Research Article
AMERICAN JOURNAL OF PHARMACY AND HEALTH RESEARCH
www.ajphr.com
2018, Volume 6, Issue 12
ISSN: 2321–3647(online)

Diarrheal Diseases and Awareness at Displaced People Camp

Maria Mubarak[1]., Fatima Fadul Ali[2]., Mohamed Osman Elamin[3]., Alfatih Aburass[4]
1,2.Alzaiem Alazhri University. Sudan,
3.Faculty of Public Health, Umm Al-Qura University, KSA,
4.MOH,KSA,King Faisal Hospital.

ABSTRACT

Comparing estimates of the current global burden of the diarrheal diseases with previously published estimates, highlights that the incidences of diarrhea have not changed much, although overall diarrhea mortality has declined. For children aged less than five years in developing countries, a median of 3.2 episodes of diarrhea occurred per child-year, which is similar to that reported previously. Estimates of mortality indicate that 4.9 children per 13.6 per 1000 per year died in the developing regions because of diarrhea illness in the first 5 years of life. A cross sectional institution based study was conducted in Alhajaj IDPs camp in Elgeneina locality, Sudan for the Assessment of knowledge, attitudes and practices of displaced people towards diarrheal diseases. Assessment of Knowledge, attitudes and practice leading diarrheal diseases at the Alhajaj internal displace people camp. The study found that, the knowledge of the community about the common methods of transmission of diarrhoea in the camp are contamination of food, flies, contamination of hands, and contamination of water, in addition 67% of people in camp use tanks as a source of water, 22% of the people use wells, 44% of people are practicing open defecation. The study recommended that activities for raising health awareness of the community and provision of safe water supply and sanitation in the camp are a major priorities.

Keywords: Diarrheal diseases, Displaced

*Corresponding Author Email mohsm71@yahoo.com
Received 15 November 2018, Accepted 13 December 2018

Please cite this article as: Osman M. *et al*., Diarrheal Diseases and Awareness at Displaced People Camp. American Journal of Pharmacy & Health Research 2018.

INTRODUCTION

Comparing estimates of the current global burden of the diarrheal diseases with previously published estimates, highlights that the incidences of diarrhoea have not changed much, although overall diarrhoea mortality has declined. For children aged less than five years in developing countries, a median of 3.2 episodes of diarrhoea occurred per child-year, which is similar to that reported previously. Estimates of mortality indicate that 4.9 children per 13.6 per 1000 per year died in the developing regions as a result of diarrhoea illness in the first 5 years of life. This is decline from the previous estimates of 13.6 per 1000 per year in 1959-1979 and 5.6 million per 1000 per year in 1980-1989. The decrease is more pronounced in infants. According to recent estimates for 2000-2003 diarrhoea diseases account for about 17 per cent of under 5 mortality in post neonatal period, and 3 per cent of neonatal death.(1)

Agent factors in developing countries, diarrhoea is almost universally infectious in origin. A wide assortment of organisms cause acute diarrhoea and many of them have been discovered only in recent years such as rotaviruses and campylobacters. (1)

Each year diarrhoea kills around 525 000 children under five, a significant proportion of diarrheal disease can be prevented through safe drinking-water and adequate sanitation and hygiene.

Globally, there are nearly 1.7 billion cases of childhood diarrheal disease every year, Diarrhoea is a leading cause of malnutrition in children under five years old.(WHO)(2).

Diarrheal disease is the second leading cause of morbidity and mortality for all ages it is the next leading cause of infant deaths. The most important bacterial infections gain entry through the gastro- intestinal tract they include the bacillary dysenteries, cholera and enteric fevers.

The studies also estimated that the total yearly morbidity and mortality from diarrheal diseases for children under 5 years of age in Africa, Asia, were 744 +000 million episodes and 4.6 million deaths (WHO, 2008).

In developing countries, diarrhoea is among the leading causes of childhood morbidity and mortality (who-1993) (3).

According to WHO, approximately one billion cases of diarrhea occur each year worldwide causing a burden that was about 99.2 million DALYs (disability adjusted life years) (who between 1992 and 2000\,2003) (4).

An estimated one billion episodes, about 80% of deaths due to diarrhoea occur in the first two years of life (Trop Med Int Health; 2001) (5).

Over 3 million people die each year nearly all from developing countries with 80% of the total disease burden coming from the poor countries (WHO, 2007).(6)

In developing countries, it is not only water contamination at source or during distribution that is an issue but also water stored within the home which may also become contaminated (WHO/UNICEF, 2007). In the United States, outbreaks of infectious (6).

The health consequences of inadequate water and sanitation services include an estimated 4 billion cases of diarrhoea and 2.2 million deaths each year, mostly among young children in developing countries (WHO, 2008). In Kenya, diarrhoea ranks as the third leading cause of both mortality and morbidity among infectious diseases (Care/Kenya, 2005). According to a report by Gwako (2010), (16, 22) million Kenyans do not have access to safe drinking water resulting to several deaths (mostly children) (6).

