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PREVALENCE OF TYPHOID FEVER AMONG CITIZENS OF GOMBE STATE: PERCEPTION OF THE RULERS AND RULED FROM THE PERSPECTIVES OF *SHARĪ'AH*

AISHATU ABUBAKAR KUMO
Department of Sharī'ah and Legal studies, School Legal Studies, Gombe State College of Education & Legal Studies, Nafada.
Corresponding Author: jauroji1988@gmail.com

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Abstract

Typhoid fever is one of the prevalence illnesses that bothers the lives of Gombe Citizens. It is one of the diseases that even lead to dead in some cases. Studies have shown how it mostly affects the developing world frequently. This paper adopted a quantitative method of data collection and have found out some lapses of both the ruler and the ruled on typhoid fever in Gombe. This study have investigated the adoption and application of basic life rules and regulation that will help to enhance the wellbeing of the individual in Gombe state. Both the rulers and ruled have a collective responsibility in order to have harmonious life. It is the duty of the ruler to provide all the necessary amenities for the welfare of the subjects. The ruler must maintain law and order, govern the nation, protects the people, provide resources and services and promote citizens' rights and welfare. While the subject are bound to obey the [redacted] rules stipulated in all aspects of life. However, the result indicate a negligence attitude by both the subjects and the rulers. Thus, the research suggested an effort towards making a strong rules by the leaders to help the subjects adjust themselves and comply with the order, while the rulers adhere to discharge their duties towards the subjects as prescribed by Islamic legislations.

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Introduction

One of the greatest challenges facing emerging countries is reaching the vast majority of their people who are largely uneducated, impoverished, with poor health facilities and information about the process of protection and prevention of certain diseases in both rural and urban areas. Typhoid fever (TF) is one of the major public health problem in many developing countries. It is a human-specific disease caused by the gram-negative Salmonella typhi bacterium. It is most commonly contracted through consuming food or drink contaminated with the faeces or urine of S. typhi-shedding carriers, which are typically asymptomatic (Masuet-Aumatell, & Atouguia, 2021). This sickness is characterized by a high fever that lasts for several days and is accompanied by a wide range of symptoms, including nausea, vomiting, diarrhoea, paradoxical bradycardia, muscle atrophy, and a lack of appetite. It can result in haemorrhage, peritonitis, encephalopathy, and intestinal perforations, all of which are fatal if not treated promptly (Umar, et.al, 2022).

Typhoid leads to death and disease morbidity, with The World Health Organization reporting over 25 million cases yearly (Muhammad, et. al. (2020). There are about 33 million cases of typhoid annually in the world resulting in 216,000 deaths in endemic areas. The World Health Organization (WHO) identifies typhoid as a serious public health problem with high incidence on children, young adults and pregnant women. Outbreaks of typhoid fever are frequently reported from sub-Saharan Africa and countries in Southeast Asia (WHO, 2017).

Common risk factors associated with the disease include poverty as a result of poor sanitation and poor hygiene (Denmark, 2014). Improper disposal of solid waste left unattended to create dumpsites which serve as breeding grounds for pathogenic microorganisms. Secretion of feaces by the infected person on water ways can be a cause for the spread of the disease to the healthy person. There are elements of improper wastes disposal among the citizens of Gombe. This has open up for the waste to find its way into the Dadin Kowa dam. It based on this background that this research investigated the reason behind prevalence of typhoid fever among the people of Gombe.

Problem Statement

For any developing country to developed and civilize, it must put into consideration the rights and responsibilities of its citizens. No nation can prosper

with many diseases associated with negligence from both the ruled and the rulers. Typhoid fever is one of the prevalence diseases disturbing the economic development of the people. It is characterized as the killer disease indiscriminately by Muhammad, et. al. (2020). Several studies have found out the prevalence of typhoid fever among Gombe citizens (Taufiq, et. al, 2022; Ra, et.al. 2021; Peters, et. al nd). This include those within the metropolis and other local government areas. Provision of insufficient healthy water and inappropriate sanitation is one of the caused typhoid infection. Some of the problems attributed with people of Gombe is dumping of refused and feaces in water ways. The common risk factors are associated with the disease include poverty as a result of poor sanitation and poor hygiene (Denmark, 2014). Improper disposal of solid waste left unattended to create dumpsites which serve as breeding grounds for pathogenic microorganisms. Secretion of feaces by the infected person on water ways can be a cause for the spread of the disease to the healthy person. This same water ways is the passage of rainfall that goes to Dadin Kowa dam that is use as drinking water for the populace. Another issue is the refuse disposal mostly placed closed the water ways. While some refuse dumping ground are nowhere to be found after they were stipulated by the government; even though, these days there are emergence of refuse dumping by the government. It is to this background that this research is aim to achieve the following objectives.

Objective (s) of the Study:

The general aim of this study is to investigate the perception of the lead and leaders towards each other's rights and responsibilities in terms promoting the welfare of the citizens. The specific objectives of the study are to:

1. To find out the responsibilities of the leaders in terms of welfare of the citizens in Islam.
2. To identify the rights of the subjects over the rulers in terms of provision of resources and services under the Islamic legislation.
4. To spot where the lapses come from and prosper way out.

