Assessment of Mothers' Knowledge and Practices Concerning Cholera at Al-Muhandiseen Region in Hilla City

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الخلاصة

الهدف: تقييم معرفة وممارسات الأمهات المتعلقة بمرض الكوليرا وعلاقتها ببعض الصفات الاقتصادية والسكانية للأمهات.

المنهجية: تم اختيار عينه مناسبة مكونه من (100) ام لفترة من الاول من للول حتى نهاية شرين الثالي عام .2007 جمعت البياتات عن طريق مقابلة الأمهات اللواتي يراجعن مراكز الرعاية الصحية الأولية باستخدام استبانه قام الباحث ببنائها مكونة من)13(فقرة، حقق الباحث الصدق والثبات عليها من خلال الدراسة الاستطلاعية. استعمل الباحث الإحصاء الوصفي والاستنتاجي في تحليل البيانات من خلال التكرارات والنسب المئوية وقيم مربع كاي.

النتائج: أشارت نتائج الدراسة بأن معارن وممارسات الأمهات حول المرض غير مقبولة وأن هناك علاقة ذات دلالة إحصائية معنوية بين معرفة وممارسات الأمهات وبعض صفاتهن الاجتماعية والسكانية.

التوصيات: أوصت الدراسة على الإمكان بتصميم وبناء وتنفيذ برامج تعليمية للأمهات حول المرض، إضافة إلى إجراء بحوث أخرى على عينة أكبر من الأمهات وعلى نطاق القطر.

المفردات: المعرفة، الممارسات، الكوليرا، الأمهات.

Abstract

Objective: To assess mothers' knowledge and practices concerning cholera and their relationship with some sociodemographic characteristics of those mothers.

Methodology: A sample of (100) mother was selected through a convenience sample for the period of July First through August 31'' 2007. Data were collected through interview of mothers were visiting PHC centers by using of constructed questionnaire developed by the researcher that contains (31) item. Reliability and Validity of the tool were determined through pilot study. A descriptive and inferential statistical approaches were used for data analysis.

Results: The study indicated that mothers' knowledge and practices concerning cholera were unacceptable and there is a significant relationship between mothers' knowledge and practices and some of their sociodemographic characteristics such as age, level of education and economic status.

Recommendations: The study recommended that an education program can be designed, constructed and implemented to mothers about the disease and further and nation-wide studies can be conducted on a large sample size of mothers.

Keywords: knowledge, practice, cholera, mothers.

Introduction:

Cholera is still an important diarrheal disease in the developing countries that caused by the gram-negative vibrio cholera. The impact of cholera outbreak is tremendous for a country at human and economic level. The World Health Organization (WHO) estimated that diarrheal diseases cause about (2.8) million deaths per year in developing countries. Officially, cholera is causing about 120,000 deaths per year (1).

With more than (50) country affected and 200,000 notified cases per year, cholera, after having almost disappeared 50 years ago, has again become the calamity it was in the 19th century (2). In the developing countries, the microbial contamination of household drinking water is implicated in the prevalence of various diseases (5). The emergence of cholera has been a significant public health problem around the world and battle to completely control this deadly disease continues (4).

Since the cholera outbreak was first detected in Kirkuk on 14 August 2007, it has spread to 9 out of 18 provinces across Iraq. It is estimated that more than (30,000) people

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have fallen ill with acute watery diarrhea, among which (3,315) were identified as positive for cholera. ٨ total of (14) individual are known to have died of the disease (5). To prevent the transmission of major communicable diseases, restoring basic public health and water/sanitation services is currently a top priority in Iraq. Lack of security continues to be a barrier for effective public health surveillance and response in Iraq (6).

٨ rigorous approach to field investigation is essential, not just to enable the most appropriate control measures to be applied but to increase the knowledge base on infections and means of prevention (7). Prevention is the safeguard against the epidemic of cholera and the best way to prevent the disease is hygiene and early diagnosis and treatment of cases.

In 2005, (131,943) case from 52 countries were reported to the WHO. Resource-poor areas continue to report the vast majority of cases; nearly (95%) of cases was reported from Africa (8.9).