According to the World Health Organization (WHO) and UNICEF, there are about two billion cases of diarrheal disease worldwide every year, and 1.9 million children younger than 5 years of age perish from diarrhoeal each year, mostly in developing countries. This amounts to 18% of all the deaths of children under the age of five and means that more than 5000 children are dying every day as a result of diarrheal diseases. Of all child deaths from diarrhoea, 78% occur in the African and South-East Asian regions. (A global perspective 2012) (7).

According to the latest joint epidemiological bulletin by the Sudanese Ministry of Health and World Health Organization (WHO), almost 15,000 suspected cases of Acute Watery Diarrhoea, including 279 deaths, were reported in Sudan between mid-August 2016 and 2 June 2017.

Since the last reporting period (epidemiological week 22), a total of 1,373 new cases were reported, including 16 deaths, the Health Ministry and WHO said, Overall 67 localities in Blue Nile, Sennar, El Gedaref, Kassala, Red Sea, Northern State, River Nile, Khartoum, North Kordo fan, El Gezira, and White Nile states are affected, the UN Office for the Coordination of Humanitarian Affairs (OCHA) in Sudan said in its bulletin last week, The South Kordo fan Health Ministry reported to WHO a cumulative number of 83 AWD cases since 24 May, affecting six out of 17 localities.

According to epidemiological findings, about 87 per cent of the affected population are five years of age and above, while nine percent are under five years. All patients with AWD presented symptoms of diarrhoea and 80 percent reported vomiting, while 8.8 percent showed symptoms of abdominal pain, and 1.8 percent reported fever.

“WHO procured more Diarrheal Diseases Kits and Rapid Response Kits, which will be distributed to target states early next week,” the OCHA bulletin reads.

Last week, the federal Minister of Health, that between August 2016 and May this year 14,659 people were infected and 292 died of watery diarrhoea, Today diarrhoea remains a major public health problem (8).

Since the start of the diarrhea outbreak in August 2017, about 23,200 cases and nearly 470 deaths (roughly 2% mortality rate) have been reported by the WHO and the federal Ministry of Health (FMoH). The outbreak had previously affected 16 of 18 of Sudan's states, excluding West and Central Darfur states. However, diarrhea is a significant potential threat to the residents of West Darfur particularly the IDP camps with high population. Between July and September, a total of 679 cases of suspected diarrhea and 20 deaths have been reported to SMOH in West Darfur.(8).

Objectives:

General objective

Knowledge, attitudes and practice of the community towards diarrheal diseases at the alhajaj internal displace people camp-2018.

Specific objectives:

1. To assess the knowledge of the community towards diarrhea diseases.
2. To determine attitudes of the community towards diarrhea diseases.
3. To identified the practices of the community towards diarrhea diseases.

Study design:

A cross sectional community based study was conducted in Alhajaj IDPs camp in Elgeneina locality to Assessment of knowledge, attitudes and practices of the community towards of diarrhea diseases.

Study Area:

The current study was carried out during October 2017 to March2018 in Elgenina town in west Darfur state. West Darfur State represents one of the greater Darfur State, located in west of Sudan, bordering from the West, South and North by Republic of Chad, it located between latitudes 13-12 degrees to the North and longitudes 21-22 degrees to the East. At above the sea level. West Darfur state it has eight administrative localities and 25 administers units, 7 out of them bordered with Republic of Chad, the Geneina town is the capital of west state.

The total population of Geneina town is 391685 and itcontain 4 administers units, (ElGeneina, ash Barra, Tandalty and Ardamatta) also comprises (35) primary health Centre and 3 referral hospitals in addition 7 (IDPs) camp distributed at the Centre and the out skirt s of town. Beside that there is greater movement population between Chad and Geneina.

The area lines within the town biomes semi desert and savannah with low rainfall therefore mainly covered with the sand soil with cracking clay soil in the south part of and seasonal Water courses.

The prevailing climate in the area is tropical continental with average rainfall 200-300mm the rainy season start in mid –June till last September whereas the dry season between Novembers and may. Main monthly temperature varies between 10 and 39. The average relative humidity is 40-41%.

The area is mainly dominated by desert scrub vegetation and savanna with lo rain fall trees such as bushes and annual grasses in some areas in additional some several essential crops such as millet and maize and fruits are grow in the area with seasonal rivers call wadies which is filled with water and run during the rain fall from North to south pass through most of the unite. Considered sources of drinking water and became pools and small collection of water which create suitable breeding site for snails during the dry season.

Alhajaj internal displace people (IDPs) camp in west Darfur state El Geneina town and it hosts around 7.676 populations. The internal displace people (IDPs) have been displaced to alhajaj IDP camp since 2004 - the beginning of the Darfur conflict alhajaj IDP camp continues suffer from repeated communicable disease specific diarrheal diseases. At the camp there are inadequate latrines due to space constraint. Only there is six blocks of communal latrines with 36 pits and one water station, and health center.

Study population:

Study population in Alhajaj internal displaces people (IDPs) camp.

