

**BINDURA UNIVERSITY OF SCIENCE EDUCATION
FACULTY OF AGRICULTURE AND ENVIRONMENTAL SCIENCE**

DEPARTMENT OF ENVIRONMENTAL SCIENCE

An assessment into knowledge, attitudes and practices towards cholera and WASH among students and staff in the department of Environmental Science. The case of Bindura University.



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**A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS OF A BACHELOR OF ENVIRONMENTAL SCIENCE HONOURS
DEGREE IN SAFETY, HEALTH AND ENVIRONMENTAL MANAGEMENT**

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DECLARATION

To be compiled by the student

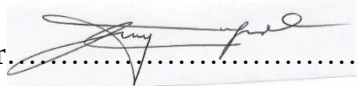
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I Evans Madzura do hereby declare that this work-related project is my original work and has not been submitted before. All the information derived from other sources is indicated in the project.

Signature of the student..........Date: 30-05-2025

To be compiled by the supervisor

This dissertation is suitable for submission to the faculty and has been checked for conformity with the faculty guidelines. Signature of the

Supervisor..........Date: 30-05-2025

DEDICATION

This research project is dedicated to my beloved family, whose unwavering love, support and encouragement have been my constant source of strength throughout this academic journey. Your belief in me, even during the most challenging times, has inspired me to push boundaries, overcome obstacles and strive for excellence.

I also dedicate this work to my dedicated professors, mentors, and colleagues, whose guidance, wisdom and valuable feedback have shaped my intellectual growth and stimulated my curiosity. Your passion for knowledge, commitment to excellence and academic rigor have been instrumental in shaping my research skills and broadening my understanding of the subject matter.

Furthermore, I dedicate this project to all the individuals who have generously shared their time, insights and expertise to support this research endeavour. Your willingness to engage in meaningful dialogue, provide valuable perspectives and collaborate on this study has enriched my learning experience and contributed to the depth and quality of this work.

In closing, this research project is dedicated to the pursuit of knowledge, the spirit of inquiry and the quest for truth. May this work reflect our collective dedication to scholarship, personal growth and making a positive impact to the world. Thank you for being a part of this journey and for your unwavering support and encouragement.

With heartfelt gratitude,

Evans Madzura

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To all those mentioned above and to anyone else who contributed in any way to the successful completion of this research, I extend my deepest appreciation. Your support and encouragement have been truly invaluable and I am humbled by your belief in my abilities.

ABSTRACT

Cholera is a potentially devastating bacterial disease caused by *Vibrio cholerae* that is associated with areas where poor hygiene and sanitation are endemic. The disease is transmitted through primary and secondary sources, with the former caused by aquatic environments and the latter through infected subjects. Contaminated water and the consumption of raw or uncooked food are the chief sources of infection. The disease is currently considered as a global health menace particularly in zones with poor access to portable water and in regions with poor health infrastructure and according to WHO, the incidence of the disease lies between 1.3 and 4 million new cases and a range of 21000 to 143000 deaths annually (Alqato, et, al. 2025). In order to curb this havoc, there is need to put efforts to prevent the disease and exercise good WASH practices but this depends on peoples, knowledge, attitudes and practices whose baselines we don't know. This study seeks to fill that gap.

A cross sectional descriptive survey was conducted using a standardized questionnaire. A total of 120 questionnaires were administered on students and staff of the institution. The questionnaire comprised four sections namely, demographic characteristics, knowledge, attitude, and practices (KAP).

Data were analysed using SPSS to generate frequencies for each KAP question. From the frequencies in percentage, a preferred KAP answer was assigned a score of 1 and a non-preferred answer was assigned 0 to come up with an overall score for each of Knowledge, Attitudes and Practices. Multinomial logistic regression was used to relate KAP to socio-demographic variables.

A total of 120 respondents participated in the study with 54% being male, while 46% being female. The majority (65%) of respondents lied in the 18-25 age group. Results indicate that knowledge about cholera prevention and good WASH practice was quite high at 70%. Attitudes were also moderately high at 66%. However, respondents scored poorly on practice at 37% positive practice. This was mainly due to lack of facilities at the institution that can sustain good cholera prevention and WASH.

