



ASSESSMENT OF MATERNAL HEALTH CARE SEEKING BEHAVIORS TOWARD TREATMENT OF ACUTE DIARRHEA FOR CHILDREN IN JEDDAH

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ABSTRACT

A cross-sectional analytic study was adopted to estimate the prevalence of acute diarrhea, assess the mothers' health care seeking behaviors toward treatment of acute diarrhea and their predictors in children who attended the well-baby and vaccination clinics of Ministry of health primary health care centers in Jeddah. An interview Arabic questionnaire was utilized for data collection. This study included 280 mothers with their children. The results show almost half (49.3%) of the studied children were one year or less. Eighty eight percent of the studied mothers recognized the correct definition of diarrhea. Children who had acute attack of diarrhea was 32.5% while 67.5% did not had acute diarrhea attack. Among the children with acute attack 75.8% had at least had one attack. Sixty-six (72.5%) of the 91 mothers of children with acute diarrhea visited health facilities. Most of them visited the health facilities because the child did not improve. Previous experience with similar illness was found to be the only reason that significantly associated with visiting health facilities by the mothers.

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INTRODUCTION

Diarrhea is a worldwide issue and is characterized as 'having free or watery stools no less than three times each day or more often than usual for a person' (Ansari *et al.*, 2012). It is the second most general cause for child mortality throughout the world. Every year around 1.5 million children die worldwide because of diarrhea. Dehydration is the principal immediate reason for death from severe diarrhea. Hence, it is critical that caretakers supplant the loss fluids in an appropriate way and look for suitable care even when slight indications of dehydration symptoms show up in a child (Gao *et al.*, 2012). Diarrhea is a general symptom of gastrointestinal infections caused by a variety pathogen such as bacteria, viruses and protozoa. Rotavirus is the main source of intense loose bowels, and is accountable of around 40% hospitalization of children under the age of five (UNICEF/WHO, 2009). It is more common in the under develop or developing countries where there is lack of safe potable water, proper sanitation and hygiene besides, inferior general wellbeing and nutritional level.

WHO and UNICEF started a policy known as the Integrated Management of Childhood Illness (IMCI), in the 1990s to enhance the quality of care extended in wellbeing services to pneumonia, diarrhea, malaria, measles and malnutrition which is accountable for 70% child fatality. To support significant participation of families in managing diarrhea, it is crucial to

include data on the variables that impact caretakers' acknowledgment and treatment of diarrhea (Wilson *et al.*, 2012).

Recently, epidemiologists and social researchers have committed growing consideration regarding investigation of health-seeking behavior related with the two foremost causes of child fatality i.e., acute diarrheal diseases and acute respiratory diseases. It is also imperative for the policy makers to consider information on health care seeking behavior in setting plans to diminish the child mortality rate (Sreeramaraddy *et al.*, 2006).

The features influencing the health care seeking behavior can be seen in different settings i.e., physical, financial, social and political. Along these lines, the use of a health care scheme, open or private, formal or non-formal, may rely upon socio-demographic factors, social structures, level of education, social convictions and practices, gender discrimination, status of ladies, financial and political frameworks, environmental conditions, and the form of illness and health care scheme itself (Shaikh and Hatcher, 2005). Study has demonstrated that apparent illness severity, maternal acknowledgment of specific signs and manifestation of childhood ailment were vital elements in influencing health care seeking behavior (Sreeramaraddy *et al.*, 2006).

Diarrheal illnesses are equaled in significance just by respiratory diseases in the Kingdom of Saudi Arabia (KSA), with high occurrence and pervasiveness in community studies. The control of diarrheal illnesses is one of the 'Child Health and Survival Programs' of the Ministry of Health

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(MOH). The main goal of the control program was to diminish mortality and morbidity rates because of dehydration, including the utilization of oral rehydration treatment. Nonetheless, diarrheal ailments are one of the main reasons of newborn and child mortality and morbidity in Saudi Arabia (Bani *et al.*, 2002). It has also been observed that there is underutilization of health services and inappropriate behaviors of mothers in seeking treatment of acute childhood diarrhea in KSA. Unlike other countries of the world, KSA has limited studies concerning health-seeking behavior of mothers.

