

Original Research Article

Knowledge, Attitudes and Practices of Mothers with Children Under Five Years towards Diarrheal Diseases in Displaced People Camp

Amal Mohammed Elnoor E^{1*}, Fatima Fadul Ali Osman², Mohamed Osman Elamin³ and Tassnim.H.Sinky⁴¹Elfasher University, ²Alzaiem AlAzhari University, ^{3,4}Faculty of Public Health& Informatics, Umm Al-Qura University, Saudi Arabia**Article History**

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Abstract: A cross sectional-community based study was conducted in Al-Salaam displaced people Camp to assess knowledge, attitudes and practices of mothers with under five years children towards diarrheal diseases, the study aimed to study knowledge, attitudes and practices of mothers with under five years children towards diarrheal diseases. 380 mothers with fewer than five children were selected using a systematic random sampling technique. The data collected through structured questionnaire designed to cover all research objectives and observations. The statistical Package for Social Science (SPSS) was used to analyze the data; the results were presented in figures. The study clarified that mothers have low knowledge regarding the possible causes of diarrheal diseases. Large number of mothers (70.5%) believe that tooth loss is a major cause of diarrhea in children under five years old, regarding practices during diarrheal infections, 50.8% of mothers increased numbers of meals to their children. Very small numbers of mothers (28.2%) prepared oral rehydration salts solution correctly, most mothers believe in seeking health services when home management was failed, sanitation was very weak, the majority (78%) of residences were using shared toilets. The study recommended that the local health authorities should increase knowledge of mothers about diarrheal diseases and its management through health education sessions, provision of clean water and sanitation services.

Keywords: Attitudes and Practices Mothers Children.

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INTRODUCTION

Diarrhea is a leading killer of children, accounting for 9 per cent of all deaths among children under age 5 worldwide in 2015. This translates to over 1,400 young children dying each day, or about 526,000 children a year, despite the availability of simple effective treatment.

Diarrheal diseases rank among the top three causes of childhood death in the developing countries. On an average a child suffers from about 12 episodes of diarrhea, 4 such episodes occurring during the very first year of life. Existence of malnutrition makes the child very much vulnerable to diarrheal diseases [1].

In Africa and especially Sub-Saharan Africa, diarrheal diseases account for over 90% of deaths in children below five years old (WHO, 2007). This has been attributed to lack of safe drinking water, sanitation and hygiene as well as poor nutrition.

In addition to causing high rates of morbidity and mortality, diarrheal diseases are one of the main causes of childhood malnutrition. Also as many as 30%

of pediatric beds in developing countries are occupied with children with diarrheal diseases. As a result, diarrheal diseases levy a very heavy burden on health facilities and national health budgets [2].

In Sudan, diarrheal diseases consider a major danger to the people especially children less than five years. Diarrheal diseases ranked the second prevalence disease in Sudan the annual reported deaths of children less than five year due to diarrhea was 10.3% of deaths. About 31.4% of Sudanese population had no access to sanitary facilities and about 54% are drinking from unimproved water sources [3].

Diarrhea is defined as the passage of loose, liquid or watery stools, more than three times per day. The recent change in consistency and character of stool rather than the number of stools is more important. Especially in children one large amount watery motion may constitute diarrhea [1].

Variety of bacteria, viruses and parasites are the cause of diarrhea. Infection spreads through contaminated food or drinking water or from person to

*Corresponding Author: Amal Mohammed Elnoor E

Elfasher University Faculty of Public Health& Informatics, Umm Al-Qura University, Saudi Arabia

person as a result of poor hygiene. Fluid loss in diarrhea has fatal outcomes and it is the leading cause of malnutrition. Diarrhea kills young children more than Acquired Immunodeficiency Syndrome (AIDS), malaria and measles combined. It also exposes children to secondary infection.

Most diarrhoeal illnesses are acute, lasting not more than 2 weeks; however, about 5% of these illnesses last longer. These persistent diarrhoea cases require care that is expensive and often ineffective, and they may cause as many as 25% of all diarrhoeal associated deaths [4].

Most of the mortalities and morbidities due to diarrhoea can be prevented by practicing primary preventive measures such as use of clean water, hand washing, good cooking practices, exclusive breast feeding, immunization, sanitary disposal of excreta, use of latrines and good sanitary and hygienic practices. Secondary preventive measures include early recognition of dehydration due to diarrhoea and prompt oral rehydration by ORT, increased & continued feeding of energy dense food in addition to breastfeeding, zinc therapy and the use of appropriate antibiotics for severe cases of diarrhoea [5].

Mothers have pivotal role so, if we educate them and increase their awareness, they will increase the total awareness of their family and can play a major role in preventing disease especially their children [3].

It can be said that the major determinants of good or ill health of people are the knowledge they may have about health, belief, attitude and practice and the desire to bring about positive behavior change in their life.

Concentrating on these points, health education is the best alternative to change positively the individual's concept, belief, behavior and practices to control many of the health problems in the community [2].

OBJECTIVES

General Objective

Study the knowledge, attitudes, and practices of mothers with children less than five years of age towards diarrheal diseases in Al salaam Camp – North Darfur State, Sudan.

Specific Objectives

- 1- To determine the current situation of diarrheal disease.
- 2- To assess mother's knowledge about diarrheal disease.
- 3- To determine attitudes of mothers towards diarrhea diseases.
- 4- To identify the practices of mothers in regards to diarrheal disease.

Study design

A cross sectional - community based study was conducted in Al-Salaam Camp to assess knowledge, attitudes and practices of mothers with under five years children towards diarrheal diseases 2018.

Study area

The research was carried out in Al Salam Camp which was established in 2005 in response to the influx of internally displaced people (IDPs) from El Fasher, Kabkabiya, Kutum and Mallit areas in North Darfur and a few from Shearia in South Darfur.

Al Salam camp is approximately 5 kilo miter square, located 2 kilometers southern of El Fasher, the capital of north Darfur state. A total population in Al Salam Camp is estimated by 37779 inhabitants, from which 7625 are mothers with children under five years of age. The camp had divided in to 5 administrative units (Tawila, Korma, Refyelfasher, Darthagawa and Jabelsee).

There are 8 health facilities currently operational in the camp, comprising of 6 Primary Health Centers, one private clinic and one nutrition center, serving around 6,600 patients per month. A total of 77 staff members are running these facilities in which 41 medical personnel, 24 general staff (receptionists, immunization technicians, lab technicians etc.) and 12 guards. There are 32 beds across 3 Primary Health Centers, and one private clinic, whereas three Primary Health Centers are without beds. Out of the 8 health facilities, 5 facilities have reported receiving assistance from humanitarian health actors in the form of medicines and other support.

There are 51 functional schools in the camp; 13 primary schools, 4 secondary schools, 13 kindergartens, and 22 khalwas. Total enrollment is reported to be 11,790 (52% female and 48% male students). A total of 357 teachers (56.5% female, 43.4% male) are serving in these schools making an average ratio of 33 students per teacher.

