

Knowledge of mothers towards their children below 5 years of age for oral rehydration in Al Rusafa health directorate- Baghdad 2019

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Abstract: Basic minimal information about the care of children in diarrhea and ORS use is important for early recovery. To plan an anti-diarrheal program, it's important to know the knowledge, beliefs, practices of diarrhea understanding, and management including ORS; in the community [1]. the study to check out the Knowledge of mothers towards their children below 5 years of age for oral rehydration when attending primary health care centers in Baghdad. This study is a descriptive study with analytic purposes, where 166 mothers were interviewed when attending 5 primary health care centers in the al-Rusafa side of Baghdad city. They were divided into G1(116) cases where mothers of children presenting with cut gastroenteritis, while the remaining 50 children in G2 presented with cut disease other than gastroenteritis. The period of research and data collection was between April 2019 and August 2019 A questionnaire was developed by the researcher, fulfilled by the interviewer. Regarding the mother's ages of both groups, their ages were ranging between (15-65) years. 85%, 90% of both groups were from (15-20) years old respectively. Educational level revealed that most cases have not gone beyond secondary school (G1 98%, G2 100%). For the employment status (79.4) employed for G1 and (70%) for G2. The crowding index <1 for G1 = 17.2%, G2 = 6%. Regarding the mother's knowledge of ORT, only ORS used in dehydration, vomiting, and diarrhea, the correct way in preparation of ORS, - and knowledge about signs of dehydration were significant. The previous practice by G1 and G2 was 38% and 82% respectively. Attitude and practice of G1 and G2 during the attack of diarrhea shows significant only in using over-the-counter medications. The high independence score of both groups of mothers G1, G2 shows 8.6% and 14% respectfully. Most of the mothers in our study had moderate knowledge about oral rehydration salts and technique while the percentage that using ORS was few. Intensive media advertisement about the importance of ORS is required. A leading campaign by the -ministry of health among mothers of under-five children to stimulate them to use ORS for their children as long as diarrhea to lower child morbidity and mortality.

Keywords: Knowledge, children, oral rehydration, and Baghdad

Introduction :

Basic minimal information about the care of children in diarrhea and ORS use is important for early recovery. To plan an anti-diarrheal program, it's important to know the knowledge, attitude, practices of diarrhea understanding, and management including ORS; in the community [1].

Credits for discovering that in the presence of glucose, sodium and chloride became absorbable during diarrhea (in cholera patients) were typically prescribed to Dr. Robert A. Phillips. [2].

In the early 1960s, the biochemist; Robert K, find that sodium-glucose co-transport, as the technique for intestinal glucose absorption^[3].

Around the same time, others showed that the intestinal mucosa was not disrupted in cholera, as previously thought^[4].

In spite of the fact that maternal education is a cardinal determinative of the nutritional status of children, it remains ambiguous whether the mother's practical knowledge about nutrition has an independent consequence on child growth.^[5]

Diarrheal death was the leading cause of child mortality in the developing world until ORT was initiated. The second leading cause of mortality for children under five (17 %) of all deaths is diarrhea, second only to pneumonia, at (19 %). Success had led the name the discovery of its underlying physiological basis as "potentially the most important medical advance (of the 20th) century" ^[6,7,8].

Among the chief elements of food security, in terms of food usage, are knowledge and attitude. It is essential during the initial two years of young children's life.^[9].

Methodology :

A descriptive cross-sectional study of the analytic purpose was conducted between the 2nd of January 2019 till 1st of July 2019, in five primary health facilities randomly selected centers of Al-Rusafa side / Baghdad.

The protocol of the study was approved by the Family Medicine Council of the Arab Board for Medical Specialization and by Al-Rusafa Health Directorate in Baghdad.

Five primary health care centers of Al-Rusafa health district were randomly chosen by simple random sampling for collecting data. They are;

Primary health care centers in Al-Thubat, Zayoonah, Al-Mustansiriyah, Bab- Almuath, and New-Baghdad.

During the study period; a convenient sampling was used to recruit 166 mothers having children below 5 years old, attending the above primary health care centers. All the cases were examined by health professionals in those health centers. The mothers were categorized into two groups; Group 1 and Group 2.

Group 1 (n=116) included mothers of children below 5 years old, whose children suffer from acute gastroenteritis and have been admitted to the ORT units. Group 2 (n=50); included mothers of children below 5 years old suffering from acute conditions other than gastroenteritis.

The mother's verbal consent was achieved to participate in the study. Face to face interview with each mother in both groups was done. A structured questionnaire form, having a mixture of open and close-ended questions, was invented.