From October2017 to March, 2018, to Assessment of knowledge, attitudes and practices of diarrhoea diseases in alhajaj (internal displace people) camp.

Sample size:

A sample is a subset of the population can be random.

The sample size was determined by using the following formulas

Number of selected community $n=N/1+e2\ (N-1)$

$$n = \frac{N\ z2\ p\ (1-p)}{d2\ (N-1) + Z2\ p\ (1-p)}$$

Where:

n = the sample size

N=Total population=7676

z= (1.96) is the value of normal curve corresponding to level of confidence 95%

p= is the probability of target group having the problem or prevalence rate, take p = 0.5.

1-p= is the probability of target group not having the problem.

d =is the desired margin of error, we take d (0.1).

Sample size =n= 95 individual into the study

The sample size enough so that we could perform statistical analyses to Assessment of knowledge, attitudes and practices of diarrhoea diseases in alhajaj (internal displace people) camp.

Data collection:

1.Data collection tool

-Questionnaires

To avoid ambiguous answers, a questionnaire with clear and simple questions was designed. It was just the pre-tested questionnaire and had closed and open-ended questions. The questionnaire had seven sections: a section on demographic and socioeconomic characteristics; a section on clinical data.; a section on knowledge of diarrhea; a section on sanitation and rubbish disposal; a section on hygiene related practices; a section on drinking water related- practices; and a section on breastfeeding .

2. Data collection techniques

-Interviews

Face-to-face interviews based on the questionnaire. Interviewers informed interviewees that participation in the study was voluntary. Interviewers explained the purpose of the study and asked interviewees for their permission to interview. Interviewees also were informed that the information they provided was handled as confidential and their individual answers would not be known, except by the interviewer and the coordinator of this study.

Information was also collected regarding antecedent exposure, diarrheal duration, stool frequency and treatment before admission.

- Observation

3.Data analysis:

Data analysis by SPSS program

Ethical consideration:

- Approval from of university

Approval from ministry of health – west Darfur state-

-Acceptance of study of population

Study population in Alhajaj internal displaces people (IDPs) camp.

From October2017 to March, 2018, to Assessment of knowledge, attitudes and practices of diarrhoea diseases in alhajaj (internal displace people) camp.

Sample size:

A sample is a subset of the population can be random.

The sample size was determined by using the following formulas

Number of selected community n=N/1+e2 (N-1)

$$n = \frac{N\, z^2\, p\,(1-p)}{d^2\,(N-1) + Z^2\, p\,(1-p)}$$

Where:

n = the sample size

N=Total population=7676

z= (1.96) is the value of normal curve corresponding to level of confidence 95%

p= is the probability of target group having the problem or prevalence rate, take p = 0.5.

1-p= is the probability of target group not having the problem.

d =is the desired margin of error, we take d (0.1).

Sample size =n= 95 individual into the study

The sample size enough so that we could perform statistical analyses to Assessment of knowledge, attitudes and practices of diarrhoea diseases in Alhajaj (internal displace people) camp.

RESULTS AND DISCUSSION

Characteristic of Study sample:

A total of 95 individual over 18 years age, in Ahajaj IDPs camp in west Darfur state march2018,were conducted to this study by interviews, observation and based on questionnaire.

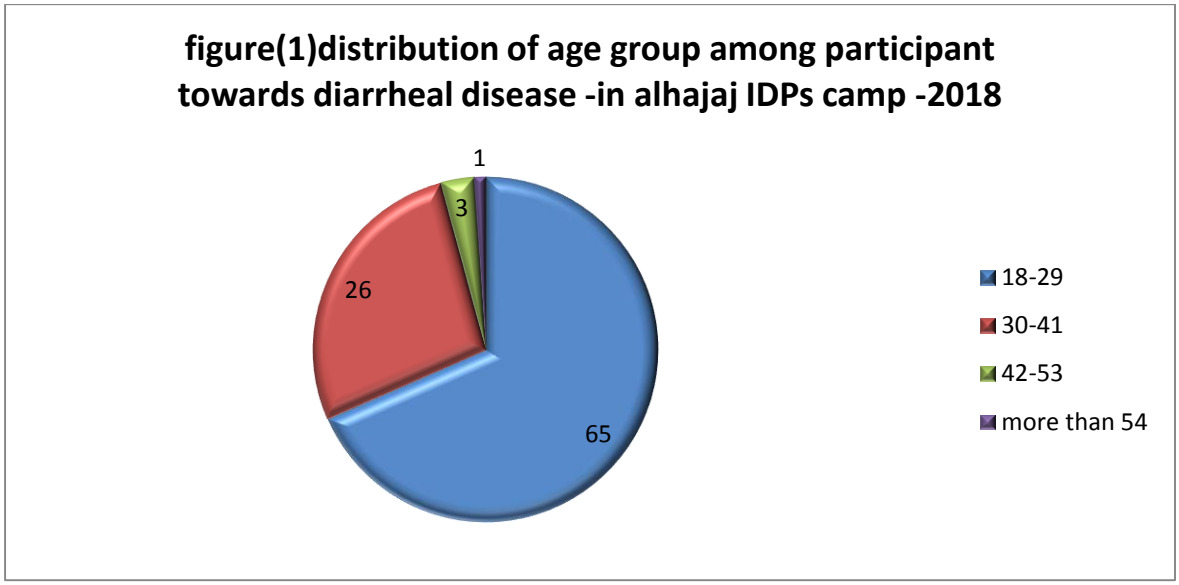

Figure (1) shows: distribution of age group, the most of the population in the sample is between ages of 18and29, the lowest age group is older than54 years.

