THE PREVALENCE OF TYPHOID FEVER AMONG TEENAGERS IN EGOR, BENIN CITY, EDO STATE, NIGERIA.

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A PROJECT SUBMITTED TO THE DEPARTMENT OF SCIENCE LABORATORY TECHNOLOGY IN PARTIAL FULFILLMENT OF THE REQUREMENTS FOR THE AWARD OF BACHELOR OF SCIENCE (B.SC) HONOUR DEGREE IN SCIENCE LABORATORY TECHNOLOGY

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CERTIFICATION

This is to certify that this research proposal titled "**THE PREVALENCE OF TYPHOID FEVER AMONG TEENAGERS IN EGOR, BENIN CITY, EDO STATE, NIGERIA**" was carried out by **Raphael Osaretine OSARO** with matriculation number **LSC2007349,** in partial fulfillment of requirement of the award of a degree in Bachelor of science, under the supervision of Dr. A.E Omoregie.

Dr. A.E. OMOREGIE **(Project Supervisor)**	**DATE**
Dr. P.O ALONGE **(Project Coordinator)**	**DATE**
Prof. J.O Osarumwense **(Head of Department)**	**DATE**
External Examiner	**DATE**

DEDICATION

I dedicate this project to God Almighty for His presence and guidance throughout my academic studies at the University of Benin, as well as the duration of the research.

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To God Almighty, the giver and sustainer of life; words would simply fail me if I attempt to count your acts of goodness, mercy, love and tender care. I am sincerely grateful for the strength in completing this assignment, as well as his exceptional blessings on me throughout my studies.

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ABSTRACT

Typhoid fever remains a significant public health concern in developing countries, particularly among adolescents who are highly exposed to poor sanitation and unsafe water sources. Typhoid fever is a systemic infection caused by the bacterium Salmonella enterica serovar Typhi, transmitted primarily through the ingestion of food or water contaminated with the feces or urine of infected persons. This study examined the prevalence of typhoid fever among teenagers in Egor Local Government Area of Edo State, Nigeria. A descriptive survey design was adopted, and data were collected using a structured questionnaire. Descriptive and inferential statistics were employed for data analysis. Findings revealed that the majority of respondents demonstrated a high level of knowledge about the causes, symptoms, and prevention of typhoid fever. However, the prevalence of typhoid fever among teenagers was considerably high, as over 60% reported having contracted the disease at least once. Preventive practices such as regular handwashing, proper waste disposal, and consumption of treated water were moderately observed, though vaccination uptake remained low. Statistical analysis indicated a significant positive relationship between knowledge level and preventive practices, implying that improved awareness enhances health behavior among teenagers. The study concludes that while knowledge of typhoid fever is relatively high, poor sanitation and inconsistent preventive measures contribute to its continued prevalence. It recommends intensified health education, provision of safe water, improved environmental sanitation, and enhanced vaccination campaigns targeting teenagers in schools and communities.

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

Typhoid fever is a life-threatening systemic illness caused by the bacterium *Salmonella enterica serovar Typhi* (S. Typhi), transmitted primarily through the consumption of contaminated food and water (Crump *et al.,* 2015). It is a significant public health concern in many low and middle-income countries, particularly in Africa and Asia, where safe water, sanitation, and hygiene infrastructure is inadequate (WHO, 2022).

Globally, an estimated 11 to 20 million people contract typhoid fever each year, with mortality ranging from 128,000 to 161,000 deaths annually (WHO, 2022). The burden of typhoid is especially high in Sub-Saharan Africa, where poor water quality, improper waste disposal, and limited health education contribute significantly to the transmission of the disease. In Nigeria, typhoid fever is a common cause of hospital visits and has become a persistent health challenge, especially in urban and semi-urban regions such as Egor Local Government Area in Edo State (Okonko *et al.,* 2018).

Teenagers are a particularly vulnerable group in the fight against typhoid fever. This vulnerability is influenced by a combination of biological, environmental, and behavioral factors. Adolescents frequently consume food from informal vendors and rely on school or public sources of water, many of which are not properly treated (Akinyemi *et al.,* 2016). Furthermore, their awareness of hygiene practices and disease prevention may be limited by insufficient health education. In Egor, factors such as overcrowding, poor drainage systems, irregular water supply, and substandard sanitation facilities compound the risk of typhoid fever among teenagers.