- First part concerned with the socio-economic characteristics of the mother. The "socio economic scale" adopted by WHO was fulfilled for each mother
 - The second part of the questionnaire was concerned with the mother's knowledge. Nine main questions on knowledge related to the managing of diarrhea and dehydration in childhood.

Statistical analysis:

The descriptive data were presented by frequency and percentage. To test the significance of the association between two variables, Chi-square was used, and a P value less than 0.05 was considered significant.

Results:

Table 1: The sociodemographic feature of the participants.

Regarding the mother's age of both groups; their ages were ranging between (15-65) years. Mothers between (15-20) years were 40 (35%), cases in G1 and 20 cases in (40%) G2; respectively. No statistical significance between the mothers' age of both groups; (P-value of 0.634). The frequency and percentage of mother's age groups in both G1 and G2.

The percentage of the illiterate educational level of mothers in G1 and G2 was 39% and 24% respectively.

Regarding the employment status of mothers in G1 and G2, housewife frequency was 19.8% and 20% respectively. There was no significant difference between the two groups regarding employment status. (P-value of 0.745).

Regarding the <1 crowding index in G1 and G2 was 17.2% and 6% respectively. The crowding index was significant in the difference between both groups of mothers; with a (P-value of 0.002).

Table (1) The sociodemographic features of the mothers in G1* and G2**

Characteristics	G 1 (N =116)		G2(N=50)		P value
	NO	%	N	%	
1.Mothers age					
15-20	40	34.5 %	20	40%	Chi square = 2.56 d.f. = 4 P-value = 0.634 Not significant
21-26	22	19 %	12	24%	
27-32	23	19.8%	10	20%	
33-38	14	12%	3	6%	
	16	14.7%	5	10%	
2.Educational level	G1	N(116) No. %	G2(N=50)	No. %	P-value
Illiterate & write	45	39%	12	24%	Chi square = 12.68 d.f.= 4 P-value = 0.012 *Significant
Read	8	7%	10	20%	
Primary school	30	26%	8	16%	
Secondary school	30	26%	20	40%	
college	3	2.6%	0	0%	
3.Employment status	G1 (N=116)	No. %	G2 N=50	No. %	P-value
Governmental	60	51.7%	23	46%	Chi square = 0.59 d.f=2 p value = 0.745 not significant
Non-Governmental	33	28.4%	17	24%	
Housewife	23	19.8%	10	20%	
4.*Crowding index	G1 (N=116)	No. %	G2 (N=50)	No. %	P-value

<1	20	17.2%	3	6%	Chi square = 12.15 d.f. value = 0.002 Significant
1-1.5	15	13%	7	14%	
2-2.5	31	26.7%	15	30%	
3-3.5	40	34.5%	20	40%	
≥4	10	8.6%	5	10%	

*G1= Group 1; mothers whose children below five years of age, presented with gastroenteritis

** G2=Group 2; mothers whose children below five years of age, presented with other acute concerns other than gastroenteritis.

d.f = degree of freedom.

Table (2) shows the mother's Knowledge of ORT

Regarding ORS. meaning- Correct answer by mothers in G1 and G2 was 38% and 82% respectively.

Regarding ORT used in diarrhea by mothers in G1 and G2 was 69% and 84% respectively. The indication of ORS. use in diarrhea attacks; was a significant difference between both groups with a (P-value of 0.044).

Continue breastfeeding and feeding by mothers in G1 and G2 was 29.3% and 84% respectively.

The way to prepare the ORS. The solution the correct way by mothers in G1 and G2 was 28.4% and 54% respectively. The way to prepare the ORS. the solution was a significant difference between both groups (P-value of 0.001).

Mother's knowledge towards signs of dehydration was none significant, except for the fact of " Fast breathing " being well known by 52 cases (45%) of G1 and 12 cases of G2 (24%); a significant difference between both groups. (P-value of 0.011).

Mother's knowledge regarding complications of dehydration concerning Kidney failure by mothers in G1 and G2 was 11.2% and 14% respectively. The same was true for complications of dehydration that were considered none significant indifference (P-value 0.613, 0.076).

