Mother’s Home Care Management to Preventing Diarrhea in Children under 5 Years at Primary Health Care Centers in AL-Diwaaniyah City

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The importance of the knowledge of the mothers of fewer than five children was selected. The questionnaire was designed and composed of two parts: The first part included three sections that deal with the children demographic data, and their mother’s demographic characteristics and factors related to his home management to preventing diarrhea. The reliability of the questionnaire was determined through a pilot study and the validity through a panel of (14) experts. The data were collected by questionnaire. The data were described statistically and analyzed through the use of descriptive and inferential statistical analysis procedures.

Results: Findings reveal that the majority highest percentage of the age mothers is located in age group of (25-30), no significant association was found between mothers home care management with factors related to home management to preventing diarrhea concerning only significant associations with (presence of flies at home, household garbage disposal, exclusive breastfeeding until 6 month).

Conclusion: The study concludes that there is non-significant differentiation among mother’s responding regarding studied domains and child (SDCv.) except between method of breastfeeding in the first six months, at any age the mother began to give her child extra food has the child previously suffered diarrhea since significant relationships.

Recommendation: The study recommended it is necessary to raise mother’s awareness of the importance of preventing diarrhea by implementing educational programs, activating the role of traditional and social media.

Keywords: Mother's, Home care management, Diarrhea, Children under 5 years.
INTRODUCTION

Diarrhea is described as the passage of three or more loose or liquid stool per day or more repeated passage than is common for the children (1). Diarrhea is a global health concern for children under 5 years of age. This causes nearly 1.9 million deaths annually every year (2).

Mother's preventive activities in children regarding acute diarrhea apply to maternal acts in the treatment of their child in order to avoid diarrhea from being contracted by their child. It consists of hygiene practices, infant feeding practices, clean water practices and defecation practices (3). Diarrheal disease prevention and control interventions not only include improved water quality, but also measures to improve sanitation, improve quality and access to water supply, and promote hand washing and other hygiene practices in domestic and community environments (4). Water, sanitation and hygiene are key determinants of the overall health of a person, with access to safe water and sanitation facilities and the adoption of effective hygiene practices playing an important role globally in preventing morbidity and mortality, especially among children under five years (5).

Prevention of diarrhea is the key to reducing morbidity and mortality due to diarrhea. Prevention of diarrhea carried out by mothers includes washing fruits and vegetables before cooking and eating, washing hands using soap and water, giving breast milk, immunizing children, and consuming healthy drinking water (6). Improper treatment of childhood diarrhea has been shown to be due to misperceptions and lack of knowledge in both caregivers and health workers. Addressing these gaps in knowledge and behavior is critical to ensure that diarrhea is prevented and children are treated appropriately (3). The adequacy to the care can depend on the abilities of the child’s caretaker, who is often the mother, and on the inter subjectivity on which the child is inserted. The mother / caretaker needs of educational strategies that helps to empower herself of manners that will permit her to develop healthy habits. When empowered, the mother/caretaker can execute a quality care to the child (7,8).

AIMS OF THE STUDY

To evaluate mother's knowledge of the under five children about preventing diarrhea & its home care management and to identify the relation of the knowledge with demographic variables

METHODOLOGY

A descriptive study design was used. This study was conducted in Al-Diwaniyah health care centers for the period from (19th / September / 2020 to 15th / March / 2021) on a non-probability (convenience sample) consisting of (200) mothers of children under five years were selected from the primary health care centers when they companied their children at the time of attending the health centers. A questionnaire was built as a data collection tool and consisted of three parts:

First part: This part contains demographic characteristics of the mother's participated in the study and which include age, residency, and house ownership, level of education and occupation, number of kids.

Second part: It includes demographic characteristics concerning the children like age, sex, order of child.
Third part: This part contains factors related to managing the home to preventing diarrhea which include water treatment, toilet latrine, exclusive breastfeeding until 6 month, presence of flies at home, soap near the tap. The validity of the questionnaire were verified by presenting it to (16) experts. Descriptive and inferential statistics were used to analyze the results of the study using the Statistical Package of Social Sciences (SPSS) version 25 and Microsoft Excel (2010).