The study concludes that although knowledge was high and attitudes moderate, respondents exhibited poor practice towards cholera prevention and wash chiefly because of lack of

adequate facilities. Therefore it can also be concluded that students and staff at the institution are exposed to conditions that promote the spread of cholera

The study recommends that the responsible authorities provide adequate facilities such as enough clean water. It is also recommended that the authorities put in place provisions to ensure the availability of soap or detergents and toilet paper in the toilets for both staff and students to ensure protection against cholera and promote good WASH practices.

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ACRONYMS AND ABBREVIATIONS

KAP	Knowledge Attitude and practices
SHEQ	Safety Health Environmental and Quality
W.H.O	World Health Organization
WASH	Water, Sanitation and Hygiene
SPSS	Statistical Package for the Social Sciences

CHAPTER 1:

INTRODUCTION

1.1 Background to study

Cholera is a potentially devastating bacterial disease caused by *Vibrio cholerae* that is associated with areas where poor hygiene and sanitation are endemic. The disease is transmitted through primary and secondary sources, with the former caused by aquatic environments and the latter through infected subjects. Contaminated water and the consumption of raw or uncooked food are the chief sources of infection. The disease is currently considered as a global health menace particularly in zones with poor access to portable water and in regions with poor health infrastructure and according to WHO, the incidence of the disease lies between 1.3 and 4 million new cases and a range of 21000 to 143000 deaths annually (Alqato, et. al. 2025). Cholera has a short incubation period of about five days after which it can manifest itself in various forms ranging from mild symptoms to severe dehydration. The occurrence of cholera by geographic location may be characterised as either endemic or pandemic where the maintenance of endemic cholera is thought to be in estuarine zones. In the case of endemic cholera it occurs where there is no evidence of importation. Furthermore, steps that are effective in controlling endemic cholera may not be so against epidemic cholera (Miller, et. al., 1985).

Outbreaks of cholera have a tendency to recur in developing countries despite efforts by health authorities and other stakeholders Rosdi, et. al, 2019). In 2004, 7964 new cases of cholera were reported in 11 African countries including Zimbabwe with the highest incidents happening in Nigeria (Onuntwa, et. al, 2025). In 2023, there was a cholera outbreak in seven districts of Manicaland province with Mutare district having the highest cases (55%) and Nyanga experiencing least cases (0.5%) (Chinheya, 2023). According to Moyo, et. al., (2025) cholera poses a severe threat in Masvingo especially in areas with insufficient water supply and poor health care infrastructure where 61% of the sampled population reported cases of cholera. In 2025, Zimbabwe reported cases of cholera outbreaks in eight districts of Bikita, Bindura, Chiredzi, Chipinge, Kariba, Goromonzi, Mazowe and Shamva with Glendale in Mazowe district being the epicentre of the outbreak. This is despite the commitment of WHO African countries to eradicate cholera by year 2030 (Kapaya, et. al. 2025)

1.2 Problem statement

Despite efforts by WHO and health authorities in Zimbabwe's efforts to eliminate cholera, the disease has continued to recur in some districts including Manicaland and Mashonaland central among others. It is thus paramount to carry out a study concerning people's knowledge, attitudes and practices towards cholera prevention and control and Water, Sanitation and Hygiene (WASH). This is so because lack of knowledge and poor attitudes often result in bad practice thus resulting in disease outbreaks.

1.3 Justification

The information generated from this research will assist as a decision support tool for policy makers to come up with interventions that targets people of specific socio-demographic characteristics. Furthermore, the information can be used to design appropriate awareness campaigns depending on the determinants of low knowledge, poor attitudes versus background variables. Also, the information that will be provided might serve as a baseline reference upon which to measure the impacts of future interventions targeted at raising awareness among citizens. Additionally the information generated can be used by other academics in their research endeavours.

1.4 Aim

The aim of the study is to carry out an assessment into knowledge, attitudes and practices towards cholera and WASH among students and staff in the department of environmental science of Bindura University of Science education.

1.5 Objectives

1.3.1 Overall Objective

An assessment into knowledge, attitudes and practices towards cholera and WASH among students and staff in the department of Environmental Science. The case of Bindura University.

