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DEPARTMENT OF PUBLIC HEALTH

CITY CAMPUS

KNOWLEDGE, ATTITUDE, AND PRACTICE TOWARDS FACTORS CONTRIBUTING TO CHOLERA IN KALINGALINGA COMPOUND IN LUSAKA DISTRICT ZAMBIA

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DECLARATION

I, Matakala Mwala, do hereby declare that the dissertation is my original work and has not been presented for a degree anywhere. This work has not been published at any other university. Works drawn from other sources have been acknowledged.

Matakala Mwala

Signature----------

Date ----------

Supervisor: Mr. Mweemba

Signature ----------

Date ----------

DEDICATION

This research dissertation is dedicated to my mother Haciwa Maimbo Mwala who has always believed in me and always told me that the sky is not the limit and that I was born to excel. I believe she is proud of me as she watches me progress. To my father, Alex Mwala, Dad, I have managed to this far because you always wanted us children to excel in education. Thank you Dad. To my siblings, Mwangal and Alex Jr. " this is our collective achievement and I owe it all to you".

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ABSTRACT

The study targeted the population of Kalingalinga compound of Lusaka district. The investigation was guided by the following objectives: To determine knowledge towards factors contributing to cholera in Kalingalinga compound, To assess attitude towards factors contributing to cholera in Kalingalinga compound and To identify practices towards factors contributing to cholera in Kalingalinga compound.

The study used qualitative design for purpose of analysing thematic data and quantitative method for purpose of analysing statistical information. The main instruments in data collection were questionnairs and interview guides. Data was collected from 25 males and 35 females who were selected from a population of 70. The study found that the population of kalingalinga have the knowledge about cholera and how it is transmitted , the attitude towards factors contributing to cholera and the practices undertaken for treatment and prevention.

In order for the community to be free from cholera the following recommendations were suggested**:** There is need for the government and all the stakeholders in the Ministry of local government and health system to consider and sensitise the public at large on the knowledge, attitude and practice towards factors contributing to cholera, there is need for the government through the Ministry of local government and health system to embark on garbage collection from townships to dumping sites, Government to make use of a combination of surveillance, water, sanitation and hygiene, social mobilization, treatment and oral vaccines, Public to be sure of drinking and use safe water, bottled water to brush teeth, wash and prepare food, Wash hands often with soap and safe water, before, during and after preparing food and Government to encourage towns to set up local boards of health to monitor the spread of the disease and advise the local population.

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DEFINITIONS OF OPERATIONAL TERMS

According the World Health Organisation (WHO, 2019) defined the following terms:

Cholera: is an infectious disease caused by a bacterium called Vibrio cholerae. The bacteria typically live in waters that are somewhat salty and warm, such as estuaries and waters along with coastal areas.

Knowledge: Is knowledge of definition, causes and signs, and symptoms of cholera infection, prevention of cholera, and treatment of cholera.

Attitude: The feelings people have towards prevention and control of cholera and their response to the case of cholera, the feelings people have about shared food at gatherings, their thoughts on washing fruits, and the reasons behind the increase in street vending.

Practice includes identification of good sources of water for drinking, ensure that water for drinking is safe, being able to wash hands after using the toilet, dispose of refuse and get rid of refuse correctly, be able to wash and peel off fruits before eating, keep leftover foods safely and warm before eating and be able to rush a suspected case of cholera to the health institution.

Health: as the state of being physically, mentally, economically, religiously stable, or merely the absence of disease.

Organizations: defined as a group of people working together to find possible solutions or objective

CHAPTER ONE

1.0 Introduction

The chapter presents the background, statement of the problem and purpose of the study. In addition, it covers research objectives, research questions, significance of the study, delimitations and limitations of the study.

1.1 Background

Cholera is defined as an acute bacterial infection that is caused by Vibrio Cholera. The main clinical feature of cholera is watery diarrhea (WHO, 2019). Although the causative bacteria have above 200 serotypes, only two serotypes are prevalent in poor sanitary and hygienic conditions which are the O1 and O 139. These two strains have been linked to cholera outbreaks globally. Cholera infections are commonly severe and highly virulent. WHO, (2019) additionally, cholera outbreaks usually occur in areas that have contaminated water or food because of poor sanitary measures (WHO, 2019). The bacteria are transmitted along the gastrointestinal tract through contaminated food or water. Vibrio cholera produces cholera toxin, which causes the clinical symptoms of the infection. In addition to watery diarrhea, other symptoms included vomiting and abdominal colic. Furthermore, the infection affects all age groups.

The true global burden of cholera is largely unknown as the passively acquired surveillance data underreport its cases related to poor surveillance systems and laboratory diagnostic capacities and social, political, and economic disincentives for reporting in many cholera-endemic countries. Inconsistent with this finding, the World Health Organization estimates that only 5–10% of the cholera cases occurring annually are officially reported by Member countries. According to (WHO, 2019) estimated that there have been approximately 1.3 billion people who are at risk for cholera in endemic countries worldwide, with an estimated 2.86 million cases and 21 000 to 143 000 deaths worldwide due to the infection occur annually, with Sub-Saharan Africa accounting for 60% of the estimated cases (WHO, 2019).

In Africa between 1970 and 2011, African countries reported 3,221,050 suspected cholera cases to the World Health Organization, representing 46 % of all cases reported globally. Excluding the Haitian epidemic, sub-Saharan Africa accounted for 86 % of reported cases and 99 % of deaths

worldwide in 2011 (WHO, 2015). From January to December 2018, approximately 37,565 cases and 443 cholera-related deaths were reported in the region with an average CFR of 1.2%. These cases emerged from 10 out of the 21 countries in the Eastern and Southern Africa Region (ESAR) (WHO, 2019).

In Zambia, widespread cholera outbreaks have occurred since 1977, predominantly in the capital city of Lusaka (Francisco L, 2014). As of May 12, 2018, the outbreak had affected seven of the 10 provinces in Zambia, with 5,905 suspected cases and a case fatality rate (CFR) of 1.9%. Among the suspected cases, 5,414 (91.7%), including 98 deaths (CFR = 1.8%), occurred in Lusaka residents (ZNPHI, 2018). As in most outbreaks and epidemics, the major drivers noted in the 2017-18 cholera outbreak in Zambia included inadequate access to clean and safe water, and poor sanitary conditions, waste management, and personal hygiene (ZNPHI, 2018). In many developing countries women draw water from distant and usually insecure sources as depicted on our cover page (ZNPHI, 2018). The Government of the Republic of Zambia, through its Local Government Ministry, has pledged to improve the infrastructure for water and sanitation. We hope that that this pledge comes to timely fruition. As a medium to long-term measure is being planned, the response team facilitated the immediate provision of water as close to households in affected communities as possible by supplying water to temporary tanks and increasing water points on existing networks (unpublished Ministry of Health situation reports) (ZNPHI, 2018). A cholera outbreak has become more common in Lusaka particularly in the rainy seasons; however, there is a paucity of data on effects associated with these cholera outbreaks rendering interventions difficult.

Kalingalinga compound is a large compound where the residents are among the poorest of Lusaka's population with most of them being self-employed involved in vending. Most of the people of the Kalingalinga compound live in conditions that make them extremely vulnerable to cholera due to the lack of access to safe water, drainage, and good sanitation facilities. As such it is one of an area in Lusaka that loses lives to cholera every year. As the rains approach, it is evident that more lives will be lost from the deadly epidemic as sanitation and hygiene standards in the area fall short of being habitable. There are no drainages in some areas and while those areas with drainage systems are blocked by garbage that people throw in them leading to floods in the rainy season. There are many bars in the community, and they open as early as 06:00 hours and close after midnight and most of the bars have poor sanitation facilities making the people use the shake-shake containers

to answer to the call of nature which are later disposed of indiscriminately posing a danger of cholera outbreaks in the rainy season (Kalingalinga Health Centre, 2018). It is therefore, necessary to conduct a study of this nature to this study to determine the knowledge, attitude, and practice towards factors contributing to cholera in Kalingalinga compound.therefore, there is need for the government and all the stakeholders in the ministry of local government and health system to to consider and sensitise the public at large on the knowledge, attitude and practice towards factors contributing to cholera.

