ISSN: 2226-8012
Volume 12, Number 2, 2025
Journal of International, Educational Research and Development

ASSESSMENT OF THE FACTORS RESPONSIBLE FOR THE REEMERGENCE OF TUBERCULOSIS (TB) AMONG PEOPLE 13-65 YEARS IN KAURA LOCAL GOVERNMENT AREA OF KADUNA STATE

Mangut M. Maren[1] & Prof. Y.G. Kojang[2]
[1]National Open University of Nigeria, Kagoro Centre
[2]Department of Physical and Health Education, University of Jos, Nigeria

ABSTRACT

Tuberculosis (TB) remain a significant public health concern in Nigeria despite sustained global efforts towards it eradication. This study investigates the key factors responsible for the re-emergence of Tuberculosis among people 13-65years in Kaura Local government Area (LGA) of Kaduna state using a descriptive survey research design, combining both quantitative and qualitative approaches data was collected using structured questionnaire administered to community members, health care workers and tuberculosis patient. Findings indicate that the reemergence of tuberculosis in Kaura Local government is a combination of socio economic, environmental and health care factors. These comprise of poverty, poor infectious control measures in the health facilities, poor health infrastructure, inconsistent drug adherence by the patients and inadequate diagnosis facilities. Couple with the above, the increased prevalence of HIV/AIDS and drug resistant TB strain is also a contributory factors to the reemergence of tuberculosis (TB) in Kaura LGA. The study recommends that Nigerian government should trained man power as well as provide modern equipment for diagnosis and treatment of TB, Nigeria should strictly adhere to the Universal health care policy which states that every one -irrespective of living standard receives health service they need and that using health service should not cause financial hardship, increasing awareness of TB and its treatment in the communities, Government should Strengthen TB Drug Resistance Monitoring, health workers should encourage people with HIV to report to health facility and treatment for tuberculosis should commend promptly and community should improve their standard of living by keying into the good economic policies of the government

INTRODUCTION

there are different types of non-communicable diseases, one of them is Tuberculosis (TB) that has re-emerged over the past two decades; industrialized countries in association with immigration, and in to the Human Immunodeficiency virus epidemic and drugs resistance (Borgdorff & Goolingen, 2013).. On a global scale, the global burden of Disease study showed that TB was among the top ten causes of mortality and health life- years lost (Borgdorff & Goolingen, 2013). The World Health Organization (WHO) said Nigeria is one of the countries with high burden of tuberculosis (TB) worldwide (Ogbo, Ogeleka, Okoro, Olunsaya, Ifegwu, Awosema, Eastwood, 2018)

Tuberculosis (TB) remains a significant public health issue in low income and middle income countries and is the leading cause of death as a single infectious disease, ranking above Human Immunodeficiency Virus and Acquired Immune deficiency Syndrome (HIV/AIDS)(Ogbo et'al 2018).

In the past two decades, WHO has listed Nigeria as one of the countries with a high burden of TB in order to stimulate targeted intervention and advocacy for funding and policies to improve TB control (Ogbo et al, 2018?)

Tuberculosis TB is a disease that has been affecting man since antiquity with some of the earliest known human isolated dating back some 400years ago (Shajahan Navaratran, Kasinthan, Kadnelu & Pillai, 2016).

It has proved to be a deadly disease, contributing to 3 million deaths annually according to recent statistics. Tuberculosis TB is a severe chronic infectious disease and is one of the ten causes of death worldwide. 2020 global tuberculosis report has shown that 9.96 million new patient with TB were diagnosed in 2019.

WHO (2024) in its New release in Washington DC; Reported that approximately 8.2 million people were newly diagnosed with TB in 2023. The highest number recorded since WHO began global TB