Keeping the above-mentioned facts in mind, an attempt has been made to describe the commonness, features and the distinctive variables related with diarrhea incidences stated at the Primary health care centers in children under the age of five. The main objectives of this study were, to estimate the prevalence of acute diarrhea in the children, to assess the mother's health care seeking behaviors and to identify the factors that affect these behaviors toward treatment of acute diarrhea for their children who was attending the well-baby and vaccination clinics of Ministry of Health, Primary health care centers in Jeddah 2013.

METHODOLOGY

Study area

The study was conducted at Ministry of Health, Primary health care centers in Jeddah, KSA.

Study design

A cross-sectional analytic study was adopted.

Study population

Mothers of children aged (1month-5years) attending the well-baby clinics of the Ministry of health, primary health care centers in Jeddah city, at the period of the study.

Inclusion criteria

Mothers of children aged from 1 month to 5 years who had acute diarrhea during the study period or in the past 3months were eligible for study inclusion.

Sample size

It was calculated using statistical facility in the EPI Info program version 7 assuming that the average number of target population (mothers who attending well baby clinics of MOH PHCCs throughout a year is 122877 and prevalence of acute diarrhea in children aged from 1 month to 5 years (based on a pilot study conducted by the researcher in one of the PHCCs) is 25%. At 95% confidence interval, the estimated sample size was 287 mothers. The response rate was 97.5%, as 280 of mothers were included in the study.

Data collection tool

An Arabic questionnaire structured by the researcher and was validated by three consultants: community medicine, family physician and epidemiologist. The questionnaire consists of four main parts:

- Socio-demographic data.
- Questions to measure the prevalence of acute childhood diarrhea.

- Questions to assess the mother care seeking behaviors toward treatment of acute diarrhea in their children.
- Questions to determine the predictors of mother care seeking behaviors toward treatment of acute diarrhea in their children.

Pilot study

A pilot study was conducted in one primary health care center to test the validity of the questionnaire and modifications were done according to the pilot results.

Data collection technique

The participants were interviewed the during the working hours and data were collected in the same day. This was done over three months period (Oct.-Dec. 2013). The data were verified by hand then coded and entered to a personal computer.

Data entry and analysis

Data were entered and analyzed by SPSS version 18. Health-seeking behaviors was presented as numbers and percentage. Chi square statistical test was used to identify the association between health-seeking behaviors and the predictors. P value less than 0.05 was considered statistically significant.

Table 1 Demographic characteristics of mothers and children in the study

Variables	Number	Percentage		
Mothers (N=280)				
Age	Below 25 years	40	14.3	
	Between 25-35 years	184	65.7	
	Above 35 years	56	20	
Marital Status	Married	275	98.2	
	Divorce	4	1.4	
	Widow	1	0.4	
Level of education	Pre-school	38	13.6	
	School	142	50.7	
	Higher	100	35.7	
	Government	30	10.7	
Job	Private sector	14	5	
	House wife	220	78.6	
	Business	5	1.8	
	Other	11	3.9	
House type	Own house	55	19.6	
	Rental	225	80.4	
Family income	Below 3,000	73	26.1	
	Between 3,000-6,000	82	29.3	
	Between 6,000-10,000	70	25	
Nationality	Above 10,000	55	19.6	
	Saudi	170	60.7	
	Non-Saudi	110	39.3	
Definition of Diarrhea	1 time/day	11	3.9	
	2 times/day	22	7.9	
Children (N=280)	3 times/day	247	88.2	
	Age	Up to 1 year	138	49.3
		2 years	48	17.1
3 years		35	12.5	
4 years		24	8.6	
5 years		35	12.5	
Number of siblings	1-2	110	39.3	
	3-4	123	43.9	
	≥4	47	16.8	
Position of child in the family	1-2	151	53.9	
	3-4	93	33.2	
	≥4	36	12.9	
Gender	Male	135	48.2	
	Female	145	51.8	

Ethical considerations

Ethical approval was obtained from the local ethical Committee. Before conducting the research, a written permission was acquired from the Joint Program of Family & Community Medicine. A written permission from concerned authority in MOHPHC centers was also procured. Individual assent was an essential requirement for the information gathering. Furthermore, it was also indicated on the front page of the questionnaire that ‘answering questionnaire implies agreement of contribution in the investigation’. All the data was kept classified and utilized only for the purpose of research.