RESULTS:
Table (1): Distribution of the studied group according to SDCV

| SDCV. of Mothers | Groups | No. | %   |
|------------------|--------|-----|-----|
| **Age groups of the mothers Yrs.** |        |     |     |
| 15 – 19          | 7      |     | 3.5 |
| 20 – 24          | 47     |     | 23.5|
| 25 – 29          | 55     |     | 27.5|
| 30 – 34          | 51     |     | 25.5|
| 35 – 39          | 24     |     | 12  |
| 40 – 45          | 16     |     | 8   |
| Mean ± SD        |        |     | 28.88 ± 6.17 |
| **Educational Levels** |        |     |     |
| Do not read or write | 27 | | 13.5 |
| Read and Write    | 31     |     | 15.5|
| Primary           | 34     |     | 17  |
| Intermediate      | 23     |     | 11.5|
| Secondary         | 17     |     | 8.5 |
| Institute         | 33     |     | 16.5|
| College           | 34     |     | 17  |
| Advanced degree   | 1      |     | 0.5 |
| **Occupations**   |        |     |     |
| Working           | 51     |     | 25.5|
| Don’t work        | 149    |     | 74.5|
| **Marital Status**|        |     |     |
| Married           | 194    |     | 97  |
| Separated         | 6      |     | 3   |
| **Types of Family** |      |     |     |
| Nuclear           | 91     |     | 45.5|
| Extended          | 109    |     | 54.5|
| **Residence**     |        |     |     |
| Rural             | 46     |     | 23  |
| Urban             | 154    |     | 77  |

Table 1 shows regarding "age groups of the mothers", most of studied sample were assigned at second, third, and fourth groups, [i.e. (20 - 35) years old], and accounted 153 (76.5%) with mean and standard deviation (28.88), and 6.17 yrs. respectively. Less than fifty percent of studied sample concerning educational level of mothers had a moderate education levels (i.e. Secondary graduate and more), which accounted 86 (43%), then followed with "occupation", which illustrated that most of studied mothers don't work, and they are accounted 149 (74.5%), and most of studied mothers who assigned married status, and accounted 194 (97%) , then followed with type of family, which recorded a similar distribution statistically, since no different was found between who had "nuclear", or "extended" family types. Finally urban residency formed the most of studied mothers, and they are accounted 154 (77%).

Table (2): Distribution of the studied sample according to (SES)

| Groups | No. | % |
|--------|-----|---|
| < 37.5 (Low) | 66 | 33 |
Table 2 shows that vast majority of the studied sample had at moderate, and then followed by low responding, and they are accounted 188 (94.0%).

Table (3): Factors related to Home Management to Preventing Diarrhea

| Factors related to Home Management To Stop Diarrhea | Groups                  | No. | %  |
|---------------------------------------------------|-------------------------|-----|----|
| Soap near the tap                                  | No                      | 11  | 5.5|
|                                                   | Yes                     | 189 | 94.5|
| Water treatment (filtration, boiling, chlorine)    | No                      | 4   | 2  |
|                                                   | Yes                     | 196 | 98 |
| Presence of flies at home                          | No                      | 80  | 40 |
|                                                   | Yes                     | 120 | 60 |
| Household garbage disposal                         | Driven to public collection | 144 | 72 |
|                                                   | Drop in river or open area | 56  | 28 |
| Water reservoir                                    | Covered                 | 197 | 98.5|
|                                                   | Uncovered               | 3   | 1.5|
| Toilet latrine                                     | With flushing           | 192 | 96 |
|                                                   | Without flushing        | 8   | 4  |
| Exclusive breastfeeding until 6 month              | No                      | 88  | 44 |
|                                                   | Yes                     | 112 | 56 |

Table 3 shows regarding item of "soap near the tap", most of the studied sample were assigned a positive answered, and are accounted 189(94.5%), as well as asking about water treatment (filtration, boiling, chlorine), most of studied sample were assigned a positive answered, and are accounted 196 (98.0%).