1.2 Statement of Problem

Cholera remains a public health concern as many lives are lost during an outbreak every year in Kalingalinga compound. Cholera has caused serious damage in our country over the last few years. on 06th October 2017, the minister of health declared in the Zambian capital Lusaka. From 28 September through 7 December 201, 547 cases including 15 deaths (case fatality rate =1.8%) had been reported since the beginning of the outbreak (MoH, 2018). The initial outbreak period was 28 September through 20 October. From 21 October through 4 November 2017 there were less than 5 November 2017 an increase in the number of cases was observed with a total of 136 cases reported in the week beginning 26 November, and this had a great impact on the economy of the country because it brought closure to the country, and the economy became slow because people stopped going for work and school children also stopped going to school (MoH, 2018).

The situation in most of the towns and cities is frightening especially when one looks at the state of drainage and sewer systems as well as the inability of local authorities to collect garbage. Many places in Lusaka have clogged drainage systems, and the slightest of rain leaves many places flooded (CSO, 2017). Our markets in Lusaka are fertile breeding grounds for all sorts of germs in the rain season and it is always surprising to imagine how people continue to trade there (CSO, 2017). It has been observed that cholera outspread in Kalingalinga compound of Lusaka district is a leading cause of death. Among the people identified with cholera in Lusaka district, 499 cases were from kalingalinga compound of Lusaka district Kalingalinag (2024 HMIS). With this data presented, it was worthy to determine the knowledge, attitude, and practice towards factors contributing to cholera in Kalingalinga compound.

1.3 Purpose of the study

The purpose of the study was to determine knowledge, attitude, and practice towards factors contributing to cholera in Kalingalinga compound of Lusaka district.

1.4 General Objective of the study

The general objective of the study was to determine knowledge, attitude, and practice towards factors contributing to cholera in Kalingalinga compound of Lusaka district.

1.5 General research question

What knowledge, attitude, and practice towards factors contributing to cholera in Kalingalinga compound of Lusaka district do you have?

1.6 Specific Objectives

1. To determine knowledge towards factors contributing to cholera in Kalingalinga compound
2. To assess attitude towards factors contributing to cholera in Kalingalinga compound
3. To identify practices towards factors contributing to cholera in Kalingalinga compound

1.7 Study Questions

1. What knowledge of factors contributing to cholera in Kalingalinga compound do you have?
2. What attitude towards factors contributing to cholera in Kalingalinga compound are existing ?
3. What is the practice towards factors contributing to cholera in Kalingalinga compound?

1.8 Significance of the study

It was hoped that the research would add knowledge to the already existing body of knowledge on the disease of cholera and stimulate further determination concerning the knowledge, attitude and practice towards factors contributing to cholera in kalingalinga compound of Lusaka district, because the magnitude and frequency of cholera outbreaks in Lusaka have plagued the district, lkalingalinga compound to specific since 1977 up to date and it is most likely to continue if more attention is paid to case management than on preventive measures. Lusaka city council conducted

a study on cholera and the study showed that people in Lusaka drink water from contaminated sources. This study was followed by extensive health education on behavioral change towards cholera. Chime and Kapwepwe (1994) conducted a study on cholera in Lusaka, in their study it was confirmed that many people are unable to practice what they know with regards to the prevention of cholera.

Despite efforts made through massive health education and improvements made in making the drinking water supply safe, cholera outbreaks have continued to be a health problem and threat in Kalingalinga compound. Hence this study hoped to find out the reasons behind cholera persisting in Kalingalinga compound. Could these outbreaks occur due to inadequate knowledge on cholera prevention, negative attitude, or poor practices of the people of Kalingalinga compound.

The possible results of this study on knowledge, attitude, and practice on factors contributing to cholera was used by the local community, neighboring places, and other relevant authorities in formulating further policies and guidelines on environmental health to prevent outbreaks of cholera and its management in Lusaka district.

1.9 Limitation of the study

Limitation included lack of adequate financial resources in procuring research materials, typing and printing of the study. Time was another limitation the researcher faced since he was a distance student who was needed to be working as well as carrying out the research study. In this regard, not all areas of kalingalinga compound purported to be visited were successful in the collection of data . Hence, this limited the targeted areas of the research leading to inadequate data compilation.

1.10 Delimitation of the study

The study was confined to kalingalinga compound of Lusaka district and focused on people who were affected with cholera in order to be able to collect meaningful data to support the study.

1.11 Summary

This chapter has provided the background to the study. The chapter has also outlined the objectives and the research questions of the study that facilitated the collection of data.it has also outlined the purpose of the study which was to find out about the knowledge, attitudes and practice towards factors contributing to cholera people of kalingalinga were equipped of. The chapter further states

the significance of the study. Finally, the chapter concludes by stating the limitations and delimitations of the study.

CHAPTER TWO: LITERATURE REVIEW

2.0 Introduction

This chapter presents literature review that is relevant to the study. It reviews relevant literature that has has been covered by other scholars in line with the research study and the guiding theoretical framework of the study. The literature review is presented according to the views of the research study on aspects of the knowledge, attitude and practice towards factors contributing to cholera in kalingalinga compound in Lusaka Zambia.

2.1 Conceptual Framework

This study is guided by social model of Germ theory (2020). This social model was developed, proved and popularised in Europe and North America between 1850 and 1920. Because its implications were so different from the centuries old humoral theory, Germ theory revolutionised the theory and practice of medicine and the knowledge, attitude and practice towards factors contributing to cholera. It was however, compatible with existing ideas about health, especially those associated with hygiene and sanitation. In line with the factors contributing to cholera, Germ theory's social model contain the following aspects which includes: knowledge, attitude and practice towards factores contributing to cholera.

The subsequent paragraphs therefore, try to explain how involving knowledge, attitude and practice can be used to identify, assess and determine factors contributing to cholera as illustrated in the diagram below:

CONCEPTUAL FRAMEWORK

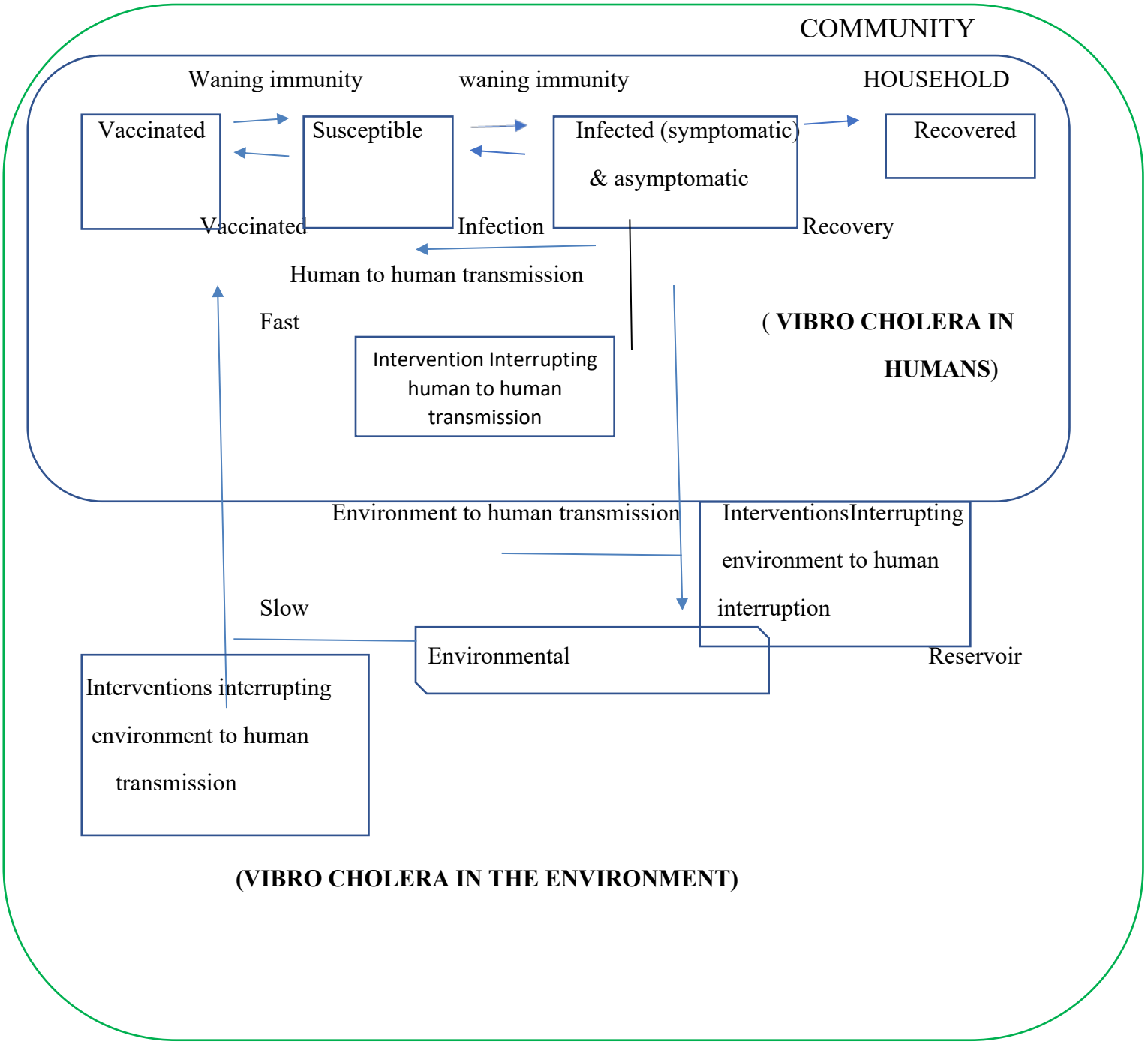


Figure 2.1: Adapted from Gern theory (2020)'s social model of cholera concerning knowledge, attitude and practice towards factors contributing to cholera.

2.2 Knowledge Towards Factors Contributing to Cholera

A study by Tasnuva Wahed et al (2013) on knowledge of, attitudes toward, and preventive practices relating to cholera and oral cholera vaccine among urban high-risk groups: findings of a cross-sectional study in Dhaka, Bangladesh. This cross-sectional study was conducted in an area of high cholera prevalence in 15 randomly selected clusters in Mirpur, Dhaka city.

The results from this study included 2,830 families included in the final analysis, 23% could recognize cholera as acute watery diarrhea and 16% had ever heard of oral cholera vaccine. About 54% of the respondents had poor knowledge about cholera-related issues while 97% had a positive attitude toward cholera and oral cholera vaccine. One-third showed poor practice relating to the prevention of cholera. The findings showed a significant ($p < 0.05$) association between the respondents' knowledge and sex, education, occupation, monthly overall household expenditure, attitudes, and practice. In the adjusted model, male sex, having a lower monthly overall household expenditure, and having a less positive attitude toward cholera were the significant predictors to having poor knowledge.

Another study by Erick Otieno Orimbo (2018) on knowledge, attitude, and practices on cholera in an arid county. Kenya: This cross-sectional study involved a mixed-methods approach utilizing a questionnaire survey and focus group discussions (FGDs). Using multistage sampling with household as the secondary sampling unit, interviewers administered structured questionnaires to one respondent aged ≥18 years old per household. We created a knowledge score by allotting one point for each correct response, considered any total score ≥ median score as high knowledge score, calculated descriptive statistics, and used multivariate logistic regression to examine factors associated with high knowledge score. In FGDs, we randomly selected the participants aged ≥18 years and had lived in Isiolo for >1 year, conducted the FGDs using an interview guide, and used content analysis to identify salient emerging themes.

According to this study, there was a high knowledge score on cholera with gaps in preventive practices. The study recommended targeted health education to the old and uneducated persons and general strengthening of health education in the community.

2.3 Attitude Towards Factors Contributing to Cholera

Attitude is feeling people have or develop towards cholera prevention and control. The feeling could be good or bad and negative or positive (Dempsey and Dempsey 2019). Patience Ebekeyi Idoga, et al (2019) on analysis of Factors Contributing to the Spread of Cholera in Developing Countries. A cluster random sampling in the form of a close-ended questionnaire was used to collect data from a sample of 420 participants comprising farmers, traders, housewives, and students who were randomly selected from different locations in Makurdi. Statistical analyses, such as demographics, reliability, and descriptive analysis, of the collected data, were performed, and a socio-technical design approach was used in the system development.

The results from this study indicated floods, improper sewage disposal, and lack of environmental hygiene were the main causes of the spread of cholera in Benue State. The research highlighted the factors aiding the spread of cholera in Nigeria by directing donor agencies and the government to channel their focus and prepare ahead because of an emergency.

Mpuzi, et al, (2015), in their research in Ilala furthermore, revealed the proportion of respondents with positive attitudes towards cholera prevention in the study was 97.4%. The hygienic practices concerning cholera prevention were lagging in knowledge and attitude. A range of specific interventions is likely to be necessary for the control of cholera in this population. Misconception about the transmissibility of cholera that cholera cases are not transmitted through cow's dung, young children stool, and chicken feces need to be addressed.

Kasoka, (2013) researched Knowledge, Attitude, and Practice among the residents of the Makululu compound in Kabwe town. His study revealed that the majority of residents in a high-density area of the compound shared foodstuff and attended social, religious, and political gatherings during the cholera outbreak. He described the situation as feelings of fearlessness of cholera the residents of Makululu had.

2.4 Practice Towards Factors Contributing to Cholera

WHO, (2019) defined the practice as the exercise carried out by people regularly to prevent, avoid, or minimize the occurrence and spread of cholera such as washing hands before eating, avoiding gatherings during cholera outbreaks. Trying to perfect our health habits can reduce or completely stop the reoccurrence of cholera. Cholera is a real historical health problem that requires local and

international assistance and cooperation to achieve cholera control measures. Because of this many researchers have conducted studies on the practice of people towards cholera; the following are some information written on cholera outbreaks globally, regionally, and nationally.

A study was conducted in Latin America to determine the risk factors that were associated with the transmission of cholera. The reported agent for cholera transmission included the following practices: drinking contaminated water with fecal matter, improper preserved fish practices, and undercooking shellfish, rice, and raw oyster practices (Blake, P.A 2018). In 2019 a study was conducted on 17 cases associated with the cholera epidemic in South America. The study result showed that the associated six cases were travelers to South America who were not screened for cholera; the remaining eleven cases had eaten crabs that were brought by travelers from Ecuador.

The above study is evidence enough to conclude that the practice of not screening travelers at airports and the habit of buying foods from travelers can predispose people to the germ that causes cholera. Cholera can be transmitted through the practice of eating foods contaminated with fecal matter, drinking contaminated food drinks, and water when infected individuals unknowingly travel from epidemic areas to non-epidemic areas. In 2019 Romania reported two cases that occurred in the Danube Delta area and the primary source of infection was found to have come from the Delta River. Those infected were found to have been infected after drinking contaminated water with sewer from Delta River (WHO, 2019).

Mpuzi, et al, (2015) conducted a study on the Knowledge, Attitude, and Practice of illala residents in Tanzania with regards to cholera outbreaks in the same area. Three hundred and ten (310) respondents were included in the study of whom 186 (59.9%) were females and 124(40.1%) were males aged between 13-84 years. The proportion of respondents with good knowledge of cholera in the study was 85%.

The study revealed that the main practices associated with cholera occurrence among respondents with high levels of knowledge in Ilala by water source were uses of piped water 84.3%, water from deep wells 88.3%, and shallow wells 71.4%. The distribution of respondents by low knowledge and water source were piped water 15.7%, shallow wells 28.6%, and deep well 1.7%.