A total of 56 functional water sources and sub-sources exist, which consist of 37 water systems, 9 hand pumps, 5 artesian wells and 5 tanks. There are 600 latrines and bathrooms in the camp, additionally many families have constructed their own latrines in their shelters premises. The majority of shelters are constructed from local materials such as clay and grass.

The camp has 18 centers and community gathering places, out of which 5 are not functioning (4 youth centers and one distribution center) due to lack of resources. Of the remaining 13; 1 is a training center, 2 are women centers and remaining 10 are youth centers.

Apart from acting as gathering spaces, some of these are also utilized by the humanitarian partners during the distribution of the humanitarian aid assistance. There are 2 main markets with over 150 shops, which open daily and reported to be accessible during the rainy season. Residents also have access to a market in the Abu Shouk Camp. (International Organization for Migration North Darfur – Al Salam IDP Camp Profile 2015).

Study population

The target group was mothers with children under 5 years of age in Al-Salam Camp, North Darfur state. The total numbers of women with children under 5 years in Al-salaam camp are 7625.

Inclusion criteria

- Mother with children under 5 years of age in Al-Salaam Camp
- Mothers, who are permanent residents in the area
- Mothers, who are willing to participate and enrolled for the study,

Exclusion criteria:

- Mothers, who are not residents in the area
- Mothers, who are not willing to participate and enrolled for the study
- Mothers with children above five years old.

Sample Size and Sampling technique:

The following formula had been used to calculate the sample:

Where:

$$n = \frac{N}{1 + N(e)^2}$$

n = the desired sample size

N = the total number of target group.

e = the allowable error usually set at 0.05

The sample size was calculated to be (380) women. The sample was distributed proportionally to the study population and according to total population in the administrated units as follows:

No	Administrative unit	Population	Percentage	Sample size
1-	Tawila	1950	26%	97
2-	Korma.	2050	27%	102
3-	Refyelfasher	1150	15%	57
4-	Darthagawa	1400	18%	70
5-	Jabelsee	1075	14%	54
Total		7625	100%	380

The sampling was selected by multi stage cluster- sampling for selecting the study population this was done by three stages:

First stage: distribution of the total sample among the five administrative units. The five clusters were selected using the ‘probability proportional to size’ (PPS) sampling method.

Second stage: divided each administrated unit into clusters block (cluster sampling technique). A random sampling technique is then used on any relevant clusters to choose which block to include in the study in each identified cluster.

Third stage: All households of the selected cluster enlisted. An attempt was made to select an equal number of household in the unit as far as possible. Household from each block was selected by systemic random sampling .The sample size was distributed for each block using the following formula:

$$K = \frac{N}{n}$$

Where:

K= interval.

N= population.

n= sample.

Study variables

The dependant variable of the study is the knowledge, attitude and practices of mothers regarding to diarrheal diseases and the independent variables included socio demographic data, such as age, education, occupation, religion, family size and socio economic status.

DATA ANALYSIS

The data was statistically analyzed by using the Statistical Package for Social Sciences (SPSS) program version 20. The results were presented in graphs and figures.

RESULTS

This cross sectional - community based study was conducted in Al-Salaam Camp to assess knowledge, attitudes and practices of mothers with under five years children towards diarrheal diseases 2018.

The following are the main findings of the study:

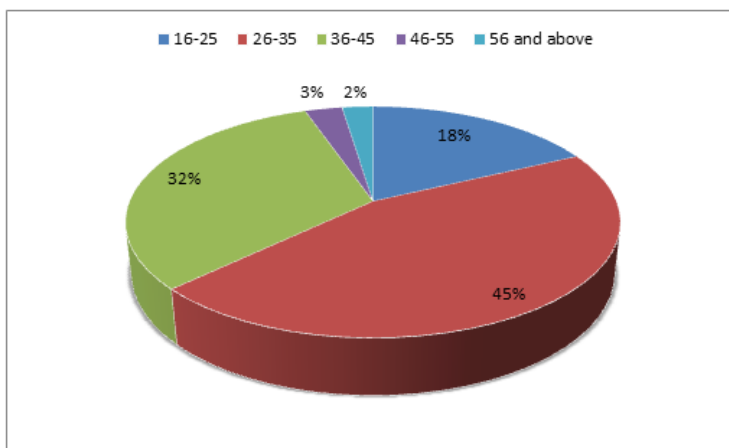


Fig-1: Distribution of the participants according to their age group in Al Salam Camp North Darfur State -2018.

The majority (77%) of the participant in the age groups 26-35 and 36-45

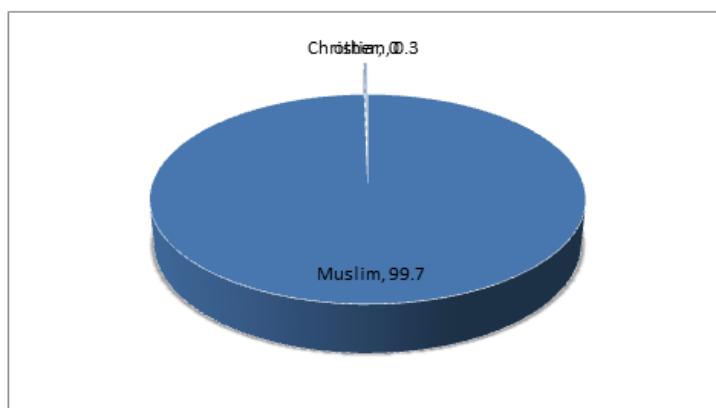


Fig-2: Distribution of the participants according to their religion in Al Salam Camp North Darfur State -2018. 99.7% of the participants are Muslim

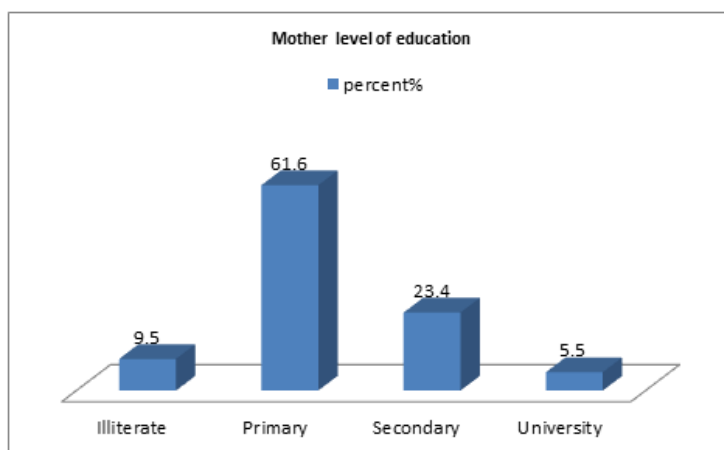


Fig-3: Distribution of the participants according to their level of education in Al Salam Camp North Darfur State -2018.

The majority (85%) of the mothers' level of education are primary and secondary.