Table (2) shows mother's Knowledge towards ORT

Knowledge on ORT	Group1(N=116)		Group2(N=50)		P-value	
	No.	%	No.	%		
1. ORS. meaning- Correct answer	46	40%	23	46%	Chi Square= 0.58 P-value=0.448 d.f=1 Not significant	
2. To Continue breast feeding and feeding	34	29.3%	17	84%	P-value=0.549 d.f=1 Chi Square= 0.36 Not significant	
3.()RS used in	a. Dehydration	75	64.6%	38	76%	P-value=0.151 d.f=1 Chi Square= 2.06 Not Significant
	b. vomiting	28	24.1%	12	24%	P-value=0.85 d.f=1 Chi Square= 0.03 Not significant
	c. diarrhea	80	69%	42	84%	P-value=0.044 d.f=1 Chi Square = 4.03 * Significant

4. Preparation of ORS solution	Correct way	33	28.4%	27	54%	P-value=0.001 d.f=1 Chi Square = 9.82* Significant
5. Signs of dehydration	a. D mouth	85	73.2%	41	82%	P-value=0.339 d.f=1 Chi Square = 1.45 Not significant
	b. Decrease urine output	30	25.8%	13	26%	Not significant P-value=0.985 d.f=1 Chi Square= 0.03
	c. Fast breathing	52	44.8%	12	24%	P-value=0.011 d.f=1 Chi Square = 6.36* Significant
	d. Loss of skin elasticity	80	69%	39	78%	P-value=0.237 d.f=1 Chi Square = 1.40 Not significant
	e. Sunken eyes	80	69%	38	76%	P-value=0.360 d.f=1 Chi Square = 0.84 Not significant
	f. Depressed Fontanel	55	47.4%	30		P-value=0.137 d.f=1 Chi Square = 2.20 Not significant
6. Complication of dehydration	a. Kidney failure	13	11.2%	7	14%	P-value=0.613 d.f=1 Chi Square = 0.26 . Not significant
	b. Death	88	75.8%	44	88%	P-value=0.076 d.f=1 Chi Square = 3.14 . Not significant

Discussion: Basic minimal information about the care of children in diarrhea and ORS use is important for early recovery. To plan an anti-diarrheal program, it's important to know the knowledge, attitude, practices of diarrhea understanding, and management including ORS; in the community [1]. The potential cofounder of socioeconomic status includes; mother's age. their ages were ranging between (15-65) years. These results were parallel with those obtained by the Lela Rose Bachrach study in Kingston/ Jamaica [11].

Results obtained by our study in regards to literacy revealed that; most mothers of both groups have not been graduated beyond a secondary school, in contrast to the results obtained by the study of Naseem A, Swetha R which shows that the percentage of literate mothers was high(78.67%) [1].

Our results have shown that employment status between the two groups was of no significance (P- 0.745) though; only (20%) of mothers G1 and G2 were housewives. On the other hand; Hailemariam Mekonnen Workie a study from Ethiopia shows that Housewife consists of 79.7% [12].

Iyanam's study [10]., has assessed the knowledge and practice of child survival strategies among nursing mothers. Our study tells that (67.9%) have acceptable knowledge of ORT in all age groups of mothers.

These findings differ when compared to the results of our study, which was a descriptive study of the analytic purpose and not a cross-sectional study. There was poor knowledge of ORT. by both groups of mothers studied, except for the knowledge regarding the use of ORS. in cases of diarrhea (84% for group 2), the preparation of ORS. (54% for group 2) as well as their

some knowledge in recognition of fast breathing as a sign of dehydration.

Lela Rose Bachrach's study [11]. showed that both groups studied had comparable answers regarding food, with (25%) saying that no food should be given at all, and (31) saying no milk should be given as well. When asked if a baby with diarrhea that was still nursing should be breast-fed, 20% of the G1 and 8% of G2 caregivers said to stop breastfeeding. The same was true for G1 and G2 of our study; were only (29.3%,34%) knew the fact of continuity of breastfeeding and feeding during the attack, which is a none significant difference, with (P-value of 0.549).

Regarding the Preparation of the ORS solution in the correct way the range was between 28.4% and 54% for G1 and G2 respectively which is better when comparing with Naseem A, Swetha R [1] study 30.5%.

Conclusions :

1. There was no significant difference between the socioeconomic scale of mothers whose children below five years of age with acute gastroenteritis (G1), compared to mothers whose children below five years with acute concerns other than gastroenteritis (G2).
2. Although (20%) of both groups were housewives; employment status was of no significant difference.
3. Educational standard up to a secondary school level in (97.3%) of (G1) mothers; with a significant (P-value of 0.012).
4. The crowding index of 3.5 was significantly found in (91.4%) G1 mothers. Seventy-six percent of G1 mothers significantly had no source for ORT information; (63%) without a previous practice towards ORS.
5. No significant difference regarding mother's knowledge about ORT.; except for the preparation of ORS., and the indications of its use.

6. Recommendations :

1. Further researches are to be accomplished to include a larger sample size with expansion of the duration of the study.
2. Implementing educational programs to raise awareness on the importance of ORT; being a simple, effective, and inexpensive treatment modality; especially between nursing mothers and at school levels.
3. Maintaining mother's "health promotion sessions on; diagnosis of dehydration and sustaining support for ORT use.

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