Literature Review

Pokarel et al. (2009) studied enteric fever prevalence and Salmonella antibiotic resistance in Kathmandu Valley, Nepal. They found an overall prevalence of 5.4% among 479 fever patients, with *S. paratyphi A* (65.4%) being the most common cause, followed by *S. typhi* (34.6%). The highest prevalence was in children aged 1-

15 years (8.9%). Females had a higher incidence (female-to-male ratio of 1.4:1). The prevalence varied by ethnicity, with Dalit, Khas, and Madeshi groups showing higher rates. However, differences in age, sex, and ethnicity were not statistically significant. The study also noted high antibiotic resistance among Salmonella isolates. This work has contributed to the level of the disease in the area, but did not discussed on my area concern.

Modu et al. (2022) in their study *"Spatial and Temporal Simulation of Typhoid Fever Transmission in Yobe State"* used a computational model to simulate the spread of typhoid fever in the region. They employed the SIR (Susceptible, Infected, and Recovered) model in GLEaMviz software to analyze the disease's spatial trends. The study found mild seasonal fluctuations in typhoid transmission, with higher cases during the rainy season, likely due to the transportation of the disease through flowing water. The results suggest a perennial trend with increased cases in the rainy season. However, this work did not touch on my area of research in Gombe metropolis.

Taufiq et al. (2022) in their study *"Epidemiology and Risk Factors for Typhoid Fever in Gombe Metropolis, Gombe State, Nigeria"* highlighted the lack of epidemiological data on typhoid in Gombe, despite its high prevalence. The study aimed to identify risk factors for typhoid infection and recurrence. Using simple random sampling, data from 663 respondents were collected through a validated questionnaire. The analysis revealed that typhoid occurrence was significantly linked to factors such as vaccine hesitancy, having a houseboy or girl, poor hand hygiene before food handling, low education levels, drinking un-boiled water, eating commercially available food or drinks, and having a typhoid carrier in the household. This paper has revealed the causes of typhoid fever but did not mentioned the lapses of the ruled and the rulers of which this paper will find out.

Peters et al. (2022) studied the pattern of enteric fever among patients at General Hospital Kaltungo, analyzing 1,206 samples for *Salmonella typhi* and *Salmonella paratyphi*. Of these, 748 (62%) were positive for typhoid and paratyphoid fevers. Females had a higher positivity rate (68.4%) compared to males (55.5%). The highest positivity was found in the 0-10 years (28.3%) and 11-20 years (26.2%) age groups, while the lowest was in those aged 60 and above (6%). The study recommended improved personal hygiene, particularly for women and individuals in the 0-10 and 11-20 age groups, as they were most affected by Salmonellosis. This work has contributed in detecting the level of typhoid fever in Gombe, but it also did not touch on my area of study.

Gana et al. (2023) analyzed the impact of solid waste dumpsites on community health in Gombe Metropolis, revealing that improper waste disposal creates breeding grounds for pathogenic microorganisms, leading to diseases like malaria, Lassa fever, and typhoid. The study emphasizes the need for integrating health considerations into solid waste management plans, particularly focusing on bacterial agents responsible for diseases such as malaria, typhoid, UTRI, and diarrhea. The authors recommend stronger regulation of dumpsites by local authorities, public education on hygiene practices, and prioritizing health risks in waste management efforts to improve public health in the region.

Bassey et al. conducted research on the environmental and public health impacts of municipal solid waste dumpsites in Calabar Metropolis, Cross River State. The study found that 70% of households have proper dustbins, while the remaining 30% lack government-provided containers, leading to increased indiscriminate dumping. This improper waste management poses significant environmental and health risks, highlighting the need for improved waste disposal systems and better public access to waste containers in the metropolis.

Mawdudi, (1976) in his work, "Human rights in Islam. Leicester: The Islamic Foundation". Discussed the rights of the citizens in both Islamic and western perspectives. This include the political framework and how it can executed. Fundamentals rights were stipulated which includes both male and female respectively.

Musshtaq, et. al. (2023), in their work "Rights and Responsibilities of the Ruler of Time in the Light of Ali Khilafat" revealed that after the martyrdom of Uthman bin Affan (RA), Ali (RA) comes to the post of caliphate in 35 AH. Ali took over the system of government in very difficult circumstances. During his caliphate, the political situation became so intense that it was a very difficult phase to manage all the people. On the one hand, Uthman's demand for retribution, on the other hand, not to allow division among the subjects, in this political crises. Ali (RA) organized the system in the best way. The system of government became an example for later people. The article explore the system of government adopted by Ali (RA) during his reign and evaluate the rights and responsibilities imposed on a Muslim ruler in the light of his leadership style.

Bhatti et al. (2023) in *"The Rights and Responsibilities of Rulers in the Light of the Life of Umar bin Abdul Aziz"* discuss the relationship between rulers and their subjects, emphasizing that leadership is a blessing granted by Allah. Leaders have certain rights over their people, who are obligated to obey them in matters that

align with Shariah law. Obedience is not required in actions that contradict the Shariah. The paper states that Muslims must follow the caliph's orders regarding essential Islamic matters, provided they do not oppose Shariah principles. Even in non-essential religious matters, if the caliph's decision is based on Ijtihad (reasoned legal opinion) and does not contradict Islamic sources, it is obligatory to follow it. The paper also asserts that once Muslims agree on a sultan's rule, rebellion against that ruler is forbidden, even if the ruler does not fulfill all the conditions of the caliphate. This paper is also about the contributions of rulers in terms of discharging a duty, but it did not mentioned what this paper is about to discuss.