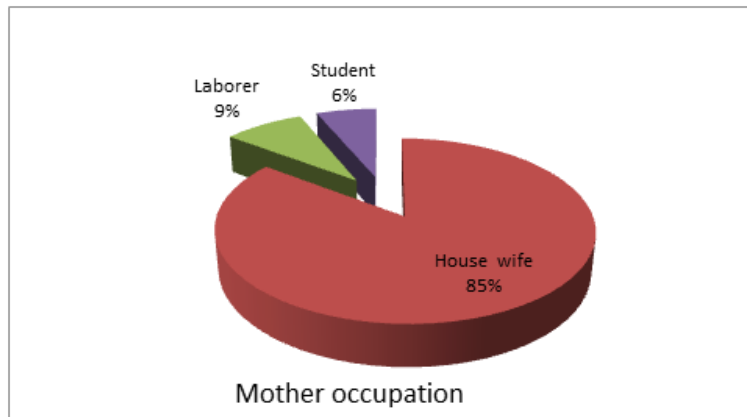


Fig-4: Distribution of the participants according to their occupation in Al Salam Camp North Darfur State -2018. 85% of mothers are house wives

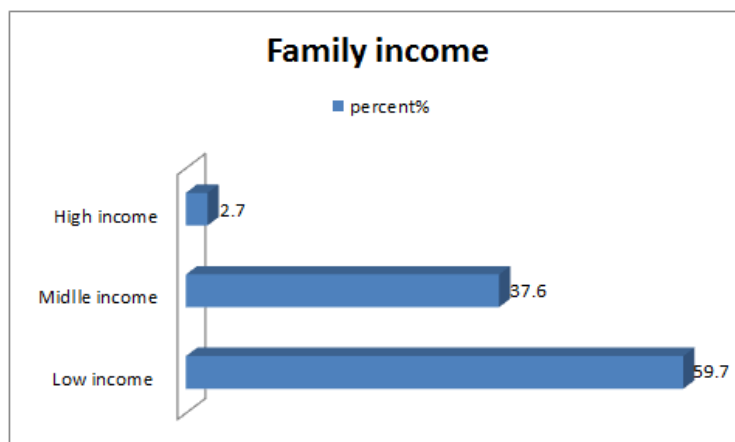


Fig-5: Distribution of the participants according to their family income in Al Salam Camp North Darfur State - 2018.

The majority (59.7%) of the mothers' family income is low income.

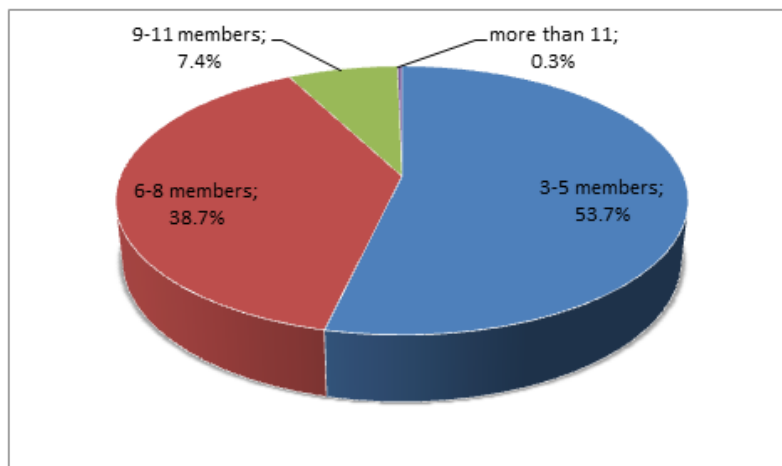


Fig-6: Distribution of the participants according to their family size in Al Salam Camp North Darfur State -2018.

The majority (92.4%) of the mothers' family size are 3-5 and 6-8 members.

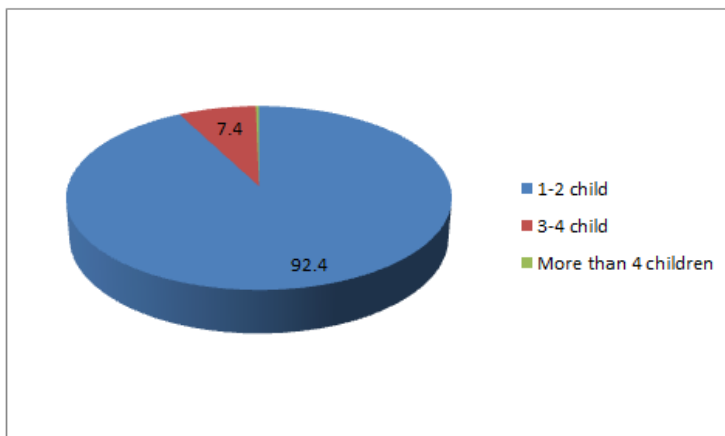


Fig-7: Distribution of the participants according to their number of children less than 5 years of age in Al Salam Camp North Darfur State -2018.

92.4% of the participant’s families have 1-2 children less than 5 years of age.

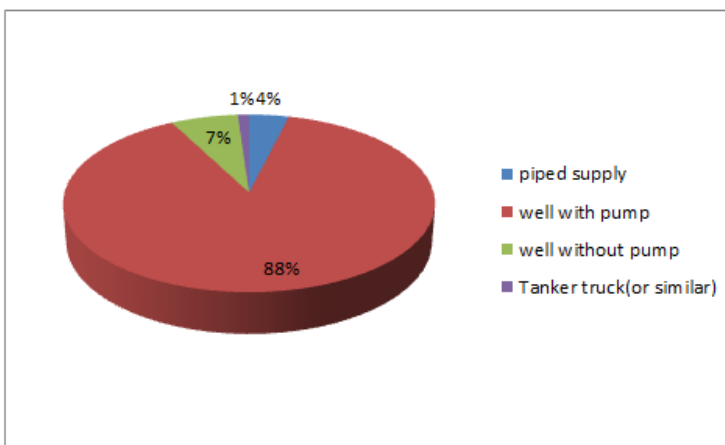


Fig-8: Distribution of the participants according to major source of drinking water in Al Salam Camp North Darfur State -2018.

The dominant source of drinking water in the camp is well with pump.

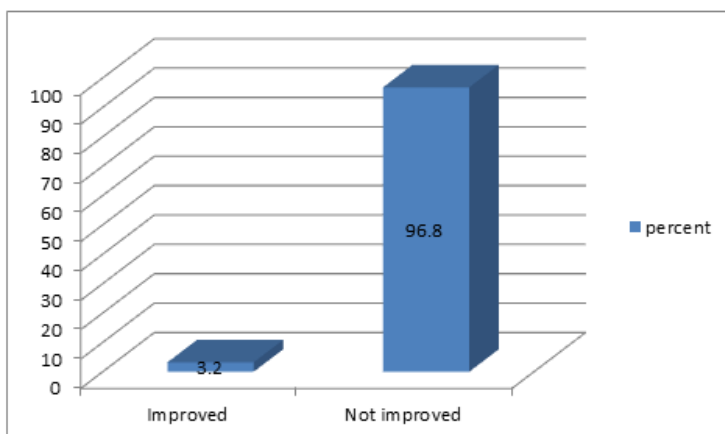


Fig-9: Type of toilet facilities in Al Salam camp North Darfur State – 2018 96.8% of toilet facilities available in the camp are not improved.