2.5 Identified Gap and its Justification

Other researchers that have been reviewed conducted studies, each focused on the knowledge, attitude and practice people have towards factors contributing to cholera. From the reviewed literature, it was clear that kalingalinga compound people despite having the required knowledge, positive attitudes and practice preventive measures agnaist cholera, they are still being affected with the disease

2.6 Summary of the chapter

Cholera outbreaks continue to be a problem of public health, given that they cause great human, social and economic losses. From the literature reviewed, it was indicated that low knowledge and poor practices of many people towards cholera were behind the occurrence of cholera in many areas. Literature on cholera in Africa in terms of knowledge, practice, and attitude has demonstrated the realness of cholera. It is caused by a germ called Vibrio cholerae which is transmitted through eating food, which is contaminated during or after preparation and drinking infected fecal contaminated water with vibrio cholerae. Furthermore, a literature review has indicated that man is the main reservoir of the infection, and the oral-fecal route plays a major role in the transmission of cholera. However, despite many people having a positive attitude towards cholera the disease has continued to affect many people the world over.

CHAPTER THREE: RESEARCH METHODOLOGY

3.0 Introduction

This chapter presents the methodology that the researcher employed in conducting research in terms of research design, population of the study,sample size, sampling technique/procedure, data collection tools/instruments, data collection procedure, data analysis, validity and reliability and ethical consideration..

3.1 Research design

The research was a case study which was an in depth investigation of an individual, group and involved a community-based cross-sectional study that was conducted among a randomly selected resident of the Kalingalinga compound.studies were based on the premise that a case could be found that was typical of many other cases.the case study was viewed as an example of a group of individuals.the study fitted into a case study design because it intended to analyse in detail the knowledge, attitude and practice people have towards factors contributing to cholera in kalingalinga compound of Lusaka district. The study also prioritized on the use of a qualitative design for purpose of analyzing thematic data. It also used the quantitative method for purpose of analyzing statistical information. In that regard, trianulationwas used as it supplemented both designs for purposes of quality work.

A descriptive survey was used on variables as were found on study site. O'Leary (2014), define survey as "the process by which the researcher collects data through a questionnaire and interview for collecting primary data". Therefore, information was collected using interview schedules and administered questionnaires to uncover information behind a participant's experiences and pursuing in-depth information around the study. While questionnaires were used because they allow the researcher to generate data specific to his or her own research and offers insights that might otherwise be unavailable.

3.2 Population of study

The targeted population of study consisted of the residents of Kalingalinga compound of Lusaka district who are both males and females aged 18 years and above and these are heads of households accessed at selected houses.

3.3 Sample size

The sample population is a representative case from the large population, (Cresswell, 2012). However, the sample size of this study comprised of 60 respondents, of which 25 were males and 35 were females

3.4 Sampling Technique/Procedure

The researcher used purposive sampling technique which allows researchers to infer information about a population based on results from a subset of the population, without having to investigate every individual to select participants who participated in the study, because that was an ideal procedure used with both qualitative and quantitative sampling research studies. The study needed to use purposive sampling to select respondents who were interviewed, considering that respondents involved were all connected to the disease in kalingalinga compound.

3.5 Data Collection Procedures

The researcher got an introductory letter from Chresso University, permission from kalingalinga ward councellor to carry out study.The researcher then distributed the structured questionnaires to the respondents and conducted interviews.then a date was set for data collection. The researcher collected primary data using questionnaire and interview guides and secondary data from books, online reading materials and journals through visiting different libraries at different libraries such as, main library at the University of Zambia and Chresso University library.

3.6 Data Analysis

Data analysis according to Shamoo and Resnik (2003), is a process of systematically applying statistical and /or logical techniques to describe and illustrate, condense and recap, and evaluate data. Data obtained from the field in raw form was difficult to interpret, therefore, the Statistical Package for Social Science (SPSS) computer programme and microsoft excel was used to analyse data in triangularly form. Data collected was checked for completeness, coded and entered into the SPSS. Since the researcher had quantitative data collected through questionnaires, it was appropriate to present data in frequency distribution tables, percentages, averages, computer generated graphs and charts in order to compare data from different groups of respondents on major variables. To analyse qualitative data, that was collected through interviews, the researcher

used a content analysis process where data was analysed by the use of themes that emerge from the responses of the respondents in order to draw conclusions.

3.7 Validity and Reliability

Validity and Reliability are concepts in research that ensure the quality of study. Validity refers to a process whereby the researcher earns the confidence of the reader that he/she has it right, (Guba and Lincorn cited in Leavy and Biber, 2011). The basis issue in relation to trust worthiness are simple, how can an inquirer persuade his/her audience including him/herself that the finding of an enquiry are worth paying attention to, worth taking account of, what arguments can be mounted, what argument can be motivated, what criteria, what questions asked that would be persuasive on this issue? Validity considers what it intends to investigate. This is to explain if the findings are meaningful, relevant and true in research questions,(Gall and Gorg 2007).

Reliability is referred as the consistency of a data collection tool in obtaining the same answers when the research is repeatedly done, (Gall and Gorg 2007).the goal of reliability is to minimize error and bias in the study. Yin (2011) indicated on the issue of reliability in terms of gathering data from observations of individuals or events within a field setting. Generally it seeks to ascertain the following issues, is the gathered information reasonable? Does it fit together? Does the data add up? Is there any consistency in the observations? Neuman (2003), stated that, reliability in a field of research depends on a researcher's insight awareness, suspicious and questions.he/she also looks at members and events at different angles.

3.8 Ethical Considerations

Mc Donald (2003), defines ethical consideration as the study of upheld ethical standards and provided confidentiality throughout the research process. The primary ethical consideration that was employed was anonymity. All participants details were treated anonymous, meaning no names of the participants were collected during the study. The researcher acquired permission from all respondents before the questionnaires or oral interviews were issued. In addition, assurance was granted that none of the data pertaining to the identity of the participants would be circulated to the general public. The participation was on voluntary basis only and none of the participants were forced to take part in the study.

3.9 Summary of the chapter

This chapter outlines the methodology that was used to collect data and analyse the information for the study. In doing so, it defined the type of study as a case study. It also looked at the study population that was involved which was basically the members of the community to be specific, kalingalinga compound of lusaka District. The chapter outlined the sample, sample size and procedures that were used to come up with the sample. The chapter further discussed the instruments and the data collection methods which were used. Lastly, the chapter dealt with the data analysis techniques.

CHAPTER FOUR: FINDINGS AND ANALYSIS

4.0 Introduction

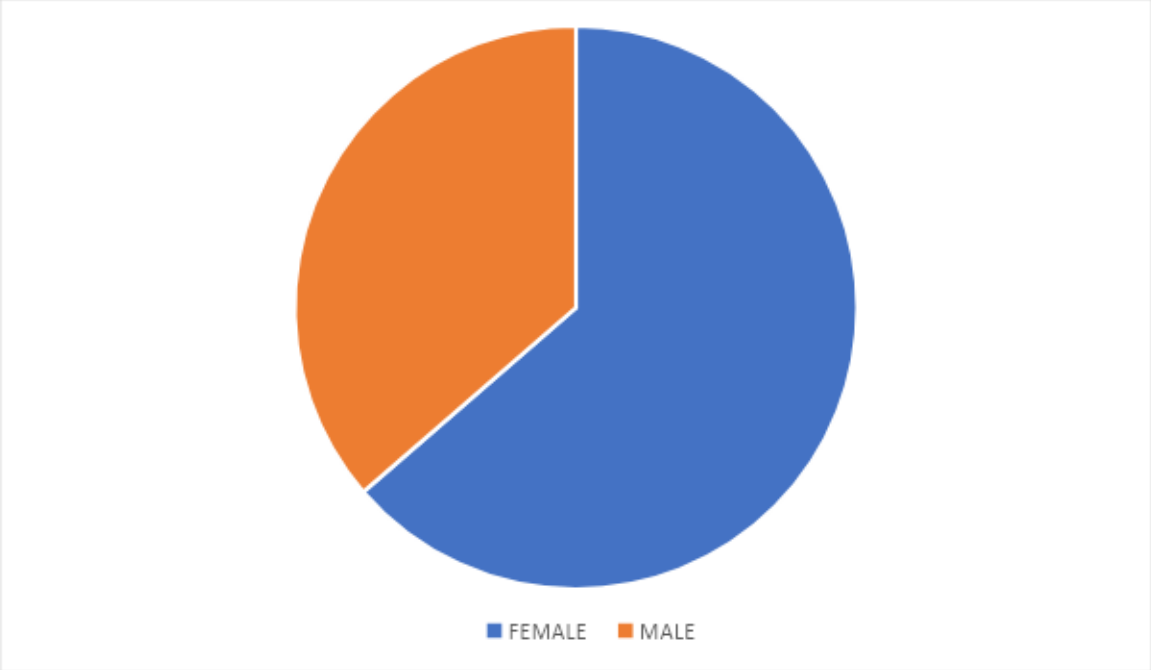
This chapter presents the findings of the study. For the facilitation of ease of information dissemination and understanding for the target audience, presentation of finding was done using tables, charts and figures. The findings of the research were presented based on the following specific research objectives:

- To determine knowledge towards factors contributing to cholera in Kalingalinga compound
- To assess attitude towards factors contributing to cholera in Kalingalinga compound
- To identify practices towards factors contributing to cholera in Kalingalinga compound

4.1 The response rate of participation

This study received increased sufficient response rate to warrant sufficient grounds for representative and unbiased findings. It must be known that from the sample size of 60 made up of 25 males and 35 females, all of them responded making the response rate to be 100%, which is above the required response threshold for a research to guarantee sufficient grounds for representative findings.

FIGURE 4.1 Participants by gender



The above figure shows that there were 25 males representing 42% of all the participants and 35 females representing 58%.

Table 4.2 The number of the respondents to the study

Location	Number of males	Number of females	Total
Kalingalinga compound	20	35	60

Table 4.2 shows the number of the population of study which was drawn by both purposive stratified sampling in order to give a representative picture of the study in kalingalinga compound of Lusaka district. Disproportionate stratified random sampling technique was used in selecting the sample for this study. This is because it permitted the researcher to have representation from the given compound. Kolo (1992) was of the opinion that this kind of sampling entails that the random drawing of participants from the population is not only stratified, but that the stratification reflects an appropriate proportion to the power of each strata of the society.

Table 4.3 The age of participants by gender.

Ages of Participants	**Male**	**Female**	**Total**	**Percentages**
18 to 23 years	**06**	**07**	**13**	**22**
24 to 29 years	**01**	**04**	**05**	**8**
30 to 35 years	**06**	**09**	**15**	**25**
36 to 40 years	**02**	**00**	**02**	**3**
Above 41 years	**10**	**15**	**25**	**42**
Total	**25**	**35**	**60**	**100**

Figure 4.3 The age of participants by genda

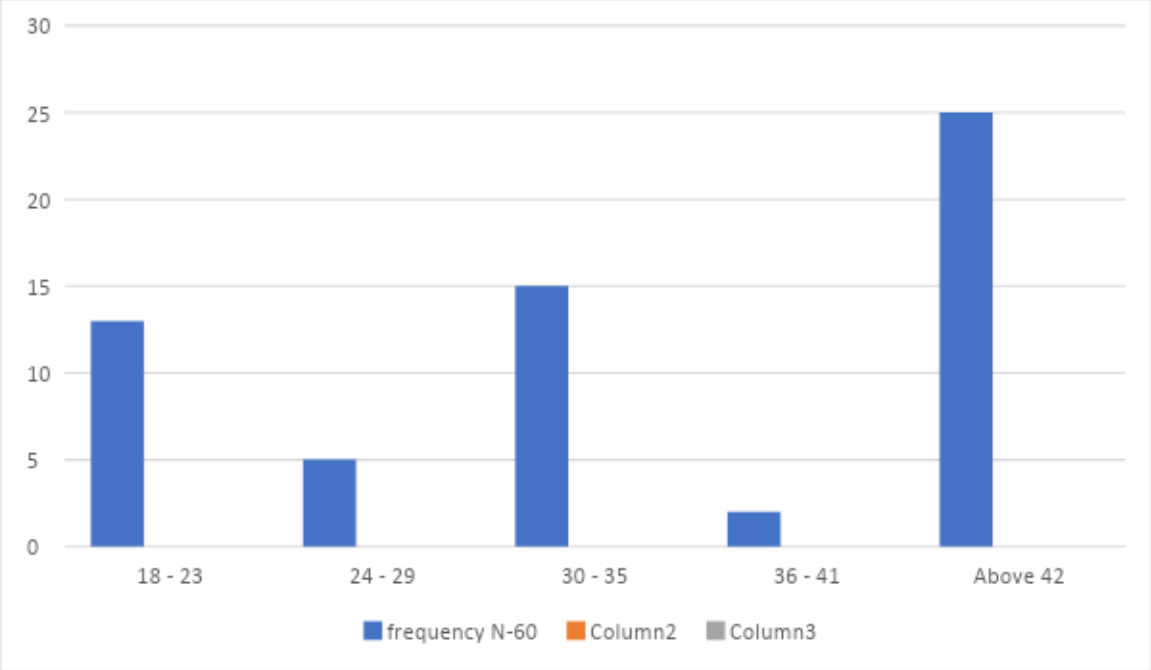


Figure 4.3 shows that the age of the participants were distributed as from 18 to 23 years were 13 representing 22%, from 24 to 29 years were 5 representing 8%, from 30 to 35 years were 15 representing 25%, from 36 to 41 years were 2 representing 3% and from 42 and above years were 25 representing 42%.

Figure 4.4 Marital status of participants

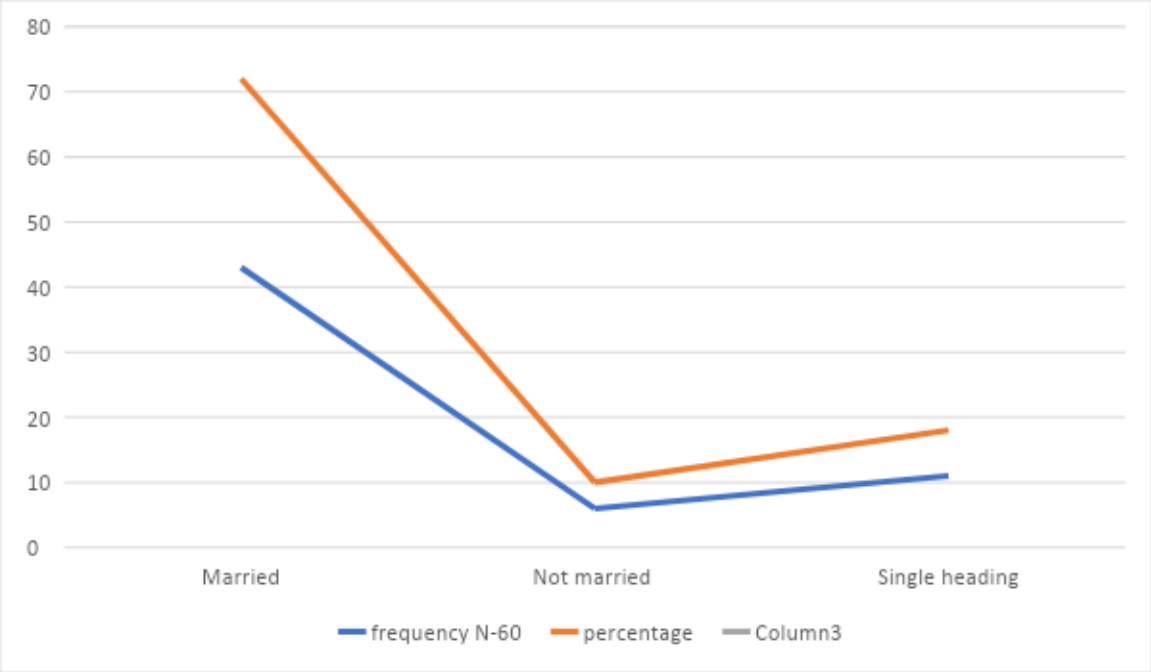


Figure 4.4 shows that 43 of the participants of the study were married represented by 72%, 6 were not married represented by 10% and 11 represented 18% were single heading of homes.