monitoring in 1995, this represent TB again as the leading infectious disease killer in 2003 surpassing COVID-19 ((Ogbo et'al, 2018).). WHO Global tuberculosis report 2024, highlight mixed progress in the global TB fight, with persistent challenges such as significant and defunding. while the number of tuberculosis-related deaths decreased from 1.32 million in 2022 to 1.25million in 2023, the total number of people falling ill with TB rose slightly to an estimated 10.8million in 2023 (WHO, 2024).
In 1993 World Health Organization (WHO) declared tuberculosis a global public health emergency, the only disease, so far to warrant that designation. The declaration galvanized awareness in the medical community of the magnitude of the global tuberculosis problem (Brenan, 1997)
Tuberculosis (TB) is the most challenging, infectious disease that human kind faces. It is estimated that in the last 200 years. TB has killed one billion people. Currently TB is still the main worldwide causes of death by an infectious disease (Brenan, 1997)
In 2017, there were 10.4 million new TB cases and 1.7 million related death worldwide. It affects people of all social statuses, although most TB cases occur in resources limited countries. (Ahmed, Montarola-sales, Prats, Musa, Lopez, and Casanovas- Garcai, 2018).
Laminu Musa & Olowolafe (2023) reported that from 2006-2020 , 6325 TB cases were documented among the general population in Kaduna state 5811 were declared cured, 481 were certified death, 133 were lost to follow up, 362 were TB/HV co-infected, 10 cases were reported among Health care workers out of which 7 cases were declared cured and 3 were certified death.
Nigeria has an estimated incidence rate of at least 10,000 cases per year. The prevalence rate of tuberculosis and TB/HIV co-infection in Nigeria was reported to be around 219/100,000 and 111/100,000 population(Laminu, Musa & Olowolafe, 2018)..
Despite the incidence of TB is in a decrease in some parts of the world include Asia and the Western Pacific, African was reported to have a 1.3 million incidence rate in 2013 this out of control in the region. Nigeria alone have an estimated annual new TB case of 590,000 Nosocomial transmission also referred to as hospital-acquired infection (HAIS) in the transmission of infectious disease from infected patient to susceptible healthcare in the countries with poor implementation of hospital infection control (Laminu, Musa & Olowolafe, 2018).
Tuberculosis (TB) remain a significant public health issue in low income and middle-income countries in Nigeria and is the leading cause of death as a single infectious disease ranking above-human immune deficiency virus and acquired immune deficiency syndrome (HIV/AIDS) (Ogboet'al, 2018).
Uduu (2023) stated that Nigeria is ranked sixth nation with the highest number of TB case globally. The country in 2021 contributed to 44. Percent to the total TB cases globally. Data from WHO show that two thirds of the global TB cases are found in eight countries. Uduu(2023) said these countries are India (28%) Indonesia (9.2%), China (7.4%) the Democratic Republic of the Congo 2.9%.
These reports highlights the considerable burden of TB globally for example, the WHO African region accounted for 25% of total number of incidence cases, (i.e. TB-Negative and TB-HIV Infection globally, where Nigeria accounted for 8 % or 407 cases per 100,000 population in 2016.(Ogbo et'al, 2018). Up from 322 cases per 100,000 populations in 2015; these estimates may be lower than the actual number of TB cases in Nigeria because only less than a quarter of TB cases (13%) were notified in 2015 (Ogbo et'al, 2018).
Tuberculosis (TB) had an estimated global incidence of approximately 8.7 million cases in 2011 and caused 1.4 million death Borgdorff & Goolingen, 2013)
The World Health Organization (WHO) Global Tuberculosis report 2017 reported 6.3 million new cases of TB among HIV negative people in 2016, compared to 6. 1 million in 2015; Similarly in another related report, the global burden of disease, injuries and risk factors (GBD) 2016 estimated 9.0 million to 8.8 million in 2025 (Ogbo et'al 2018).
Nigeria experienced an increased incidence of TB from 2000 to 2021; the number of TB incidence increased from 269,000 in 2000 to 46700 in 2021 in-between the years, there has been steady increase in the number of incidences recorded in the country (Uduu, 2023). While TB record in Kaduna state from 2006-2022 shows that 6,325 TB cases were recorded among the general population 5,811 were declared cure, 481 were certified death, 33 were lost to follow up and 362 were TB/HIV co-infected among TB/HIV con infected

The reemergence of tuberculosis in Kaura LGA poses a serious public Health risk, despite government &non-governmental efforts to control TB through awareness, vaccination &treatment programs, there is resurgence of cases of the Disease due to possible factors such as poverty, poor sanitation, incomplete treatment regimen and overcrowding.Preliminary study conducted by the researcher in Kaura LGA by reviewing the existing record available from health department showed tha from 2019 to 2024 total number of 641 cases of tuberculosis were recorded (Kaura LGA Health Dept. TB register, 2025).

Research Questions

i. What are the factors responsible for the re-emergence of Tuberculosis among people 13-65years in Kaura LGA of Kaduna state
ii. What is the role health care system is playing in controlling the re-emergence of tuberculosis among people 13-65years in Kaura LGA of Kaduna state
iii. What are the effects of re-emergence of Tuberculosis Among people 13-65 years in Kaura LGA of Kaduna state
iv. What are the ways of preventing/controlling the re-emergence of tuberculosis among people 13-65 years in Kaura LGA of Kaduna state

This study adapted a descriptive survey research design, combining both quantitative and qualitative approaches the descriptive design enables and in-depth examination of the resurgence of Tuberculosis, while the mixed method approach ensures comprehensive data collection and analysis. The targeted populations includes

1. TB Patients- Individual diagnosed with TB within the past 5 years
2. Healthcare workers: Doctors , community health workers, nurses and laboratory staff involved in Tuberculosis Diagnosis and treatment
3. Community members- Residents of Kaura L.G.A Including those at high TB Infection

Simple random sampling techniques was used to ensure fair representation of different groups
Sample size determination of 300 respondents was used as sample size out of the 254,417 population;

- 50 Tb Patients from hospitals and clinics
- 100 healthcare workers across government and Private health centers
- 150 community members selected randomly from the community totaling sample size of 300 respondents out of the approximately 284,417 population.

The instrument used for this study was a questionnaire (checklist) and with 2 section, section one consist of Biodata of the respondents and section B consist of the research Questions for reemergence of tuberculosis, healthcare system contributed to control of reemergence of tuberculosis, effects of the reemergence of tubercles and measurement to control/prevent the reemergence of tuberculosis.
Items in one question 1 has seven (7) items, question 2 has sixitems, question 3 has three (3) items andquestion 4 has four items
To ensure validity of the instrument, the check list was subjected for validation, it was given to three (3) experts, all of whom were not below the rank of senior lecturers in the school of Health science of the national open university of Nigeria (Noun) to ensure the face and content validation for the instrument. All observation made by them were use in correcting the said instrument and the final copy adopted for this study
Before the instrument is said to be reliable, it must measure what it supposed to measure. After the final validated instrument was obtained, it was re-tested using 20 patients that were not part of the main study. Its reliability was determined using spear man product moment coefficient. This yielded a coefficient index of 0.77 which was considered high, making the instrument to be reliable to be used for the present study.
The researcher uses a checklist (questionnaire) which was administered to the respondents, through the research assistance within area of the study. 300 hundred questionnaires were

administered to 300 respondents who are tuberculosis patient, health care workers and members of the community.