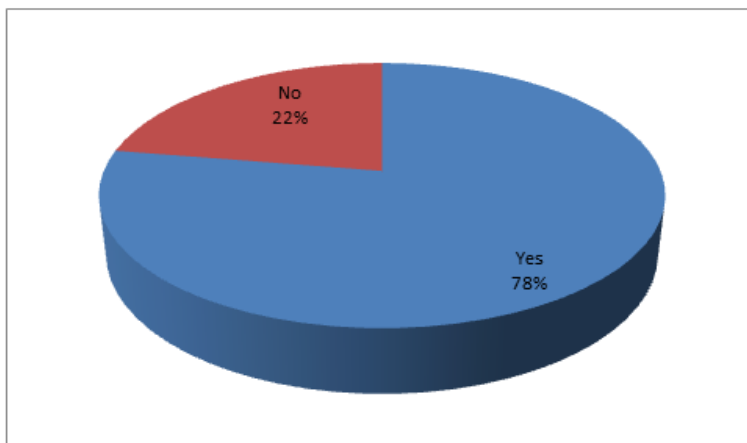


Fig-10: Sharing the toilet facilities with other household in Al Salam camp North Darfur State – 2018.

The majority (78%) of residences using shared toilet.

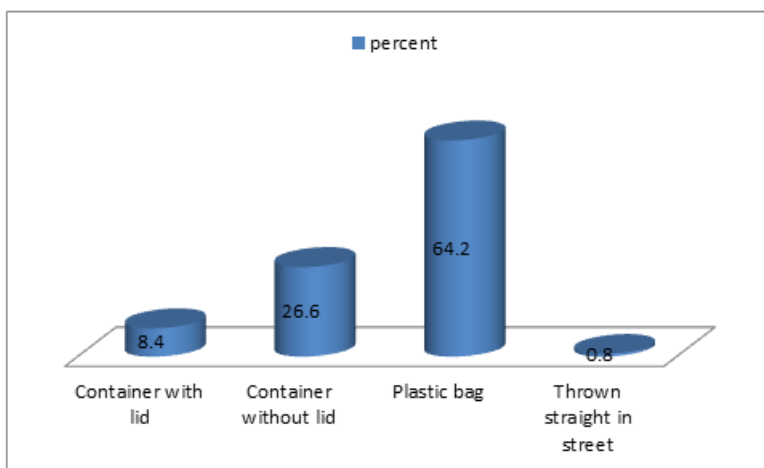


Fig-11: Types of waste collection containers in Al Salam camp North Darfur State – 2018.

64.2% of the participants collect their waste in plastic bag

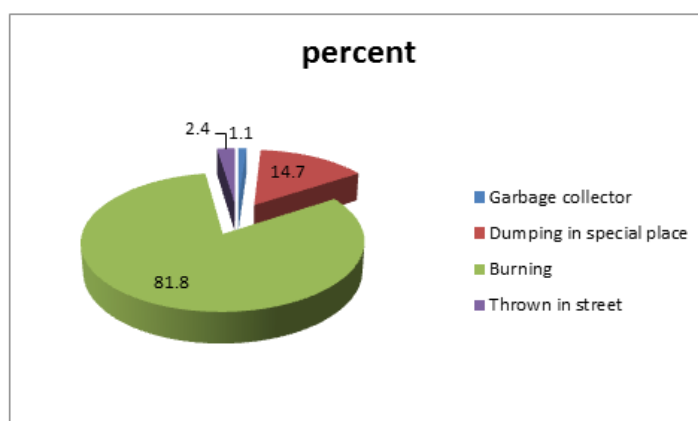


Fig-12: The way of disposing off the garbage in Al Salam Camp North Darfur State - 2018.

Burning is the dominant way of disposing off the garbage

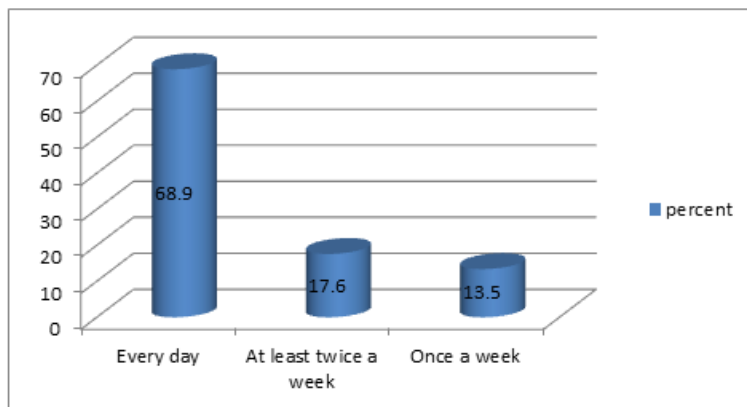


Fig-13: Times of disposing off the garbage in Al Salam Camp North Darfur State -2018

68.9% of the participants dispose of the garbage every day.

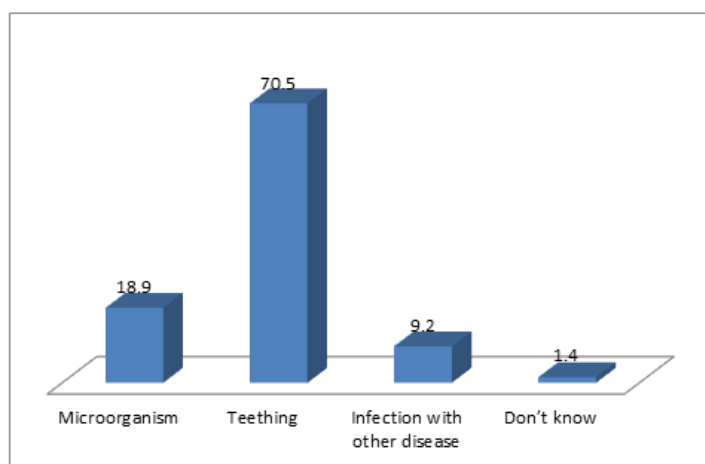


Fig-14: Mother's knowledge about Cause of diarrhea in Al Salam Camp North Darfur State -2018.

70.5% of mothers believe that the wrong idea teething could cause diarrhea

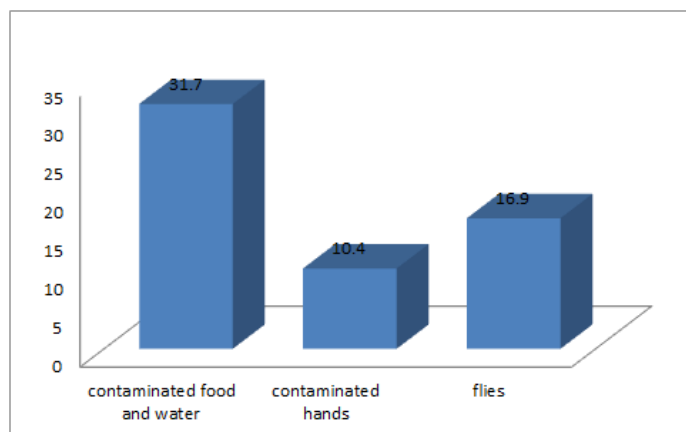


Fig-15: Mother's knowledge about mode of transmission of diarrhea in Al Salam Camp North Darfur State -2018.