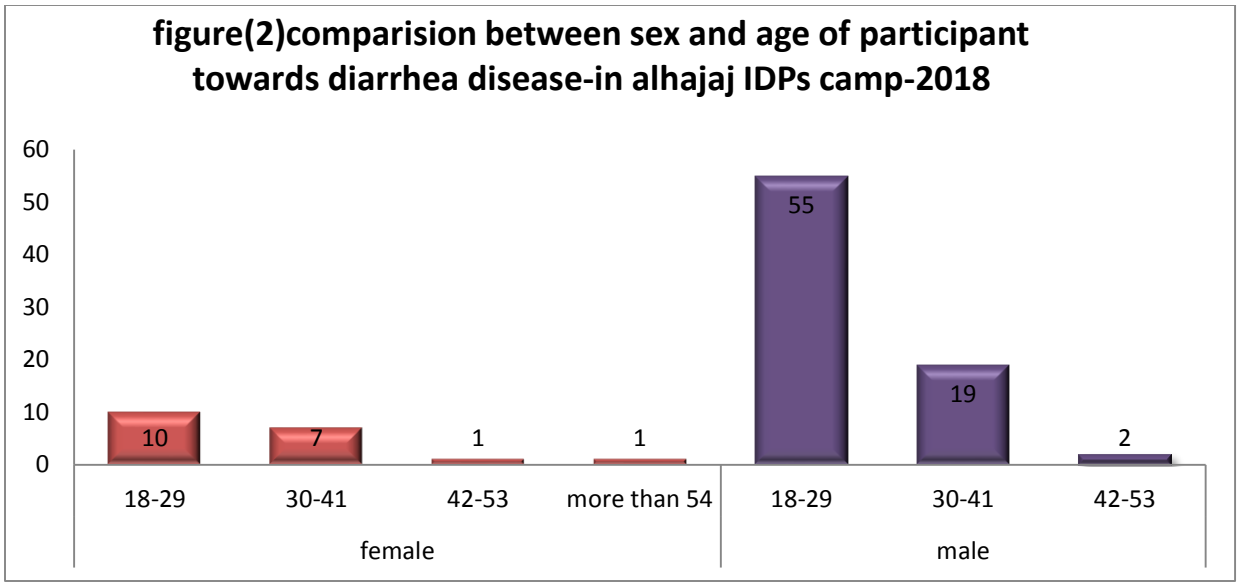

Figure (2) shows: distribution of gander: there were 76 males and 19 of females. The number of males was higher than females in almost all age groups.

The age group between 18 -29 the high in male.

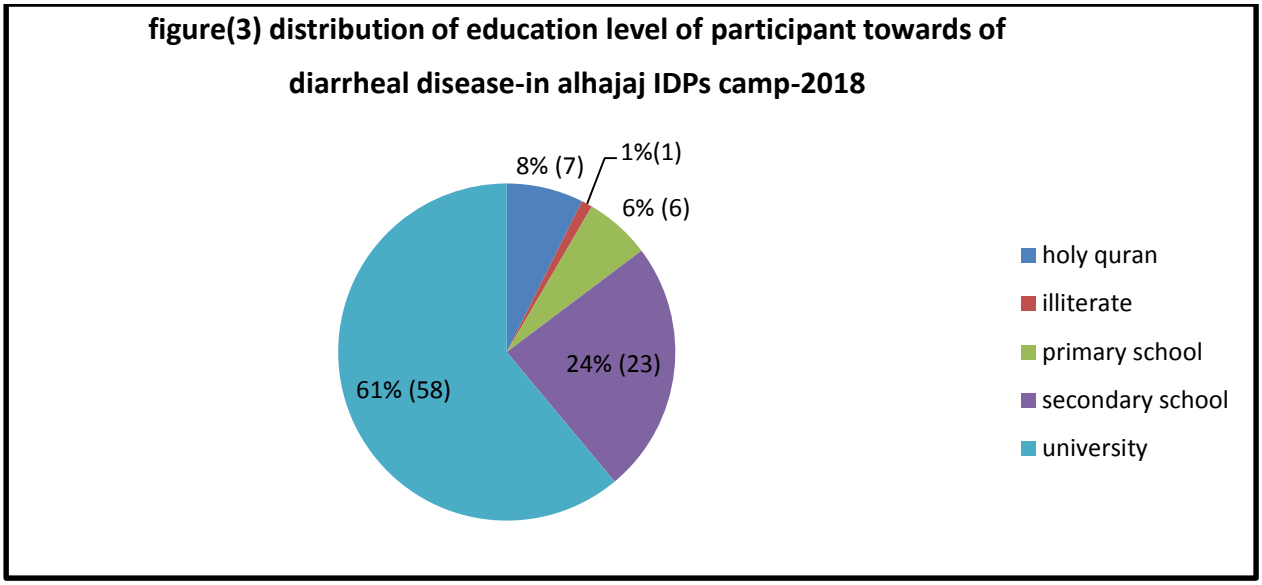

Figure (3) shows: education level for individual in the camp is high with 61% of them universal, which means that a large number of young people are educated and know the diseases and how to prevent it, very small percentage that represents 1 person is not educated.