Ahmed et al. in *"Ḥaẓrat Umar (RA) As A Role Model For Modern Muslim Rulers"* explore the leadership of the second Caliph, Umar ibn al-Khattab (RA), highlighting his exemplary role as a ruler. Umar (RA) is presented as a responsible leader who fulfilled his duties toward his people and introduced reforms to address contemporary challenges. Notably, he was the first Muslim ruler to patrol the streets of Madinah to directly understand and resolve the issues of his subjects. Umar (RA) went beyond traditional approaches by using Ijtihad to tackle new challenges, making him a timeless model for modern Muslim rulers in fulfilling their responsibilities toward the rights of their people. This paper is also good but yet to in cooperate my area of study.

All these literatures have contributed immensely toward the revelation of how typhoid fever have caused havoc to some citizens, killed others and have contributed to the backwardness of their economic progress. Therefore this paper will revealed the prevalence of the diseases in Gombe metropolis and what are the lapses that led to the cause of its prevalence in Gombe.

Methodology/ Research Design

The research adopted for this paper was quantitative in nature. Questionnaires were distributed in the study area which is located at Gombe; a city in north eastern Nigeria. The study population will consist of laboratory-confirmed typhoid patients in metropolitan area. Information regarding laboratory-confirmed occurrences of typhoid among the respondents that has been diagnosed with typhoid or has a recurrent infection. Within Gombe metropolis, Specialist Hospital Gombe, Federal Medical Centre and Zainab Bulkacuwa female and Children hospital were selected. These sites are chosen among others based on health facilities and following criteria: frequently visited, easily accessible, proximity to

more populated areas, and relative availability of diagnostic facilities. The data for this study is from January 2021-Decmber 2023 that is a three year-period. Besides that, available written materials on the disease will be used to get more information about how frequent the fever is. All patients that came to the lab for widal or micros copy test from 1st February, 2021 to 30 December, 2023 are the population of this study. These will include those below five years and above respectively. Ethical clearance is obtained from heads of the respective units.

The researcher used a closed/structured questionnaire as the method of data collection in this study. Also, the restricted questionnaire is chosen because it is a time saving to respondents where they have chosen from the available alternatives provided. While some of them have answered the questionnaire verbally for not being conversant with reading and writing skills. The researcher used personal administration with on-the spot collection. Thus, the questionnaires were delivered by the researcher and the respondents have completed and returned them back on the spot. With this mode of administration, clarifying questions were asked by the respondents and explanations were offered by the researcher. In the distribution of the questionnaires, three research assistants were employed to help in the distribution and re-collections of the questionnaires.

Ethical clearance: Ethical clearance is obtained from the Gombe state ministry of health as well federal medical Centre for protection of the data collected. All confidentialities about the data is protected.

Method of Data Analysis

The data is analyzed using quantitative method of data analysis through descriptive statistics because it is the preferred model in humanities. So, the analysis of the data is carried out through tabulation of all information to enable an easy investigation. Within the quantitative method, descriptive statistics is used because as a preferred model. Percentage is adopted from the descriptive statistics as is describes information about events and situations. On the process, the data was subjected to frequency counts. In other words, the subjects' responses for each individual question was added together to find the highest frequency of occurrence. These quantified responses is then presented in percentage forms and in a tabular form well. This is to make it possible for a reader to draw meaning out of the data collected and presented.

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Frame Work of analysis

Islam places a profound emphasis on the responsibility of leaders for the health, well-being, and welfare of their subjects. Leaders are urged to serve with justice, compassion, and care, ensuring that the needs of the people—both physical and spiritual—are met. This guidance is grounded in the Qur'an and Sunnah, which emphasize accountability, compassion, and the need to prioritize public welfare.

Islamic principles and teachings on leaders' responsibilities toward the health and well-being of their Subjects

1. Justice and Accountability: In Islam, Leaders are instructed to act with fairness and justice, ensuring that people's rights, including the right to health and welfare, are safeguarded. Allah in the Qur'anic verse commands justice and compassion, where He said, "Indeed, Allah commands you to render trusts to whom they are due and when you judge between people to judge with justice. Excellent is that which Allah instructs you. Indeed, Allah is ever Hearing and Seeing" (Qur'an 4:58). This verse underscores that a leader must be just, fair, and ensure the well-being of the people. From the Hadith of the Prophet Muhammad (SAW) where he said, "The just will be seated on pulpits of light near Allah… those who are just in their rulings and with their families and those for whom they are responsible" (Sahih Muslim, 1827). This hadith highlights that leaders who act justly, including ensuring the well-being of those under their care, are promised an honorable position before Allah.

2. Ensuring Provision of Basic Needs: A leader in Islamic legislation is a servant to his subjects. Leaders are responsible for providing their subjects with basic necessities, including access to food, water, healthcare, and other resources that support well-being. In support of that, Allah says: "And spend in the way of Allah and do not throw yourselves with your own hands into destruction. And do well; indeed, Allah loves the doers of good" (Qur'an 2:195). This encourages leaders to ensure that their people do not suffer from neglect or deprivation, and instead promote goodness by providing essential resources. The Prophet Muhammad (SAW) emphasized that leaders are held accountable for the welfare of their people, saying, "The Imam (leader) is a shepherd and is responsible for his flock…" (Sahih al-Bukhari, 7138). This means that leaders must care for the health, well-being, and basic needs of their subjects.