RESULTS

Demographic characteristics of the studied mothers and their children with diarrhea are shown in table 1. Around 14.3% of the studied mothers were in the age group of below 25 years, 65% were between 25-35 years and 20% were above 35 years. The level of education of the mothers were 13.6% pre-school, 50% school and 35.7% higher education. Majority of them were house wives (78.2%) and 10.7% were government employees. About 26.1% were belong to families having income below 3,000 SAR, 29.13% between 3,000-6,000 SAR, 25% between 6,000-10,000 and 19.6% belong to above 10,000 income group. Maximum number of them resides in apartments (80.4%) and 60.7% were Saudi nationals.

Almost half of the studied children were one year or less (49.3%), followed by 2 years (17.1%), 3 and 4 years (12.5%) and 4 years (8.6%). Forty four percent of the children have 3-4 siblings while 39.3% and 16.8% have 1-2 and more than 4 siblings, respectively. Females were 51.8% and 48.2% were males.

Knowledge of the mothers regarding the definition of acute diarrhea is shown in table 2. Around 88% of the studied mothers stated the correct definition of diarrhea while the 11.8% stated incorrectly.

Table 2 Knowledge of mothers regarding definition of acute diarrhea

Variables		Number	Percentage
Definition of diarrhea (N=280)	1 time/day	11	3.9
	2 time/day	22	7.9
	3time or more /day	247	88.2
Correct definition 3 or more (N=280)	Correct	247	88.2
	Incorrect	33	11.8

Table 3 Prevalence and characteristics of childhood diarrhea

Variables		Number	Percentage
Diarrhea attack	Yes	91	32.5
	No	189	67.5
Diarrhea frequency	1	69	75.8
	2	12	13.2
	3	6	6.6
	4	4	4.4
Any other diagnosis before	Yes	7	7.7
	No	84	92.3
Presence of vomiting		34	37.4
Presence of abdominal pain		38	41.8
Presence of fever		51	56
Presence of bloody stool		4	4.4
Presence of diaper rash		22	24.2
Presence of activity restriction		46	50.5
Presence of loss of appetite		50	54.9

Prevalence and characteristics of the childhood diarrhea are presented in table 3. Around 32.5% children had acute attack of diarrhea while 67.5% did not. Almost 76% of the children had at least one attack whereas 13.2% had 2 attacks, 6.6% had 3 attacks and 4.4% had 4 attacks. Regarding the mother’s knowledge about symptoms, 54.9% stated loss of appetite, activity restriction (50.5%), abdominal pain (41.9%) and vomiting (37.4%) are symptoms of acute diarrhea. Table 4. shows the reasons and patterned actions of mothers for visiting and reasons for not visiting health facilities. Sixty-six (72.5%) among 91 mothers visited the health facilities to seek treatment for their children while 25 (27.5%) did not.

Table 4 Reasons and patterned actions for visiting and not visiting health facilities

Variables		Number	Percentage
Visiting health facility (N=91)	Yes	66	72.5
	No	25	27.5
Reasons and patterned actions for visiting health facilities (N=66)			
Type of the visited health facility	Government PHCC	18	27.3
	Private polyclinic	23	34.8
	Governmental ER	10	15.2
	Private ER	15	22.7
Time of health facility visit	day 1	15	22.7
	day 2	31	47
	day 3	10	15.2
	day 4	5	7.6
	after day 5	5	7.6
Reason for visiting health facilities	Child has not improved	60	90.9
	Mother received advice	16	24.2
	Mother had experience before	20	30.3
Treatment given at the health facility	Oral medication	55	83.3
	Medical advices	43	65.2
	IV fluid	25	37.9
Days of admission (N=8)	Admission	8	8.7
	1-3 days	4	6.06
	≥ 3 days	4	6.06
	Follow up in the clinic	33	51.6
Reasons for not visiting health facilities (N=25)			
Unavailable nearby health facilities		4	16
Unavailable transportation		2	8
Busy working mothers		1	4
Busy mothers with other family member		3	12
Diarrhea is not a serious disease		17	68
Previous experience with childhood diarrhea		15	60
Previous participation in health education programs about childhood diarrhea		1	4