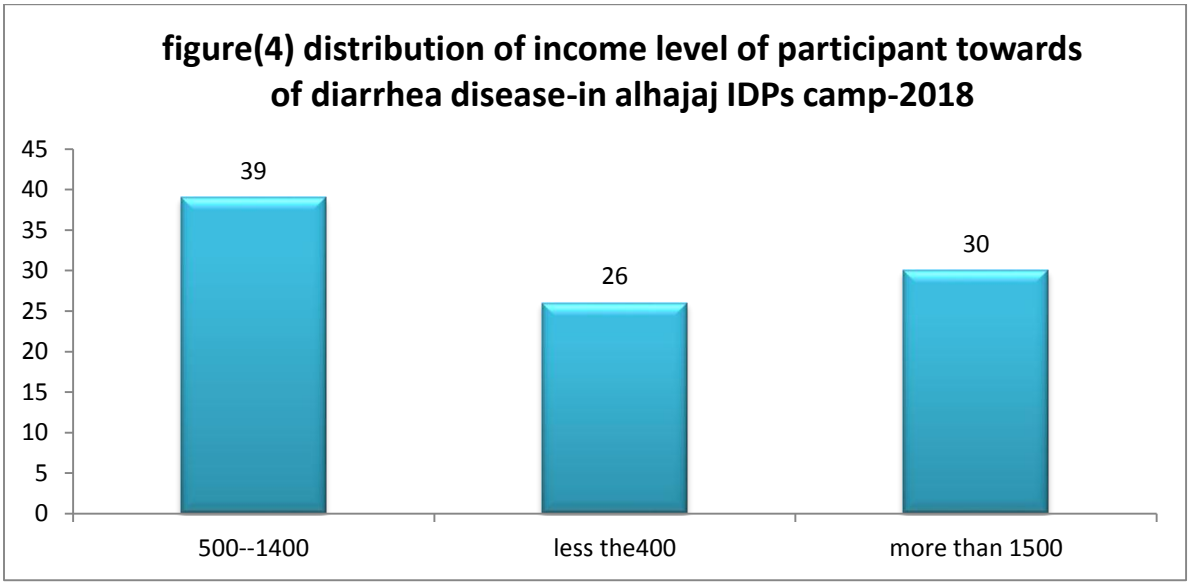

Figure (4) shows: average monthly income per person in the camp between (500-1400) pounds.