Little is known about the mothers' knowledge and practices concerning cholera nature, transmission, and prevention and this has urged the researcher to conduct the present study in this field. Such work will help to assess the mothers' knowledge and practices concerning this disease and thus guide the design and implementation of health promotion mothers' awareness programs because they are the most members of the family that dealing with foods and drinks preparation and introducing in the home.

Methodology:

A descriptive study was conducted throughout July ث! until the end of August 2007. A convenience sample of (100) mother was selected who visited the primary health care centers (Almuhandiseen and Shaheed Al-Islam primary health care centers). ٨ constructed questionnaire (31 item) by the researcher was used for data collection that comprised of 3 parts; the first part that contains (3 items) is concerned with sociodemographic characteristics of the mothers, the second part included (18 item) is related to mothers' knowledge. The latter part (10 item) is concerned with mothers' practices. The second and third parts were introduced with a 3-leve! scale (1 know, Uncertain, Do not know) and (Always, Sometimes, Never) respectively. ٨ panel of 4 experts have reviewed the tool for the determination of its validity. Correlation coefficient of 0.90 is computed through reliability of the instrument.

٨ descriptive statistical approach (frequencies, percentage) and inferential statistical approach (chi-square) were used for the data analysis.

Results:

Table 1. Demographic characteristics of the sample

Age (years)	F	%
18<	12	12
19-24	13	13
25-30	40	40
>31	35	35
Total	100	100
Level of Education	**F**	**%**
Illiterate	14	14
Read and write	15	15
Primary school graduate	38	38
Secondary school graduate and more	33	33
Total	100	100
Economic Status	**F**	**%**
Sufficient	13	13
Barely Sufficient	21	21
Insufficient	66	66
Total	100	100

f= frequency, %=percentage

Relative to mothers' age, level of education, and economic status, the findings indicated that the highest proportion of the sample (40%) was 25-30 years old, primary school graduates (38%), having insufficient economic status (66%) (Table 1).

Table 2. Distribution of the sample knowledge by frequencies and percentages

No.	Knowledge	!know		1 am Uncertain		I don't know	
		f	%	f	%/	f	%
1	Cholera is a bacterial infection.	19	19	71	71	10	10
2	Cholera is a preventable disease.	17	17	60	60	23	23
3	Cholera can occur as a result of contaminated drinking and eating ingestion.	58	58	24	24	18	18
4	Cholera symptoms are vomiting without nausea, and watery rice-like diarrhea without abdominal spasm.	15	15	55	55	30	30
5	Cholera danger is dehydration.	18	18	62	62	20	20
6	Cholera can affect any age group.	13	13	36	36	51	51
7	Personal hygiene is very essential to prevent cholera.	70	70	13	13	17	17
8	Proper food cooking is important to prevent cholera.	23	23	20	20	57	57
9	Boiling or chlorinating of drinking water can prevent cholera.	64	64	26	26	10	10
10	Hand washing properly before food preparation and eating and after WCs using is essential to prevent cholera.	50	50	30	30	20	20

Table 2. Continued

No.	Knowledge	1 know		1 am Uncertain		I don't know	
		f	%	f	%	f	%/
11	It is important to avoid street foods and drinks buying (e.g. sandwiches, and milk and its products) to prevent cholera.	20	20	32	32	48	48
12	Proper fruit and vegetables washing by salt and water or soap and water can prevent cholera.	48	48	30	30	22	22
13	To avoid cholera, it is important to clean patient's clothes with boiling water for 5 minutes or exposed to sunlight.	36	36	44	44	20	20
14	Breast feeding can prevent cholera among children.	61	61	30	30	9	9
15	Waste disposal and sanitation are essential to avoid cholera.	44	44	40	40	16	16
16	There is effective antibiotics to prevent cholera complications.	21	21	51	51	28	28
17	There is effective vaccine to prevent cholera.	37	37	30	30	33	33
18	Fluids and electrolytes replacement is essential to avoid dehydration.	45	45	30	30	25	25

f= frequency, egatnecrep=o/•

Table 2 shows that the highest proportion of the mothers (71%) do not know that cholera is a bacterial infection. Seventy percent of them know that personal hygiene is very essential to prevent cholera. Only (58%) know that cholera can occur as a result of contaminated drinking and eating ingestion. Only (13%) of the sample know that cholera can affect any age group. Only (17%, 15%, and 18%) of the sample know that cholera is a preventable disease, cholera symptoms, and cholera danger, respectively.