The data collected was analyzed by using statistical tool e.g. software method of excel

Section A: Demographic Information of Respondents

Table 1; Age of Respondents

Age	Respondents	Percentages
15-24	78	26%
25-34	87	29%
35-44	105	35%
45-54	21	7%
55-and Above	9	3%

The above table indicates that respondents within ages 15-24 are 78 representing 26% , 25-34 are 87 representing 29% , 35 – 44 are 105 representing 35% while 45-54 are 21 representing 7% and 55 and above are 9 representing 3%, impelling that majority of the respondents are within the age of 35-44 with 105 responses representing 35%

Table 2: Sex of the Respondents

Sex	Respondents	Percentages
Male	108	36%
Female	192	64%

The above table showed that male 108 respondents representing 36% while female 192 respondents representing 64% Majority of the respondents are female with 192 responses representing 64%

Table 3: Occupation of the respondents

Occupation	Respondents	Percentages
Farming	8	2.6%
Trading	54	18%
Employed	30	10%
Health workers	100	33%
Unemployed	45	11.6%

The above tables showed that 8 respondents representing 2.6% are farmers, 54 respondents representing 18% are traders, 30 respondents representing 10%, 100 respondents representing 33% are health workers and 45 respondents representing 11.6%. Majority of the respondent are health workers with 100 respondents representing 33%

Table 4: Education qualification of the respondents

Educational Qualification	Respondents	Percentages
Primary	9	3%
Secondary	105	35%
Tertiary	186	65%
Others	0	0

The table above table showed that 9 respondents representing 3% had primary certificates, 105 respondents representing 35% had secondary certificates, and 186 respondents representing 65% had tertiary school certificates. Which implies that majority of the respondent186 (65%) are well knowledgeable

Table 5: Marital Status of the Respondents

Marital Status	Respondents	Percentages
Singles	111	37%
Married	180	60%
Widow	0	0
Divorce	3	1%
Separated	3	1%

The above table showed that singles have 11 responses representing 37%, married had 180 responses representing 60% no responses in widow, while divorce and separated had 3 responses each representing 1% this implies that the married had 180 the highest responses which is(60%)

Table 6: Religion of the respondents

Religion	Respondents	Percentages
Christianity	285	95%
Islam	6	2%
Traditional worship	9	3%

The table above showed that majority of the respondents is Christians with 285 responses representing 95% while Muslim and traditional worship had 6 and 9 responses representing 2 and 3% respectively.

Research Q1: Factors responsible for reemergence of tuberculosis (TB)

Table 7: On what the respondent think is the main cause of **tuberculosis**(TB)

Causes of Tuberculosis	Respondents	Percentages
Poor Hygiene	45	15%
Bacteria	246	82%
Witchcraft/ evil spirit	6	2%
Malnutrition	3	1%
TOTAL	300	

From the above table poor hygiene has 45 respondents representing 15%, Bacteria infection. Bacterium tuberculosis witchcraft has 6 respondents representing 2% and 3 respondents said malnutrition 246 respondents 82%,n representing 1%. This imply that majority of the respondents belief that tuberculosis is caused by bacterium tuberculosis but yet there are some who still belief that it is causes by witchcraft .

Table 8: How tuberculosis is commonly transmitted

How tuberculosis is transmitted	Respondents	Percentages
Through water	18	6%
Through sexual contact	9	3%
Through the air when infected person cough or sneezer	270	90%
Through skin contact	3	1%
TOTAL	300	

From the above table 15 respondent representing 6% said is transmitted through water, 9 representing 3% said through sexual contact, 270 representing 90% and it is transmitted through air and infected person by coughing while 3 representing 9% said it can be transmitted through skin contact. Majority said through the air and infected person by coughing

Table 9: Factors that most likely contribute to the reemergence of TB in Kaura L.G.A

Most likely contributing factors	Respondents	Percentages
Increase awareness and reporting	90	30%
Improve nutrition	18	6%
Drugs resistance due to incomplete treatment	162	53%
Availability of treatment	30	10%
TOTAL	300	

The table above showed that 90 respondents representing 30% said that increase awareness and reporting may likely contribute to the reemergence of TB. 18 representing 6% said improve nutrition can contribute, 162 representing 53% and drugs resistance and incomplete treatment while 30 representing 10% said availability of treatment can contribute to reemergence of TB

Table 10: Response on the impact of Poverty on TB cases in Kaura L.G.A

How poverty impact on the cases of TB in Kaura L.GA	Respondents	Percentages
No impact	80	26.6%
It reduces TB	36	12%
It makes people seek early treatment	70	23.3%
It increases vulnerability and limits access to healthcare	114	38%
TOTAL	300	100%

Table above showed that 80 respondents representing 26.6%, poverty had no impact on TB reemergence, 36 representing 12% said poverty reduces TB impact, 70 representing 23.3% said poverty makes people seek early treatment while 114 representing38% said it increases vulnerability and limits access to healthcare. Implying that majority of the respondent believed that poverty increase the vulnerability of people to TB infection or its reemergence