Mothers have poor knowledge about mode of transmission of diarrhea.

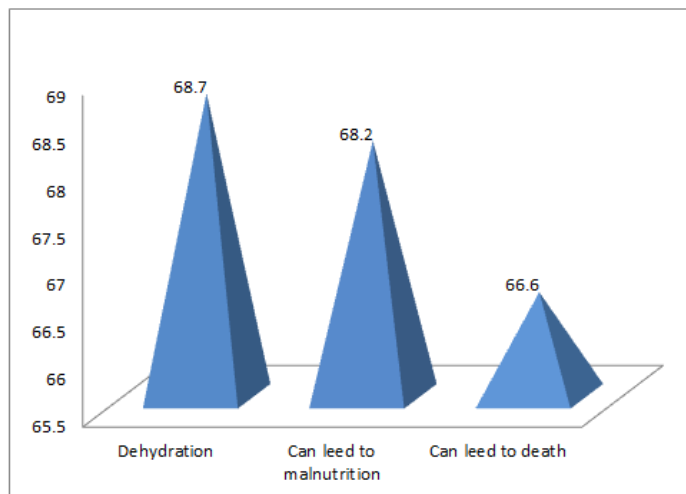


Fig-16: Mother’s knowledge about sequences of diarrhea in Al Salam Camp North Darfur State -2018.

More than 60% of the participants know the sequences of diarrhea.

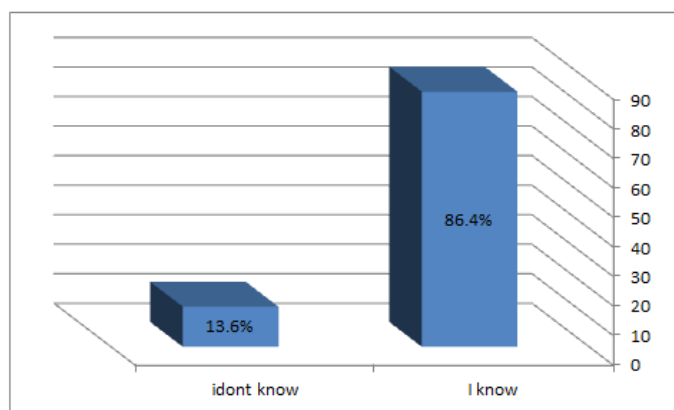


Fig-17: Mother’s knowledge about Importance of breastfeeding in Al Salam Camp North Darfur State -2018

86.4% of mothers know the importance of breastfeeding.

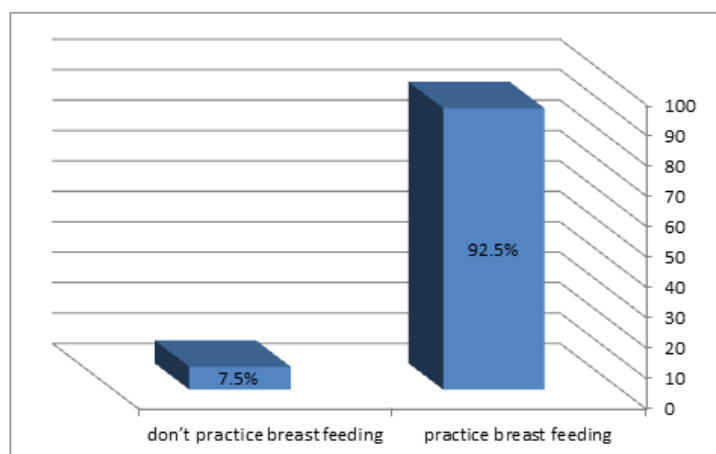


Fig-18: practices of breast feeding in Al Salam Camp North Darfur State -2018.

92.5% of mothers’ breast fed their babies.

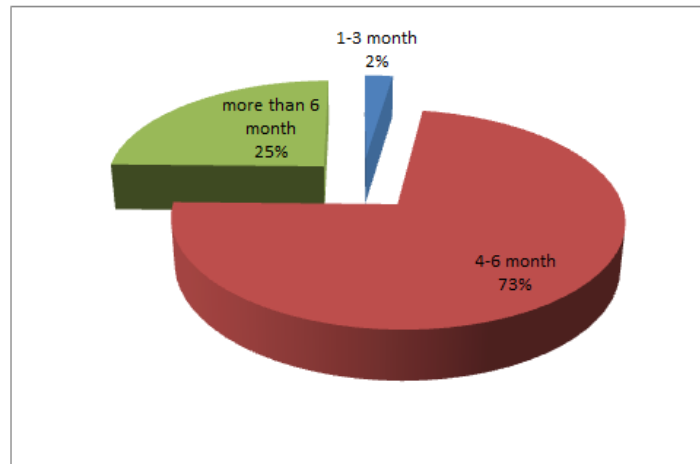


Fig-19: Age of giving water to child in Al Salam Camp North Darfur State -2018.

73 % of mothers giving their children water at age 4-6 month.

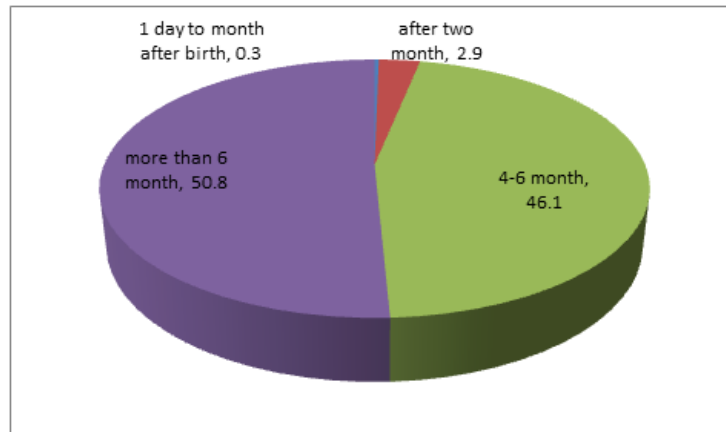


Fig-20: Age of giving food to child in Al Salam Camp North Darfur State -2018.

The majority of mothers (96.9% giving their children food in age 4-6 month and more

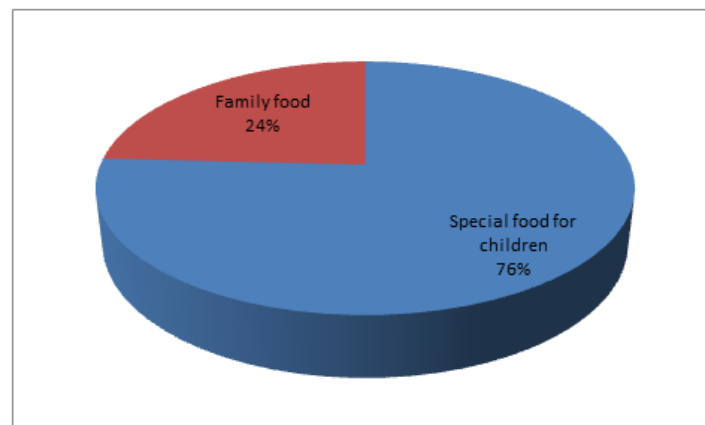


Fig-21: Type of food given to the child in Al Salam Camp North Darfur State -2018.