1.3.2 Specific Objectives

Aligned objectives include:

1. To determine the knowledge about cholera and WASH among students and staff in the department of Environmental Science.
2. To determine the attitudes about cholera and WASH among students and staff in the department of Environmental Science.
3. To determine the practices about cholera and WASH among students and staff in the department of Environmental Science.
4. To relate KAP of about cholera and WASH among students and staff in the department of Environmental Science

1.6 Research questions

1. What is the level of knowledge about cholera and WASH students and staff in the Department of Environmental Science?
2. What attitudes do students and staff in the Department of Environmental Science hold towards cholera and WASH?
3. What practices do students and staff in the Department of Environmental Science adopt to prevent cholera and maintain good WASH behaviours.

1.8 Scope and Limitation for the Study

This thesis focused on the main objective, which was the assessment into knowledge, attitudes and practices towards cholera and WASH among students and staff in the department of Environmental Science. The case of Bindura University. The study was limited to the objectives highlighted in the study. The busy schedule of the students and staff was a limitation with erroneous and biasness due to human nature forming additional factors that limit the study. The researcher also faced financial limitations as it had a relatively high cost implications and had to stick to the budget schedule for the study.

CHAPTER 2

LITERATURE REVIEW

Cholera is a potentially devastating bacterial disease caused by *Vibrio cholerae* that is associated with areas where poor hygiene and sanitation are endemic. The disease is transmitted through primary and secondary sources, with the former caused by aquatic environments and the latter through infected subjects. Contaminated water and the consumption of raw or uncooked food are the chief sources of infection. The disease is currently considered as a global health menace particularly in zones with poor access to portable water and in regions with poor health infrastructure and according to WHO, the incidence of the disease lies between 1.3 and 4 million new cases and a range of 21000 to 143000 deaths annually (Alqato, et. al. 2025). Cholera has a short incubation period of about five days after which it can manifest itself in various forms ranging from mild symptoms to severe dehydration. The occurrence of cholera by geographic location may be characterised as either endemic or pandemic where the maintenance of endemic cholera is thought to be in estuarine zones. In the case of endemic cholera it occurs where there is no evidence of importation. Furthermore, steps that are effective in controlling endemic cholera may not be so against epidemic cholera (Miller, et. al., 1985).

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2.1 Knowledge about cholera prevention and WASH

Assessing knowledge about cholera is critical in order to identify gaps that may need to be bridged through interventions that target the right group depending on how that knowledge is distributed across different socio-economic variables (Blankson, 2024). According to Andrade, et. al., (2020), a KAP study must precede any intervention or programme by providing relevant input in terms of information that can be used to manage and prevent cholera. Besides, a KAP study can help to provide baseline information against which the success of future interventions may be bench marked.

In a study by Balnkson, et. al.(2024) at a University in the great Accra region in Ghana, it emerged that although overall knowledge about cholera was high, there existed a gap in knowledge with regards to cholera vaccination and dosages.

A study among University students in Zambia revealed that only 26% had adequate knowledge pertaining to cholera preventive measures, 17 % remained neutral and 6% professed ignorance. This highlights the need for awareness campaigns among the target population (Mulenga and Musebe, 2024).

In Saudi Arabia, Ali, et al. (2021) discovered that the level of knowledge about cholera prevention and WASH was poor. Furthermore the same study concluded that there was an association between education and level of knowledge.

In a study that was carried out in six countries in the MENA region, Bhekit, et. al., (2025), it was revealed that although 85% of the respondents had heard about cholera, only 51% had adequate knowledge concerning its transmission and prevention. In the same study, the predictors for good knowledge were high education, being old, being employed in the healthcare delivery system as well as residing in a country that has experienced frequent outbreaks

A study carried out in Jazan city showed that knowledge scores were below average and there was a significant relationship between knowledge and education, with those with better education having better knowledge than the less educated (Ali, et. al, (2021). In a separate study, it was revealed that being younger than thirty five years and being in possession, being female were the determinants of knowledge about cholera prevention and control. In the same study, 90% of the respondents did not know that cholera cannot be transmitted through mosquitoes. However, the majority of people were knowledgeable that cholera can be

prevented through heating food, boiling water and disposing of waste properly. Notably, the majority of respondents did not know that cholera can be prevented through vaccination (Digenarro, et, al., 2023).

