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## Evaluation of the knowledge of medical and health personnel about cholera in Al-Adhamiya Health Centre in Baghdad

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### Abstract

**Background:** Cholera is a (Vibrio bacteria) which infects people by being transmitted through contaminated food and water and leads to severe diarrhoea and other symptoms, this disease needs quarantine of the infected person and good care by resting and rehydrating to avoid fatal outcomes, Cholera is spreading in poor regions, it considered as major public health there, due to inadequate sterilization and limitation of detergent issues. A study done by The Lancet Infectious Diseases (2021). Reported that even with advanced treatments, like rehydration solutions taken by oral, and antibiotics which improve the situation of the disease, but poor and infrastructure regions still facing this challenge, The climate is another domain that affects the dynamic of Cholera, recently some research has taken this direction to study how climate has affected Cholera, a study done in 2022. (Environmental Research Letters) reported that climate affects water quality, due to extreme weather events, so lead to increase the infection with Vibro Cholera, especially in poor regions, so on that resulted in increasing the researches about the vaccine of Cholera, and how we should to looking for new vaccine formulations, new distribution ways and new strategies to maximum protection achieving (2023) <sup>[3]</sup>. Vaccine development are open another domains like understanding the Cholera genome and trying to formulate vaccines depending on Cholera gene analysis Nature Microbiology (2022). all these strategies and advanced surveillance for the Choleara are working together to prevent or limit Cholera spreading, a review done in 2021 talks about (Global Health Action), mentioned that disease spreading gives us a lesson about Cholera in detail and how to deal properly with it. **Aim of the study:** This study aims to evaluate the extent of knowledge of medical and health personnel about cholera in Adhamiya Health Centre. **Methodology:** The cross-sectional design was used with statistical analysis to record an appropriate sample of health cadres working in primary health care centers in Baghdad city. The samples were collected in a period between June and August 2024. about (218) Participants who were shared in this study, who work in the centers of primary health care the data were collected through, direct interviews at Al-A'dhamiya Health Center in Baghdad city with health center workers, The questionnaire included three main axes, each axis included several questions, the first axis was about the demographic characteristics, the second axis was the disease symptoms, its transmission, and complications, and the third axis was about diagnosis, prevention and treatment. In this study, the following statistical data Analysis methods were used to evaluate and assess the results of the study using, The statistical program (SPSS) version (22.0), Descriptive data analysis using (frequencies and percentages). The inclusion criteria included some health cadres in Baghdad and all age groups who work in primary health care centers. **Conclusion:** Health personnel have a good foundation of knowledge about the prevention of cholera, but they need to enhance continuous updates and also intensive training to ensure that these preventive measures are applied effectively and to prevent the spread of the disease.

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**Keywords:** Evaluation, knowledge, medical, health, cholera