Figure 4.5 Education status of the participants

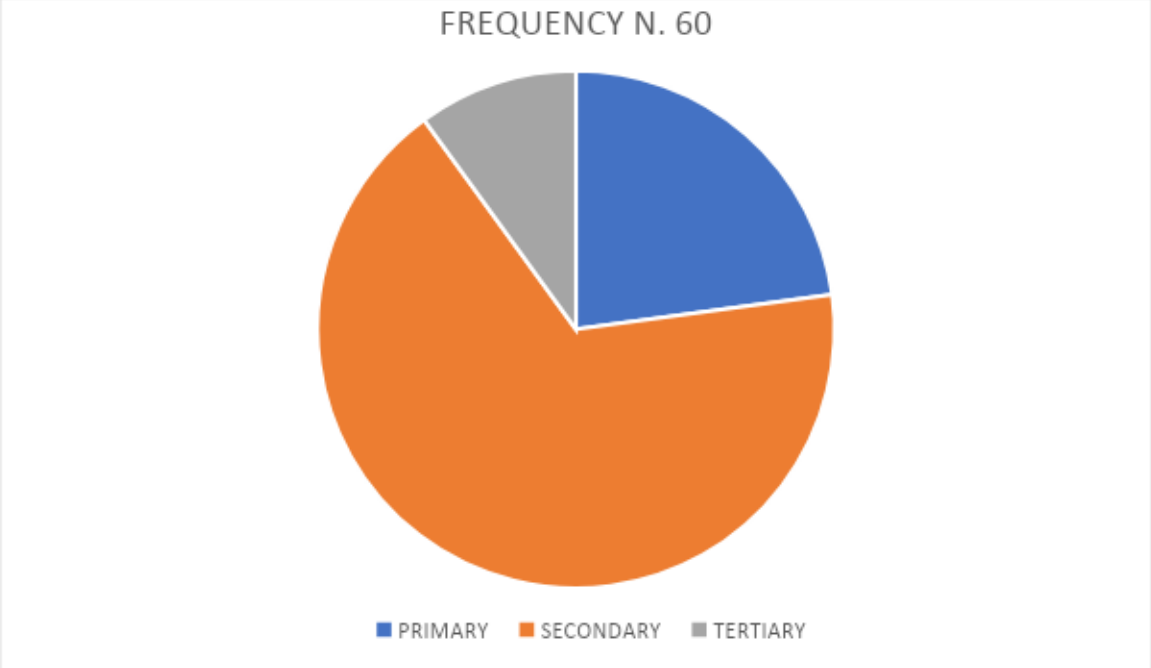


Figure 4.5 shows that 16 of the participants have only gone upto primary level representing 23%, 47 attained secondary level with 67% and those who have gone upto tertiary level were 7 representing 10%.

Figure 4.6 Knowledge of participants towards factors contributing to cholera

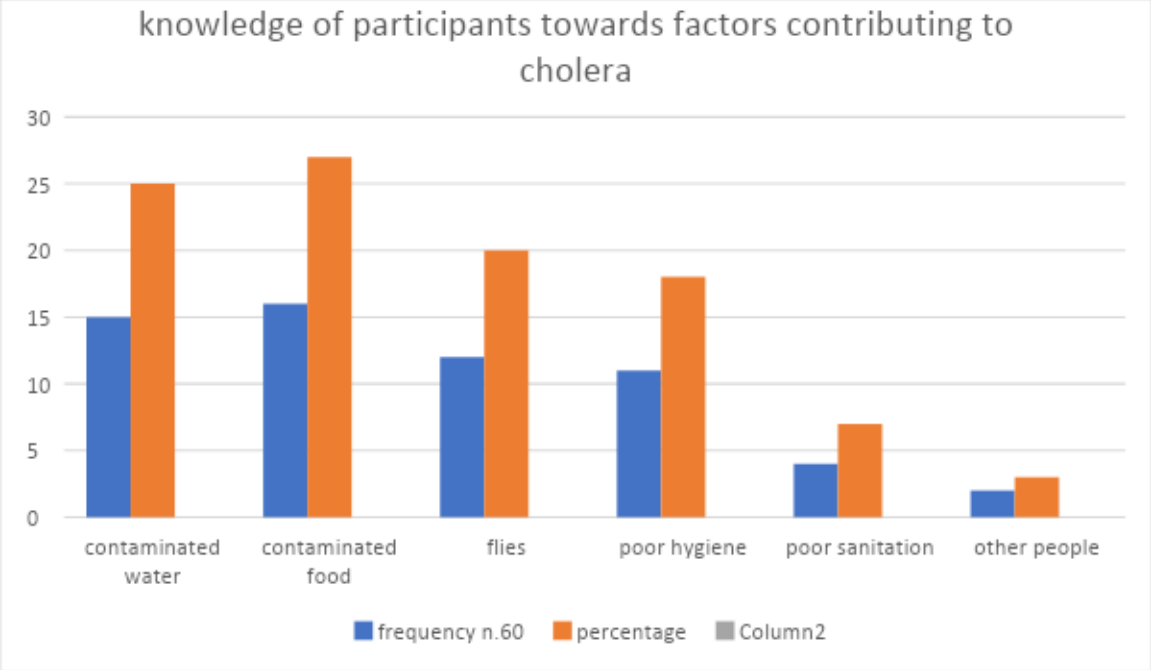


Figure 4.6 defines how much knowledge participants have on factors contributing to the spread of cholera. 15 among the 60 participants representing 25% said that cholera is caused and is spread by drinking contaminated water, 16 representing 27% said cholera is caused and spreads through eating contaminated food. While, 11 of the participants representing 18% said that factors contributing to cholera can be flies that get in contact with drinking water or food that people eat, 12 representing 20% of the 60 participants said that poor hygiene is contributing factor to cholera. 4 of the participants representing 7% said that, cholera is spread and caused by poor sanitation and 2 representing 3% said that, people infected if come in contact with uninfected people can transmit cholera.

Figure 4.7 Attitudes of participants towards factors contributing to cholera

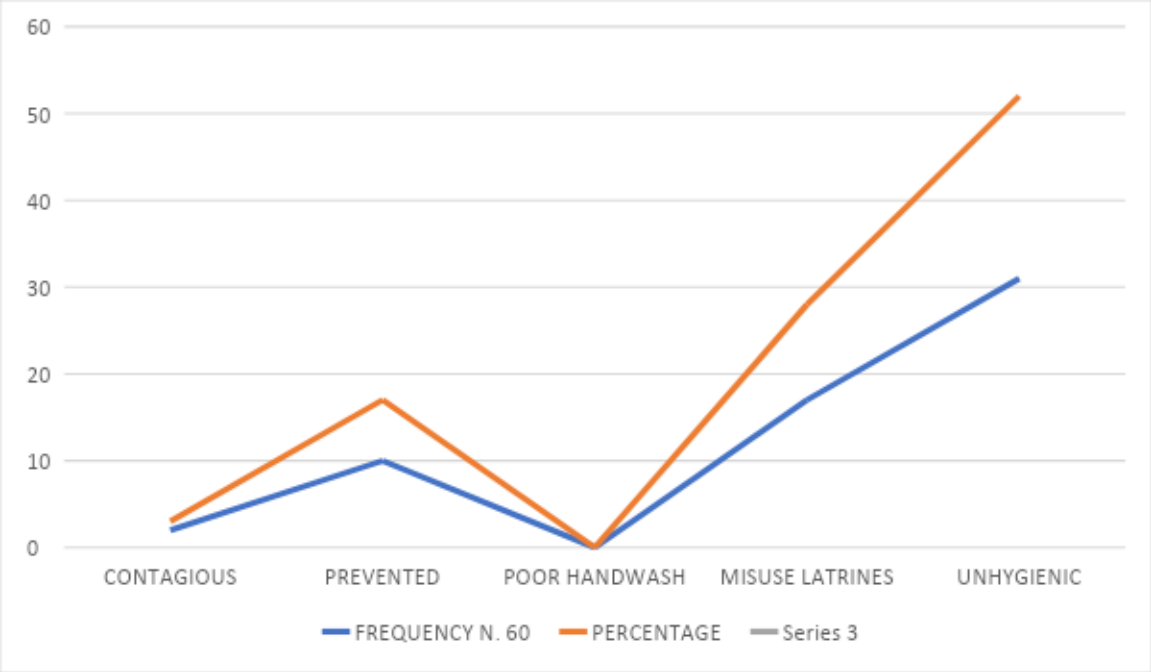


Figure 4.7 presents participants' attitudes towards factors contributing to cholera spread. It shows that 2 participants representing 3% said cholera is contagious, meaning that cholera can be transmitted from one person to another, 10 representing 17% said that cholera can be prevented by putting and following preventive measures. None of the sampled participants of Kalingalinga said that cholera can spread by poor handwashing habit.17 representing 20% said inappropriate use of latrine toilets can lead to cholera and 31with 52% said that, unhygienic surrounding promote the spread of cholera

