Journal of World Health Research
Vol. 1 No. 12 (2024): December 2024
https://doi.org/10.71020/jwhr.v1i12.3
Original Article

ATTITUDE AND PRACTICES TOWARDS PREVENTION OF CHOLERA AMONG RESIDENTS OF SEMBULE VILLAGE RUBAGA DIVISION, KAMPALA DISTRICT. A CROSS-SECTIONAL STUDY.

Gloria Nantongo, Were Amiri*
Kampala School of Health Sciences.

Abstract

Background

Kampala city slums, with one million dwellers living in poor sanitary conditions, frequently experience cholera outbreaks. Drinking contaminated water from an unprotected well was associated with a cholera outbreak. This study aimed at identifying attitudes and practices toward the prevention of cholera among residents of Sembule Village Rubaga division, Kampala district.

Methodology

The study employed a cross-sectional study design with a simple random sampling technique. Data was collected from a sample size of 50 respondents using semi-structured questionnaires written in the English language with open and close-ended questions as data collection tools along with observation. Data analysis was done manually using tally sheets, pens, and papers and then entered in a computer program Microsoft Word, presented in tables and figures, and then interpreted.

Results

Most (42%) of the respondents were single, (30%) of the respondents were Muslim, (42%) of the respondents were business persons. 70% of the respondents strongly agreed that cholera can spread, 46% disagreed with cholera outbreak being due to supernatural powers, 58% strongly agreed to the effectiveness of water treatment products and 70% were willing to participate in community awareness activities against cholera. 62% of the participants said they usually got their water from the well/borehole, 50% always drank boiled or treated water, and 54% always washed their hands after toilet use and before heating.

Conclusion

Attitudes and practices towards the prevention of cholera among the residents of Sembule village were notable, the study established gaps regarding sanitation and food hygiene practices regardless of being aware of how cholera is transmitted and prevented.

Recommendation

The health workers at the community level along with community leaders should work hand in hand to implement and emphasize community health education sessions and surveys on the preventive practices towards cholera.

Keywords: *Cholera prevention, Sembule village Rubaga division, Residents practices.*
Submitted: 2024-04-13 Accepted: 2024-11-27

Corresponding Author: Were Amiri.

Email: *wereamiri79@gmail.com*
Kampala School of Health Sciences.

Background

The mortality associated with cholera outbreaks is of particular concern as many countries report higher CFR than in previous years. The average cholera CFR reported globally in 2021 was 1.9% (2.9% in Africa), a significant increase above acceptable (< 1%) and the highest recorded in over a decade. There are many densely populated areas especially the semi-urban slums of most poorly developed countries especially in most African countries. The result of the congestion is that there is an increased risk of pollution of water sources especially due to poor quality of sanitary infrastructure. This leads to an outbreak of severe diarrheal diseases which may lead to increased mortality rates. (WHO, 2023)

On 6 January 2019, the Rubaga Division notified the Uganda Ministry of Health of a suspected cholera outbreak in Sembule village. Kampala city is one of slums, with over one million people living in poor sanitary conditions and as a result, they frequently experience cholera outbreaks. 50 suspected case patients were identified with three deaths. Drinking contaminated water from an unprotected well was associated with a cholera outbreak. (Eurien D et al, 2021). The study seeks to contribute necessary information for developing effective and efficient policies, strategies, and

interventions that are easily implementable in resource-scarce areas like Sembule Village. (Orimbo EO et al, 2020) in a study in Kenya attributed cholera cases to supernatural powers, as the participant said, "It is due to God's will." The participants also mentioned socio-cultural beliefs that might lead to the spread of cholera. They felt that these water treatment agents were not readily accepted by pastoralists and had an unpleasant smell and test when put in drinking water. Some participants preferred boiling water to using water products to make water safe for drinking and few participants felt the products were important as they assisted in making water safe.