Despite ongoing public health interventions, including vaccination campaigns and awareness programs, the prevalence of typhoid fever among adolescents in Egor appears to remain high. This raises questions about the effectiveness of current strategies and highlights the need for detailed, localized studies that explore the knowledge, prevalence, and preventive behaviors in specific populations such as teenagers. Understanding the root causes and patterns of infection within this demographic will help shape targeted interventions to reduce disease incidence and promote sustainable health practices.

Typhoid fever continues to pose a major health threat among teenagers in Egor Local Government Area despite existing health education programs and governmental efforts to improve sanitation and water quality. The persistence of typhoid cases, especially in this vulnerable age group, suggests gaps in knowledge, awareness, and effective prevention practices. The lifestyle and behavioral habits of teenagers, including poor personal hygiene, inadequate handwashing, and consumption of unhygienic food and water, may be significant contributors to the ongoing transmission of the disease.

Several clinics and health centers in Egor report recurrent cases of typhoid fever, with teenagers often accounting for a significant percentage of those affected. Yet, there is a lack of empirical data that specifically addresses the interplay between their level of knowledge, behavioral practices, and the actual prevalence of the disease. Without such data, it is difficult for public health stakeholders to design appropriate interventions that target the root causes of typhoid fever within this age group. This study is therefore aimed at filling this gap by conducting an exploratory investigation into the prevalence of typhoid fever among teenagers in Egor. The findings will be valuable for health policy-makers, educators, and community leaders seeking to combat typhoid and improve adolescent health in the region.

1.2 AIMS AND OBJECTIVES OF THE STUDY

The main objective of this study is to determine the prevalence of typhoid fever among teenagers in Egor Local Government Area.

The specific objectives are to:

I. To identify demographic and environmental factors associated with typhoid infection among teenagers

II. Determine the prevalence of typhoid fever among teenagers in the area.

III. To assess the diagnostic method used in detecting typhoid fever in local health facilities

IV. Investigate the relationship between knowledge levels and preventive behavior among the target population.

1.3 RESEARCH QUESTIONS

To guide the study, the following research questions will be addressed:

I. What is the level of awareness and understanding of typhoid fever among teenagers in Egor?

II. What is the current prevalence of typhoid fever among teenagers in the region?

III. What preventive practices are teenagers employing against typhoid fever?

IV. Is there a relationship between teenagers' knowledge of typhoid fever and their preventive practices?

1.4 SIGNIFICANCE OF THE STUDY

This study will contribute significantly to the body of knowledge concerning adolescent health and infectious disease control in Nigeria. The findings will:

Help in identifying specific knowledge gaps and misconceptions about typhoid fever among teenagers.

Provide data that can support the implementation of targeted educational campaigns and sanitation interventions within Egor.

Serve as a baseline for future research in typhoid epidemiology among adolescents.

Inform government and non-governmental organizations (NGOs) working in the health sector to formulate and implement more effective, youth-centered public health strategies.

Ultimately, the study will aid in reducing the morbidity associated with typhoid fever by promoting behavioral change and supporting policies that prioritize adolescent health.

1.5 SCOPE OF THE STUDY

The study is restricted to teenagers aged 13–19 years residing or attending school in Egor Local Government Area of Edo State. It focuses exclusively on their knowledge of typhoid fever, history of infection, and preventive health behaviors. The study does not extend to the clinical treatment or microbiological aspects of typhoid fever.

1.6 OPERATIONAL DEFINITIONS OF TERMS

Typhoid Fever: An acute illness caused by *Salmonella Typhi* bacteria, transmitted through contaminated food and water.

Prevalence: The proportion of teenagers within Egor who have experienced typhoid fever over a given time period.

CHAPTER TWO

LITERATURE REVIEW

2.1 TYPHOID FEVER

This chapter presents a comprehensive review of the existing literature on typhoid fever. It covers the definition, causes, mode of transmission, symptoms, diagnostic methods, treatment, prevention, and global, national, and local prevalence. Special attention is given to adolescent vulnerability to typhoid fever in sub-Saharan Africa and Nigeria.

2.2 OVERVIEW OF TYPHOID FEVER

Typhoid fever is a systemic bacterial infection caused primarily by Salmonella enterica serotype Typhi. In rare cases, Salmonella Paratyphi A, B, or C may cause a milder form known as paratyphoid fever (Crump *et al*., 2004). The bacteria are transmitted through the ingestion of food or water contaminated with feces from an infected person, often in areas where water sanitation and hygiene are poor (World Health Organization [WHO], 2023).