### Introduction

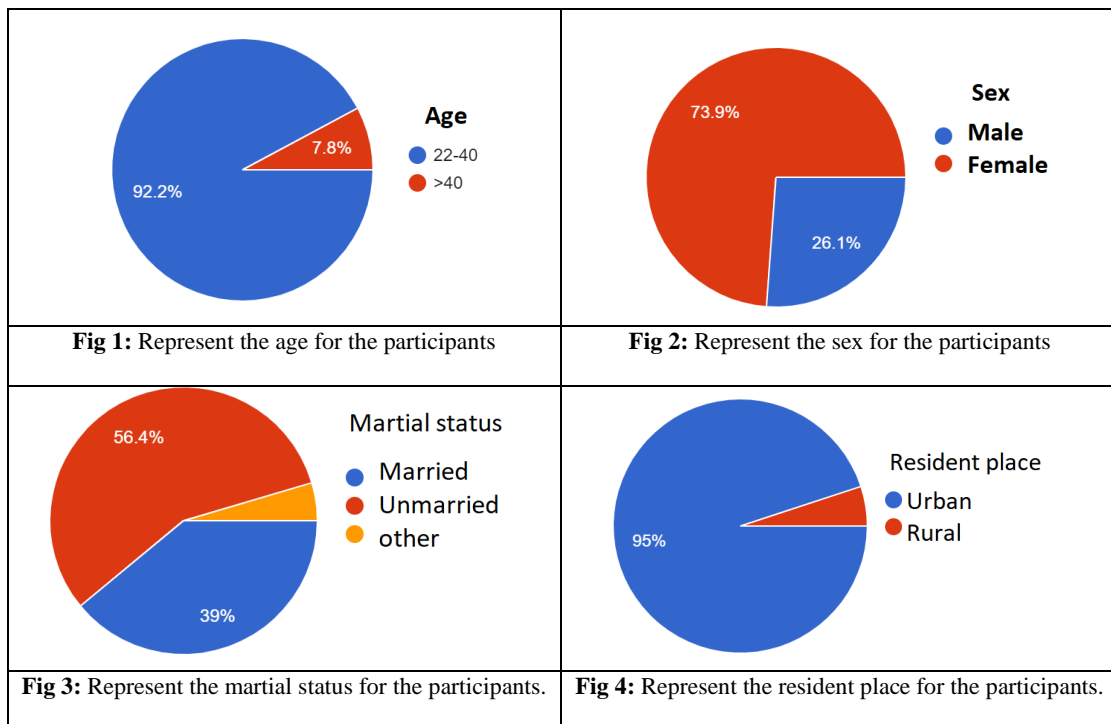
Cholera is an infectious disease that affects the digestive system and is characterized by severe symptoms, including severe watery diarrhea and vomiting. It may lead to severe dehydration and loss of a lot of fluids and salts in the body. If the symptoms are not treated quickly, it may cause dehydration and threaten the patient's life <sup>[6]</sup>. Cholera is a disease that usually spreads in

contaminated water and also in food contaminated with bacteria. It may be or appear in places where the infrastructure is lacking, especially in sewage areas and places where clean water is scarce and in areas that are also experiencing health crises or catastrophes. The history of cholera is ancient and may have an impact on public health. Major epidemics that occurred in the past centuries have led to the loss of many lives due to cholera [7]. One of the most important preventive methods to get rid of cholera is improving sanitation, providing clean water, developing vaccines, and treating with saline solutions [8]. Awareness is also one of the most important factors to reduce the spread of cholera, improving the health infrastructure and providing the vaccine [9]. Cholera is caused by a bacterial strain called

*Vibrio cholerae*. The bacteria can be transmitted to humans by eating or drinking contaminated food or drink [10]. Cholera is named after the cholera vibrio, which is named after its shape under the microscope, which resembles the vibrio in the Arabic language. This bacteria causes the famous cholera disease, which spreads in an epidemic manner, especially in the environment of children [11]. The first cholera pandemic occurred during the period 1817 to 1824 and is also known as the first Asian cholera pandemic. It then spread throughout Southeast Asia and continued to spread to the Middle East, East Africa and the Mediterranean coast [12].

**Results**

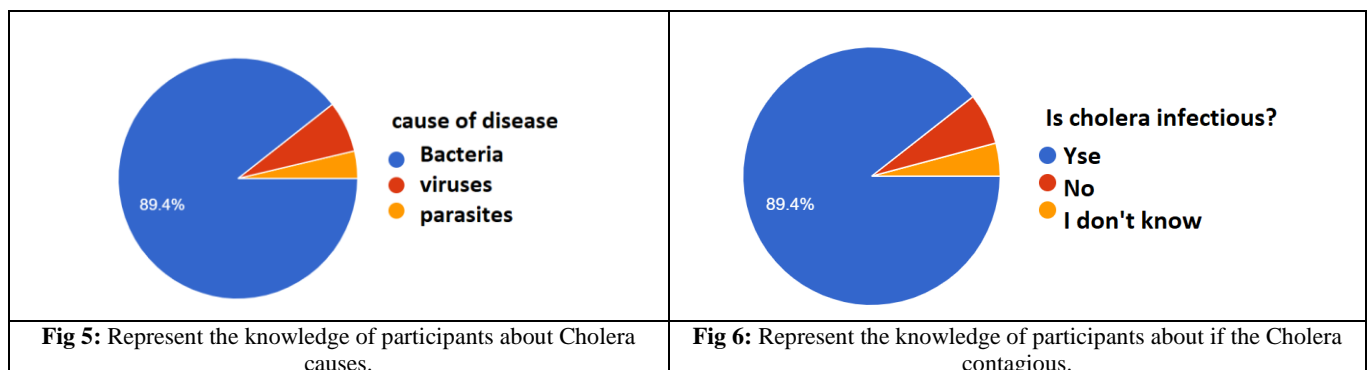
**A- The answers of demographical questions**