3. Compassion and Care: Here Leaders are encouraged to exhibit compassion, kindness, and mercy in dealing with their subjects, especially in matters related to health and well-being. In support of that, Allah says, "And We have not sent you,

(O Muhammad), except as a mercy to the worlds" (Qur'an 21:107). The Prophet's role as a mercy to humanity serves as a model for leaders to act with compassion toward their people. And the hadith of the Prophet said, "Allah will not show mercy to him who does not show mercy to others" (Sahih al-Bukhari, 6013). Leaders are expected to exercise mercy and compassion in their decisions, including in providing healthcare, education, and resources for well-being.

4. Protecting Public Health and Safety: Protection of health and safety is as well one of the duties of the leaders on their subjects. Leaders are responsible for taking proactive steps to protect the health and safety of their communities, including preventing harm and ensuring access to healthcare. During times of plague, the Prophet gave practical advice, saying, "If you hear of an outbreak of plague in a land, do not enter it; but if the plague breaks out in a place while you are in it, do not leave that place" (Sahih al-Bukhari, 5728). This guidance for quarantine reflects an early Islamic teaching on public health measures to prevent the spread of disease.

There is Hadith on Well-Being where the Prophet also emphasized the importance of physical health, saying, "There are two blessings which many people lose: (They are) health and free time for doing good" (Sahih al-Bukhari, 6412). This serves as a reminder for leaders to prioritize and promote the health and well-being of the community.

5. Addressing Poverty and Socioeconomic Welfare: Islam stresses the need for leaders to alleviate poverty, provide economic support, and address inequalities that impact the health and welfare of the people. Allah has instructed where He says: "And in their wealth and possessions (was remembered) the right of the (needy), him who asked, and him who (for some reason) was prevented (from asking)" (Qur'an 51:19). This verse emphasizes that leaders should ensure resources reach the vulnerable, helping meet basic needs and alleviate hardships. So also the Prophet (SAW) warned leaders about neglecting the poor, saying, "He who does not care about the affairs of the Muslims is not one of them" (Sunan al-Kubra al-Bayhaqi, 9/104). Leaders are encouraged to address social welfare issues as part of their responsibility, promoting well-being across all segments of society.

6. **Consultation and Seeking Advice for Public Welfare:** Islam encourages leaders to consult experts and consider the needs of their people in decision-making, particularly in health and welfare matters. Allah says, "And consult them in the matter…" (Qur'an 3:159). Leaders are encouraged to seek counsel and make informed decisions that promote public welfare, ensuring that health and well-

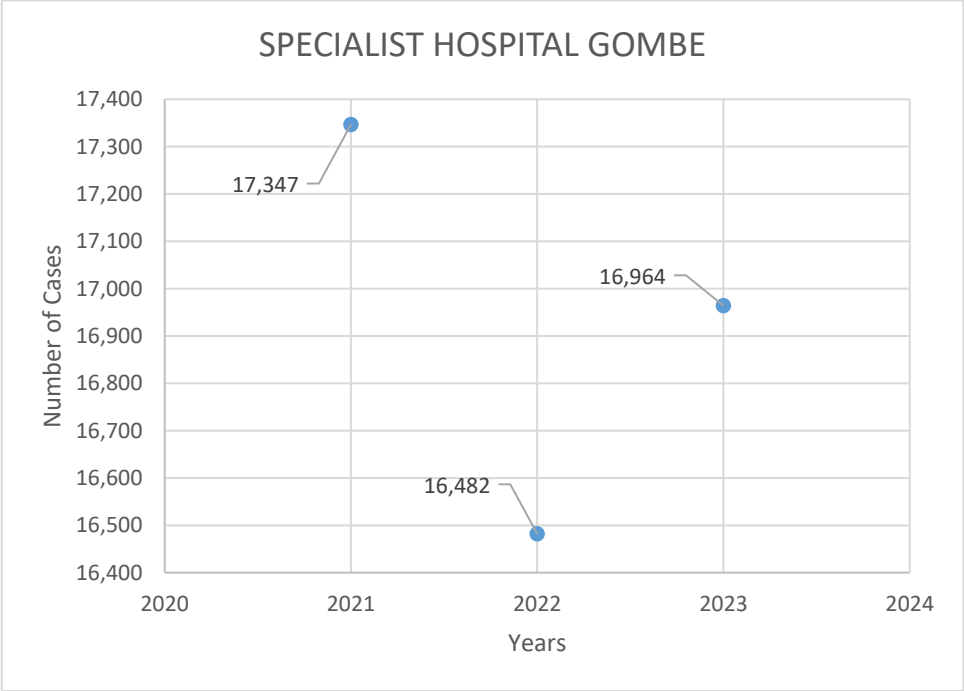
being are prioritized. An example can be obtain from the Prophet's Life. He used to consults with his companions on various issues and valued their input. For instance, during a difficult time when people were affected by drought, he encouraged praying for rain and led the people in the *Salat al-Istisqa'* (prayer for rain), showing compassion and attention to their well-being. This shows reflecting his concern for the people's welfare and reliance on Allah for well-being.

Data Samples obtain from the three Hospitals in the Study Area.