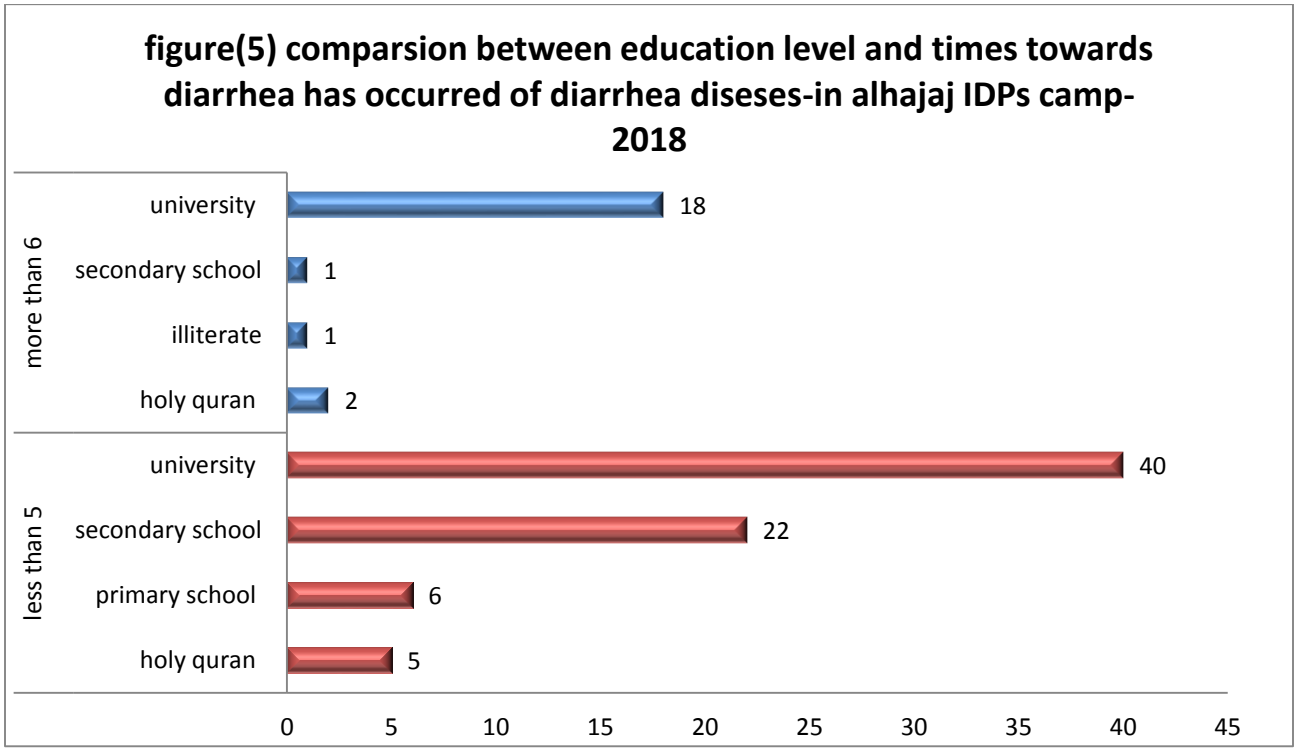

Figure (5) shows: the universal people are most affected by diarrhoea and have been consistently affected by other. This because the variety of food and eating from different place during their studies.

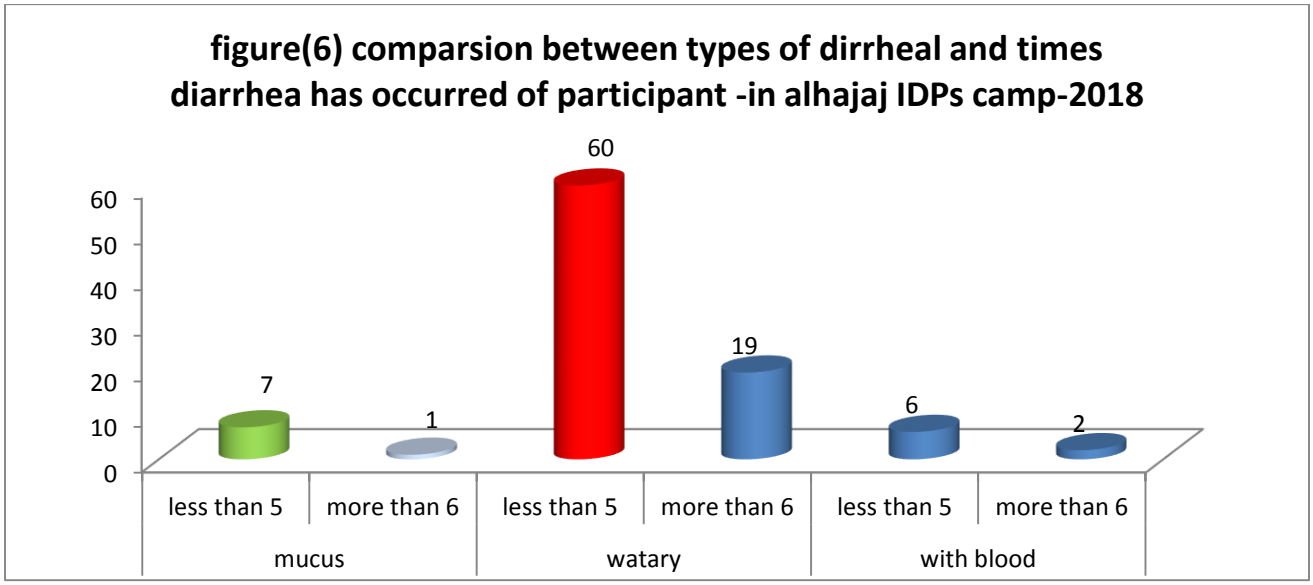

Figure (6) shows: watery type is more occurrence than other types, and other types are equal in occurrence.