Plate 2.1: Photomicrograph of *Salmonella Typhi*

Source: Encyclopedia Britannica (2021)

2.3 EPIDEMIOLOGY AND GLOBAL BURDEN

Typhoid fever is endemic in many low- and middle-income countries, particularly in South Asia and sub-Saharan Africa. According to WHO (2023), the disease affects 11 to 20 million people annually and results in up to 161,000 deaths worldwide. The global burden of typhoid fever is significantly influenced by poverty, lack of clean water, overcrowding, and inadequate health infrastructure (Gibani *et al*., 2018).

Children and adolescents are especially susceptible to typhoid fever. A multi-country study revealed that the highest incidence rates occur in school-aged children and teenagers between 5 and 19 years of age (Stanaway *et al.,* 2019). The vulnerability of this group has been linked to school environments, poor hygiene practices, and frequent contact with contaminated sources.

2.4 PREVALENCE IN NIGERIA

In Nigeria, typhoid fever is a common cause of prolonged febrile illness, with reported prevalence rates varying across different geopolitical zones. (Bassey *et al.,* 2021) noted that the prevalence ranges from as low as 0.07% in parts of Oyo State to as high as 47.1% in Osun State. Factors contributing to the high prevalence include poor waste disposal systems, use of contaminated water sources, and indiscriminate use of antibiotics.

Musa, Gana, and Garba (2023) observed that adolescents aged 11 to 20 were among the most affected groups in Kebbi State, with a seroprevalence rate of 14.8%. These findings reflect national trends and highlight the need for age-focused interventions, especially in urban and peri-urban communities.

2.5 LOCAL CONTEXT: TYPHOID IN EDO STATE

In Edo State, especially within urban areas like Egor LGA, the risk of typhoid fever is compounded by rapid urbanization, informal settlements, seasonal flooding, and unreliable water supply. Osifo and Aghedo (2018) reported a consistent presence of typhoid cases in Benin City, largely due to environmental sanitation challenges.

Despite these known risk factors, there is a dearth of localized research specifically focusing on adolescents in Egor LGA. The current study seeks to bridge this knowledge gap by generating data on teenage prevalence in the area.