76% of families introduce to their children special food for children.

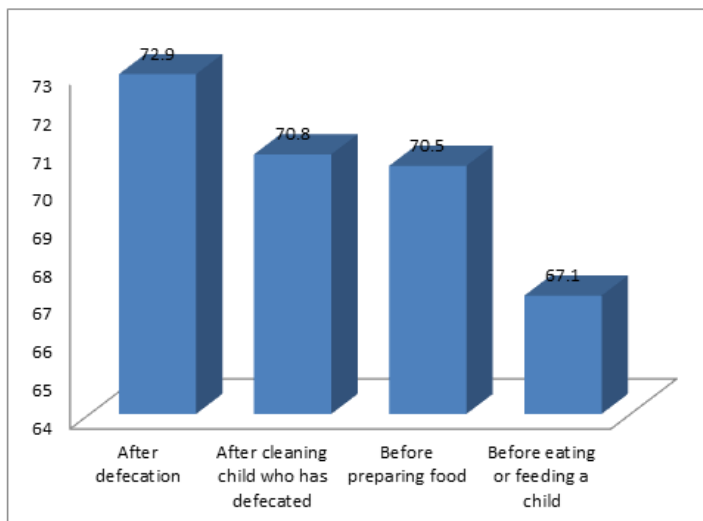


Fig-22: Practices of hand washing with soaps in Al Salam Camp North Darfur State -2018.

About three quarters of mothers washed their hand with soaps at different situation.

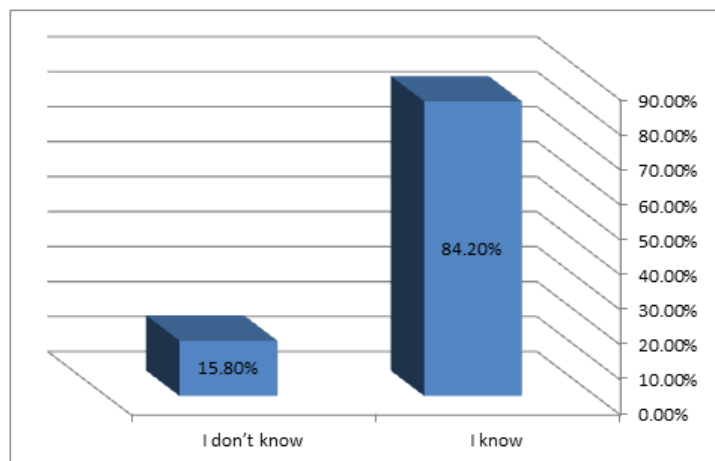


Fig-23: Mother's knowledge about Importance of vaccination in Al Salam Camp North Darfur State -2018.

84.2% of mothers know the importance of vaccination.

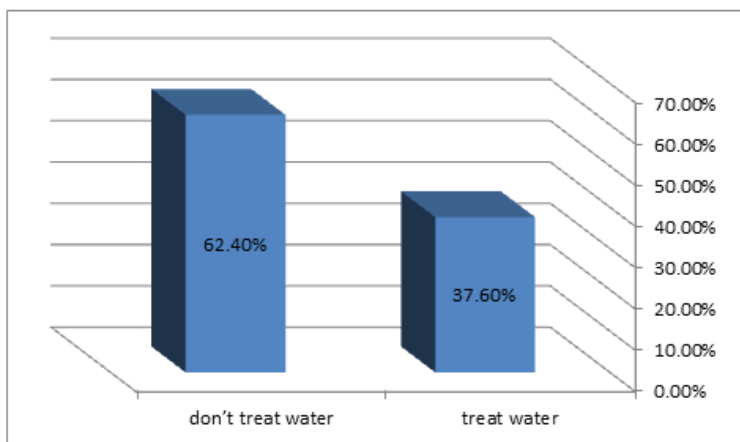


Fig-24: Boiling or treat water before drinking in Al Salam Camp North Darfur State -2018.

Only 37.6% of mothers treat the drinking water before using it.

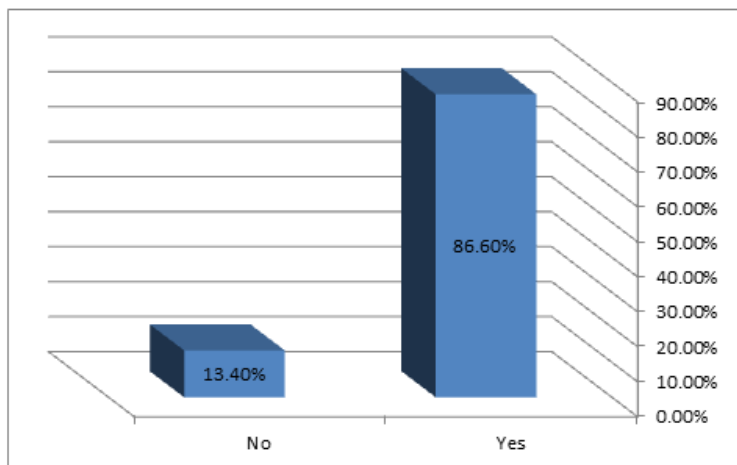


Fig-25: Taken the child to clinic for immunization in Al Salam Camp North Darfur State -2018.

86.6% of mothers take their children to clinic for immunization.

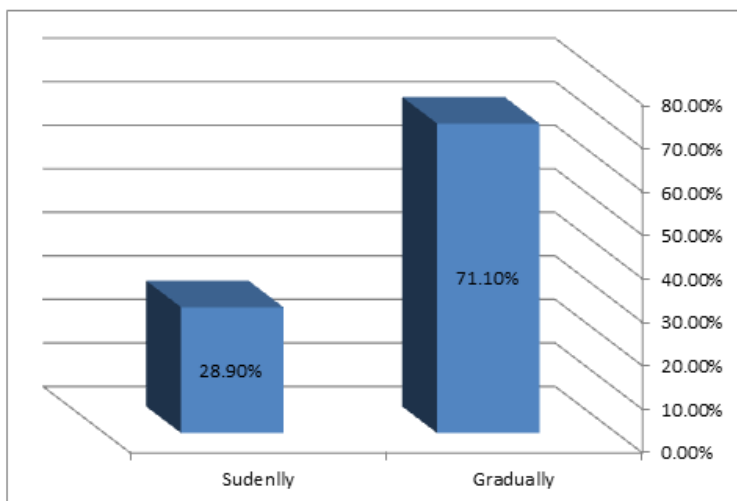


Fig-26: Weaning pattern of child in Al Salam Camp North Darfur State -2018.

28.9% of mothers wean their children suddenly.