2.2 Attitudes about cholera prevention and WASH

In Saudi Arabia, Ali et al., (2021) realised that people's attitudes about cholera prevention and WASH were rated below average. In another study that was carried out in six countries in the MENA region, Bhekit, et. al., (2025), it was revealed that although 85% of the respondents had heard about cholera, 67% had positive attitudes concerning its transmission and prevention. In the same study, predictors for good attitudes were by older ages, being females, those working in the medical sector, and those living in an outbreak country. In a separate study, the majority of respondents had a negative attitude that cholera cannot be prevented. The same study identified the determinants of good attitudes towards cholera prevention and WASH were: being younger than 35 years of age, being female and owning a mobile phone. Although the majority of respondents reported to have never heard about cholera vaccination, the majority expressed a willingness to be vaccinated in the event of vaccine availability (Digenarro, et, al., 2023).

In terms of cholera prevention and control, a study revealed that the majority of respondents were not willing to use traditional medicines to treat cholera. Furthermore, the majority of respondents were willing to be treated at the cholera treatment centres which highlights a good attitude towards cholera prevention and control (Digenarro, et, al., 2023).

2.3 Practices about cholera prevention and WASH

In a study that was carried out in six countries in the MENA region, Bhekit, et. al., (2025), it was revealed that although 85% of the respondents had heard about cholera, only 50% had adequate practice concerning its transmission and prevention. In the same study practice scores were lower in those cases where many people lived in the same house and among those who worked in the medical field.

A study carried out in Jazan city showed that practice scores were below average and there was a significant relationship between knowledge and sex, with females having better practice than males (Ali, et. al, (2021)

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Description of the study area

The study was carried out in the Faculty of Agriculture and Environmental Science or Astra Campus of Bindura University of Science Education. The University is situated approximately 87 Km from Harare. Bindura has one provincial hospital and several clinics in its surrounding suburbs. The town lies on the coordinates: 17.3251°S 31.3326°E.