Figure 4.8 Practices of participants towards factors contributing to cholera

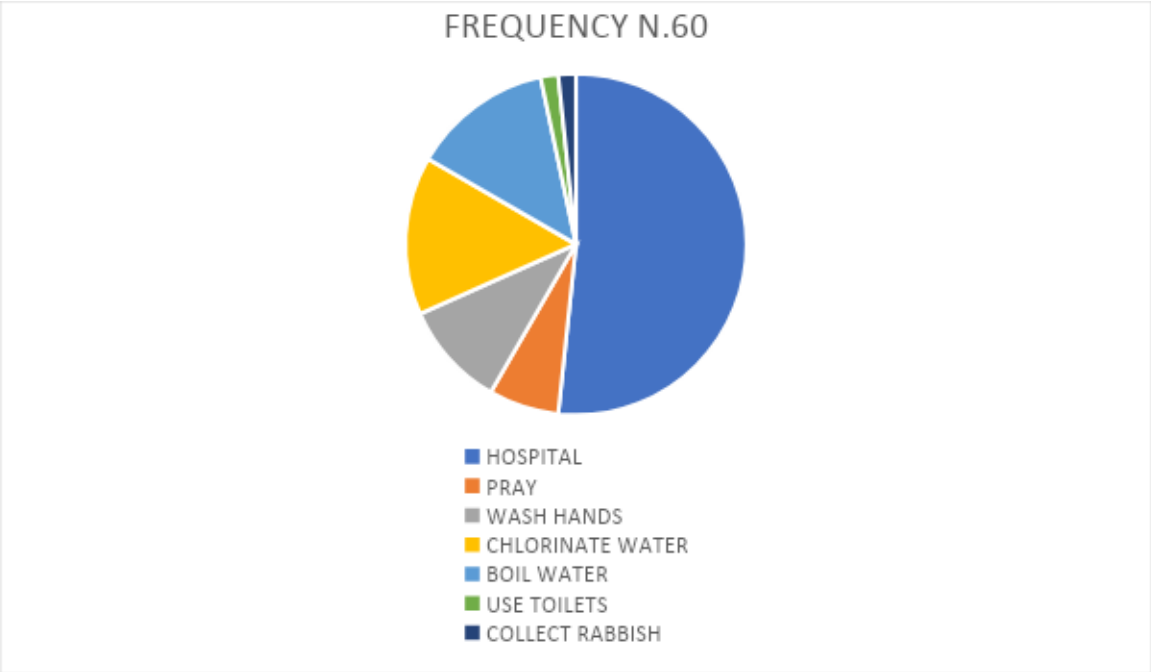


Figure 4.8 shows participants practices towards factors contributing to cholera in order to stop the spread of cholera in the compound. 31 participants represented by 52% said that, going to the hospital for treatment when infected and for prevention is a good deed. 4 participants represented by 7% said that, prayer is a practice in prevention of cholera. 6 represented by 10% said washing of hands is a good practice to stop the spread of cholera. 9 represented by 15% said that, adding chlorine to drinking water is another practice that can stop the the spread of cholera in the compound. 8 participants represented by 13% said that boiling drinking water is yet another good practice to stop the spread of cholera. And 1 represented by 2% said that the proper use of toilets is a good practice that can be used to stop the spread of cholera. 1 represented by 2% said collecting rubbish to the dump point is also a good practice to stop the spread of cholera.

4.8 Summary of the chapter

Chapter four has presented the results and the analysis of the data. The chapter has applied the use of a combination of various types of descriptive statistic frequency tables, bar charts and pie charts. In general, the chapter has presented the study findings that are crucial to the knowledge, attitudes and practices towards factors contributing to cholera in Kalingalinga compound of Lusaka district.

The findings are presented in the format that depicts a recall of research questions earlier set in chapter one in this dissertation. Qualitative data was coded and thermalized.

CHAPTER FIVE: DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter discusses the findings on the knowledge, attitudes and practices towards factors contributing to cholera in kalingalinga compound of Lusaka district. The findings are presented in line with the objectives: To determine knowledge towards factors contributing to cholera in Kalingalinga compound, To assess attitude towards factors contributing to cholera in Kalingalinga compound and To identify practices towards factors contributing to cholera in Kalingalinga compound. The discussion of the findings were also presented according to research questions raised in this study.

5.1 knowledge towards factors contributing to cholera in Kalingalinga compound of Lusaka district.

The study revealed that people have the knowledge about the cause of cholera and ways in which it can be transmitted from one person to another**.** Cholera is defined as an acute bacterial infection that is caused by Vibrio Cholera. The main clinical feature of cholera is watery diarrhea. Although the causative bacteria have above 200 serotypes, only two serotypes are prevalent in poor sanitary and hygienic conditions which are the O1 and O 139, as said by:

P 1 that,"*cholera being an acute bacterial infection, breed and can be spread in poor sanitation and poor hygienic conditions".*

These two strains have been linked to cholera outbreaks globally. Cholera infections are commonly severe and highly virulent. additionally, cholera outbreaks usually occur in areas that have contaminated water or food because of poor sanitary measures The bacteria are transmitted along the gastrointestinal tract through contaminated food or water as said by:

P2 that, "*cholera is caused and spread through contaminated water and contaminated food with vibrio cholera".*

Vibrio cholera produces cholera toxin, which causes the clinical symptoms of the infection. In addition to watery diarrhea, other symptoms included vomiting and abdominal colic. Furthermore, the infection affects all age groups**.**

Among the suspected cases, including deaths occurred in Lusaka residents (ZNPHI, 2023). As in most outbreaks and epidemics, the major drivers noted in the 2021-23 cholera outbreak in Zambia included inadequate access to clean and safe water, and poor sanitary conditions, waste management, and personal hygiene (ZNPHI, 2023)

5.2 Attitudes of participants towards factors contributing to cholera

Kalingalinga compound is a large compound where the residents are among the poorest of Lusaka's population with most of them being self-employed involved in vending. Most of the people of the Kalingalinga compound live in conditions that make them extremely vulnerable to cholera due to the lack of access to safe water, drainage, and good sanitation facilities, as revealed by:

P.3 that, "*most people in Kalingalinga compound's attitude towards cholera so much that even when they know that there is an outbreak of cholera they will still not consider to be contigious".* As such it is one of an area in Lusaka that loses lives to cholera every year. As the rains approach, it is evident that more lives will be lost from the deadly epidemic as sanitation and hygiene standards in the area fall short of being habitable. There are no drainages in some areas and while those areas with drainage systems are blocked by garbage that people throw in them leading to floods in the rainy season.

P.4 additionally revealed that," *the use of latrines or toilet is inappropriate in places where there are mushrooms of bars*".

There are many bars in the community, and they open as early as 06:00 hours and close after midnight and most of the bars have poor sanitation facilities making the people use the shake-shake containers to answer to the call of nature which are later disposed of indiscriminately posing a danger of cholera outbreaks in the rainy season (Kalingalinga Health Centre, 2018).