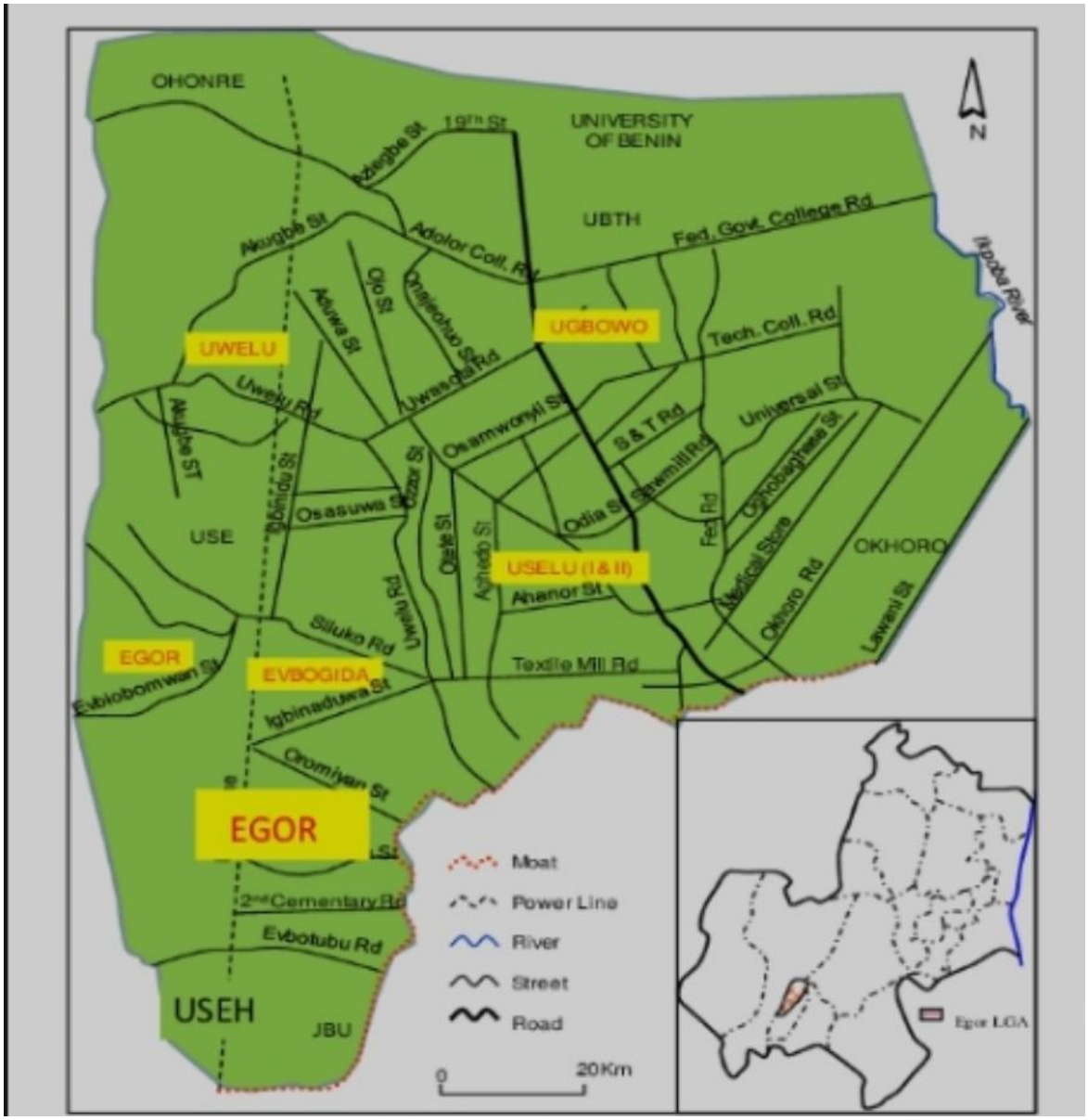

Figure 2.1: Map of Egor Local Government Area, Benin City, Edo State.

Source: Ministry of Lands and Survey, Benin City, 2010.

2.6 RISK FACTORS AMONG TEENAGERS

Teenagers face unique risk factors for typhoid fever. These include:

School exposure: Shared latrines and improper hand hygiene in schools facilitate disease spread (Akinyemi *et al.,* 2005).

Street food consumption: Adolescents often consume food from vendors with questionable sanitary conditions.

Limited awareness: Many teenagers lack adequate knowledge of disease transmission and prevention.

Moreover, adolescence is a period of increased mobility, social interaction, and reduced parental supervision, which can further contribute to risky behaviors related to typhoid transmission (Musa *et al*., 2023).

2.7 MODE OF TRANSMISSION

Typhoid fever is transmitted via the fecal-oral route, meaning it spreads through the ingestion of food or water contaminated by feces or urine of infected individuals. Poor sanitation, use of untreated water, and unhygienic food handling practices are major contributors (WHO, 2023). Infected individuals may become asymptomatic carriers, shedding the bacteria for prolonged periods (Crump *et al.,* 2004).

2.8 SIGNS AND SYMPTOMS

Typhoid fever typically presents with prolonged fever, abdominal discomfort, headache, malaise, and anorexia. Other symptoms may include constipation or diarrhea, rose-colored spots on the trunk, and hepatosplenomegaly (Parry *et al.,* 2002). Without prompt treatment, complications such as intestinal perforation or hemorrhage may occur.

2.9 DIAGNOSIS AND CHALLENGES

Diagnosis is usually done through blood, stool, or bone marrow cultures. However, in resource-limited settings like Nigeria, the Widal test remains the most commonly used diagnostic tool despite its low specificity and reliability (Akinyemi *et al*., 2005). Over-reliance on this test has led to misdiagnosis and over-treatment.

2.10 TREATMENT AND DRUG RESISTANCE

Typhoid is typically treated with antibiotics such as chloramphenicol, ampicillin, or ciprofloxacin. However, resistance to first-line and even second-line antibiotics has become widespread in recent years (Gibani *et al*., 2018). In Nigeria, self-medication and incomplete treatment courses contribute significantly to antimicrobial resistance.