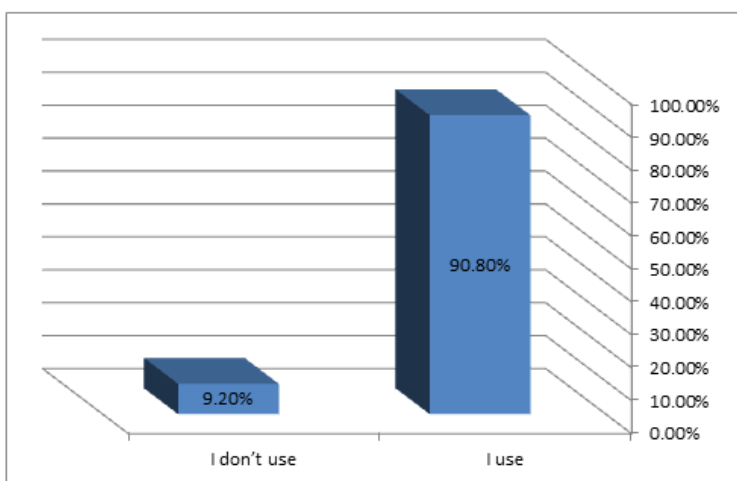


Fig-27: Using oral rehydration salts to treat child with diarrhea in Al Salam Camp North Darfur State -2018

The majority of mothers use oral rehydration salts to treat child with diarrhea.

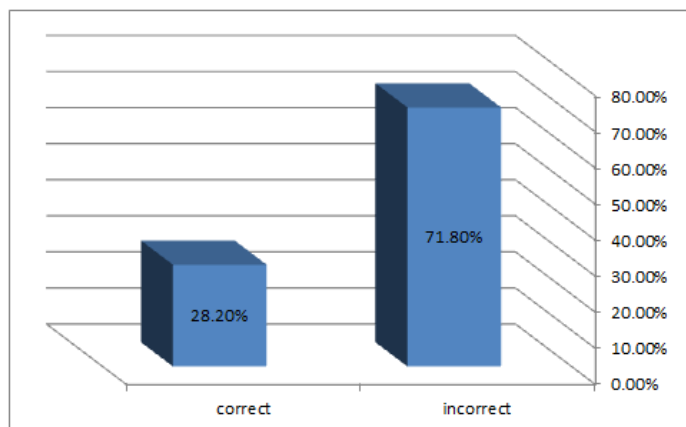


Fig-28: Preparing oral rehydration salts solution in Al Salam Camp North Darfur State -2018.

Only 28.2% of mothers prepared oral rehydration salts solution correctly.

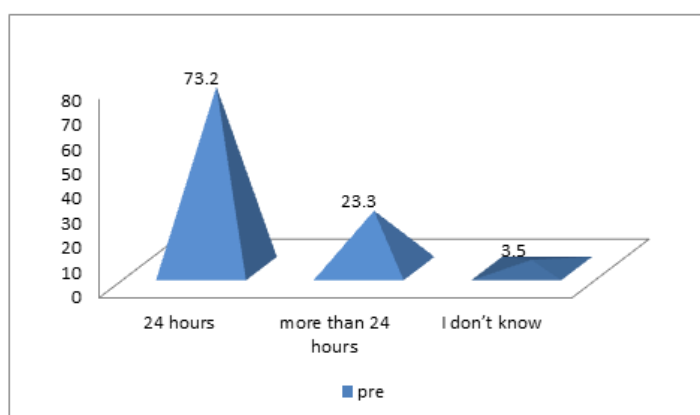


Fig-29: period of keeping the remaining oral rehydration salts solution in Al Salam Camp North Darfur State -2018.

About three quarters of mothers (73.2%) keep the remaining solution of oral rehydration salts for 24 hours.

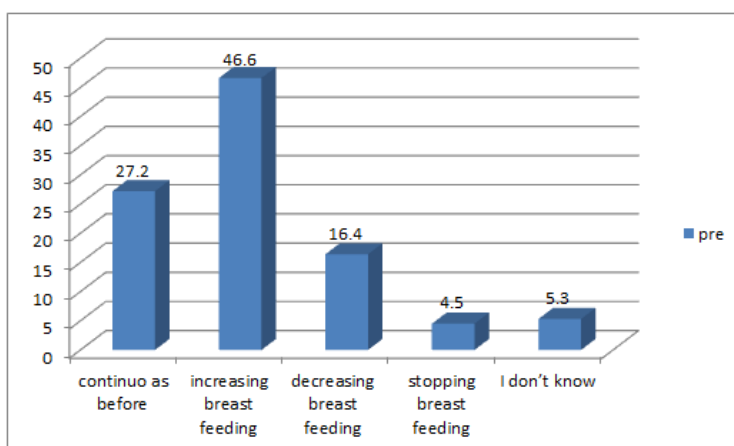


Fig-30: Practice of breast feeding when child has diarrhea in Al Salam Camp North Darfur State -2018.

Only 46.6% of the participants increased breastfed with diarrhea.

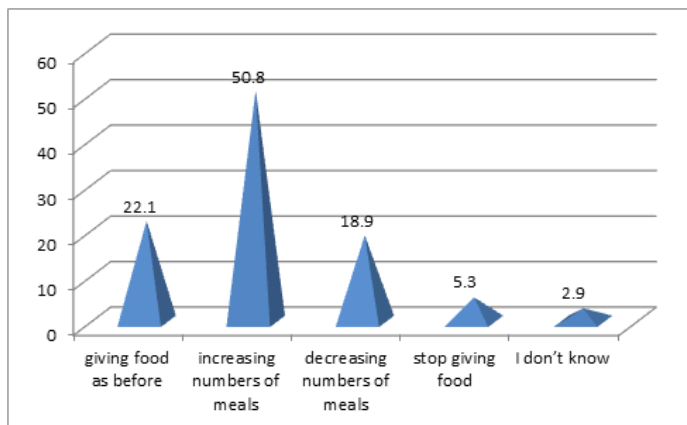


Fig-31: Practice of mother with other food when child has diarrhea in Al Salam Camp North Darfur State -2018.

Only 50.8% of mothers increased numbers of meals to child with diarrhea.

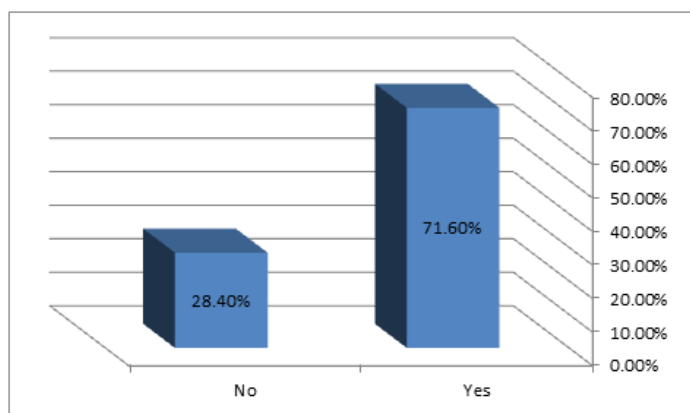


Fig-32: Giving things at home to treat diarrhea in Al Salam Camp North Darfur State -2018.