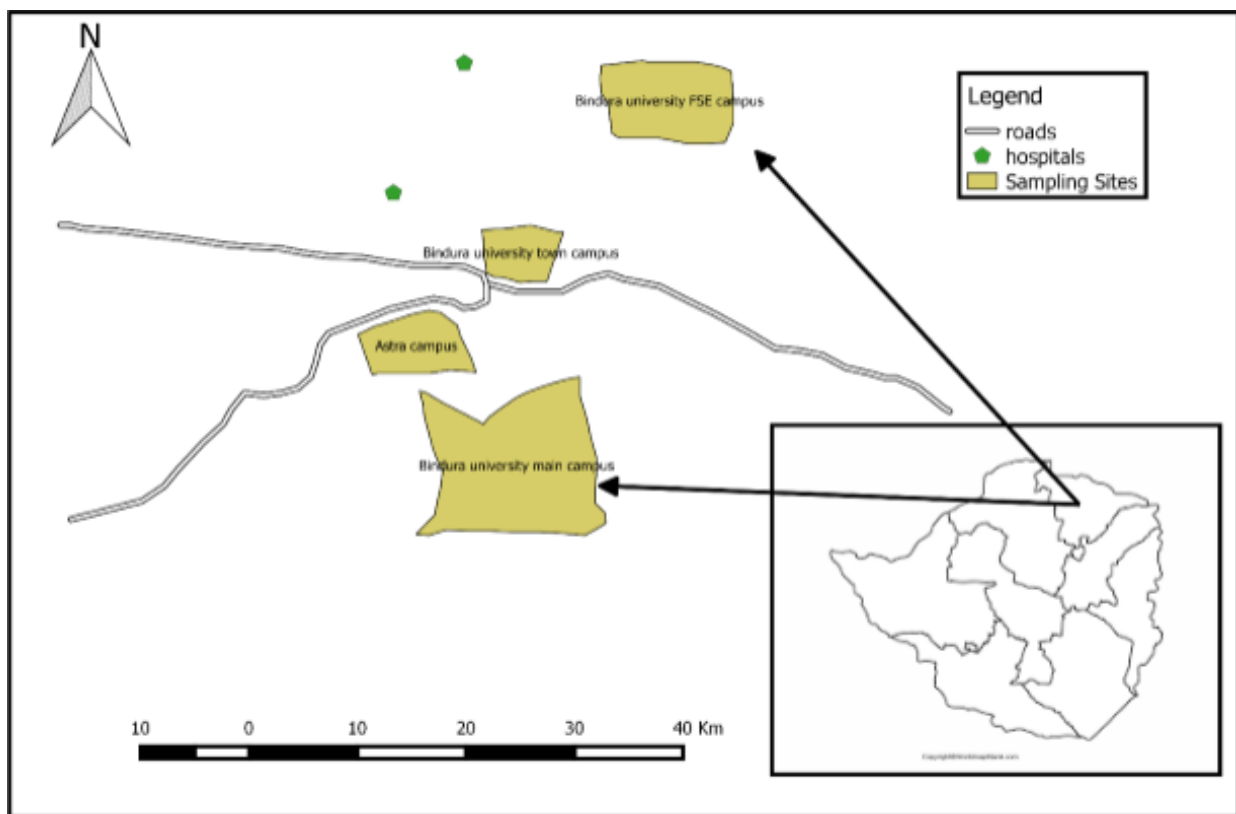


Figure 3. 1 Map of the study area

3.2 Research design

The study made use of a descriptive cross sectional survey design in which data are collected in a snapshot of time without any longitudinal follow up studies.

3.3 Sampling

A multi-stage sampling method was made use of to select respondents by first of all stratifying them into students, academic staff and non-academic staff. Then convenience sampling was done in each stratum to select the requisite number of respondents according to the sample size.

In each stratum the following Slovin's formula was used to determine the sample size:

$$n = N / (1 + Ne^2)$$

n = expected sample size

N = population size

e = level of precision (0.05) at 95% confidence level

3.4 Data Collection Instrument

Properly designed questionnaires were used in collecting the primary data on waste knowledge, attitude, practices and their influence on waste management. This instrument was convenient, time and financial conserving making the questionnaire as the most favourable instruments to help capture primary data.

3.5 Data Collection Procedure

Data collection entails acquiring and gathering relevant information deployed depending on the research design in question, data collection methods are selected (Kothari, 2004). In administering the questionnaire for the purpose of capturing the primary data, two approaches are used: self-administered and the drop and pick approaches

3.6 Validity and Reliability

The pretesting of the questionnaire was instrumental and vital to ensure it was faultless and understandable by the respondents. The discussion with two random respondents helped prove the validity and relevance of the questionnaire. The respondents who participated in the reliability test were not included in the final study.

3.7 Data analysis and presentation

Data were analysed using SPSS to generate frequencies for each KAP question. From the frequencies in percentage, a preferred KAP answer was assigned a score of 1 and a non-preferred answer was assigned 0 to come up with an overall score for each of Knowledge, Attitudes and Practices. Multinomial logistic regression was used to relate KAP to socio-demographic variables.

CHAPTER 4

RESULTS

Table 4. 1: Summary of demographic characteristics

Demographic variable	Category	n=120	%=100
Sex	Male	65	54.2
	Female	55	45.8
Age	18-25	78	65
	26-33	20	16
	34-41	10	8.3
	42-49	7	5.8
	50+	5	4.1
Highest Education	Primary	0	0
Level	Secondary	15	12.5
	Tertiary	105	87.5
Status	Student	85	70.8
	Academic staff	15	12.5
	Non-academic staff	20	16.7

The survey respondents were predominantly male (54.2%) compared to female respondents (45.8%). The age distribution was segmented into five groups. The largest age group was 18-25 years old, representing 65% of the participants. Other age groups included 26-30 year olds (16%), 34-41 year olds (8.3%), 42-49 year olds (5.8%), and those 50 years or older (4.1%). The majority of the respondents were students (70.8%), followed by non-academic staff (16.7%) and academic staff (12.6%).