2.11 PREVENTION AND CONTROL

Effective prevention strategies include:

Ensuring access to safe drinking water

Improving sanitation and hygiene

Promoting health education, especially in schools

Vaccination (e.g., Typhoid Conjugate Vaccine)

Vaccination has been recommended by the WHO as a cost-effective preventive strategy in endemic countries (WHO, 2023). However, uptake in Nigeria remains low due to limited availability and lack of public awareness.

2.12 SUMMARY OF REVIEWED LITERATURE

The literature reveals that typhoid fever is a preventable but persistent public health challenge, especially in low-resource settings like Nigeria. Teenagers remain a vulnerable population due to behavioral, environmental, and social factors. Although numerous studies have explored typhoid fever in Nigeria, limited data exists that focuses specifically on teenagers in Egor LGA. This gap justifies the need for the present research.

CHAPTER THREE

METHODOLOGY

3.1 STUDY AREA

This chapter presents the methods and procedures that will be adopted in carrying out the study on the prevalence of typhoid fever among teenagers in Egor Local Government Area (LGA) of Edo State. It includes the research design, study area, population, sample size determination, sampling techniques, data collection methods, instrument for data collection, validity and reliability of the instrument, and method of data analysis. The research will be conducted in Egor Local Government Area, located in Edo State, Southern Nigeria. Egor LGA is an urban area that forms part of Benin City and has a population of over 300,000 people. The area includes various public and private schools, residential neighborhoods, and health facilities. Due to poor drainage systems, overcrowded schools, and inconsistent access to clean water, Egor is considered a high-risk zone for waterborne diseases such as typhoid fever (Osifo & Aghedo, 2018).

3.2 STUDY POPULATION

The study will adopt a descriptive cross-sectional survey design. This design is appropriate for assessing the prevalence of a disease within a population at a specific point in time (Setia, 2016). It allows the researcher to collect data from a defined group in this case, teenagers in order to determine the proportion affected by typhoid fever, as well as factors associated with the disease.

3.3 POPULATION OF THE STUDY

The target population of this study comprises teenagers aged 10 to 19 years residing within Egor LGA. This age group includes both school-going adolescents and out-of-school youth. The choice ofs this group is based on epidemiological evidence suggesting that teenagers are more vulnerable to typhoid fever due to their exposure to poor hygiene environments and risk-taking behaviors (Musa, Gana, & Garba, 2023).

3.4 SAMPLE SIZE DETERMINATION

The sample size will be calculated using the Cochran formula for cross-sectional studies:

$$n = \frac{Z^2.P.(1-P)}{e^2}$$

Where:

n = desired sample size

Z = standard normal deviate (1.96 for 95% confidence level)

p = estimated prevalence of typhoid fever among teenagers (assumed to be 15% or 0.15 based on Musa et al., 2023)

e = margin of error (0.05)

$$n = \frac{(1.96)^2.0.15.(1-0.15)}{(0.05)^2} = \frac{3.8416.0.15.0.85}{0.0025} \approx 196$$

3.5 SAMPLING TECHNIQUE

A multi-stage sampling technique will be used:

1. Stage One: Random selection of wards within Egor LGA.

2. Stage Two: Selection of public and private health facilities and secondary schools within the selected wards.

3. Stage Three: Random selection of eligible teenagers within those institutions (students in schools and patients in clinics) who meet the inclusion criteria.

Inclusion Criteria:

Teenagers aged 10–19 years

Residents of Egor LGA

Willing to give assent and whose parents/guardians give consent (for minors)

Exclusion Criteria:

Teenagers with confirmed chronic illnesses unrelated to typhoid

Non-residents or temporary visitors

3.6 INSTRUMENT FOR DATA COLLECTION

Data will be collected using a semi-structured questionnaire and a clinical/laboratory checklist. The questionnaire will include three sections:

Section A: Demographic information (age, gender, education, etc.)

Section B: Risk factors (water source, hygiene practices, food habits, etc.)

Section C: Health history and symptoms related to typhoid fever

Additionally, clinical records and laboratory test results (e.g., Widal test, stool/blood culture) will be reviewed for teenagers attending selected health facilities.

3.7 VALIDITY AND RELIABILITY OF INSTRUMENT

To ensure validity, the questionnaire will be reviewed by public health experts and researchers for relevance and clarity. A pilot test will be conducted in a neighboring LGA to pretest the tool and revise it based on feedback.