5.3 Practices of participants towards factors contributing to cholera

WHO, (2019) defined the practice as the exercise carried out by people regularly to prevent, avoid, or minimize the occurrence and spread of cholera such as washing hands before eating, avoiding

gatherings during cholera outbreaks. Trying to perfect our health habits can reduce or completely stop the reoccurrence of cholera. Cholera is a real historical health problem that requires local and international assistance and cooperation to achieve cholera control measures. Because of this,

P.5 "*was of the view that, if only all the drinking places, markets, venders, households and people adhere to preventive measures and good practices, cholera can be eradicated completely*".

The study results revealed that, reported agent for cholera transmission included the following practices: drinking contaminated water with fecal matter, improper preserved fish practices, and undercooking shellfish, rice, and raw oyster practices.

P.6 *additionally said that, in 2022 the compound had 17 cases associated with the cholera epidemic where six cases were travelers from South Africa who were not screened for cholera the remaining eleven cases had eaten crabs that were brought by the same travelers*".

The above information is evidence enough to conclude that the practice of not screening travelers at airports and the habit of buying foods from travelers can predispose people to the germ that causes cholera. Cholera can be transmitted through the practice of eating foods contaminated with fecal matter, drinking contaminated food drinks, and water when infected individuals unknowingly travel from epidemic areas to non-epidemic areas.

The study revealed that the main practices associated with cholera occurrence among respondents with high levels of knowledge in kalingalinga compound of Lusaka district by water source were drinking unboiled or unchlorinated water. Other sources revealed they were not going to the hospital when signs and symptoms of cholera appear, poor handwashing habits and as a result of uncollected garbage.

5.4 Conclusion

This chapter provided the conclusion and recommendations based on the findings. It must be stated that this study was confined only to the Kalingalinga compound of Lusaka district. The purpose of the study was to determine knowledge, attitude, and practice towards factors contributing to cholera in Kalingalinga compound of Lusaka district**.**

5.5 Recommendations

Based on the findings of this study, the following recommendations were made.

5.5.1 There is need for the government and all the stakeholders in the Ministry of local government and health system to consider and sensitise the public at large on the knowledge, attitude and practice towards factors contributing to cholera.

5.5.2 There is need for the government through the Ministry of local government and health system to embark on garbage collection from townships to dumping sites.

5.5.3 Government to make use of a combination of surveillance, water, sanitation and hygiene, social mobilization, treatment and oral vaccines.

5.5.4 Public to be sure of drinking and use safe water, bottled water to brush teeth, wash and prepare food.

5.5.5 Wash hands often with soap and safe water, before,during and after preparing food.

5.5.6 Government to encourage towns to set up local boards of health to monitor the spread of the disease and advise the local population.

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APPENDICES

Appendix 1.

TITLE OF STUDY: KNOWLEDGE, ATTITUDE, AND PRACTICE TOWARDS FACTORS CONTRIBUTING TO CHOLERA IN KALINGALINGA COMPOUND

INVESTIGATOR: MATAKALA MWALA: 0975330955 CU NUMBER: 21000699

DEPARTMENT OF PUBLIC HEALTH

Chreso University, The School of Health Science

Department of Public Health

Nangwenya Road, Box 37178, Lusaka

PURPOSE OF STUDY

You are being asked to take part in a research study. Before you decide to participate in this study, it is important that you understand why the research is being done and what it will involve. Please read the following information carefully. Please ask the researcher if there is anything that is not clear or if you need more information.

The purpose of this study is to determine the knowledge, attitude, and practice towards factors contributing to cholera in Kalingalinga compound

STUDY PROCEDURES

You have been asked to join this study because we are looking for positive mothers who are feeding. If you agree to be in this study, you will be interviewed with an aid of a questionnaire guide.

RISKS

There are no physical risks involved in this study. You may feel uncomfortable answering some of the questions that will be asked regarding infant feeding practices. You are at liberty to refuse to answer any questions that will make you feel uncomfortable. As a participant, you can stop the interview session at any time and your responses will not affect you as a participant in any way.

BENEFITS

The possible results of this study on knowledge, attitude, and practice on factors contributing to cholera will be used by the local community, neighboring places, and other relevant authorities in formulating further policies and guidelines on environmental health to prevent outbreaks of cholera and its management in Lusaka district.

CONFIDENTIALITY

If you agree to be in the study the researcher will ask you some questions. To make sure your identity is secret; none will know you by name in the study or after. Participant data will be kept confidential except in cases where the researcher is legally obligated to report specific incidents. These incidents include, but may not be limited to, incidents of abuse and suicide risk.

CONTACT INFORMATION

If you have questions at any time about this study, or you experience adverse effects as a result of participating in this study, you may contact the researcher whose contact information is provided on the first page. If you have questions regarding your rights as a research participant, or if problems arise which you do not feel you can discuss with the Investigator, please contact the Chreso University Ethical Committee

VOLUNTARY PARTICIPATION

Your participation in this study is voluntary. It is up to you to decide whether or not to take part in this study. If you decide to take part in this study, you will be asked to sign a consent form. After you sign the consent form, you are still free to withdraw at any time and without giving a reason. Withdrawing from this study will not affect the relationship you have, if any, with the researcher. If you withdraw from the study before data collection is completed, your data will be returned to you or destroyed.

CONSENT

I have read and understood the provided information and have had the opportunity to ask questions. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving a reason and without cost. I understand that I will be given a copy of this consent form. I voluntarily agree to take part in this study.

Participant's signature _____ Date _____

Investigator's signature _____Date _____

Appendix 2. Questionnaire

Section A: Social Demographic Characteristics (Tick the appropriate answer)

1. What is your gender?

a) Male
b) Female

1. How old are you?

a) 18 - 23
b) 24 - 29
c) 30 - 35
d) 36 – 41
e) Above 42

2. What is your present marital status?

a) Married
b) Not married
c) Single heading

3. Education status

a) Primary
b) Secondary
c) Tertiary

Section B: Knowledge

4. Does cholera spread through contaminated water?

a) Yes
b) No

5. Does cholera spread through contaminated food?

a) Yes
b) No

6. Does cholera spread by flies and mosquitoes?

a) Yes
b) No

7. Does cholera spread by poor hygiene?

a) Yes
b) No

8. Does cholera spread by poor sanitation?

a) Yes
b) No

9. Does cholera spread by others?

a) Yes
b) No

Section C: Attitudes

10. Do you think cholera can be contagious?

a. Yes
b. No

11. Do you think the spread of cholera can be prevented?

a) Yes
b) No

12. Do you think poor hand washing habits will promote the spread of cholera?

a. Yes
b. No

13. Do you think inappropriate use of latrines will encourage the spread of cholera?

a. Yes
b. No

14. Do you believe unhygienic circumstances surrounding your place will encourage the spread of cholera?

a. Yes
b. No

Section D: Practices

15. Will you go to the hospital to treat yourself if you suspect having cholera?

a) Yes
b) No

16. Will you pray to treat yourself?

a) Yes
b) No

17. Do you always wash your hands with soap?

a) Yes
b) No

18. Do you always drink chlorinated water or boiling water?

a) Yes
b) No

19. Do you always use the toilet properly?

a) Yes
b) No

20. Do you always collect rubbish from your surrounding place?

a) Yes
b) No

Thank you so much for your cooperation.

Appendix 3. An Interview Guide

Instructions:

Tick the appropriate response/or write in the space provided.

1. Gender

   Male [ ]

   Female [ ]

2. How old are you?

   18 – 23years old [ ] 24 – 29 years old [ ] 30 – 35 years old [ ] 36 -41 years old [ ]

   Above 42 years old [ ]

3. What do you know about cholera? ----------

   ---.

4. What is your attitude towards factors contributing to cholera in your area?----------
   ---

   ---.

5. What practices are put in place to prevent the spread of cholera disease in kalingalinga? --
   ---

   ---.

6. In your own opinion, what do you think should be done in order to eradicate cholera completely in your area?----------
   ---

   ---.

   Thank you so much for your cooperation.