Table 4. 2: Knowledge towards cholera prevention and WASH

Question	Preferred response	%	Score	Possible Score
Have you hear about cholera?	Yes	100	1	1
What causes cholera?	Bacteria	96	0.96	1
Can cholera cause death?	Yes	100	1	1
Can cholera be transmitted by mosquitoes?	No	96	0.96	1
Can cholera be treated?	Yes	96	0.96	1
Is there a vaccine against cholera?	Yes	65	0.65	1
Vomiting is a symptom of cholera	Yes	61	0.61	1
Diarrhoea is a symptom of cholera	Yes	61	0.61	1
Watery faeces are a symptom of cholera	Yes	17	0.17	1
Fever is a symptom of cholera	Yes	9	0.09	1
Has cholera caused some outbreaks in Bindura?	Yes	83	0.83	1
Can cholera be transmitted through food?	Yes	91	0.91	1
Can cholera be transmitted through water?	Yes	96	0.96	1
Cholera can be prevented by heating food	Yes	44	0.44	1
Cholera can be prevented by boiling water	Yes	57	0.57	1
Cholera can be prevented by washing hands under running water	Yes	66	0.66	1
Can cholera affect animals?	No	70	0.7	1
Can cholera be transmitted through sex?	No	83	0.83	1
Is it possible to contract cholera at Church?	Yes	83	0.83	1
Can cholera be transmitted through eating fruits	Yes	87	0.87	1
Do you think cholera can be treated using herbs?	Yes	13	0.13	1
Do you think cholera can be treated through praying?	No	65	0.65	1
Do you think cholera can heal without treatment	No	74	0.74	1
Total Score			16.13	23

From the table above, the total knowledge score was 16.13 out of a possible of 23. This translates into a percentage score of $(16.13/23) * 100\%$ which equals 70% which is moderately high. Knowledge was highest (100%) concerning the existence of cholera as a disease as well as for knowing that cholera can culminate in death if not quickly attended to. Knowledge was least (17%) for watery faeces as a symptom of cholera.

Table 4. 3: Attitudes towards cholera prevention and WASH

Question	Preferred response	%	Score	Possible score
Would you be willing to be vaccinated against cholera?	Yes	52	0.52	1
Do you think cholera is a deadly disease?	Yes	87	0.87	1
Do you think tap water should be boiled before drinking?	Yes	78	0.78	1
Do you think well water should be boiled before drinking?	Yes	100	1	1
Do you think cholera can be treated?	Yes	87	0.87	1
I don't like boiling water because it makes it tastes bad	No	47.8	0.478	1
Do you think water at your institution is safe to drink?	No	39	0.39	1
Do you think there are enough toilet facilities at your institution?	No	44	0.44	1
Are you willing to take home made medicine to treat cholera	Yes	61	0.61	1
Total Score			5.958	9

From the table above, the mean score for positive attitude was 0.66 (5.958/9) which translates a percentage of 66% $(5.958/9) * 100\%$ which is moderately high. Attitudes were more positive (100%) regarding the belief that even tap water needed to be boiled before drinking and least towards the perception that water at the institution is safe to drink.

Table 4. 4: Practices towards cholera prevention and WASH

Question	Preferred response	%	Score	Possible Score
Do you always wash your hands after visiting the toilet?	Yes	83	0.83	1
Do you boil tap water before drinking?	Yes	22	0.22	1
Do you sometimes eat cold food?	No	4	0.004	1
Do you sometimes have shortage of water to wash hands?	No	35	0.35	1
Do you sometimes have no soap to wash hands at your institution?	No	13	0.13	1
Total Score			1.534	5

From the table above, the mean score for positive practice towards cholera prevention and WASH was 0.368 (1.534/5) or 37% (1.534/5)*100 % which represents poor practice towards cholera and WASH. Good practice scores were obtained with regard to washing hands after visiting the toilet. The poorest practice score was in regard to eating cold foods without heating.

CHAPTER 5

DISCUSSION

The results show that knowledge scores about cholera prevention and WASH was high, indicating that people had a grasp about cholera, its causes, prevention and control as well as a good understanding of WASH. Furthermore, the respondents had a moderately positive attitude towards cholera prevention, control and WASH practices. However, the overall practice towards cholera prevention, control and good WASH were poor. The high knowledge about cholera prevention, control and WASH could be due to the fact that most of the respondents operate in a University environment where some of the issues are tackled in courses that involve content on the subject of this research. Additionally, all respondents have attained at least secondary education where some of the issues were taught. Besides, the high literacy levels may mean that the respondents are also able to acquire information on the subject of study through various portals such as electronic and print media. Moreover, Bindura University has a clinic where awareness posters on cholera and WASH are pitched in places where the clients can be able to read and understand. The high knowledge in the study area is inconsistent with findings by Mulenga and Musebe, (2024) where knowledge pertaining to cholera preventive measures was poor among University students in Zambia with only 17% exhibiting good knowledge.