With respect to "presence of flies at home" item, 120 (60%) of studied sample were supported positively. Not a few of the respondents responded by throwing waste into the river, and accounted 56 (28%), and most of them are answered for covered of water reservoir, and they are 197 (98.5%), as well as most of them were used flushing for toilet latrine treatment, and they are 192 (96.0%).Finally exclusive breastfeeding until 6 month are formed 112 (56.0%).

Table (4): Relationships among mother's responding regarding studied domains and factors related to home management to preventing diarrhea

| Factors related to home management to stop diarrhea | Family Hygiene | Feeding and General Practices | (( Overall )) Mothers home management for Preventing Diarrhea |
|----------------------------------------------------|----------------|-----------------------------|---------------------------------------------------------|
|                                                    | C.C. | Sig. | C.S. | C.C. | Sig. | C.S. | C.C. | Sig. | C.S. |
| Soap near the tap                                  | 0.061 | 0.388 | NS   | 0.028 | 0.697 | NS   | 0.061 | 0.388 | NS   |
| Water treatment (filtration, boiling, chlorine)    | 0.074 | 0.293 | NS   | 0.095 | 0.117 | NS   | 0.074 | 0.293 | NS   |
Table (4) shows no association between mother’s home care management for preventing diarrhea due to studied domains, and an overall score with factors related to home management to preventing diarrhea concerning only significant associations with (presence of flies at home, household garbage disposal, exclusive breastfeeding until 6 month).

**DISCUSSION:**

**Part I:** Discussion of Socio-Demographic Characteristics for Mothers (in the table 1, 2)

Findings reveal that the majority highest percentage of the age mothers is located in age group of (25-30). This finding is similar to a study *(6)*. In their title (self-efficacy relationship towards improvement of mother’s knowledge in childhood management with diarrhea), the mention that majority of the study sample (73.3%) were within age group (20-29) years. From researcher view point mothers age played a significant role in the occurrence of childhood diarrhea. Teenage mothers had the highest risk of experiencing childhood diarrheal diseases. The occurrence of childhood diarrhea decreased with mother's age.

In addition, the present results agree with a study in Sub-Saharan Africa *(9)*. In titled (prevalence of diarrhea and associated risk factors among children under-five years of age in Efoulan health District-Cameroon, Sub-Saharan Africa), they reported that the majority of mothers age 63.0% were within age group (26-38).

The current study is concerned with the educational level of the study sample that the found that higher proportion of participants were at educational level (represented less than quarter of participants were primary and college 68 (34%). These findings agree with study *(6)* who mentions that high school as many as 24 respondents with a percentage of 40%.

Furthermore, the current study found Occupation, which illustrated that most of the studied mothers don't work, and they accounted 149 (74.5%). These finding agree with study in Bangalore entitled (A study to assess the effectiveness of self-instructional module on home management of diarrhea among mothers of under five children in selected hospital, Bangalore), who mention that the maximum number of mothers 55% were noticed as housewives *(5)*.

Also, the results were consistent with the findings of the current study in titled (diarrheal morbidity and predisposing factors among children less than 5 years of age in rural East Ethiopia). They mentioned that the majority of mothers were housewives and accounted for (73.6) *(1)*.

Based on the marital status of respondents, the study found out that the majority of the respondents, 194 representing (97%). These findings agree with study in titled (caretakers’ home management and health seeking behavior for diarrheal diseases among children under five years in Eldoret Municipality, Kenya) were married 155 (43.1) *(10)*.

Furthermore, the current study found that the number of the mothers living in nuclear 91 (45.5) and mothers living in extended family accounted 109 (54.5). These results agree with
the study in (Bangalore) who found that the majority numbers of the mothers (70%) belong to joint family and 30% belong to nuclear family (1).

In additional, urban residency formed the most of the studied mothers, and they are accounted 154 (77%); from researcher view point, the vast majority of people in Iraq live in urban areas, perhaps because there more service for citizen than in rural areas. Therefore, there is an increasing population density towards the city center.

In relation to the family socioeconomic status (SES), the present study findings revealed that most of the sample came from the moderate level of the SES. The results of this study is opposite to the study which is entitled (Self-effectiveness in preventing diarrhea and child care: A transversal study) who mentioned most of the sample living under the poverty line, that is having a per capita income under a quarter of the minimum wage (n=188; 43.8%) (11).