In Nigeria about 22.3% of the respondents strongly agreed to always washing their fruits before eating, 26.1% strongly agreed to clean their environment regularly, 34.0% strongly agreed to always wash their hands before eating,21.8% strongly agreed to always covering their drinking water to prevent cholera,32.2% strongly agreed to dispose of all waste properly to prevent the incidence of cholera, 25.8% strongly agreed to engage in environmental sanitation in their community every week, 23.7% strongly agreed that the waste in their community is properly disposed regularly to prevent cholera and 30.9% strongly agreed to wash their hands with soap and water after using the toilet (Akorede Seun Nurudeen et al, 2023). As attitude and hygiene practices determine the preventive measures needed to combat the recurrence of cholera, this study aimed to assess the attitudes and practices of the residents of Sembule Village regarding the prevention of cholera.

Methodology

Study design

The study design used was a cross-sectional study design. This study design was adopted because it was favorable to allow comparison between many different variables at the same time for example age, gender, income, and education level in relation to respondents' opinions of the different questions presented to them.

Study area

The study was carried out in Sembule village, Kabowa parish, Rubaga division, Kampala district in central Uganda region. The area of study is approximately 6.2km by road South of Kampala the capital and largest city of Uganda. The area covers a population of approximately 4700 people and 780 households.

Study population

The targeted population for the study were the residents of Sembule village, Rubaga division, Kampala district.

Study tools

Questionnaires were designed and distributed to the residents of Sembulevillage, Rubaga division, Kampala district.

Sample size determination

The sample size was obtained using the formula (1952) as below; S= 2(QR)O WHERE;
S: Required sample size
Q: Number of days the researcher takes while collecting data
R: Maximum number of people per day
O: Maximum time the interviewer spends on each participant HENCE;
S=2(5*5)1
=50 respondents
Therefore 50 respondents will be used in my research.

Sampling technique

The sampling technique used in this study was a simple random sampling technique. It was convenient to use this technique as it would allow us to make generalizations about the population without any bias.

Sampling procedure

A sampling procedure of convenience sampling was used to select the residents who participated in the research, where both male and female residents were selected.

Data collection methods

Data was collected solely by the researcher with the help of a trained research assistant.

Data collection tools

Questionnaires were used as tools for data collection.

Data collection procedure

Data was collected by administering questionnaires that contained semi-structured and close-ended questions written in the English language to the respondents and giving them a reasonable period to give their responses after which the questionnaires were collected. The research was also able to observe the general condition of the community in terms of water and sanitation for the prevention of cholera.

Dependent variable

Prevention of cholera

Independent variable

Attitude and practices among Residents of Sembule village towards prevention of cholera.

Inclusion criteria

The residents of Sembule that were included in the inclusion criteria were those who were present during the period of data collection and were willing to take part in the research and ready to consent.

Exclusion criteria
The residents of Sembule village that were included in the exclusion criteria were those who weren't available during the period of data collection and those who were not willing to take part in the research.

Quality control
Pilot study
The tool used in this study was pretested as a pilot study was carried out in the Makindye division among 10 respondents in a day to establish consistency of results. This helped the researcher to make necessary adjustments before the study was carried out in Sembule village. Questions that did not have any value to the study were removed.

Validity of the tool
The ability of the tool to yield dependable results was tested by interviewing some selected respondents in Sembule village about knowledge attitudes and practices toward the prevention of cholera. This allowed for the correction of unnecessary errors that were in the questionnaire.

Data management
This included data analysis and data presentation.

Data analysis and presentation
After data collection, data was manually sorted, edited, and arranged according to the themes based on the specific objectives of the study to generate frequencies and percentages using a scientific calculator. The data was later entered into a computer program, Microsoft Excel to generate figures and tables for easy interpretation of the study findings. Data was presented in tables. Other data was presented in the form of graphs and pie charts.

Ethical considerations
Ethics are systems of moral values that are concerned with the degree to which the research procedures adhere to professional legal and social obligations to the study participants. Ethical considerations involve an understanding of the ethical code and guidelines for protecting the rights of research participants. A letter of introduction was obtained from the Kampala School of Health Sciences Ethics Committee after approval of the research proposal to the authorities of Sembule village, Rubaga division to obtain permission to carry out the research. When permission was granted, the researcher introduced and explained the study objectives to the participants. A free and informed consent of each respondent was given at the beginning of the study and all information about the individual was treated with utmost confidentiality.