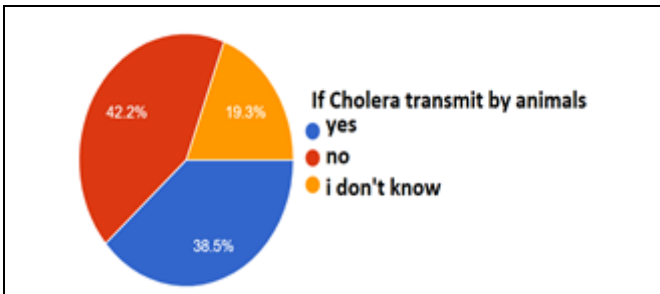


**Table 1:** Represent the educational level for the participants

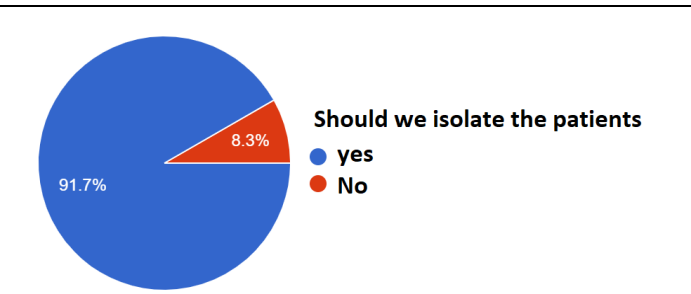
	Education level	#	%
1	Diploma	67	21.5
2	Bachelors	123	41.2
3	Master	18	4.6
4	PHD	10	0.5

**B- The answers of questions about cholera**

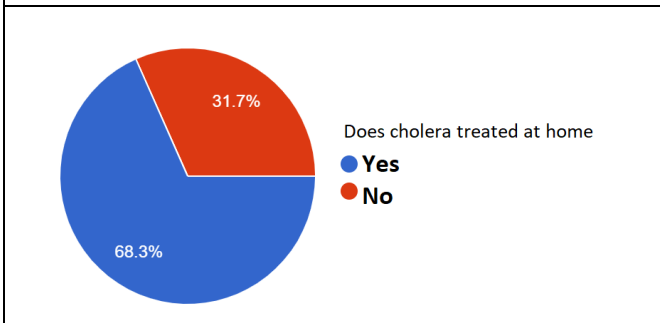




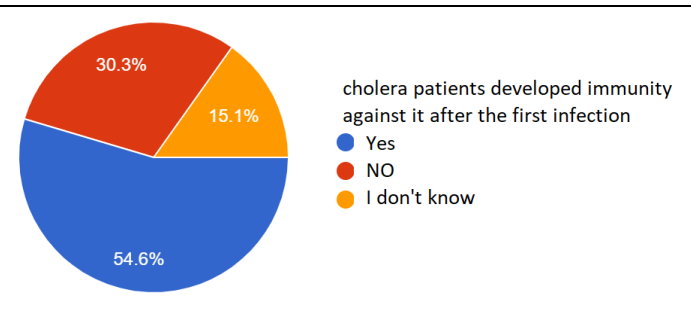
**Fig 7:** Represent the knowledge of participants about if the Cholera transmit by animals.