Table 11: How HIV/AIDS affect TB spread in the community

How HIV/AIDS affect TB spread	Respondents	Percentages
It has no effect	21	7%
It helps to cure TB	15	5%
It increases the risk of TB infection	264	88%
Its prevent TB transmission	0	0
TOTAL	300	100%

From the above table 21 respondents representing 7% said that HIV/AIDS has no effect on TB spreading in the community, 15 representing 5% said HIV/AIDS helps to cure TB, 264 representing 88% said HIV/AID increase the risk of TB spreads in the community while no respondents belief that HIV/AID prevent TB transmission. Implying that majority of the respondent agreed that HIV/AIDS is a major factor in reemergence of TB. But still some of the respondents are not aware that HIV/AID can serves as major means of reemergence of TB.

Table 12: Responses on why some TB Patient default there treatment

Why some patient default in TB treatment	Respondents	Percentages
Because the feel better before completing drugs	246	82%
Because treatment is too short	18	6%
Because they are forced to stop by the physician	18	6%
Because TB Drugs are unavailable	18	6%
TOTAL	300	100%

The table above showed that 246 respondent representing 82% said that some TB patient default because of feel better before completing their drugs, 18 representing 6% said that because the treatment is short, they are forced to stop by the doctor and also said it is because TB drugs are

unavailable. This implies that majority of the respondents are aware of reasons of defaulter rate but vital a fear still showed the ignorant and this few cannot be neglected.

RQ2: Role of Healthcare system in contributing to TB reemergence in Kaura

Table 13: Responses on availability of TB diagnostic facilities

Responses in health center within Kaura	Respondents	Percentages
Very adequate	162	54%
Adequate	84	28%
Inadequate	42	14%
Very inadequate	12	4%
TOTAL	300	100%

The above table showed that 162 respondents representing 54% said there are very adequate diagnosis of facilities in the Health facilities for treatment of TB, 84 representing 25% said there are adequate 42 representing 14 said there inadequate diagnostic facilities while 12 respondent said there a diagnostic facilities for treatment of TB in Kaura. Despite the affirmation by majority of the respondents that there are very adequate diagnosis of facilities in the Health facilities for treatment of TB there are still a handful who still say there are inadequate probably this may be in some facilities there no adequate diagnostic facilities

Table 14: Responses on how effective follow up system is for TB PTS in Kaura LGA

How effective is follow-up system of TB pattern in Kaura	Respondents	Percentages
Very adequate	141	47
Adequate	120	40%
Inadequate	30	10%
Very inadequate	9	3%
TOTAL	300	100%

The table above showed that 141 respondents representing 47% agreed that there very effective follow up system of TB patient in Kaura LGA, 120 representing40% said it effective, 30 representing 10% said it is infective and 9 representing 3% said it is very infective therefore majority believe that follow up system is effectives but yet few opined that it was not effective.

Table 15: Responses on the attitude of health workers towards TB patients

Attitude of health workers TB patient	Respondents	Percentages
Very adequate	162	64%
Adequate	114	38%
Inadequate	12	4%
Very inadequate	12	4%
TOTAL	300	100%

The tabled showed that 162 respondents representing 54% said attitude of the health workers toward TB patients is very supportive, 114 representing 38% said is supportive, 12 representing 7% said it is unsupportive and in representing 4% said is hostile. This imply that majority of the respondents are satisfied with the attitude of health workers towards TB out. But still that small number who is not satisfied should not be ignored.

Table 16: Responses on the state of infection control measures for TB in public facilities in Kaura LGA

State of infection control measures for TB in Public Health facilities	Respondents	Percentages
Fully implemented	145	48%
Partially implemented	117	39%
Rarely implemented	27	9%

Not implement	11	4%
TOTAL	300	100%

The above table showed that 145 respondent representing 48% said that the state of infection control measures for TB in public facilities in Kaura is fully implemented, 117, representing 29% said is partially implemented, 27 representing 9% said is rarely implemented while 11 representing 4% said not implemented. Majority of the respondents agreed that infection control measures for TB are being implemented in Kaura

Table 17: Response on the extend of Poor Health infrastructure contribute to TB reemergence in Kaura

Extend to which poor health infrastructure contributes to TB	Respondents	Percentages
Very great extend	156	52%
Moderate extend	129	43%
Small extend	10	3%
No extend	5	2%
TOTAL	300	100%

The table above indicates that 156 respondents representing 52% said that the extend of poor health infrastructure contribute to TB reemergence in Kaura is very great, 129 representing 43% said moderately, 19 representing 3% said small while 5 representing 2% said it has no. Therefore this implies that majority agreed that poor Health infrastructure contribute to TB reemergence

Table 18: Responses on how accessible are TB service to rural areas in Kaura LGA

Accessibility of TB service to rural areas	Respondents	Percentages
Very accessible	111	37%
Moderately accessible	123	41%
Poorly accessible	54	18%
not accessible	12	4%
TOTAL	300	100%

The table above showed that 111 respondent representing 37% said TB services in rural area is very accessible, 123 representing 41% said moderately accessible, 54 representing 18% said it is moderately accessible and 12 representing 4% said is poorly accessible. This implied that majority of the respondents believed that TB services are accessible in rural area in Kaura LGA yet there are some few whole believed TB services are not accessible

RQ3 Effects of reemergence of TB

Table: 19 responses on the most common effects of TB reemergence in the community

The most common effects of TB in the Community	Respondents	Percentages
Increase illness and death	195	65%
Increase hospital visit	57	19%
Social isolation of patient	40	13%
No noticeable effect	8	3%
TOTAL	300	100%

The above table shared that 195 respondents representing 65% said most common effects of TB reemergence are increase illness and death, 57 representing 19% said, it increase hospital visit 40 representing 13% said it leads to solid isolation and 8 representing 3% said no noticeable effect. Majority said increase illness and death is the common effect.