Results
Sociodemographic data

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Table 1: Shows the distribution of respondents according to demographic data N=50.

Response	Frequency (f)	Percentage (%)
Age		
18-23 years	23	46
24-29 years	15	30
30-35 years	8	16
Above 35 years	4	8
Total	**50**	**100**
Gender		
Male	18	36
Female	32	64
Total	**50**	**100**
Marital status		
Married	15	30
Single	21	42
Separated	14	28
Total	**50**	**100**
Level of education		
No formal education	0	0
Primary	18	36
Secondary	21	42
Tertiary	11	22
Total	**50**	**100**
Religion		
Catholic	13	26
Muslim	15	30
Protestant	8	16
Others	14	28
Total	**50**	**100**
Occupation		
Unemployed	9	18
Business	21	42
Others	20	40
Total	**50**	**100**

Table 1: shows that most (43%) of the respondents were aged between 18 and 23 years of age whereas the least (8%) were aged above 35 years with the majority (64%) of the respondents being female whereas the minority (36%) were male. Regarding marital status, most (42%) of the respondents were single whereas the least (28%) were separated. The study further revealed that most (42%) of the respondents had attained a secondary level of education whereas the least (0%) had no level of education. The findings obtained from the 50 respondents further showed that most (30%) of the respondents were Muslim whereas least (16%) were Protestants. Furthermore, most (42%) of the respondents were business persons whereas the least (18%) were unemployed.

Attitude towards prevention of cholera among the residents of Sembule village

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Table 2: Shows the distribution of respondents according to whether they thought that cholera could be spread from one person to another N=50.

Response	Frequency (f)	Percentage (%)
Strongly agree	35	70
Agree	8	16
Disagree	3	6
Strongly disagree	1	2
Not sure	3	6
Total	**50**	**100**

Table 2: shows that the majority (70%) of the respondents strongly agreed that cholera can be spreadfrom one person to another whereas the minority (2%) strongly disagreed.

Figure 1: Shows the respondents' distribution on whether they thought cholera affects both children and adults N=50.

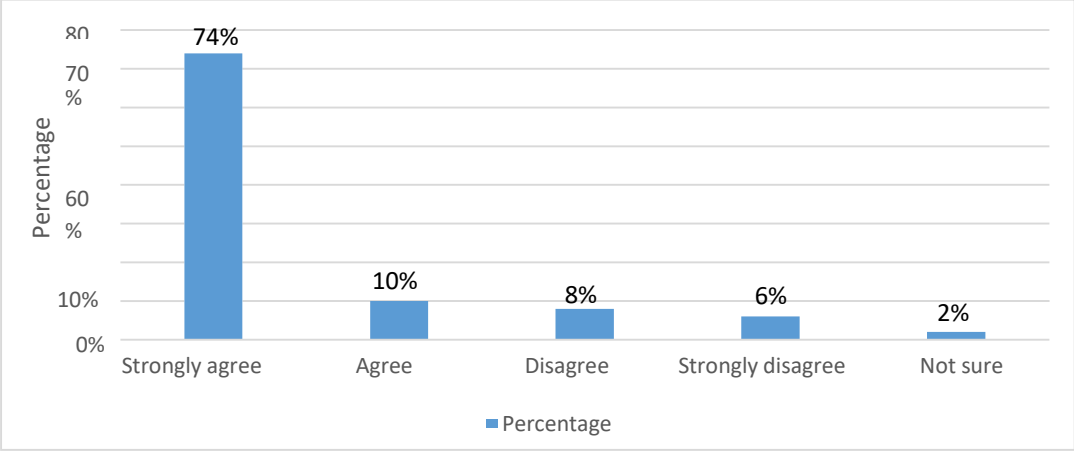
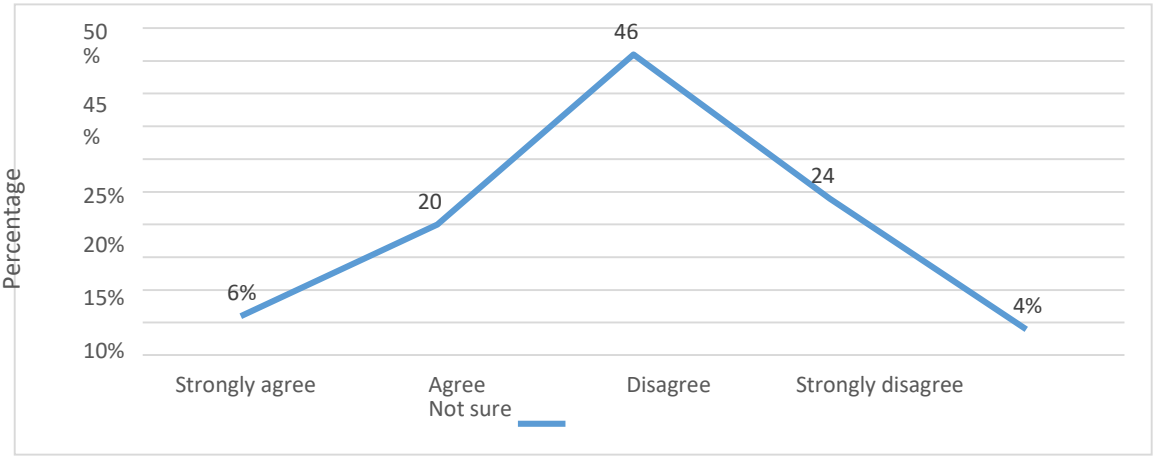