A. Specialist Hospital Gombe

Specialist Hospital Gombe Statistics of Typhoid Fever Cases		
S/N	**NUMBER OF CASES**	**YEARS**
1	17,347	2021
2	16,482	2022
3	16,964	2023

A.1



The table provided contains the number of typhoid fever cases at Specialist Hospital Gombe over a three-year period, from 2021 to 2023. Below is the analysis of the data:

i. **The overall Trends indicate the followings:**

a. Decrease in cases (2021-2022): From 2021 to 2022, there was a slight decrease in the number of cases, from 17,347 in 2021 to 16,482 in 2022. This represents a decrease of 865 cases, or approximately 5%.

b. Slight increase (2022-2023): However, from 2022 to 2023, there was a slight increase in cases, from 16,482 in 2022 to 16,964 in 2023. This represents an increase of 482 cases, or approximately 3%.

2. Yearly Comparison

a. 2021 to 2023: When comparing the numbers between 2021 and 2023, there is an overall decrease of 383 cases, which is about 2.2% lower than in 2021.

3. **Possible Implications consist of:**

a. **Fluctuating trends**: The data shows a small fluctuation in the number of typhoid fever cases across the three years, which could be due to a variety of factors, such as changes in healthcare access, public health initiatives, sanitation improvements, or seasonal patterns.

b. **Effectiveness of interventions:** The decrease in cases from 2021 to 2022 might suggest that public health interventions (like vaccination campaigns, better hygiene practices, or improved water sanitation) could have had a positive effect. However, the small rise in cases in 2023 could point to new challenges or variations that need further investigation.

4. Potential Areas for Further Study

a. Cause of the slight increase in 2023: Understanding why there was a slight increase in typhoid fever cases in 2023 could provide insights into emerging trends, such as changes in the environment, population behavior, or healthcare system challenges.

b. Long-term trends: It would be helpful to examine a longer dataset for a more comprehensive understanding of whether this is part of a larger trend.

As the number of cases fluctuates slightly, the data shows a relatively stable pattern over the past three years, with a slight overall decrease in the number of typhoid fever cases from 2021 to 2023.

B. Zainab Bulkachuwa Women & Children Hospital Gombe

Zainab Bulkachuwa Hospital Statistics of Typhoid Fever Cases		
YEAR	**NO. OF CASES**	
2021	**3290**	
2022	**2913**	
2023	**2846**	

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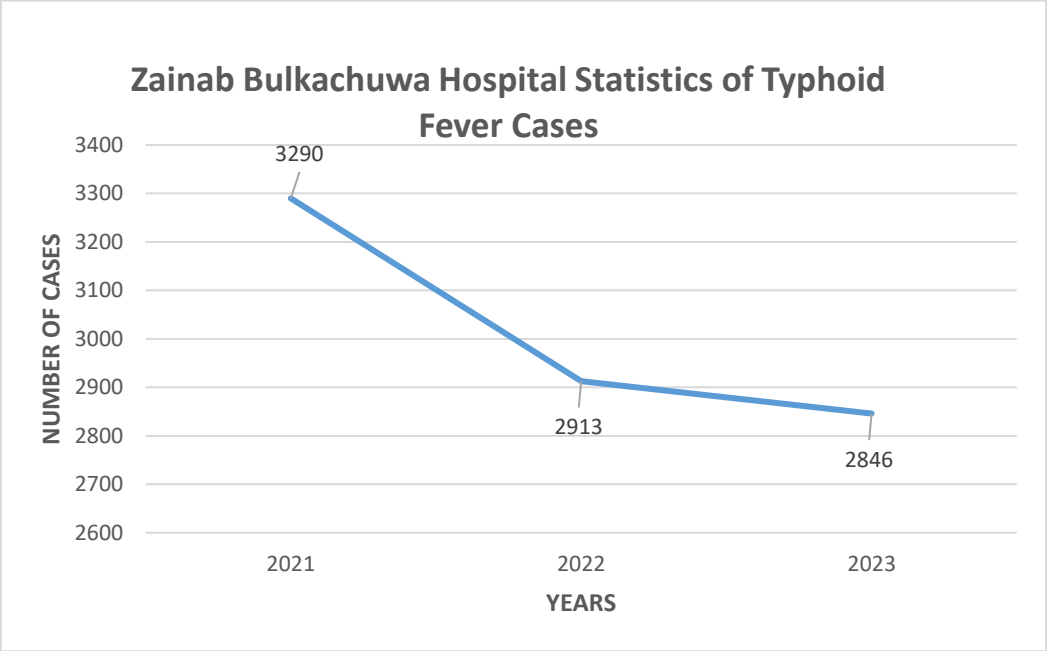
B.1



Source: Data from Zainab Bulkachuwa Hospital

The above table from for Zainab Bulkachuwa Hospital presents the number of typhoid fever cases over a three-year period. Below is the analysis:

1. Overall Trends

a. Decrease in cases (2021-2022): From 2021 to 2022, there was a decrease in the number of typhoid fever cases, from 3,290 in 2021 to 2,913 in 2022. This represents a decrease of 377 cases, or approximately 11.4%.

b. Slight decrease (2022-2023): From 2022 to 2023, there was a further decrease in cases, from 2,913 in 2022 to 2,846 in 2023. This is a decrease of 67 cases, or about 2.3%.

2. Yearly Comparison

a. 2021 to 2023: Comparing the cases between 2021 and 2023, the total decrease is 444 cases, or about 13.5% lower than in 2021.

3. Possible Implications

a. **Steady decline in cases:** The overall trend shows a consistent decrease in the number of typhoid fever cases over the three years, which might indicate improvements in public health measures such as better sanitation, healthcare access, vaccination, or hygiene practices.

b. **Continued efforts needed:** Although the number of cases has decreased, the rate of decrease is slowing (especially from 2022 to 2023), suggesting that there may still be underlying factors or challenges contributing to the persistence of typhoid fever.