Table 20: Response of whether or not TB reemergence affects the economic activities of the area or not.

TB reemergence affect the economic activities is the are	Respondents	Percentages
Yes very seriously	139	46%
Yes very moderate	85	28%
Yes but slightly	42	14%
No effect	34	11%
TOTAL	300	100%

The table above indicates that 139 respondents representing 46% said yes TB reemergence affects economic activities of the area, 85 representing 28% said Yes very moderately, 42 representing 14% said Yes but slightly and 34 representing 11% said there is no effect. Therefore, majority of the respondents agreed that TB reemergence affects economic activity of the area (Kaura L.G.A)

Table 21: Responses on whether TB Patient in the community are treated fairly

Are Tb patient in your commentary treated fairly	Respondents	Percentages
Yes they are avoided	39	13%
Yes they are supported	118	29%
No they are treated like others	129	43%
I don't know	14	5%
TOTAL	300	100%

The table above showed that 39 respondent representing 13% said that TB patient are avoided, 118 representing 39% said yes TB said are supported, 129 representing 43% said TB patient are treated, like the patients are treated while 14 representing 5% said they don't know. Therefore Majority of the respondents are of the view that TB patient are treated like other patient. But few said they are avoided this could also have an adverse effect on hem and their families

RQ4 how to prevent reemergence of tuberculosis

Table 22: Responses on the most effective way to prevent the spread of TB in the community

How can TB prevented in the community	Respondents	Percentages
Avoid eating with others	45	15%
Regular TB screening & treatment adherence	237	79%
Drinking herbal mixtures	15	5%
Staying indoors	3	1%
TOTAL	300	100%

The table above indicates that 45 respondents representing 15% said TB reemergence can be prevented avoiding eating with others, 237 representing 79% said it can be prevented by regular TB screening and treatment adherence 15 representing 5% said it is prevented by drinking herbal mixture and 3 representing 1% said by staying indoors, majority said by regular screening

Table 23: Responses on ways in preventing reemergence of TB in high risk area

The ways of preventing reemergence of TB in high-risk area are:	Respondents	Percentages
Burning incense	15	5%
Avoiding all physical activities	45	15%
Strengthening public health education	23	77%
Reducing water intake	9	3%
TOTAL	300	100%

The above table showed that 15 respondent, representing 5% said the ways of prevailing TB in high risk areas is by burning incense, 45 representing 15% said by avoiding all physical activities 231 representing 77% said by strengthening public health education and 9 representing 3% said

by reducing water intake. The majority of the respondents said by strengthening public health education, but still the others opening on should not be ignored.

Table 24: Responses on whether or not it is important to complete TB treatment

Why is completing TB treatment important?	Respondents	Percentages
It saves money	27	9%
It prevent s reinfections and drugs resistance	231	77%
It increases appetite	34	11.3%
It allows early discharge from Hospital	8	2%
TOTAL	300	100%

The table above showed that 27 representing 9% said it saves money, 231 representing 77% said it completing treatment can prevent reinfection, 34 representing 11% said it increase appetite and 8 representing 2% said it allows early discharge from the hospital

Table 25: Responses on the role community health education play in TB prevention

What is the role community health education in TB prevention	Respondents	Percentages
It encourages people to avoid hospitals	30	10%
It help dispels myths &promote early diagnoses	207	69%
it increases sales of face masks	34	11%
It reduce government spreading	29	9.6%
TOTAL	300	100%

The above table indicates 30 (10%) said it encourages people to avoid hospitals, 207 respondent representing (69%) said it helps to dispels myths, 34 (11%) said it increase sales of face mask while 29 respondent representing (9.6%) said it reduced government spending implying that majority of them are those who said it dispel myths and promote early diagnoses.

Table 1; implies that majority of the respondents are within the ages of 35-44 with 105 (35%) being the most productive age group with more passion and interest on the subject matter.
This is expected because this is the most productive age with better understanding and aspiration in life
Table 2; showed that Majority of the respondents are female with 105 (64%) this can be an indication of women being more susceptible to TB than men due to low immunity status.
Table 3; showed that majority of the respondents are health workers with 100 (33%) from the sample size the researcher was deliberate in choosing health workers because they are the major stake holders as far as the topic of the study is concerned, since they provide the care for TB patients.
Table 4 showed that 186 (62% have tertiary certificates, implying that majority are literate, hence the low level of TB infection on the area of the study
Table 5; showed that the married are 180 (60%) being the majority. This gives an indication that area of the study is made up of people who seek for health care service responsively and adhere to health promotion education promptly
Table 6; showed that majority of the respondents are Christians with 285 (95%) hence the low level of infection in the area of study and the area is Christian dominated area.
Table 7 showed that poor hygiene has 45 (15%) on the commonly cause of TB, Bacteria infection (Bacterium tuberculosis) has 246 (82%), witchcraft has 6 (2%) and malnutrition has 3(1 %.). This implies that majority of the respondents' believed that tuberculosis is caused by bacterium tuberculosis this is in agreement with (Mancuso, 2023) who stated that Tuberculosis (TB) is an infectious disease caused by a group of closely related acid fast-aerobic, non-motile bacilli that belong to the mycobacterium tuberculosis complex (MTBC).