Figure 1: shows that the majority (74%) of the respondents strongly agreed that cholera affects bothchildren and adults whereas the minority (2%) were not sure.

Figure 2: Shows the distribution of respondents on whether they thought that cholera outbreaks are due to supernatural powers and God's will N=50.



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https://doi.org/10.71020/jwhr.v1i12.3
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Figure 2 shows that most (46%) of the respondents disagreed with cholera outbreaks being dueto supernatural powers or God's will whereas the least (4%) were not sure of whether cholera outbreaks are due to supernatural powers or God's will.

Table 3: Shows the distribution of respondents on whether they thought water treatment products such as chlorine tablets are effective in the prevention of cholera n=50.

Response	Frequency (f)	Percentage (%)
Strongly agree	29	58
Agree	9	18
Disagree	6	12
Strongly disagree	1	2
Not sure	5	10
Total	**50**	**100**

Table 3: shows that most (58%) of the respondents strongly agreed that water treatment productssuch as chlorine tablets are effective in the prevention of cholera whereas the least (2%) strongly disagreed.

Table 4: Shows the distribution of respondents according to whether or not they are willing to participate in community awareness activities towards cholera and its prevention N=50.

Response	Frequency (f)	Percentage (%)
Yes	35	70
No	15	30
Total	**50**	**100**

Table 4: shows that the majority of the respondents (70%) were willing to participate in communityactivities toward cholera and its prevention whereas the minority (30%) did not agree to participate in community activities towards cholera and its prevention.

Practices towards prevention of cholera among residents of Sembule village.

Table 5: Shows the distribution of respondents according to where they usually got their water from N=50.

Response	Frequency (f)	Percentage (%)
Tap	10	20
Well/borehole	31	62
Pond	9	18
Total	**50**	**100**

Table 5: shows that most (62%) of the respondents usually got their water from the well/boreholewhereas the least (18%) usually got their water from the pond.

Table 6: Shows the distribution of respondents on how often they drank boiled or treated water N=50.

Response	Frequency (f)	Percentage (%)
Always	25	50
Sometimes	20	40
Not at all	5	10
Total	**50**	**100**

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Table 6: shows that most (50%) of the respondents agreed to always drinking boiled or treatedwater whereas the least (10%) did not at all drink boiled or treated water.

Table 7: Shows the distribution of respondents according to how often they wash their hands after toilet use and before eating. N=50.