4. Potential Areas for Further Study

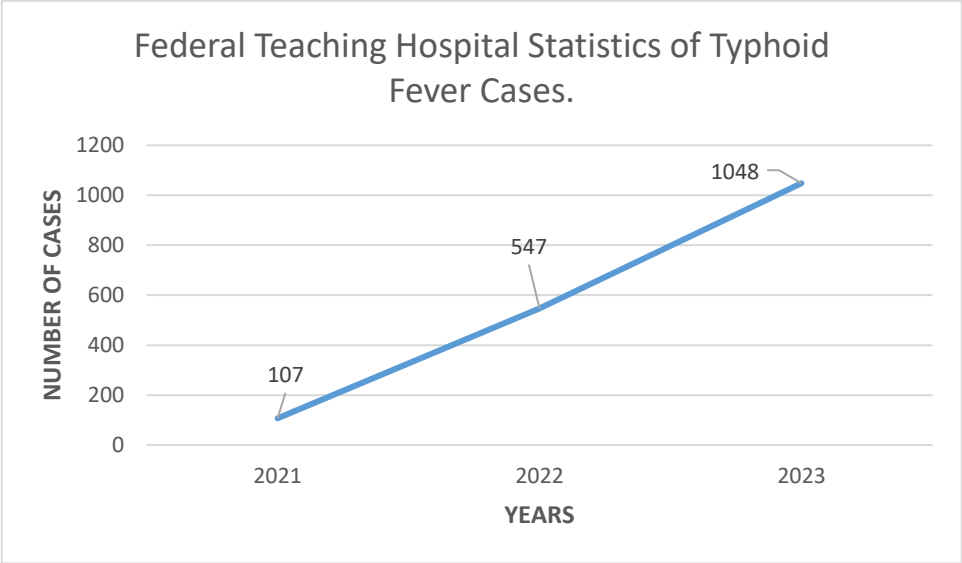
a. **Investigation of contributing factors:** The steady decrease could be explored further to understand the specific factors driving the improvement. This could include examining any public health interventions, sanitation improvements, or healthcare system developments.
b. **Examination of local context:** A deeper dive into the local context, including population growth, migration, or changes in the environment, might help clarify the reasons behind the decrease in typhoid fever cases.

So, the data from Zainab Bulkachuwa Hospital reveals a steady decline in typhoid fever cases over the three years, with a significant decrease of about 13.5% from 2021 to 2023. The trend is encouraging, but the decrease appears to slow down in 2023, suggesting that continued efforts are needed to further reduce cases.

C. Federal Teaching Hospital Gombe

Federal Teaching Hospital Statistics of Typhoid Fever Cases		
YEAR	NO. OF CASES	
2021	107	
2022	547	
2023	1048	

C.1



The table you provided for the Federal Teaching Hospital presents the number of typhoid fever cases over three years. Here is an analysis of the data:

1. Overall Trends

a. Significant Increase (2021-2022): There was a sharp increase in typhoid fever cases from 2021 to 2022, from 107 in 2021 to 547 in 2022. This represents an increase of 440 cases, or approximately 411%.

b. Further Increase (2022-2023): From 2022 to 2023, there was an even larger increase in cases, from 547 in 2022 to 1,048 in 2023. This is an increase of 501 cases, or about 92%.

2. Yearly Comparison

a. 2021 to 2023: Comparing the cases between 2021 and 2023, there was a significant overall increase of 941 cases, or about 879%.

3. Possible Implications

a. **Large fluctuation in cases:** The sharp rise in cases could be indicative of several factors, including:

1. **Public health issues:** There may be an outbreak or a significant issue in the region that has led to a rise in typhoid fever cases.
2. **Changes in reporting practices:** It's possible that changes in reporting or healthcare access could explain the sudden increase. More people may have sought treatment or more cases may have been diagnosed.
3. **Population growth or urbanization:** Increased population or movement in and out of the region might have contributed to the rise in cases.
4. **Environmental factors:** Issues such as poor sanitation, contaminated water, or seasonal factors might also be contributing to the higher number of cases.

4. Potential Areas for Further Study

a. **Investigation of the causes:** Further investigation into the reasons behind the dramatic increase in cases could help identify whether it's due to an outbreak, changes in healthcare access, environmental factors, or population movements.

b. **Monitoring and prevention measures:** This sharp increase might call for urgent attention in terms of monitoring, prevention, and intervention strategies, such as vaccination campaigns, improved water supply, or public awareness programs.

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c. **Data verification:** Given the large fluctuations, it might also be worthwhile to verify the accuracy of the data or check for any changes in reporting procedures during this period.

Finally, the data from the Federal Teaching Hospital reveals a dramatic increase in typhoid fever cases from 2021 to 2023, with a significant 879% rise. This sharp upward trend suggests that factors such as outbreaks, reporting changes, or environmental influences could be contributing to the increase. Further investigation is needed to determine the exact causes and address any emerging public health concerns.

Data Presentation and Analysis of the findings

This section contains the presentation, analysis and discussion of data collected from the field through questionnaire administered to the some citizen of Gombe in various wards. The responses gathered from the respondents through the questionnaires are analyzed based on tabular illustrations using simple percentage method. A total number of two hundred eighty nine (289) questionnaires were self-administered but only (250) were filled and returned. Thus, this number gathered formed the basis for this research analysis.