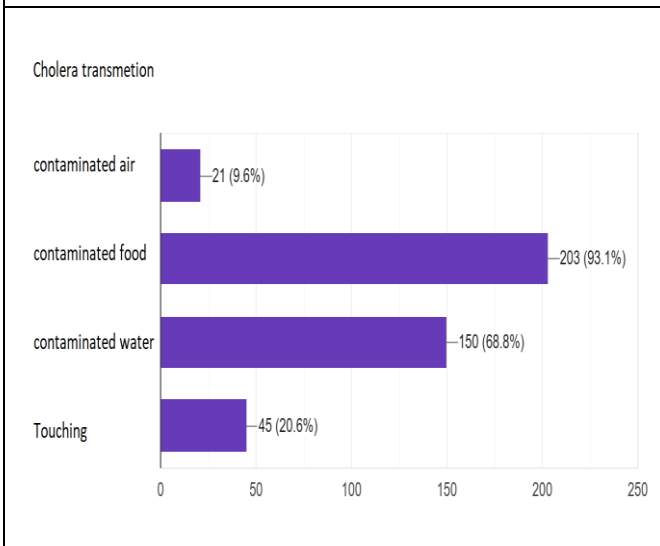
**Fig 8:** Represent the knowledge of participants about if they should isolate the Cholera patients.



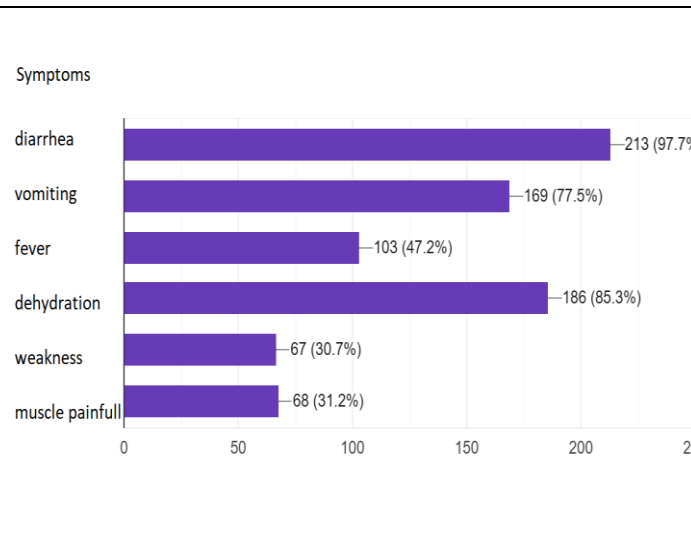
**Fig 9:** Represent the knowledge of participants about if the Cholera patients can treated at home.



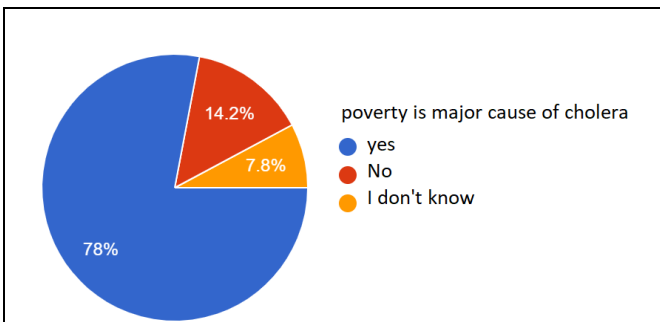
**Fig 10:** Represent the knowledge of participants about if the Cholera patients developed immunity after the first infection.



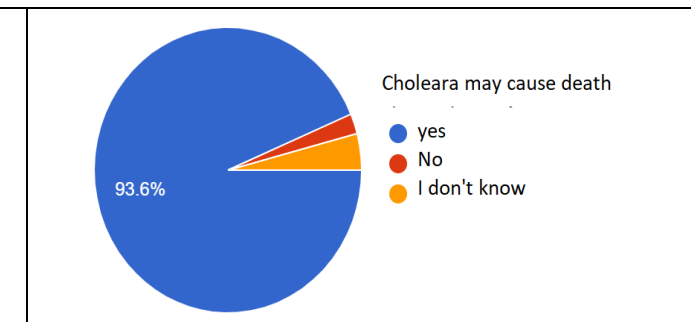
**Fig 11:** Represent the knowledge of participants about how Cholera can infect people.