Among the 66 mothers, 34.5% visited private polyclinic, 27.3% visited governmental PHCC, 22.7% visited private ER and 15.2% visited governmental ER. Almost half (47%) of them visited the health facilities at day 2 and 22.7% visited on day 1. Most of mothers (90.9%) visited the health facilities because their children did not improve by home remedies. The most common medication that was given is oral medication (83.3%) and 51.9% of the children had follow up. Twenty-five (27.5%) mothers did not visit health care facilities. The reasons behind not visiting health care facilities are diarrhea is not a serious disease (68%), previous experience with diarrhea (60%), unavailable of nearby health facilities (16%) and busy with other family member (12%). Procedures regarding breast and bottle feeding followed by mother when their children were suffering from diarrhea is shown in table 5. About 56.7% mother stated that they did not breast fed their children while 43.3% breast fed as usual. Regarding bottle feeding about two-thirds of them (63.6%) did not use it. The result also shows that only 44% mother used ORS when their children were suffering from diarrhea while 56% mother did not.

Table 5 Procedures regarding breast and bottle feeding and usage of ORS followed by mothers

Variables	Number	Percentage
Breast feeding (N=67)*	Used	29 43.3
	Not used	38 56.7
Bottle feeding (N=67)	Used	24 36.4
	Not used	42 63.6
ORS (N=91)	Used	40 44
	Not used	51 56

*for those aged 2 years or less (N=67)

Table 6. shows other treatments used by mothers for their children without prescription. Fifty percent mother used non-prescribed treatment, 31.2 % used traditional treatment and 6.2% used previous prescription from doctor.

Table 6 Other treatments used by the mothers for their children without prescription (N=48)

Variables	Number	Percentage
Other non-prescribed treatment	24	50
Traditional medicine	15	31.2
Previous prescription from doctor	3	6.2
Pharmacy	6	12.5

Table 7 Source of information received by mothers about childhood diarrhea (N=29)

Topics	Number	Percentage
Previous information about childhood diarrhea	Physician	15 51.7
	Nurse	5 17.2
	TV	1 3.4
	Internet	6 20.7
Source of information	Magazines	1 3.4
	Books	1 3.4

Table 8 Knowledge of mothers regarding correct definition of acute diarrhea according to their seeking behavior of health facilities

Definition of diarrhea	Yes (N=66) N (%)	No (N=25) N (%)	Test of significance
Incorrect	5 (7.6%)	5 (20%)	p=0.09
Correct	61 (92.4%)	20 (80%)	

Table 9 Demographic characteristics of mother according to visiting health facilities

Variables	Health facility		Total N (%)
	Yes N (%)	No N (%)	
Age	Below 25	13 (19.7)	4 (16) 17 (18.7)
	Between 25-35	43 (65.2)	19 (76) 62 (68.2)
	Above 35	10 (15.2)	2 (8) 12 (13.2)
Marital status	Married	65 (98.5)	25 (100) 90 (98.9)
	Widow	1 (1.5)	0 (0) 1 (1.1)
		p=0.721	
Level of education	Pre-school	6 (9.1)	0 (0) 6 (6.6)
	School	35 (53)	13 (52) 48 (52.7)
	Higher	25 (37.9)	12 (48) 37 (40.7)
Job	Working mother	15 (22.3)	4 (16) 19 (20.9)
	House wife	51 (77.3)	21 (84) 72 (79.1)
		p=0.43	
House type	Own house	12 (18.2)	6 (24) 18 (19.8)
	Rent	54 (91.8)	19 (76) 73 (80.2)
		p=0.363	
Family income	Below 3,000	14 (21.2)	5 (20) 19 (20.9)
	Between 3,000-6,000	18 (27.3)	9 (36) 27 (29.7)
	Between 6,000-10,000	20 (30.3)	5 (20) 25 (27.5)
	Above 10,000	14 (21.2)	6 (24) 20 (22)
Nationality	Saudi	46 (69.7)	16 (64) 62 (68.1)
	Non-Saudi	20 (30.3)	9 (36) 29 (31.9)
		p=0.389	

Sources of information received by mothers about childhood diarrhea is shown in table 9. About 31.9% of the studied mother had previous information about diarrhea. Physicians were the main source for them 51.7%, while nurses were the source for 17.2% mothers. Internet/web sites were the source of information regarding childhood diarrhea for 20.7%.