Table 1. How important is your health to you

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very important	231	93.9	93.9	93.9
	important	7	2.8	2.8	96.7
	undecided	4	1.6	1.6	98.4
	less important	4	1.6	1.6	100.0
	Total	246	100.0	100.0	

SOURCE: Field Survey, 2024

The above shows that majority of the respondents consider their health very important in their daily life with 93.9% ,while others take health as important in their daily life with 2.8% Those who were undecided, less important and not

important have a very negligible percentage of 1.6%, each respectively. The data above shows how people in the study area consider health to be so valuable and important in their daily lives.

Table 2: The extent of believe in leaders responsibility in Islam

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	30	12.2	12.2	12.2
	Rarely	39	15.9	15.9	28.0
	Sometimes	64	26.0	26.0	54.1
	Often	26	10.6	10.6	64.6
	always	87	35.4	35.4	100.0
	Total	246	100.0	100.0	

SOURCE: Field Survey, 2024

From the above table the respondents' opinion on the extent to which leaders responsibilities in Islamic principles are somehow misapplied in daily dealings. Only 35.4% responded to always which is not reasonable. By implication, the duties imposed on the leaders by Islamic principles is not manifested among the followers.

Table 3: Do you believe that Islam has stipulated rights and responsibilities upon the rulers and ruled?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	14	5.7	5.7	5.7
	Strongly Agree	122	49.6	49.6	55.3
	Disagree	28	11.4	11.4	66.7
	Agree	82	33.3	33.3	100.0
	Total	246	100.0	100.0	

SOURCE: Field Survey, 2024

The above table indicates the respondents' opinion that Islam has stipulated rights and responsibilities on both the rules and the ruled. Majority of the respondents

with 49.6% strongly believed that there are rights and responsibilities endorsed by Islam to Muslims. This is followed by the respondents who agree with 33.3% and followed by disagree (11.4%, and strongly disagree 5.7% respectively. By implication, there is misinformation about the Islamic legislations vested on the rulers and the ruled by the respondents.

Table 4: Rights and Responsibility of Leaders in educating citizens on health

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	20	8.1	8.1	8.1
	Sometimes	43	17.5	17.5	25.6
	Often	33	13.4	13.4	39.0
	Always	118	48.0	48.0	87.0
	Occasionally	32	13.0	13.0	100.0
	Total	246	100.0	100.0	

SOURCE: Field Survey, 2024

By the above table, the results indicate always with 48.0% of respondents, that the leaders educate the citizens on their health issues. This is followed by sometimes, which is 17.5%, and occasionally; 13.0%, and never, 8.1% respectively. This also indicate the absence of discharging such a duty from the leaders on educating the citizens on their health.

Table 5: Do you think leaders prioritize their subjects' health as prescribed by Islam?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	95	38.6	38.6	38.6
	Slightly	54	22.0	22.0	60.6
	Moderately	56	22.8	22.8	83.3
	Significantly	18	7.3	7.3	90.7
	Completely	23	9.3	9.3	100.0
	Total	246	100.0	100.0	

SOURCE: Field Survey, 2024

Above table shows the respondents' opinion on the extent to which the leaders prioritized the health of their subjects as prescribed by Islam. Majority of the respondents were of the opinion that at all ruler do not prioritized the health of their subjects with 38.6% followed by those who choose moderately with 22.8% then slightly, with 22.0% ,completely 7.3% significantly with 7.3% respectively. By implication, this table is showing non-chalant attitude by the leaders in terms prioritizing the health of their subjects.

Table 6: National Orientation Agency enlightens citizens about their health?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	82	33.3	33.3	33.3
	Rarely	42	17.1	17.1	50.4
	Sometimes	87	35.4	35.4	85.8
	Often	21	8.5	8.5	94.3
	Always	14	5.7	5.7	100.0
	Total	246	100.0	100.0	

SOURCE: Field Survey, 2024

The above table indicate the respondent opinion on the role played by national orientation Agency in enlightening the subjects about their health. The highest is 35.4% with sometimes, that the agency is not doing its job in that aspect. This is followed by never, rarely, often and always with 33.3%, 17.1%, 8.5%, and 5.7% respectively.

Table 7: How healthy is the type of drinking water provided by your leaders?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	45	18.3	18.3	18.3
	Slightly	59	24.0	24.0	42.3
	Moderately	96	39.0	39.0	81.3
	Significantly	20	8.1	8.1	89.4
	Extremely	26	10.6	10.6	100.0
	Total	246	100.0	100.0	

SOURCE: Field Survey, 2024

The above table indicates the respondents' opinion on how they have observed their leaders provision of portable drinking water. Majority of the respondents

with 39.0% believed that temporarily the leaders provided them with healthy drinking water, followed by the respondents who chose slightly, not at all, extremely no, and never with 24.0%, 18.3%, 10.6% and 8.1% respectively. The above data clearly shows that leaders have not played a significant role in providing portable drinking water to the citizens as endorsed by Islamic legislations. This also indicates how leaders' attitude and behavior toward the provision of healthy drinking water for their followers has contributed to the spread and persistence of typhoid fever in Gombe.