Response	Frequency (f)	Percentage (%)
Always	39	78
Sometimes	9	18
Not at all	2	4
Total	**50**	**100**

Table 7: shows that most (54%) of the respondents always washed their hands after toilet useand before eating whereas the least (6%) of the respondents never washed their hands at all.

Figure 3: Shows the distribution of respondents according to the type of toilet they used N=50

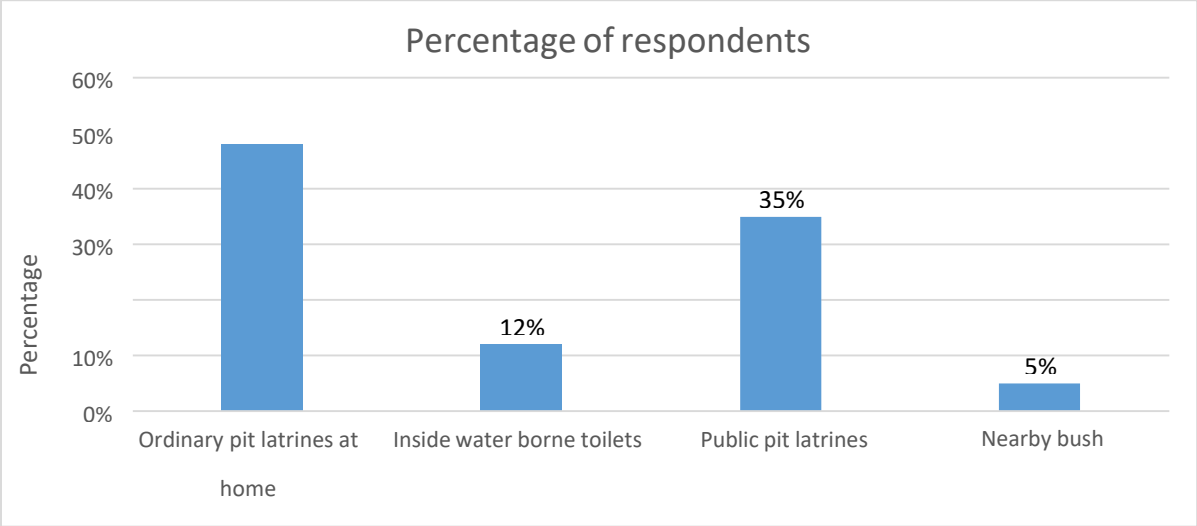

Figure 3: shows that most (48%) of the respondents reported using ordinary pit latrines at homewhereas the least (5%) used the nearby bush.

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Figure 4: Shows the distribution of respondents according to how they manage waste and household liquid refuse. N=50