Table 3. Distribution of the sample practices by frequencies and percentages

No.	Practices	Always		Sometimes		Never	
		f	%	f	%	f	%
1	I wash fruit and vegetables properly with salt and water or soap and water before eating.	10	10	18	18	72	72
2	I wash my hands properly with soap and water before food preparing and eating and after WCs usin[illegible]	23	23	35	35	42	42
3	I use only boiled or chlorinated water in drinking, washing, bathing, and cooking.	38	38	46	46	16	16
4	I am cooking foods properly before eating.	95	95	5	5	0	0
S	1 pay more attention for my and other family members personal hygiene.	57	57	30	30	13	13
6	I avoid street vendors' foods and drinks.	12	12	15	15	73	73
7	I am continuing of my child breast feeding during the bouts of diarrhea.	40	40	48	48	12	12
8	I use ORF or rice·water in case of dehydration.	42	42	22	22	36	36

f= frequency, %=percentage

Table 3. (continued)

9	Attending of physician when I have diarrhea or vomiting for diagnosis and treatment.	51	51	38	38	11	11
10	I am disposing of home waste properly by burning or throwing them in suitable place.	35	35	40	40	25	25

f= frequency, %=percentage

Table (3) reveals that the highest proportion of the mothers (95%) always cooking foods properly before eating. Seventy two percent of the sample never wash fruits and vegetables properly. Only, (23%) of them always washing their hands properly before food preparation and eating and after WCs using. Only, (12%) of the subjects always avoiding street vendors' foods and drinks.

Table 4. The association between knowledge of the subjects and their age, level of education and economic status

Knowledge / X^2	X^2 Obs.	* Crit.	df	P≤.05
Age	15.85	12.59	6	S.
Level of education	18.17	12.59	6	S.
Economic status	12.2	9.48	4	S.

Df=degree of freedom, P= probability level, S. significance, X^2 crit.= critical chi-square X^2 Obs,= observed chi-square

The findings of this table had shown that a significant association between subjects' knowledge and their age, level of education and economic status.

Table 5. The association between practices of the subjects and their age, level of education and economic status

Practice / X^2	Obs.	Crit.	df	P≤05
Age	18.41	12.59	6	S.
Level of education	52.7	12.59	6	S.
Economic status	36.17	9.48	4	S.

df= degree **of freedom, P= probability level, S.= significant, x^2crit.= critical chi-square X^2 005.- Observed chi-square**

Results revealed that a significant association between subjects' practices and their age, level of education, and economic status as shown in this table.

Discussion:

Unfortunately, the highest proportion of the mothers (71%) uncertain that cholera is a bacterial infection (Table 2). The World Health Organization mentioned that cholera is an acute bacterial infection (1). The researcher expected that subjects thought that cholera is ingestion of foreign bodies. Seventy percent of the subjects know that personal hygiene is very essential to prevent cholera (Table 2). This is consistent to the finding of the study held by Zambian Ministry of Health and CDC in response to a large cholera outbreak through the period of 2003-2004 which underscored the importance of hygiene, clean water, and sanitary food handling for cholera prevention (").

Poor hygienic practices can lead to a serious health problems e.g. cholera, typhoid, and skin diseases (12).

Unfortunately, only (58%) of the sample know that cholera can occur as a result of contaminated food and drink ingestion (Table 2). Efforts should be directed toward establishing clean water, food, and sanitation to avoid food-bome diseases (13).

The researcher expected that most of the sample thought that cholera affects children only. Findings indicated that only (13%) of the respondents know that cholera can affect any age group(Table2). Contrary to the fact that cholera is an extremely virulent disease and affects both children and adults^.