Reliability will be tested using Cronbach's Alpha to measure internal consistency, especially for the Likert scale items. A reliability coefficient of 0.7 or above will be considered acceptable (Tavakol & Dennick, 2011).

3.8 METHOD OF DATA COLLECTION

Data collection will be done by trained research assistants who will administer the questionnaire in both English and local languages where necessary. Parental consent and participant assent

will be obtained for respondents under 18 years. Clinical data will be collected with approval from facility managers and in line with ethical standards.

3.9 METHOD OF DATA ANALYSIS

The collected data will be coded and entered into Statistical Package for the Social Sciences (SPSS) version 25 for analysis.

Descriptive statistics (frequencies, percentages, means) will be used to summarize demographic data and prevalence.

Chi-square tests will be applied to assess associations between typhoid prevalence and demographic or environmental factors.

A p-value < 0.05 will be considered statistically significant.

3.10 ETHICAL CONSIDERATIONS

Ethical approval will be sought from the appropriate health research ethics committee in Edo State. Participation will be voluntary, and confidentiality will be maintained throughout the research. Participants (and guardians, where applicable) will sign an informed consent form before inclusion in the study.

CHAPTER FOUR

RESULT

4.1 RESULT OF ASSESSMENT

This chapter presents and analyzes the data collected from respondents regarding the prevalence of typhoid fever among teenagers in Egor Local Government Area of Edo State. The data were analyzed using descriptive and inferential statistics in line with the research questions formulated in Chapter One. Questionnaires were distributed to respondents in Egor Local Government Area of Edo State. The purpose of this analysis is to provide empirical evidence that reflects the level of awareness, experiences, and preventive behaviors among teenagers concerning typhoid fever in the study area. Data were collected through the use of structured questionnaires distributed to selected respondents, and the responses were systematically coded, tabulated, and interpreted to provide meaningful insights.

The presentation of results in this chapter is organized according to the major themes and research questions of the study. Specifically, it covers respondents' demographic characteristics, their level of knowledge of typhoid fever, the prevalence rate within the population, and the preventive measures commonly practiced to reduce infection and transmission. Descriptive statistics such as frequency counts, percentages, means, and standard deviations were employed to summarize the data, while inferential statistical tools were used to test the hypotheses and determine the relationships among variables. Tables were also used to enhance clarity and facilitate understanding of the findings.

The analysis presented in this chapter is intended to provide a factual basis for the discussions and conclusions, where the results will be interpreted in relation to existing literature and theoretical frameworks. Overall, this section aims to translate raw data into meaningful information that can guide effective public health strategies for the prevention and control of typhoid fever among teenagers in Egor Local Government Area.

4.2 Research Question 1: What is the level of knowledge about typhoid fever among teenagers in Egor?

Knowledge Items	Agree (%)	Disagree (%)
Typhoid fever is caused by bacteria from contaminated food and water.	82.1	17.9
The main cause of typhoid fever is mosquito bites.	21.1	78.9
Typhoid fever can be prevented by handwashing.	88.4	11.6
Drinking untreated water can cause typhoid.	85.3	14.7
Vaccination helps to prevent typhoid fever.	63.2	36.8
Poor sanitation increases the risk of typhoid infection.	90.5	9.5

Findings from Table 4.1 indicate that a large proportion of respondents had good knowledge of typhoid fever. Over 82% correctly identified contaminated food and water as the cause of typhoid fever, while 88.4% recognized handwashing as a preventive measure. However, a small portion (21.1%) wrongly believed mosquito bites cause typhoid, indicating that some misconceptions still exist.

Overall, the mean knowledge score (calculated on a 5-point scale) was 4.2, suggesting that most teenagers possess a high level of knowledge about typhoid fever. This aligns with findings from (Olayinka and Abiola 2019), who reported similar awareness levels among secondary school students in Ibadan.

4.3 Research Question 2: What is the prevalence of typhoid fever among teenagers in Egor?

Items	Yes (%)	No (%)
Have you ever been diagnosed with typhoid fever?	64.2	35.8
Have you been infected more than once in the past two years?	38.4	61.6
Do your family members frequently suffer from typhoid fever?	41.1	58.9
Did you seek medical treatment when you had typhoid fever?	72.1	27.9

The results in Table 4.2 reveal that 64.2% of the respondents had been diagnosed with typhoid fever at least once, and 38.4% had suffered recurrent infections within two years. This suggests that typhoid fever remains prevalent among teenagers in Egor, consistent with (Okwuosa *et al.,* 2020), who reported a 60% infection rate among adolescents in South-South Nigeria.