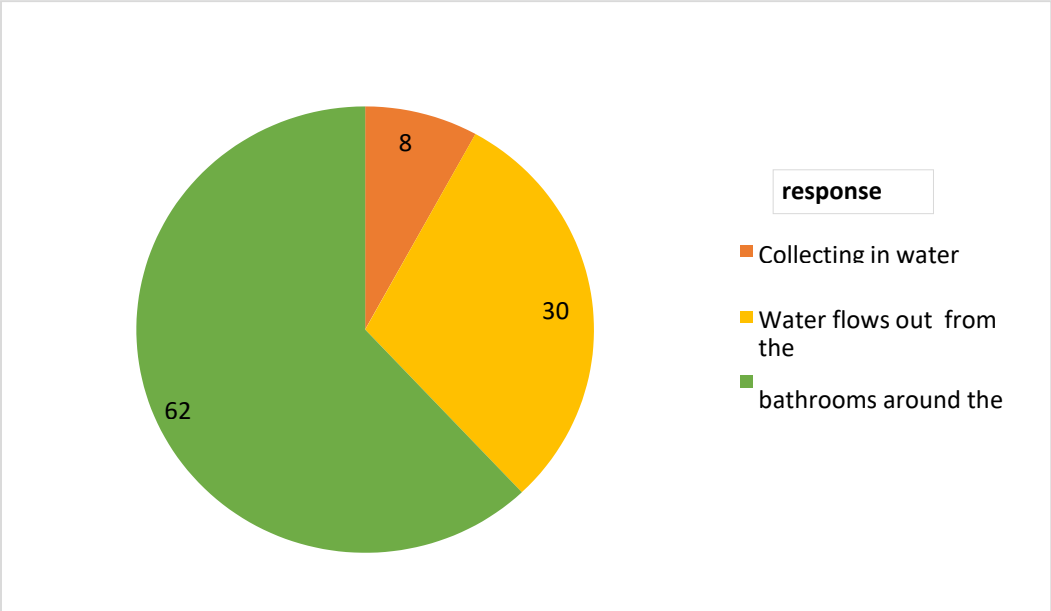

Figure 4: shows that the majority (62%) of the respondents poured their waste water into drainagechannels whereas the minority (8%) drained their wastewater into water sumps.

Figure 5: Shows the distribution of respondents according to where they reported going in case, they got cholera N=50

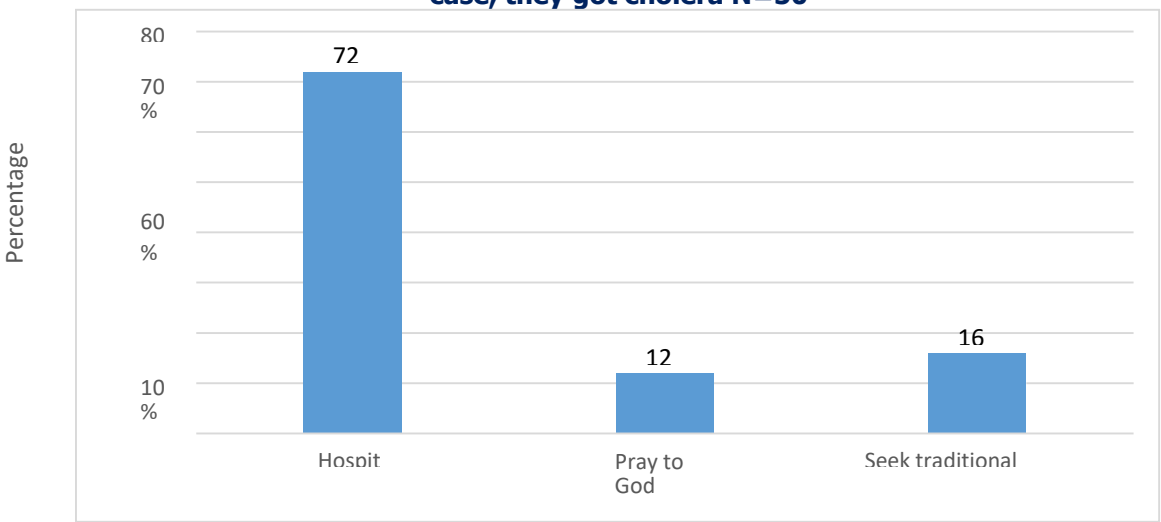

Figure 5: shows that the majority (72%) of the respondents reported going to the hospital in case they got cholera whereas the minority (12%) reported praying to God as treatment for cholera.

Discussion of findings

Attitudes towards prevention of cholera among residents of Sembule village

From the study, the findings showed that the majority (70%) of the respondents strongly agreed that cholera can spread from one person to another. This signifies that a large

number of study participants had had an experience with how cholera spreads. This was in agreement with Eman Merghani A et al (2021) where (70%) of the respondents thought that cholera is contagious. Furthermore, the study revealed that most (74%) of the respondents strongly agreed that cholera affects both children and adults. This could be attributed to the fact that many of the respondents had heard about the recent cholera deaths in their community or neighborhood. This was in line with O.G Ogbeyi et al (2017) where participants believed that cholera is very serious for adults 97.1% and children 96.3%.