Whilst knowledge was overall high, most respondents did not know that watery faeces are part of symptoms of cholera. This may be because watery faeces can be a symptom of other ailments that result in diarrhoea such as typhoid and food poisoning. Furthermore, the majority of respondents did not know that fever is a symptom of cholera. Again this may be explained that fever is not exclusive to cholera as it can manifest itself in other diseases such as influenza and malaria.

The gap between overall knowledge and knowledge on specific KAP elements is consistent with findings in a study that was carried out in six countries in the MENA region, Bhokit, et. al., (2025), where it was revealed that although 85% of the respondents had heard about cholera, only 51% had adequate knowledge concerning its transmission and prevention.

In the present study the predictors of good knowledge were education and sex. Being educated and being female were associated with more knowledge. This tallies with a study by Bhokit, et. al., (2025) in six countries in the MENA region, Bhokit, et. al., (2025), where predictors for

good knowledge were being educated and being female. Whilst knowledge was generally high, only 44 % of respondents were aware that cholera can be prevented by heating food. This is despite 91% of respondents agreeing that cholera can be spread through food. This may be an indicator that respondents are unaware of the biology and behaviour of *Vibrio cholerae* whose enzymes can be denatured by heat. This is understandable because it is likely that the majority of respondents do not have a firm grasp of disease epidemiology.

Attitudes of respondents towards cholera prevention, control and WASH were moderately high. In spite of that, only 52% of the respondents were willing to be vaccinated against cholera. This may be because generally, people are vaccine hesitant even in the face of pandemics such as Covid-19. A possible cause of vaccine hesitancy may be because people have been exposed to many conspiracy theories around vaccine in which claims are made that it is sought to decimate the black race through the administration. This result conflicts with findings by Digenarro, et. al., (2023) where the majority expressed a willingness to be vaccinated in the event of vaccine availability

The majority (53%) of respondents felt that they did not like boiling water because it loses its taste. This is despite the fact that the respondents feel that water must be boiled before it can be consumed. The moderate attitudes are in contrast to findings in Saudi Arabia, where Ali et al., (2021) realised that people's attitudes about cholera prevention and WASH were rated below average. In another study that was carried out in six countries in the MENA region, Bhekit, et. al., (2025), it was revealed that although 85% of the respondents had heard about cholera, 67% had positive attitudes concerning its transmission and prevention. The determinants of attitudes in this study were being female and being educated. Females and those that had attained tertiary education were more likely to have a good attitude than being male and having not attained tertiary education. This tallies with findings of a study by Bheki, et. al (2025) where attitudes towards cholera prevention and WASH were associated with sex and education. That more women than men had better attitudes towards cholera may owe to the fact that women are more exposed to information as they visit clinics more than men as they seek for contraceptives as well as when they take babies for vaccination at clinics.

The majority of respondents felt that there are no adequate and consistent supplies of water in their institute's toilet facilities. They report that there are also no hand washing detergents in

the toilets. The absence of such facilities inherently result in bad cholera prevention, control and WASH practices.

Although knowledge was high and attitudes moderate, the respondent's practices towards cholera prevention, control and WASH were poor (37%). This was generally because of the unavailability of facilities in the ablutions in terms of water and detergents. The piped water supply is erratic to the extent that people end up using buckets, a situation that can lead to unhygienic practice.

CHAPTER 6

CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusion

The study concludes that although knowledge was high and attitudes moderate, respondents exhibited poor practice towards cholera prevention and wash chiefly because of lack of adequate facilities. Therefore it can be concluded that students and staff at the institution are exposed to conditions that promote the spread of cholera.

6.2 Recommendations

The study recommends that the responsible authorities provide adequate facilities such as enough clean water. It is also recommended that the authorities put in place provisions to ensure the availability of soap or detergents and toilet paper in the toilets for both staff and students to ensure protection against cholera and promote good WASH practices.

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