Table 8 showed that 15 (6%) said TB is transmitted through water, 9 (3%) said through sexual contact, 270 (90%) said is transmitted through air and infected person by coughing while 3 (9%) said it can be transmitted through skin contact. Implying that the respondents had adequate knowledge on how TB is transmitted this is in agreement with Olaleye et'al, (2023) who stated that Mycobacterium tuberculosis is a droplet air-born disease mainly caused by tuberculosis. Infection occurs when the tubercle bacilli droplet nuclei reach the alveoli of the lungs.

Table 9 showed that 90 (30%) said increase awareness and reporting may likely contribute to the reemergence of TB. 18 (6%) said improve nutrition can contribute reemergence of TB, 162 (53%) said drugs resistance and incomplete treatment while 30 (10%) said availability of treatment can contribute to reemergence of TB, majority of the respondents have knowledge on the contributing factor to reemergence of TB agreeing with and Kuz et'al (2016) in chapter two of the research who stated that The only significant factor for development of drug resistant and multi-drug resistance was the history of previous anti TB Treatment

Table 10 showed that 80 (26.6 %,) said poverty had no impact on TB reemergence, 36 (12%) said poverty reduces TB impact, 70 (23.3%) said poverty makes people seek early treatment while 114 (38) said It increases vulnerability and limits access to healthcare. Even though majority of the respondents are aware that poverty increase the vulnerability of people to TB infection or its reemergence in line with Silva et'al, (2021) in chapter two who states that the main risk factors of tuberculosis in the developing countries is poverty which include; poor nutrition, poor housing, poor general health, insufficient health care and inadequate food. But the other respondents are in contrast with this which could be a major factor to the spread of tuberculosis.

Table 11 indicates that 21 respondents (7%) said that HIV/AIDS has no effect on TB spreading in the community, 15 (5%) said HIV/AIDS helps to cure TB, 264 (88%) said HIV/AID increase the risks of TB spreads in the community implying that majority of the respondents agreed that HIV/AIDS is a major factor in reemergence of TB this is in agreement with Igweagu & Umeh, (2024) and Hinman et' al, (1992) in chapter two of this research who said that persons who are HIV infected and subsequently are exposed to TB are more likely to progress from infection to disease than those who are HIV negative

Table 12 indicates that 246(82%) said that some TB patient default because they feel better before completing their drugs, 18 (6%) said that because the treatment is long, they are forced to stop and 18 (6%) said it is because TB drugs are unavailable. This is in agreement with Daniel & Osman (2011) who said that the only significant factor for development of drug resistant and multi-drug resistance was the history of previous anti TB Treatment longer time of treatment which leads to default

Table 13 showed that 162 (54%) said there are very adequate diagnosis facilities in the Health facilities for treatment of TB, 84 (25%) said there are adequatediagnosis facilities in the Health facilities for treatment of TB, 42 (14%) said there are inadequate diagnostic facilities while 12 (4%) said there are diagnostic facilities for treatment of TB in Kaura this is in contrast with Ogunniyi, et'al (2024) who said, Poor health care delivery system which includes a weak drug supply system, outdated infrastructure for service delivery and a lack of human resources all contributed to National Tuberculosis control programs (NTP's) Despite the affirmation by majority of the respondents there are still a handful who still say there are inadequate, probably this may be in some facilities where there is no adequate diagnostic facilities

Table 14 showed that 141 (47%) agreed that there is very effective follow up system of TB patient in the area of study, 120 (40%) said follow up system it is effective, 30 (10%) said it is infective and 9 (3%) said it is very infective therefore majority believe that follow up system is effectives but yet few opined that it was not effective. This in line with who stated that another challenges is the way most system operates the programs e.g. when poor follow-up of the TB patient which could lead to reemergence of the diseases

Table 15 showed that 162 (54%) said attitude of the health workers toward TB patients is very supportive, 114 (38%) said is supportive, 12 (7%) said it is unsupportive and 12 (4%) said is hostile. This imply that majority of the respondents are satisfied with the attitude of health workers towards

TB patients. This in line with who stated that Although standard for TB care exist, ethics was breached by delays in TB diagnosis and initiation care, poor staff attitude to TB patients' long, waiting time and poor service delivery infrastructure, hence poor health care system are among the factors responsible for reemergence of TB..

Table **16**showed that 145 (48%) said that the state of infection control measures for TB in public facilities in the area of study is fully implemented, 117 (29%) said is partially implemented, 27 (9%) said is rarely implemented, while 11 (4%) said is not implemented. Majority of the respondents agreed that infection control measures for TB are being implemented in area of study. The percentage of those who said partially, rarely and not implemented is 42% almost close to majority which is in agreement with Ogbulabora & Onwiyekwe, (2009) who said a weak legal environment for tuberculosis control result from absence of tuberculosis specific legislation.