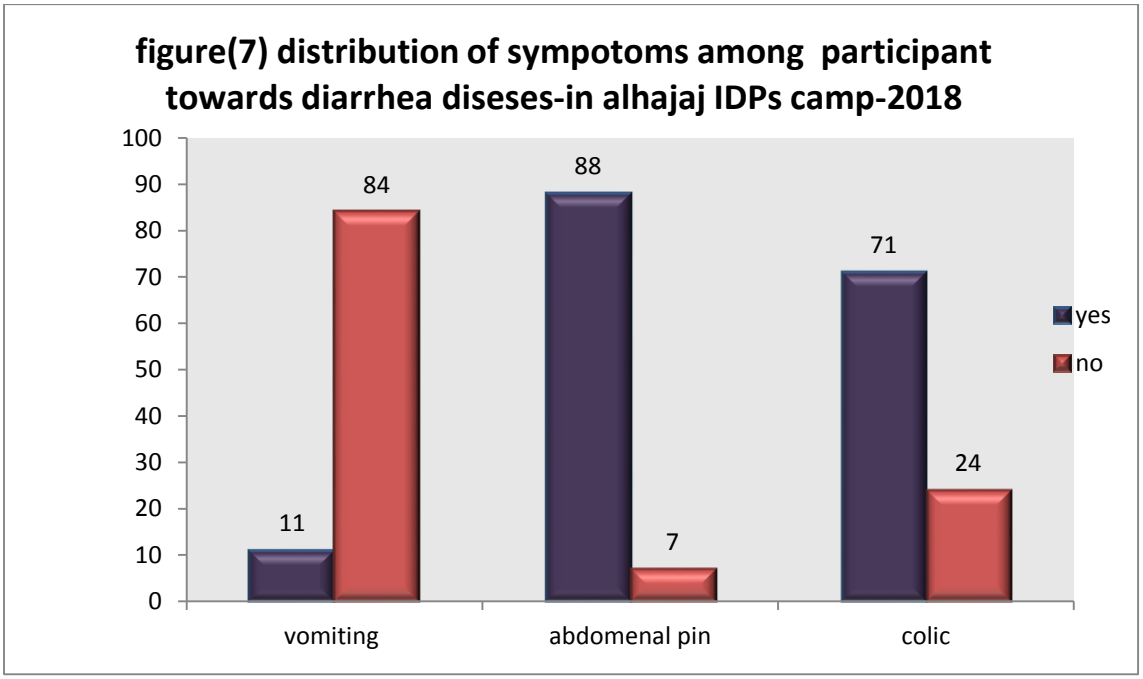

Figure (7) shows: the most exposed people during the diarrhoea disease to the abdominal pain and then colic and the lowest people suffered from vomiting with diarrhoea.

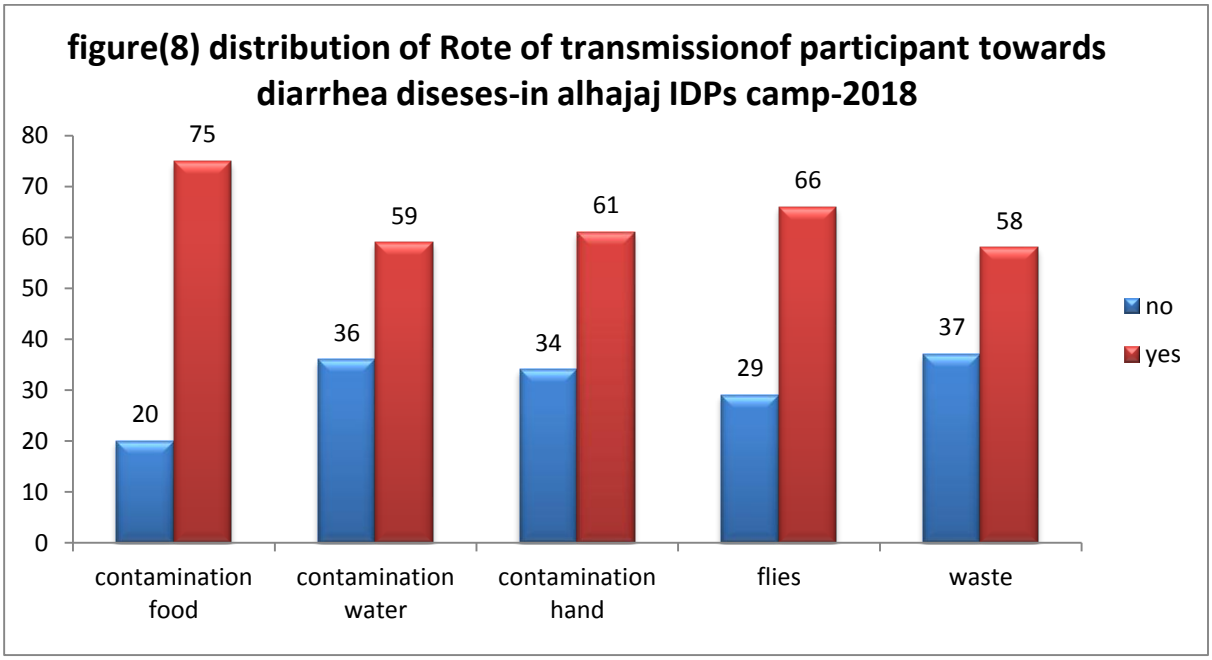

Figure (8) shows: one of the most common methods of transmission of diarrhoea in the camp is contamination food, flies, hands, water and by dirty.