Unfortunately, only (17%, 15% and 18%) of the subjects know that cholera is preventable disease; cholera symptoms, and cholera danger, respectively (Table 2). The centers for disease control and prevention stated that cholera is a preventable disease; cholera symptoms are vomiting without nausea, watery rice-like diarrhea, without abdominal cramps; and cholera danger is dehydration (16).

According to study findings, the respondents have unacceptable level of knowledge. These results are consistent with a study findings indicated that many adults lack the knowledge needed to keep themselves safe from food-bome diseases (17).

Fortunately, (95%) of the sample always cooking foods properly before eating (Table 3). Practice personal hygiene, cook foods adequately, and avoid foods from unsafe sources are essential to avoid food-bome diseases (13.18.19).

Table 3 indicated that (72%) of the participants never wash fruits and vegetables properly. This finding is contrary to results of a national survey among (2,000) randomly selected households in USA in order to quantify consumer practices related to preparation of fresh farm produce with emphasis on practices that affect safety. Results showed that only (6%) of the subjects responded that they never wash fresh produce (20). The researcher expected that this result may related to sample wash fresh produce by water only.

Only, (23%) of the participants always wash their hands properly (Table 3). This finding is consistent to a national survey conducted in USA previously mentioned, which revealed that only half of the subjects indicated washing their hands (20).

Findings showed that only (12%) of the sample always avoiding street vendors' foods and drinks (Table 3). Persons should avoid food and drink from unsafe sources to ensure food safety (1819). Enhanced hygiene and safety practices is important tool for cholera control and prevention (10).

Findings of the study showed that a significant association between age of the mothers and their knowledge (Table 4). This result is consistent with a nationwide survey conducted in USA that included (4,343) adults in order to investigate their knowledge about common food-borne diseases pathogens. Results indicated that sample knowledge is associated with age, younger adults have less knowledge than older ones (17).

The results indicated a significant association between the education level of the respondents and their knowledge (Table 4). A survey was conducted to identify knowledge and practices on food-bome diseases supported this finding in which a random sample of (394) responding mothers of children attending public schools in one region of Italy was selected.

Findings revealed that knowledge level and practices of the subjects significantly higher in older and more educated women '2'). As well as, ٩ study conducted in Bangladesh to identify environmental risk factors for cholera in an endemic area using a geographic information system approach. Data were collected from a longitudinal health and demographic surveillance system for the period of 1992 to 1996.

The study found that poor education level is important risk factor for cholera, since knowledge and practices of the population to avoid cholera are associated with their education level (22).

Table (4) presents that a significant relationship between subjects' economic status and their knowledge. A person with low socioeconomic base might be more likely to have poor knowledge, poor nutrition, never exercises, and use addictive substances (23). Resource-poor areas continue to report the vast majority of cholera cases; nearly (95%) of cases was reported from Africa (8) because of low living standards (income, education, and occupation).

There is a significant association between age of the subjects and their practices (Table 5). In a national telephone survey was conducted of (1,620) randomly selected US adult residents. They were reviewed about their recognition of food-borne pathogens and practices. Results indicated that safe practices were reported more often by persons 30 years old or older (24).

Analysis of data showed that a significant association between subjects' education level and their practices (table 5). This finding is consistent with a survey conducted in one region of Italy, previously mentioned. Their results revealed that sample practices significantly better among more educated ones (21). Knowledge level of the person can affect his or her practice (25).

The findings indicated that a significant association between economic status of the sample and their practices (table 5). This result is consistent with Blaxter's national study of individuals lifestyle who found that lower income is associated with unhealthy practices (26) Health practices and beliefs are strongly influenced by a person's economic level (23).

Conclusions:

The study concluded that knowledge and practices of mothers concerning the disease were unacceptable and there is a significant association between the sample knowledge and practices and their age, level of education, and economic status.

Recommendations:

The study recommended that an education program can be designed, conducted, and implemented to the general population, especially for mothers related to cholera control and prevention, mass media should played a significant role in presenting cholera control and prevention knowledge among the population, health education courses should contain topics of cholera control and prevention which can be presented to these mothers and further nation¬ wide studies can be conducted on a large sample size of mothers.

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