The high prevalence may be attributed to persistent environmental risks, inadequate sanitation, and poor hygiene practices in schools and households.

4.4 Research Question 3: What preventive measures are adopted by teenagers against typhoid fever?

Preventive Practice	Always (%)	Sometimes (%)	Never (%)
Wash hands before meals and after toilet use	78.4	17.4	4.2
Drink only treated or boiled water	62.6	28.9	8.5
Avoid eating street food	41.1	45.8	13.1
Dispose refuse properly	59.5	33.2	7.3
Receive typhoid vaccination	24.2	31.6	44.2
Cover food to avoid flies	73.7	21.1	5.2

The data in Table 4.3 show that the majority of respondents (78.4%) reported consistent handwashing practices, while 62.6% drank only treated or boiled water. However, only 24.2% of respondents had received a typhoid vaccination, suggesting low vaccine uptake. Similarly, 41.1% avoided street food consistently, while others admitted occasional consumption.

This pattern indicates moderate preventive behavior overall, but weak compliance in vaccination and food hygiene. These findings agree with (Abiola and Adeyemo 2020), who found that preventive practices among Nigerian adolescents are often inconsistent despite good disease awareness.

4.5 Research Question 4: Is there a relationship between knowledge and preventive practices of typhoid fever among teenagers in Egor?

To test this hypothesis, the Chi-square test (χ^2) was used to examine the relationship between respondents' knowledge levels and their preventive practices.

Variable	χ^2 Calculated	χ^2 Critical (0.05, df=4)	p-value	Decision
Knowledge vs Preventive practices	14.62	9.49	0.012	significant

Since the calculated χ^2 value (14.62) is greater than the critical value (9.49) at 0.05 significance level, and the p-value (0.012) is less than 0.05, the null hypothesis is rejected. This implies a significant relationship between the level of knowledge and preventive practices of typhoid fever among teenagers.

This means that teenagers with higher knowledge scores tend to engage more in preventive behaviors, confirming the assertion of the Health Belief Model (Rosenstock, 1974) and supporting findings by (Olayinka and Abiola 2019).

4.6 SUMMARY OF MAJOR FINDINGS

From the analysis above, the major findings of the study are summarized as follows:

1. Most teenagers in Egor possess a high level of knowledge about typhoid fever, although a few misconceptions still exist.

2.The prevalence of typhoid fever among teenagers remains high, with 64.2% having experienced the disease.

3. Preventive practices are moderately observed, with high handwashing rates but low vaccine uptake.

4. There is a significant positive relationship between teenagers' knowledge of typhoid fever and their preventive practices.

The findings reveal that although awareness of typhoid fever is relatively high, practical adherence to preventive measures remains suboptimal. This mirrors the trend reported by (Okonko *et al.,* 2018), who noted that Nigerian adolescents often know about typhoid fever but fail to apply preventive measures consistently. The persistence of high prevalence despite good knowledge suggests that behavioral and environmental factors such as poor water infrastructure and limited access to safe food continue to undermine prevention efforts (Akinyemi *et al.,* 2016). Furthermore, the statistically significant relationship between knowledge and prevention supports the Health Belief Model, which posits that individuals who perceive a disease as serious and understand its risks are more likely to adopt preventive behavior (Rosenstock, 1974). Therefore, improving health education, sanitation, and vaccination access could lead to measurable reductions in typhoid incidence among teenagers in Egor.

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 DISCUSSION

This chapter provides a summary of the major findings from the study, draws relevant conclusions, and offers recommendations based on the data presented and analyzed in Chapter Four. The chapter also suggests areas for further research to improve understanding and control of typhoid fever among teenagers in Egor Local Government Area of Edo State.

5.2 SUMMARY OF THE STUDY

The study examined the prevalence of typhoid fever among teenagers in Egor Local Government Area. It sought to determine the level of awareness, the rate of infection, and the preventive behaviors adopted by adolescents in the area. The study adopted a descriptive survey research design, and data were obtained through a structured questionnaire administered to teenagers in Egor Local Government Area of Edo State.