Table 8: Do you believe that inadequate supply of clean and healthy water can cause typhoid fever among the citizens?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	22	8.9	8.9	8.9
	Strongly Agree	102	41.5	41.5	50.4
	Disagree	23	9.3	9.3	59.8
	Agree	99	40.2	40.2	100.0
	Total	246	100.0	100.0	

SOURCE: Field Survey, 2024

Above table shows the respondents view on whether inadequate supply of clean and healthy water can cause typhoid fever with majority of the respondents with 41.5% strongly agree to that with agree, disagree, and not at all with 40.2%, 9.3%, 8.9% respectively. The above data clearly indicates that citizens are aware about the supply of inadequate clean and healthy water can be a cause to typhoid fever with insufficient respondents which it does not.

Table 9: Are there specific methods provided by the leaders to ensure the citizens do not dump refuse into the water-ways?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	66	26.8	26.8	26.8
	Slightly	53	21.5	21.5	48.4
	Moderately	72	29.3	29.3	77.6
	Significantly	22	8.9	8.9	86.6
	Completely	33	13.4	13.4	100.0
	Total	246	100.0	100.0	

SOURCE: Field Survey, 2024

Table 8 above indicates the opinion of the respondents on whether they have ever encountered any method provided by the leaders to ensure that citizens do not dump refuse into waters with majority of the respondents constituting 29.3% opined that moderately was there provision for that. Other respondents believed that not all do the made such provisions with 26.8% while slightly, completely and significantly none, constituted 21.5%, 13.4% and 8.9% respectively. The above data shows that the respondents who choose significantly none have a very negligible percentage with the majority believing that leaders do make such provisions.

Table 9: How often Governments do sanctioned anyone found excreting in water ways?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	77	31.3	31.3	31.3
	Rarely	71	28.9	28.9	60.2
	Sometimes	67	27.2	27.2	87.4
	often	12	4.9	4.9	92.3
	always	19	7.7	7.7	100.0
	Total	246	100.0	100.0	

SOURCE: Field Survey, 2024

The above table shows the respondents opinion on how often do Governments sanctioned anyone found excreting in water ways. Majority of the respondents with 31.3% that governments have never sanctioned anyone found excreting in water ways followed by rarely, sometimes, always, and often with 28.9% 27.2%, 7.7% and 4.9% respectively. The above data indicates that misapplication of any rule on any one found guilty of such offence can give a chance for others to excrete anyhow on water ways. And this behavior can increase the severity of the disease among populate.

Table 10: Do you agree that the government are not aware that all the water ways goes to Dadin Kowa Dam?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	63	25.6	25.6	25.6
	Strongly Agree	18	7.3	7.3	32.9
	Disagree	114	46.3	46.3	79.3
	Agree	51	20.7	20.7	100.0
	Total	246	100.0	100.0	

SOURCE: Field Survey, 2024

Table 10 above shows the respondents opinion on the government awareness as to all the water ways in Gombe metropolis goes to Dadin Kowa dam with the majority of the respondents with 46.3% disagreed that government officials are aware of it while 25.6% have strongly disagree, while 20.7%, 7.3% disagree and strongly agree respectively. The above data shows that government are fully aware of the water ways going to the dam, and that same water is used for drinking by the citizens. Thus, this behavior can contribute to the increase in the level of infection by populate in the fever.

Table 11: How sure are you that the water is well treated at Dadin Kowa Dam before being released for the citizens?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Sure	88	35.8	35.8	35.8
	Rarely	4	1.6	1.6	37.4
	Neutral	42	17.1	17.1	54.5
	Strongly Sure	32	13.0	13.0	67.5
	Sure	80	32.5	32.5	100.0
	Total	246	100.0	100.0	

SOURCE: Field Survey, 2024

The table above shows that majority (35.8%) of the respondents are not sure whether the leader's treated the water in Dadin Kowa Dam before releasing it. While 32.5% are sure that it being treated for consumption. Those with neutral comprises of 17.1% and 13.0% are strongly sure about the treatment. The last group are those who opined that it rarely being treated. This simply means leaders may not be discharging their duties judiciously in treating the drinking water for the populace.

Outcomes:

Knowledge of the rights and responsibilities for both the leaders and the subjects will help in discharging duties. The subjects are somehow reluctant to discharge some of their responsibilities, rather they are waiting for the leaders to do everything for them. The rulers are not so strict in making sure that the subject

comply with some of the basic needs for their well-being. Thus, lapses are found from the rulers and the ruled so far this aspect is concern. So, the study suggests adherence to the Islamic teachings on legislation upon both the rulers and the subjects in discharging duties.

Recommendations:

1. The government should ensure environmental changes across the state that will help reduce the rate of typhoid fever among the populace.
2. Awareness campaign about the population behavior, or healthcare system challenges should be address through various means of communication by the authority.
3. Public health interventions, sanitation improvements, or healthcare system developments should be examined and provide several ways for improvements.
4. Call for urgent attention in terms of monitoring, prevention, and intervention strategies, such as vaccination campaigns, improved water supply, or public awareness programs by the government are to be put in place.

In Conclusion, the study finally revealed what is obtainable in Gombe as far as typhoid fever is concern. There is a fluctuating results in the cases of those infected with the disease in the area. However, all these are attributed to non-adherence to the basic rules on what the subjects and the leaders are supposed to discharge. Islamic teachings are clear and straight forwards to both the subjects and the leaders. Compliance to it can minimize so many problems that will affects the life and wellbeing of the citizens but, on the other hand, non-adherence to it resulted into what is obtainable now in Gombe Metropolis on typhoid fever as shown by this research paper.

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