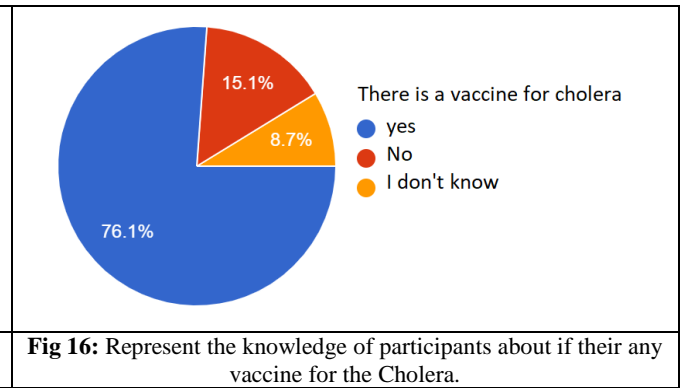
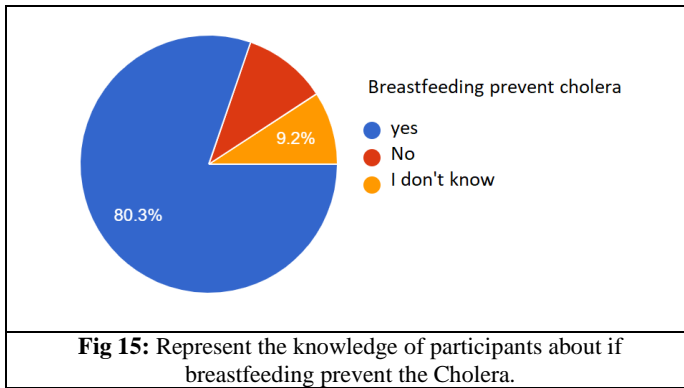
**Fig 12:** Represent the knowledge of participants about if the symptoms.



**Fig 13:** Represent the knowledge of participants about if the poverty is the major cause of Cholera.



**Fig 14:** Represent the knowledge of participants about if the Cholera can cause death.



**Fig 15:** Represent the knowledge of participants about if breastfeeding prevent the Cholera.

**Fig 16:** Represent the knowledge of participants about if their any vaccine for the Cholera.

**Table 2:** Represent the knowledge of participants about Cholera diagnosis, treatment, time of recovery

	Diagnoses	#	%
1	Stool	193	88.5
2	Saliva	2	0.9
3	Blood	4	1.8
4	I don't know	19	8.7
	Treatment	#	%
1	Antibiotics	99	45.4
2	Oral fluids	105	48.1
3	I don't know	14	6.4
	Recovery time	#	%
1	2-6 days	84	38.5
2	Two weeks	86	31.1
3	20 days	20	9.2
4	Month	5	2.3
5	I don't know	23	10.5

**4. Discussion**

Recently, in last couple years, cholera come back strongly, start threat the people life around the world. in this study we assessed what health worker know about cholera, the most participants (92.2%) were between 22 to 40 years old, which is good because this layer is the most active layer in health centers, 73.9 of them were females, no matter in this case if they marred or no (fig.1,2,3) and that similar with the most country around the world, and that agree with study done in 2024 [8], resident place may help to improve the participants knowledge (fig.4) [9], also most of them have Bachelor's degree (table (1) [10]. we found that 89.4% of these workers know that the cause of Cholera is the bacteria also they know that Cholera is contagious (fig 5,6) [11], but they were hastate if it transmit by animals 38.5% say yes, 42.2% say no and 19.3% say that they don't know (fig.7), the fact is yes Cholera can transmit by sea creatures [12], and 91.7 of them know that Cholera patients should to isolate (fig. 8) and 68.3% of them said that Cholera patients can treated at home. and that is true [13, 14], also 54.6% of them know that patients can developed immunity after the first infection (fig.9) [15], moreover they have a good knowledge about the ways of transmission and the symptoms(fig.11,12) [16]. participants also have very good information about the benefits of breastfeeding and the opposite about the disadvantage of the poverty and the neglect may cause death (fig.13, 14, 15) [17, 18], 76.1% know about Cholera vaccine(fig.16) [19], 88.5% of them know about the diagnosis and treatment methods (table2) [16, 17], but they hesitates about the recovery time only 31.1% of them were know that the Cholera can recover during 14 day(table 2) [17]

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