Table 10. showed knowledge of mothers regarding correct definition of acute diarrhea according to their seeking behavior of health facilities. About 92.4% of mother who already visited the health facility correctly stated that diarrhea mean three times per day. However, 80% of those mothers who did not visited the health faculties had the same knowledge.

Table 10 Demographic characteristics of the children according to visiting health facility

Variables	Visiting Health facility		Total N (%)	
	Yes N (%)	No N (%)		
Age	One year	35 (53)	18 (72.2) 53 (58.2)	
	Two years	10 (15.2)	4 (16) 14 (15.4)	
	Three years and more	21 (31.8)	3 (12) 24 (26.4)	
		X ² =3.83	p=0.14	
Number of sibling	1-2	34 (51.5)	10 (40) 44 (48.4)	
	3-4	25 (37.9)	11 (44) 36 (39.6)	
	≥4	7 (10.6)	4 (16) 11 (12.1)	
Position in the family	1-2	45 (68.2)	12 (48) 57 (62.6)	
	3-4	15 (22.7)	10 (40) 25 (27.5)	
	≥4	6 (9.1)	3 (12) 9 (9.9)	
		X ² =1.1	p=0.577	
Gender	Male	29 (43.9)	15 (60) 44 (48.4)	
	Female	37 (56.1)	10 (40) 47 (51.6)	
		X ² =3.3	p=0.192	
			X ² =1.87	p=0.171

Table 9. shows demographic characteristics of mother according to visiting health facilities. Comparisons between mothers who visited health facilities and mothers who did not, in some demographic characteristics revealed that there were no statistically significance differences regarding age, marital status, level of education, job, house type, family income and nationality.

Table 10. shows demographic characteristics of the children according to visiting health facility. Comparisons between children who visited health facilities and children who did not, in some demographic characteristics revealed that no statistically significant differences were detected regarding children age, number of sibling, children position in the family and gender.

Procedures regarding breast, bottle feeding and usage of ORS for children with acute diarrhea according to visiting health facilities is shown in table 11.

Table 11 Procedures regarding breast, bottle feeding and usage of ORS for children with acute diarrhea according to visiting health facilities

Variables	Visiting Health facility		Total N (%)
	Yes N (%)	No N (%)	
Breast feeding	Used	19 (42.2)	10 (45.5) 29 (43.3)
	Not used	26 (57.8)	12 (54.5) 38 (54.9)
Bottle feeding	Used	16 (36.4)	8 (36.4) 24 (36.4)
	Not used	28 (63.6)	14 (63.6) 42 (63.6)
ORS	Used	36 (55.4)	3 (12) 39 (43.3)
	Not used	29 (44.6)	22 (88) 51 (56.7)
			p=0.001

Comparison between mothers' utilization of breast feeding and bottle feeding for their children with diarrhea shows no statistically significant differences. However, usage ORS by mother who visited and who did not visit health care facility is found to be statistically significant (p=0.001).

Table 12. showed use of non-prescribed treatment and source of knowledge according to visiting health facilities. Comparison between mother visiting health facilities and who did not regarding use of treatment without prescription, type of drug used, having information about diarrhea and sources of information revealed no statistical significance between them. Women with past experience of similar illness were significantly less likely to visit health care facilities than those without experience, p=0.009.