The table 17 indicates that 156 (52%) said that the extent of poor health infrastructure contribute to TB reemergence in the area of study is very great, 129 (43%) said moderately, 19 (6%) said small while 5 (1.6%) said it has nocontribute to TB reemergence. Therefore this implies that majority agreed that poor Health infrastructure contribute to TB reemergence, this is in line with Ogunniyi, et'al (2024) who posited that poor health care delivery system which includes a weak drug supply system, outdated infrastructure for service delivery and a lack of human resources all contributed to National Tuberculosis control programs (NTP's) ineffectiveness and in efficiency thereby contributing to the reemergence of tuberculosis

Table 18 showed that 111 (37%) said TB services in rural area is very accessible, 123 (41%) said is moderately accessible, 54 (18%) said it is poorly accessible and 12 (4%) said is not accessible. This implied that majority of the respondents believed that TB services are accessible in rural area of Kaura LGA yet there are some who believed TB services are not accessible thisin agreement with that posited that another challenges is the way most system operates the programs e.g. when they trace the index case and they find out those who have had contact with him/her they have to take the person to the facility to go and commence the person on (TPT), transportation/movement.

Table 19 showed that 195 (65%) said most common effects of TB reemergence are increase illness and death, 57 (19%) said, it increase hospital visit 40 (13%) said it leads to self isolation and 8 (2.6%) said no noticeable effect. Majority said increase illness and death is the common effect. This is in line with who opined that Health effects of tuberculosis include- Hemoptysis (coughing with blood), chronic obstructive Pulmonary disease (COPD), this condition can make breathing difficult, Empyema collection pus in the plural space, Pneumothorax and collection of air between the lungs and the chest which cause lung collapse, Bronchiectasis (Chronic condition) in which the walls of the airways widen and thicken due to infection and inflammation.

Table 20 indicates that 139 (46%) said yes TB reemergence affects economic activities of the area, 85 (28%) said yes very moderately, 42 (14%) said Yes but slightly and 34 (11%) said there is no effect. Therefore, majority of the respondents agreed that TB reemergence affects economic activity of the area of the study (Kaura L.G.A). This as well is in agreement with who stated that Tuberculosis (TB) has been repeated to have socioeconomic impacts of both individual level and ecological level

Table 21 showed that 39 (13%) said that TB patients are avoided, 118 (39%) said TB patient are supported, 129 (43%) said TB patient are treated, like the other patients are treated while 14 representing (5%) said they don't know. Therefore Majority of the respondents are of the view that TB patient are treated like other patient. But few said they are avoided this could also posse an adverse effect on them and their families in agreement with who opined that effects of TB ranges from impoverishment, stigma and family separation to nutrition and missed education opportunities

Table 22indicates that 45 (15%) said TB reemergence can be prevented by avoiding eating with others, 237 (79%) said it can be prevented by regular TB screening and treatment adherence r 15 (5%) said it is prevented by drinking herbal mixture and 3 (1%) said by staying indoors, majority said by regular screening. This also is in agreement with who said TB can be prevented by comprehensive understanding, of its social determinant factors such as HIV, Infection, alcohol use disorder, smoking and diabetes that contributed to the incidence of tuberculosis should be tackled with coordinated multispectral actions that goes belong traditional health care

The table 23 showed that 27 (9%) said prevention of reemergence of TB saves money, 231 (77%) saidcompleting treatment can prevent reinfection, 34 (11%) said it increase appetite and 8 (2%) said it allows early discharge from the hospital this in agreements with Ogunniyi, et'al (2024) Table 20 showed that 15 (5%) said the ways of preventing TB in high risk areas is by burning incense, 45 (15%) said by avoiding all physical activities 231 (77%) said by strengthening public health education and 9 (3%) said by reducing water intake. The majority of the respondents said by strengthening public health education, this is aligning with Ogunmiyi et'al (2024) in chapter two, who posited that there is the need to strengthening health system to prevent infectious TB diseases. But still there are other respondents who believed that TB can be prevented by burning incense and avoiding all physical activities should not be ignored.

Table 21 showed that 27 (9%) said it saves money, 231 (77%) said completing treatment can prevent reinfection, 34 (11%) said it increase appetite and 8 (2%) said it allows early discharge from the hospital 'majority of the respondents agreed that completing treatment can prevent reinfection this is agreeing with who posited that non-completion of treatment has been the top factor contributing to TB Drug-resistance.

Table 22 indicates that 30 (10%) said community health education play role in TB preventionby encourages people to avoid hospitals, 207 (69%) said it helps to dispels myths, 34 (11%) said it increase sales of face mask while 29 (9.6%) said it reduced government spending. Implying that majority of them are those who said it dispel myths and promote early diagnoses, this is in line with Suvvari (2025) in chapter two who opined that health educating the community on improving diagnosis, adequate nutrition, and access to health care can substantially reduce the risk of developing active TB and among those infected with mycobacterium tuberculosis, it will go a long way in preventing reemergence of tuberculosis

It was concluded that, despite the decreasing trend in TB disease burden among people in Nigeria, Tuberculosis disease remains a significant public health issue in the country. Efforts to ensure a further reduction in TB disease burden, as well as improve the health and well-being of Nigerians, will require a multifaceted approach that includes increased funding and appropriate monitoring of the treatment, health system strengthening and enhanced national and sub-national surveillance for TB disease.