The study findings among 50 respondents further revealed that most of the participants (46%) strongly disagreed with cholera outbreaks being due to supernatural powers and God's will. This implied that a significant number of respondents were well conversant with the actual cause of cholera. This was in line with Orimbo E.O et al (2020) where some participants attributed cholera cases to supernatural powers and God's will. Furthermore, more than half of the participants (58%) strongly agreed that water treatment products such as chlorine tablets were effective in the prevention of cholera. This could be attributed to the fact that a good number of participants had used chlorinated water before in some parts of the community. This was in line with Dilargachew T et al (2019) where 31% of the participants believed that water for domestic purposes needs treatment with either boiling or chlorine-based solutions. The study findings showed that the majority (70%) of the respondents were willing to participate in community awareness activities about cholera and its prevention. This signified that an outstanding number of participants had acknowledged that effective prevention of cholera required total community involvement and teamwork. This was in agreement with the study by Francesco D.G et al (2022) where 81.5% showed their willingness to change their habits.

Practices towards prevention of cholera among residents of Sembule village

Study findings obtained from a sample of 50 participants showed that more than half (62%) of the respondents usually got their water from the well/borehole. This could be attributed to the fact that a substantial number of respondents could not afford the cost of piped water at their homes. These results sync with the results in the study by Diana M et al (2022) where the most common source of drinking water was the use of well water. Additionally, half (50%) of the respondents reported that they always drank boiled or treated water. This could be attributed to the fact that a good number of the respondents had understood the importance of drinking safe water. These findings were consistent with the study by Charles Ssemugabo et al (2019) where almost all (95%) of the participants said they boiled their water to make it safe for drinking.

The study further revealed that more than half of the respondents (78%) always washed their hands after toilet use and before eating. This could be a result of an outstanding number of participants being aware that poor hygiene could lead to the spread of cholera. These findings were in line with Dureab F et al (2021) where about 75% of the participants claimed washing their hands regularly. Findings from the study revealed that almost half of the respondents (48%) used ordinary pit latrines at home for defecation practice. Although the majority of participants had heard of cholera and how it is spread, they could barely afford construction of pit latrines for their homes. These results were consistent with the study by OrimboE.O et al (2020) where those reported good defecation practices were 48.8%.

The study revealed that the majority of the respondents (62%) poured their waste water into drainage channels. This could be attributed to the availability of large draining channels in the area. These study findings were in line with Elaine A. et al (2021) where 57.72% of the participants had water sumps for the management of household liquid refuse. Findings from the study revealed that the majority (72%) of the participants reported to going the hospital in case they got cholera. This signifies that an outstanding number of participants had perceived vital reasons as to why they should seek medical help in case of a disease outbreak. This was in line with Eman Megrahi A et al 2021 where 81.1% of the participants mentioned they would go to the hospital if they got cholera.

Conclusion

Attitudes and practices towards the prevention of cholera among the residents of Sembule village were notable, the study established gaps regarding sanitation and food hygiene practices regardless of being aware of how cholera is transmitted and prevented.

Study limitations

Financial constraints during the course of the research in gathering information from the internet, drafting questionnaires, and typing and printing the work.

Poor weather conditions interrupted the data collection schedule due to heavy rains and yet the study area was swampy.

Some respondents were reluctant to fill in the questions which delayed the completion of the work.

Recommendation

The health workers at the community level along with community leaders should work hand in hand to implement and emphasize community health education sessions and surveys on the preventive practices towards cholera.

The health workers at the community level along with community leaders should work hand in hand to implement

and emphasize community health education sessions and surveys on the preventive practices towards cholera.

List of Abbreviations and acronyms

AWD: Acute Watery Diarrhea
CFR: Case Fatality Ratio
FGDs: Focus Group Discussions
IDPs: Internally Displaced Persons
KAP: Knowledge, Attitude, and Practices
KSA: Kingdom of Saudi Arabia
ORS: Oral Rehydration Solutions
PUR: Purifier of Water
UAHEB: Uganda Allied Health Examinations Board
WHO: WorldHealth Organization.

Source of funding

The study was not funded.

Conflict of interest

There is no conflict of interest.

Author's biography

Gloria Nantongo is a student with a diploma in Clinical Medicine and Community Health at Kampala School of Health Sciences.

Amiri is a research supervisor at the Kampala School of Health Sciences.