Table 12 Use of non-prescribed treatment and source of knowledge according to visiting health facilities

Variables	Visiting Health facility		Total N (%)
	Yes N (%)	No N (%)	
Usage of treatment without prescription	14 (21.2)	10 (40)	24 (26.4)
	$X^2=3.29$		p=0.063
Traditional medicine	9 (64.3)	6 (60)	15 (62.5)
Type of drugs used			
Previous prescription drugs	1 (7.1)	2 (20)	3 (12.5)
Pharmacy	4 (28.6)	2 (20)	6 (25)
	$X^2=0.96$		p=0.61
Previous experience of diarrhea			
Yes	20 (30.3)	15 (60)	35 (38.5)
No	46 (69.7)	10 (40)	56 (61.5)
	$X^2=6.76$		p=0.009
Source of information regarding childhood diarrhea			
Physician	11 (52.4)	4 (50)	15 (51.7)
Nurse	4 (19)	1 (12.5)	5 (17.2)
Television	1 (4.8)	-	1 (3.4)
Internet	4 (19)	2 (25)	6 (20.7)
Magazines	-	1 (12.5)	1 (3.4)
Books	1 (4.8)	-	1 (3.4)
	$X^2=3.6$		p=0.603

DISCUSSION

In an effort to evaluate the prevalence, features and different aspects related with diarrhea incidences stated at the Primary health care centers in children under the age of five, a cross-sectional analytic study was conducted.

Studies carried out in Saudi Arabia (Milaat and Ellassouli, 1995; Bani *et al.*, 2002), to investigate the epidemiology of diarrhea in referral health facilities in Jeddah, Taif and Riyadh have demonstrated that the pervasiveness sometimes added up to 25%, with up to 6 episodes/child/year. In the current study, the incidence rate of diarrhea among children from one month up to 5 years was 32.5% in the last three months. Almost a quarter of them had at least two episodes in these 3 months. This finding indicates that diarrhea among children is yet a critical public health issue in Saudi Arabia.

A low diarrhea incident rate was reported in the PHC center in the children under 5 years group in the year 2002 in Abha (9.9%) (Alshehri *et al.*, 2004). The disparity between this finding and finding of the present investigation may be because of underreporting to the PHC center of the mild cases, those treated at home, besides some serious cases that went specifically to the higher level of care, as the previously mentioned investigation depended on medical records of children visited PHC centers.

There are fluctuating convictions about diarrhea and its administration among the mothers of various countries and this can be a main impediment toward embracing current biomedical treatments (Ansari *et al.*, 2012).

An assortment of variables has been recognized as the main sources of poor usage of essential medicinal services administrations. Review of the available indicates that these components can be categorized as social convictions, socio-demographic status, women's status, financial conditions, physical and financial accessibility, and form of illness and health facility issues (Katung, 2001; Uchudi, 2001; Navaneetham and Dharmalingam, 2002; Fatima and Avan, 2002; Stephenson and Hennink, 2004).

Sometime social convictions and practices frequently prompt self-care, home cures and meeting with traditional healers (Nyamongo, 2002). Guidance of the senior most ladies in the house is likewise extremely instrumental and can't be ignored (Delgado *et al.*, 1994). In the present study, the commonest reason mentioned by mothers for non-visiting health care center was their belief that diarrhea is not a serious disease and they were experienced with it. In addition, almost a quarter of mothers who had children with diarrhea reported using non-prescribed treatment and about 16% of them used traditional medicine and a minority asked treatment from pharmacy. These elements lead to postponement in seeking treatments, which is more typical among ladies, not only for their own wellbeing, even for their children's too (Kaona *et al.*, 1990; McNee *et al.*, 1995; Yamasaki-Nakagawa *et al.*, 2001). In agreement with that, the vast majority of mothers in the current survey cited that the reason of their visit to the primary health care center was deterioration of their child's health status.

Among socio-demographic factors, family size and equality, level of education and profession of the head of the household as well are connected with wellbeing seeking conduct other than age, gender and conjugal status (Yip *et al.*, 1998; Thorson *et al.*, 2000; Goldman and Heuveline, 2000; Shaikh and Hatcher, 2005). In this study, none of the aforementioned factors was significantly associated with mothers' visiting to the PHCC for seeking treatments. This could be attributed partially to the relatively small sample size in our survey. In two Saudi studies, illiterate mothers had the lowest significant physician consultation rate regarding their child illness (Al-Sekait, 1988; Al-Nahedh, 2004). However, in many developing countries, including Saudi Arabia, social practices and convictions have been pervasive irrespective of age, financial status of the family and level of education (Al-Sekait, 1988; Asenso-Okyere *et al.*, 1998; Ha *et al.*, 2002).