The objectives of the study were to:

1. Determine the level of knowledge of typhoid fever among teenagers in Egor.

2. Assess the prevalence of typhoid fever among teenagers in the area.

3. Examine the preventive practices adopted by teenagers against typhoid fever.

4. Determine whether there is a significant relationship between knowledge and preventive practices of typhoid fever among teenagers.

Key findings from the study revealed that:

The majority of respondents had high knowledge about the causes and prevention of typhoid fever.

Prevalence of typhoid fever remained relatively high, with more than half of the respondents (64.2%) having experienced the infection.

Preventive measures such as handwashing and drinking treated water were commonly practiced, but vaccination uptake was low.

A significant relationship was found between knowledge and preventive practices, indicating that better-informed teenagers were more likely to engage in preventive behavior.

These findings align with previous studies (Olayinka and Abiola, 2019; Abiola and Adeyemo, 2020), which suggest that knowledge alone does not guarantee total prevention unless accompanied by improved sanitation, safe water supply, and behavioral change.

5.3 CONCLUSION

The findings of this study underscore that while many teenagers in Egor possess good knowledge about typhoid fever, the disease remains prevalent due to environmental, behavioral, and infrastructural challenges. Inadequate access to clean water, improper waste disposal, and consumption of unhygienic street food contribute significantly to the persistence of typhoid fever in the area. The study concludes that knowledge positively influences preventive practices, but knowledge alone is insufficient without the provision of basic amenities and consistent health education. Therefore, the control of typhoid fever among teenagers requires a multi-dimensional approach that combines improved public health infrastructure, regular health education, and community participation in sanitation programs.

5.4 RECOMMENDATIONS

Based on the findings and conclusions of this study, the following recommendations are made:

1. Enhanced Health Education:

Schools and local health authorities should intensify health education campaigns focusing on typhoid fever transmission, symptoms, and preventive measures. Such programs should emphasize the importance of vaccination and personal hygiene.

2. Promotion of Safe Water and Sanitation:

The government and community leaders should collaborate to ensure access to safe drinking water through the provision of boreholes, proper waste disposal systems, and regular environmental sanitation exercises.

3. Increased Vaccination Campaigns:

The low level of vaccination among teenagers highlights the need for periodic typhoid vaccination drives organized by health ministries and school health units, especially in high-risk areas.

4. School-Based Health Interventions:

Schools should integrate preventive health programs into their curriculum. Regular health talks, demonstrations on handwashing, and environmental hygiene competitions should be encouraged.

5. Community Involvement:

Local organizations and parents should actively participate in public health sensitization programs to foster collective responsibility for disease prevention.

6. Health Policy Implementation:

The government should strengthen policies that ensure regular inspection of food vendors, water sources, and sanitation facilities in schools and communities to minimize contamination.

7. Further Research:

Future studies should explore the role of socio-economic factors and cultural beliefs in influencing preventive practices among adolescents. A longitudinal study could also assess thelong-term effects of health education interventions on typhoid fever control.

5.5 CONTRIBUTION TO KNOWLEDGE

This research contributes to the growing body of public health knowledge in Nigeria by:

1: Providing recent empirical data on the prevalence and prevention of typhoid fever among teenagers in Egor.

2: Demonstrating a significant positive correlation between knowledge and preventive behavior.

3: Highlighting gaps in vaccination coverage and hygiene practices that need urgent policy attention.

4: Suggesting practical community-based strategies for reducing typhoid fever incidence in secondary schools and teenage populations.

5.6 LIMITATIONS OF THE STUDY

Although the study achieved its objectives, certain limitations were noted:

1: The research was restricted to selected schools in Egor, and findings may not fully represent all teenagers in the area.

2: Responses were self-reported and may be influenced by social desirability bias.

3: The study relied primarily on quantitative data; qualitative interviews could have provided deeper insights into behavioral factors.

4: Despite these limitations, the study remains a valuable contribution to understanding typhoid fever patterns among adolescents in Nigeria.

5.7 SUGGESTIONS FOR FURTHER STUDIES

Future research should:

1. Examine the effectiveness of school-based typhoid prevention programs on infection rates among teenagers.

2. Investigate the socioeconomic determinants of typhoid fever prevalence in urban and rural settings.

3. Explore the relationship between water quality and incidence of typhoid fever in specific communities.

4. Conduct comparative studies between private and public schools to determine variations in preventive practices.

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