Also the result of the present study agrees with the study done in (Turkish) entitled (Reliability and validity of a Turkish version of the maternal self-efficacy scale for preventing early childhood diarrhea) who stated that most of his study sample accounted 58.8% of the families had their incomes equal to their expenditures (12).

**Part II: Discussion of the Factors Related to Home Management to Preventing Diarrhea**

(as shown in Table 3)

Regarding the item of "soap near the tap", most of studied sample were assigned a positive answered, and are accounted 189 (94.5%), as well as asking about water treatment (filtration, boiling, chlorine), most of studied sample were assigned a positive answered, and are accounted 196 (98.0%).

With respect to "presence of flies at home" item, 120 (60%) of studied sample were supported positively. Not a few of the respondents responded by throwing waste into the river, and accounted 56 (28%), and most of them are answered for covered of water reservoir, and they are 197 (98.5%), as well as most of them were used flushing for toilet latrine treatment, and they are 192 (96.0%). Finally exclusive breastfeeding until 6 month are formed 112 (56.0%).

The results of the present study supported with those study that they mention that The socio-demographic characteristics of study children with previous diarrhea show significantly precarious water management 86 (67.2), and toilet latrine with flushing 19 (55.6) (11), soap near the tap 230 (58.5), covered of water reservoir 182 (61.9) and not a few of the respondents responded by throwing waste into the river, and accounted 14 (73.7) and agree with study conducted in their study entitled (Influence of socio-economic conditions and maternal knowledge in self-effectiveness for prevention of childhood diarrhea) who reported that the most of them used flushing for toilet accounted 87 (56.1) and exclusive breastfeeding formed 119 (50.4) (13).

**Part III: Discussion Relationships among mother's responding regarding studied domains and factors related to home management to stop diarrhea as Shown in Table (4)**

Table (4) shows weak relationships with non-significant I levels such as (soap near the tap, water treatment (filtration, boiling, chlorine), water reservoir, toilet latrine) except between asking about "presence of flies at home" as well as for asking about "household garbage disposal" and finally between asking about "exclusive breastfeeding until 6 month", since significant relationships. From view point due to the fact that children under five are not using any toilet facility and that a household that have a latrine does not automatically imply that a child uses it but the adults in the household.

The results of current study contrasted with study in their study entitled (Diarrhea among under-five children and household water treatment and safe storage factors in Mkuranga district, Tanzania). He mentioned that the treating water by boiling, storing water in covered containers (bucket with lid) and guardians/parents washing hands with soap
following household activities and whether a child ever breast fed or currently on breast feeding were found significantly associated with under five diarrhea (14).

The current study is supported by study that the revealed the level of maternal self-effectiveness has a significant statistical relationship with exclusive breastfeeding up to six month old (p=0.001) (8).

The results of the present study agree with study he reported the mothers who were confident accounted for 10.5 % and all had a possibility of always disposing the garbage away from the compound by to prevent environmental risks in diarrhea prevention, as compared to mother who were who were not very confident, accounting for 53.2% and only 11 % were likely to uphold disposing the garbage away from the compound, as MSE decreased likelihood of disposing the garbage away from the compound decreased (13).

CONCLUSION

The study concludes that there is non-significant differentiation among mother's responding regarding studied domains and child (SDCV.) except between method of breastfeeding in the first six months, at any age the mother began to give her child extra food has the child previously suffered diarrhea since significant relationships.

RECOMMENDATIONS

The study recommended it is necessary to raise mothers awareness of the importance of preventing diarrhea by implementing educational programs, activating the role of traditional and social media as well as health professionals must encourage and help the mothers in order to feel more capable in implementing care methods, which prevent diarrhea in their children, as self-efficacy is a cognitive variable, which is essential to motivate and execute any action or behavior related to health.

Ethical Clearance: all experimental protocol was approved under the college of nursing, university Baghdad, Iraq and all experiments were carried out in accordance with approved guidelines.

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