Regarding women's autonomy, in our culture, men assume a foremost part in deciding the wellbeing needs of women and their children. Since most of the decision are made by the men in the family and also control all the assets, they choose when and where lady should look for health care (Al Huthail, 2013). This low status of ladies in the family keeps them from acknowledging their worries about wellbeing requirements for her and their children as well. Ladies are generally not permitted to visit health facilities or health care service providers by themselves or to choose to invest on health care. Hence, ladies usually can't get access to medical services even in crisis circumstances. In the present study, although not significant, working mothers sought health care for acute

diarrhea among their children more than none working mothers. However, this finding is against to what has been reported in Riyadh by Al-Nahedh as non-working mothers were more likely to bring their children for physician consultation (Al-Nahedh, 2004).

In the current study, mothers who had previous experience of childhood diarrhea were less likely to visit health care facility. This finding has been reported by other investigators (El-Gilany and Hammad, 2005; Sreeramaraddy *et al.*, 2006; Ansari *et al.*, 2012). The previous experience of successfully treating of children with diarrhea at home make these mothers relatively self-confident of treating at home again (Gao *et al.*, 2012). Furthermore, past involvement with comparable sicknesses can encourage mothers to play a 'waiting game' to check whether the sicknesses die down automatically, especially in circumstances where the cost of care is an inhibitory factor (D'Souza, 1999).

One of the striking findings of the present survey is the low usage of ORS in management of acute diarrhea as more than half of mothers cited that they didn't use ORS for management of acute diarrhea among their children. Moreover, one of the factor significantly associated with seeking care was the use of ORS as mothers who used ORS were more likely to visit primary health care center seeking consultation. However, due to the cross-sectional design of the study, we could not know exactly whether use of ORS leads to more health care seeking or the more frequent visit to health care seeking leads to use of ORS. However, the intentions behind the low utilization of ORS are uncertain therefore need further investigation.

According to UNICEF/WHO recommendations for management of acute diarrhea in young children, breast milk should keep on being given to newborns with diarrhea all the while with other oral rehydration solutions for liquid substitution (UNICEF/WHO, 2009). In the current study, only 43.3% of mothers continued breastfeeding during diarrheal illness.

Major strengths of this survey are its unique nature in Jeddah and wide range of factors considered as possibly affecting maternal health care seeking behaviors toward treatment of acute diarrhea of their children. In any case, there are additionally a few limitations to the present investigation that must be acknowledged. First, the study sample was relatively small regarding children with diarrhea (n=91) so even the strong associations with predictors of mother health care seeking behaviors toward treatment of acute diarrhea in their children are less expected to be detected. It included mothers who attended well baby clinics of PHC centers of MOH in Jeddah. Therefore, the samples are not illustrative of the whole populace and the outcomes may not make a difference to different parts of the nation. However, we included moms from different PHCCs in different regions of Jeddah, so the outcomes could be common characteristic of the local populace. Secondly, it is conceivable that the clinically characterized instances of diarrhea were misclassified on the grounds that the data on number of diarrheal attacks and consistency and other related symptoms relied upon mothers' memory, and it was impractical to affirm the exactness of these reports. Lastly, the cross-sectional investigation framework and three months review histories tend to over-represent longer period episodes since caretaker will probably

recall sicknesses that are continuous than the ones that have been settled (Koepsell, 2003).

CONCLUSION

Diarrhea is a common health problem among children aged between one month and five years in Jeddah. Most of mothers of children with diarrhea visited health care facilities seeking consultation. None of the studied factors was significantly associated with mothers' health care seeking behaviors toward treatment of acute diarrhea of their children except previous experience with similar illnesses. More than half of mothers claimed that they used non-prescription treatment for diarrhea and the commonest reason for visiting the primary health care facility is deterioration of their child's health status because of diarrhea.

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