public health, Rivers State College of Health Science and Management Technology, Port Harcourt that enables him to conduct research in the study Area.

RESULT AND DISCUSSION OF FINDINGS

Research Question 1: *What is the awareness on tuberculosis generally by the inhabitants of Ahoada town?*

Hypothesis 1: Is there Significant Difference of Awareness of Tuberculosis among Males and Females of Ahoada Town.

Table 1. Significance Difference between Males and Females Citizens of Ahoada Town

Variables	N	Mean	Std. Deviation	R	P	Remark
Males	360	42.555	5.324	.0111	0.35	ACCEPT
Females	360	19.354	0.532			

Significant Level (P = 0.05)

There is low negative significant difference of people or males and females awareness of tuberculosis of Ahoada town in Ahoada East Local government Area of Rivers States. Thus the higher the age of individual, the lower tuberculosis awareness among the people. Also the lower the age individual, the higher the tuberculosis awareness among the people.

Research Question 2: *What is the Mode of Transmission of Tuberculosis among the People of Ahoada Town in Ahoada East Local Government Area of Rivers State?*

Hypothesis 2: There is no Significance Difference in the Mode of Transmission of Tuberculosis among the People of Ahoada Town in Ahoada East Local Government Area in Rivers State.

Table 2: Mode of Transmission of Tuberculosis

$R^2 = 0.111$ Sum of square = 0.02 R adjusted square = 0.030 Standard error = 6.838						
Analysis of Variance						
	Sum of Squares	DF	Mean square	F	P	Remark
Regression	209.363	1	209.363	4.477	0.035	Accept
Mode of Transmission	16741.426	358	46.764			
Total	16950.789	359				
Significant (P < 0.05)						

The mode transmission of tuberculosis among the people of Ahoada town accounted for 1.2% of the total variance in the council rested on (R Square = 0.012 and level of significant is $p = 0.05$). The percentage though very low is also statistically significant. Thus, the people's mode of transmission of tuberculosis among the people of Ahoada town is an important predictor in Ahoada East Local Government Area.

Research Question 3: *What Preventive Measures of Tuberculosis Transmission among the People of Ahoada Town had been put in Place against Tuberculosis Transmission Mode in Ahoada Town?*

Hypothesis 3: There is no Significant Difference in the Preventive Measures of Tuberculosis Transmission among the People of Ahoada Town in Ahoada East Local Government Area.

Table 3: Comparison of Males and Females Tuberculosis Preventive Measures

Variables	Gender	N	Mean	SD	Std Error	D	F	T	Remark
Preventive Measures	Males	360	85.089	10.508	0.783	358	0.091	0.927	NS
	Females	360	38.814	13.747	1.024	358	-0.711	0.477	NS

There is no significant difference between males and Females people or citizens in Ahoada town.. It should be noted that some people are capable in the preventive measures than others. The mean of male and female is relatively far apart from each other and that shows administrative half score of 50 points.

DISCUSSION OF FINDINGS

On the whole, the discussion of findings appears psychological construct. This is because the male inability to combat the deadly disease due to fearful nature of it, helpless and apprehensive while coughing, people with it are not able to think of solution of adaptive measures in combating the disease, while on the part of the females they bear the bronze because they do not have the stamina to withstand the stress like the male counterpart. They are also involved in death more than the males, (Akpan & Edet, 2018). This disease is a bed predictor due to the level of unperceived preparedness, previous exposures of victims are significant to the regards. To this end, it was concluded that females are more affected with the deadly disease than males and this indicates that there is no significant difference between males and females having preventive measures towards enhancing tuberculosis in the Local government.

CONCLUSION

High level of tuberculosis affected the Local Government Area negatively and if not properly and promptly attended to, may lead to massive deaths among the people of the Area. It be inferred that one of the reasons for high level of the disease in the Area is due to lack of awareness, mode of transmission and preventive measures or techniques in tackling the disease, (Atim 2015).

RECOMMENDATIONS

Instructors and medical officers should cover important Areas to educate carriers of the disease. These will aid the carriers to build enough confidence and courage in themselves and not fear.

Government should establish more Health Centers/Hospitals in Ahoada town due to her thick population and to properly equip existing ones.

Tuberculosis patients should not be stigmatized within the family circles

The inhabitants of Ahoada town should accord high priority towards immunization against tuberculosis.

Government to promote sensitization campaigns in the state on transmission of tuberculosis.

Medical and health personnel serving in the communities should live above board in the cause of discharging their duties.

Companies operating within the communities of Ahoada town should be integrated in respect of projects geared towards the modification of tuberculosis transmission in the Area especially Ahoada town

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Questionnaire

I. Awareness of Tuberculosis Generally among inhabitants of Ahoada Town

Statement	SA	A	DA	SD	UD
Tuberculosis is seen as a deadly disease					
Awareness of tuberculosis transmission reduced its occurrence in Ahoada town.					
Sensitization increased people's awareness on transmission of tuberculosis in Ahoada town					
Modernization greatly increased awareness of tuberculosis transmission					

II. Awareness of Tuberculosis Transmission Mode by inhabitants of Ahoada Town

Statement	SA	A	DA	SD	UD
Mode of tuberculosis transmission					
Tuberculosis transmits from an infected person					
Tuberculosis spread through spit from an infected person					
Tuberculosis transmits by breathing contaminated air with the causative bacteria					
Tuberculosis spreads through sneeze from an infected person.					
Tuberculosis transmits when an infected person cough					

III. Preventive Measures Against Tuberculosis Transmission Mode in Ahoada Town

Statement	SA	A	DA	SD	UD
Health personnel in Ahoda town should provide vaccines against tuberculosis to be given to inhabitants of Ahoada town					
Suspected tuberculosis patient(s) restricted association by / members in Ahoada town					
Subjecting children to immunization against tuberculosis reduced the rate of tuberculosis transmission in Ahoada town					
Periodicscreeningcarriedoutbyhealth personnel in Ahoada town					