References

1. Elaine A, Tamegnon VD, Jean-Robert K, Alidehou JA and Honroe SB. (2021). Appraisal of the Knowledge, Attitudes, and Practices of the Populations of Cholerain Benin. Open Journal of Applied Sciences.
2. Orimbo EO, Oyugi E, DulachaD, Obonyo M, Hussein A, Githuku J, Owiny M and Gura Z. (2020). Knowledge attitudes and practices on cholera in an arid county, Kenya,2018: A mixed methods approach. PLOS ONE. https://doi.org/10.1371/journal.pone.0229437 PMid:32101587 PMCid:PMC7043758
3. Dureab F, Al-Qadasi Y, Nasr H, Al-Zumair M and Al-Mahbashi T. (2021). Knowledge on and preventive practices of cholera in Al-Maweet - Yemen,2018: a cross-sectional study. Journal of Water and Health, 1002-1013. https://doi.org/10.2166/wh.2021.139 PMid:34874906
4. O.G Ogbeyi, T. Bito, G. Anefu and G. Igwe. (2017). Determinants of knowledge, attitude and preventive practices relating to cholera in Wadata- a suburban slum of Makurdi, Benue state, North Central Nigeria. International Research Journal of Public and Environmental Health,277-282.
5. Eman Merghani Ali, Moawiya Badawi Mohamed, and Mosa Tawhari. (2021). Knowledge attitude and practice study regarding cholera among the people of Jazan City, KSA. Journal of Family Medicine and Primary Care, 712. https://doi.org/10.4103/jfmpc.jfmpc_965_20 PMid:34041066 PMCid: PMC8138396
6. Francesco D.G, EdoardoO, Ketan C, Giorgia G, Andrea C, Inusso C, Simone C, Davide F.B, Lucy R, Claudia M, Sergio C, Francesco V.S, Angelo G, Annalisa S, Isabel M.P, Giovanni P and Ally M. (2022). Knowledge, Attitudes, and Practices on Cholera and Water, Sanitation, and Hygiene among others.
7. Eurien D, MirembeBB, Musewa A, Kisaakye E, Kwesiga B, Ogole F, Ayen DO, Kadobera D, Bulage L, Ario AR and Zhu BP. (2021).Cholera outbreak caused by drinking unprotected well water contaminated with feces from an open storm drainage: Kampala City, Uganda, January 2019. BMC Infectious Disease. https://doi.org/10.1186/s12879-021-07011-9 PMid:34961483 PMCid: PMC8711146
8. Diana M, Malik S,Samar Younes,Nisreen M, Abir S.E, Sahar O, SouheilH and Rabih H. (2022).Knowledge, Attitude, and Practice in a Sample of the Lebanese Population Regarding Cholera. International Journal of Environmental Research and Public Health.
9. Dilargachew T, FasilK.D and Melakebirehan D. (2019). Assessment of Charles Ssemugabo, Solomon Tsebeni Wafula, Rawlance Ndejjo, Frederick Oporia, Jimmy Osuret, David Musoke and Abdullah Ali Halage. (2019). Knowledge and practices of households on safe water maintenance in a slum community in Kampala City, Uganda. Environmental Health and Preventive Medicine. Knowledge, Attitudes and Practices and its Determinant Factors towards Acute Watery Diarrhea Disease among Military Personnel Living in Harar, Ethiopia, July 2018. JuniperOnline Journal of Public Health.
10. Akorede Seun Nurudeen, Isiaq Abdulmuhit Temitope and Akorede Adam Abiola. (2023). Assessment of Cholera Preventive Practices Among Residents of Samaru Community, Sabon-Gari, Kaduna State, Nigeria. Unnes Journal of Public Health

Journal of World Health Research
Vol. 1 No. 12 (2024): December 2024
https://doi.org/10.71020/jwhr.v1i12.3
Original Article

PUBLISHER DETAILS:

PUBLIC HEALTH CORPS AFRICA LIMITED

Contact: +256 702 986 663
Email: info@phafrica.org/worldhealthresearch2024@gmail.com
Website: https://whr.phafrica.org
Address: Scholar's Summit Nakigalala, P. O. Box 166256, Entebbe Uganda, East Africa