71.6% of mothers tend to give things at home to treat diarrhea.

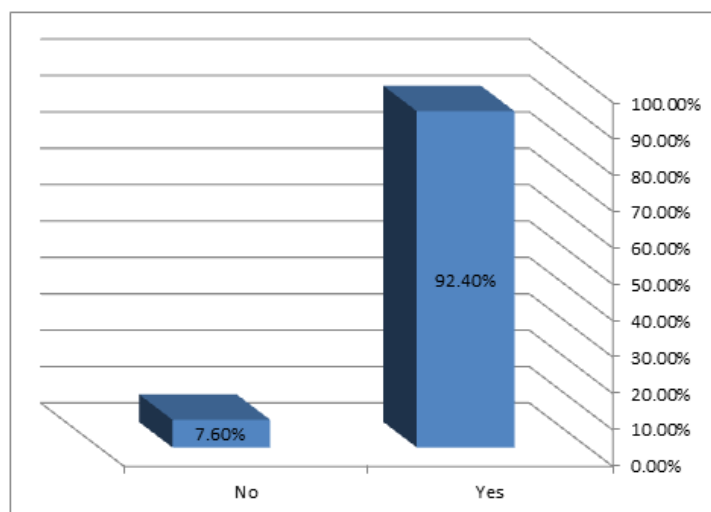


Fig-33: Taking child with diarrhea to clinic for treatment in Al Salam Camp North Darfur State -2018.

92.4% of mothers seek medical advices when the home management of diarrhea failed.

DISCUSSION

Study clarified that the knowledge of mothers regarding microorganisms as a cause of diarrhea was

18.9% , 70.5% of mothers believe that tooth loss could cause diarrhea similar to study conducted in Khartoum state by R. Alfatih (2017) which clarified that tooth loss

considered risk factor for under five diarrhea due to cultural beliefs. 51.7% of mothers didn't know the correct definition of diarrhea.

Concerning the major sequences of diarrhea mothers have moderate knowledge, 68.7% think that dehydration, can lead to malnutrition is 68.2% and can lead to death is 66.6% which is disagreed with study conducted in Sudan 2010 (Results showed that knowledge of mothers about definition of diarrhea, its danger, when to seek medical help and the three rules of home management which was found to be 35, 28, 13 and 29%. 86.4% of mothers know the importance of breastfeeding. Regarding practice of breastfeeding 92.5% of mothers' breast fed their babies Similar to study conducted in Omdurman locality by Amal Mohammed 2012 (the study shows that the prevalence of breastfeeding among the women was 94%).

73 % of mothers giving their children water at age 4-6 month, (96.9% giving their children food in age 4-6 month and more this agreed with(the Sudanese survey of family health 2006 found that 82% of women in Khartoum state introduce complementary foods for their children at a suitable time(6-9) month).

76% of families introduce to their children special food for children this agreed with study conducted in Omdurman locality 2012 by Amal Mohammed (88% of mothers wean their babies with adult food prepared at home and that may contribute to the increased incidence of diarrheal diseases and malnutrition among children as these foods are not the correct balanced diet for a growing child in that age group.

(To fulfill the nutritional requirements, child's diet should be planned by the parents and family members with different types of food items to provide balanced and nutritious diet. The child's diet should contain sufficient amount of fluids, calories, proteins, fats, carbohydrates, vitamins, minerals and salts to meet their daily nutritional needs) [1].

Only 28.2% of mothers prepared oral rehydration salts solution correctly about three quarters of mothers (73.2%) keep the remaining solution of oral rehydration salts for 24 hours. (ORS solution to be used within 24 hours of preparation [1].

During diarrheal attack most of mothers start initial management at home; they use fluids like juices, rice water. This practice of giving fluids is quite important since it replace the losses during diarrhea. 50.8% % of mothers increased numbers of meals to child with diarrhea, Only 46.6% of the participants increased breastfed with diarrhea. This disagreed with study conducted in Omdurman locality 2012 by Amal Mohammed (in case of child diarrhea, the results show that 96% of mothers continue breast feeding.

About three quarters (71.1%) of mothers wean their children gradually this is recommended (weaning, or ending breastfeeding, is best done gradually. Your breasts need to adjust to the decreasing demand for milk, and both you and your baby may feel the loss of comfort and security that breastfeeding provided).

Only 37.6% of mothers treat the drinking water before using it and about three quarters of mothers washed their hand at different situation (after defecation 72.9%, after cleaning child who has defecated 70.8%, before preparing food 70.5% and before eating or feeding a child 67.1%) this is agree with (The important preventive measures are improvement of food hygiene, personal hygiene, and environmental hygiene. These include safe water, adequate sewage disposal, hand washing practices, clean utensil, avoidance of exposures of food to dust and dirt, fly control, washing of fruits and vegetables, etc) [3].

Regarding sanitation the majority (78%) of residences using shared toilet this is disagreed with study conducted in Alhajaj IDPs camp in Elgeneina locality, Sudan 2018 (44% of people are practicing open defecation). (Diarrheal diseases are feco-oral in transmission. Therefore, disposing of feces more safely reduces the spread of diarrhea. Latrine ownership and use of latrine are associated with reduced risk of diarrhea [7].

86.6% of mothers take their children to clinic for immunization this is recommended (Prevention of low birth weight (LBW) and prematurity, exclusive breast feeding, appropriate weaning practices, balanced diet, immunization are significant aspects of child care which prevents malnutrition and diarrheal episodes [3].

CONCLUSIONS

The study concludes that mothers have low knowledge regarding the possible causes of diarrhea. Large number of mothers (70.5%) believe that teething is a major cause of diarrhea in children under five years old.

Regarding practice during diarrheal attacks, 50.8% of mothers increased numbers of meals to child with diarrhea, Only 46.6% of the participants increased breastfed with diarrhea. Very small numbers of mothers (28.2%) prepared oral rehydration salts solution correctly. Most mothers believe in seek health services when home management was fail.

Regarding sanitation the majority (78%) of residences using shared toilet. So, there is need of health education to mothers about diarrhea, its causes prevention and proper treatment, to create a positive attitude and practice towards the better prevention and

management of under-five diarrheal diseases and correct misconception related to diarrheal diseases

RECOMMENDATIONS

For children under five years of age, diarrhea is one of the leading causes of death. However, interventions to prevent and treat diarrhea can be effective. Programs can promote healthful behaviors and improve access to water and sanitation. Mothers can be trained to recognize symptoms of dehydration, to provide appropriate treatment, and to identify when outside help should be sought.

The study recommended the following

1. The Local health authority should increase knowledge of mothers about diarrhea and its management through health education sessions.
 - a. Educate mothers about the three roles of management of diarrhea at the home (give extra fluids; continue breast feeding and when they seek medical advices).
 - b. Encourage mothers to increase oral intake and breast feeding.
 - c. To promote awareness of mothers about oral rehydration salts benefits and correct method for preparation and avoid giving medication without medical prescription.
2. Introduce WASH principles in education curriculum.
3. Furthers studies toward traditional method and misconception in diarrheal disease

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