i. Based on the findings and conclusion, it recommend that government should strengthen the Healthcare System by investment in healthcare infrastructure, particularly in rural areas. This includes improving diagnostic facilities
ii. The government should Supports countries to close gaps in TB detecting and treatment as agreed by world health organization 2018 in collaboration with stop TB partnership and global fund to fights AIDs tuberculosis and malaria
iii. Nigeria should strictly adhere to the Universal health care policy which states that every one -irrespective of living standard receives health service they need and that using health service does not cause financial hardship
iv. Nigerian government should trained man power as well as provide modern equipment for diagnosis and treatment of TB
v. It is expected that increasing awareness of TB and its treatment in communities while making direct observation therapy short- course (DOTS) services more accessible and acceptable with PHC as the cornerstone of the health system, the attainment of national and global targets will be enhanced
vi. Government should Strengthen TB Drug Resistance Monitoring: Establish a robust drug resistance surveillance system and ensuring the availability of second-line drugs for the treatment of MDR-TB and XDR-TB
vii. Government should Improve TB and HIV Integration: Given the high rate of co-infection between TB and HIV, it is crucial to integrate TB and HIV services for better diagnosis, treatment, and prevention.

Health Care Workers

i. They should be prompt in immunization of children with BCG vaccines to prevent infection
ii. They should key into WHO recommendation for treatment of latent TB in people living with AIDs and small children under 5 years who are house hold owners with persons with TB**.**
iii. They should encourage people with HIV to report to health facility and treatment for tuberculosis should commend promptly
iv. They should key into ending TB strategy milestone for 2020 and 2025 by strictly following the country guidelines for prompt diagnoses and treatment of TB**.**
v. The health care Workers are to prevent new infection of mycobacterium tuberculosis and its progression to latent disease.

Members of the community

i. There should be improved standard of living among the citizens by keying into the good economic policies of the government.
The community members should fight against poverty by involving in farming and small scale business which will boost their income, this will greatly reduce the burden of TB in Nigeria and in the World at large.

REFERENCES

Akin et al (2023) Desk guide for Prevention, Diagnosis & Treatment of Tuberculosis in children & Adolescent in Nigeria, FMH fourth edition

Ahmed, N.et'al (2018): Analyzing policy making for tuberculosis control in Nigeria. Willey online library

Bargdoff M. M. et'al (2013) the re-emergence of tuberculosis what have learn from molecular epidemiology, Journal of National Literary of Medicine

Brennan P.J, (1997) Tuberculosis in the context o emerging and reemerging disease: immunology and medical microbiology; journal vol;18. Pg 263-269'

Kaura LGA Health Department, TB registry, 2025Contributory factors to successful tuberculosis treatment in south west
Nigeria; across section study: Tropical Medicine and infection disease Journal.

Laminu C, et'al (2023) Prevalence of tuberculosis among Health care workers in Kaduna state Nigeria; PAMJ; one health journal

Maiciso, B. (2023) Principle and practices of medicine: Mycobacterial infection:

Muanya C, (2024) Challengers of Eradicating Tuberculosis through free prevention therapy in Nigeria. The Guardian

Ogbeabor & Onwujekwe (2009) Risk Factors of Tuberculosis: Pulmonary medicine.pmc.ncbi.nlm.nib.gov

Daniel A.K Osman R.A (2011) Tuberculosis: Harvard Medical School Journal: www.msdmamals.com-Retrieve 9/1/2025

Ogbo F, A.,Ogeleka, P.& Page (2018) Tropical medicine and health article no34

Olaleye, S A,. Balogun,O. S. & Adusi-Mensah, F. (2023) Bibliometric structured Review of TB in Nigeria: African Health Sciences Journal; pmc.ncbi.nih.gov

Onazi et al (2025) Tuberculosis and its socioeconomic determinant in Nigeria: An Empirical investigation using ARDL approach. European Jounal of Environment and Public Health.emo126

Ogunmiyi, F. J (2024) Ending Tuberculosis Nigeria: A priority by 2030: BMJ Global health Journal Vol. 9 issues 12

Ogbo F.A. (2018) Tropical medicine of Health: Tuberculosis diseases burden and Attributable risk factors in Nigeria no 34

Qui, B, et'al (2022) Risk factors for types of recurrent tuberculosis (reactivation verses reinfection): a global systematic review; a meta-analysis: international journal of infectious diseases.

Shajahan, R., et'al (2016) Predictors of Re-emerging Tuberculosis: A review Open Access Literary Journal Vol.3. no.3

Silva G, et'al (2014) Tuberculosis epidemiology and control' Mediterranean journal of Hematology and infectious disease

David, T.S & Blumberg, H. M. (2003) Controlling Tuberculosis in the united State Recommendation from American Chronic Society CDC and Infection Disease society of America USA: MC Gran Hill.

Manlusu A.B (2023) Burden of tuberculosis diseases in Nigeria;TB Online.tbonline.infact/pos

Ugwu, K,O.,Agbo, M.C.,& Ezeonu I.M. (2021) Prevelance of tuberculosis, Drug resistance tuberculosis and HIV/TB co-infection in Enugu, Nigeria: African Journal of infectious disease.pmc.ncbin.nlm,nih.gov.Retrieved 8th January, 2025

Uduu,O (2023) Nigerians TB Survival rate increases by 67% in 21 years: Global Tuberculosis report 2022: Dataphyte.com

WHO (2024) Factors associated with tuberculosis among patient attending a treatment Centre in Caria, North west Nigeria (2010. Pan African Medical