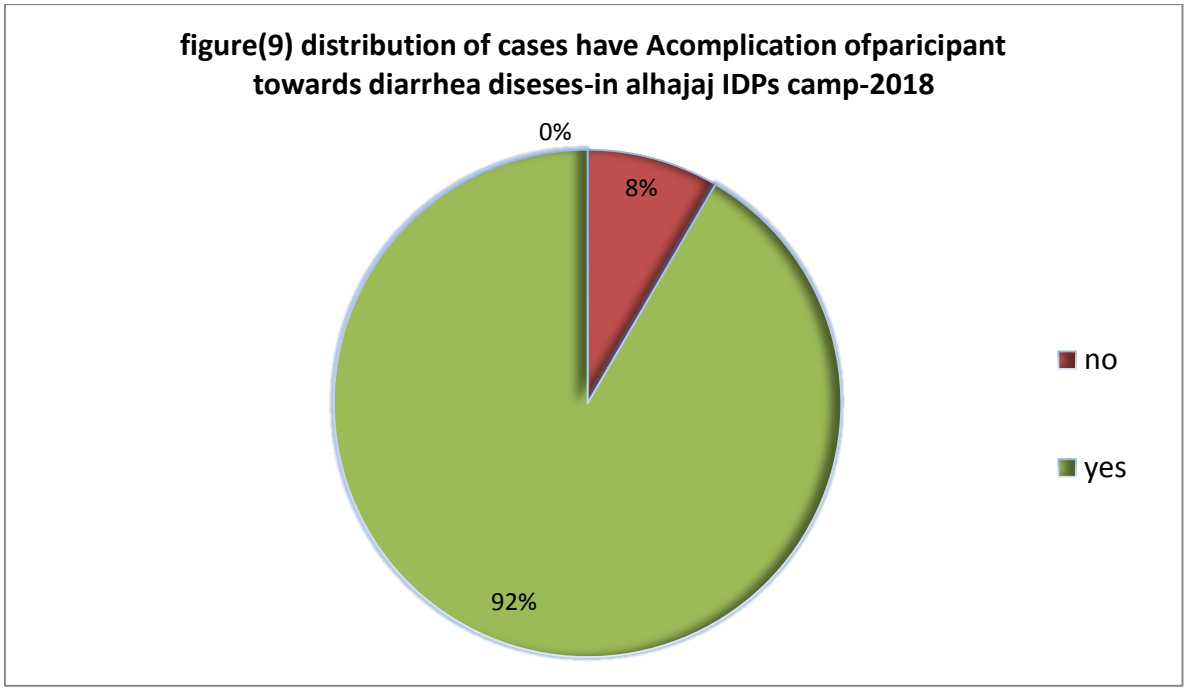

Figure (9) shows: a large number of people suffer from complication 92% of people and 8%less.

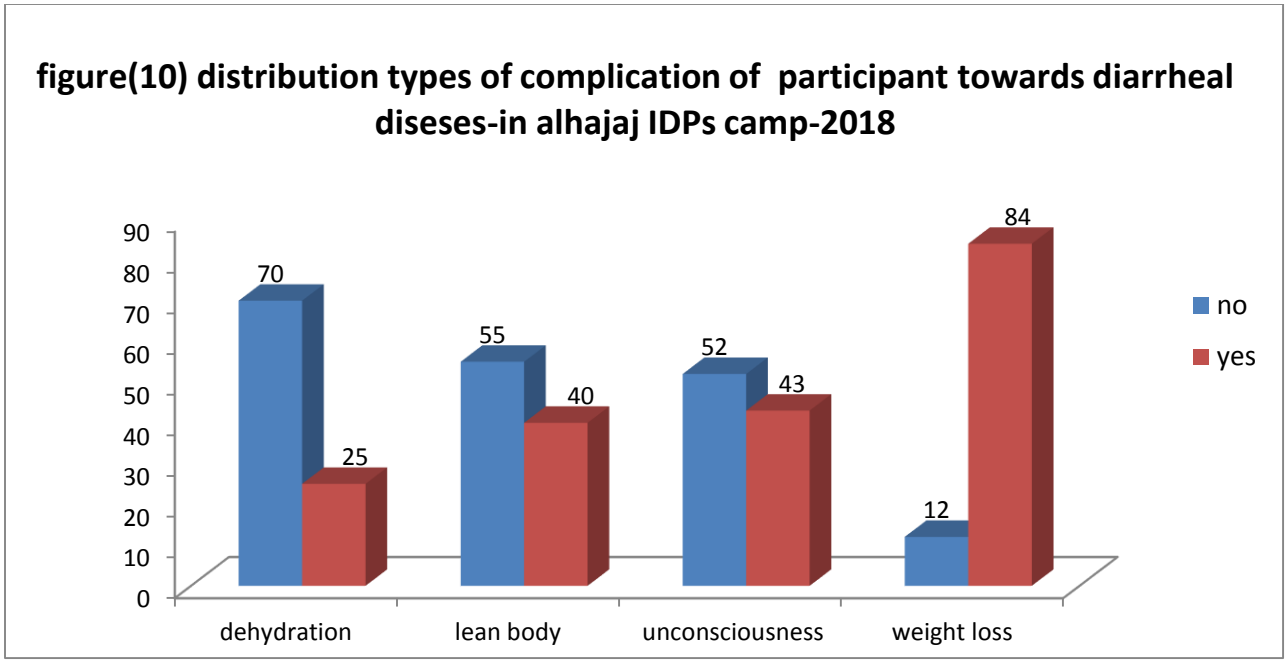

Figure (10) shows: more people there were complication is weight loss, and most people have not dehydration.

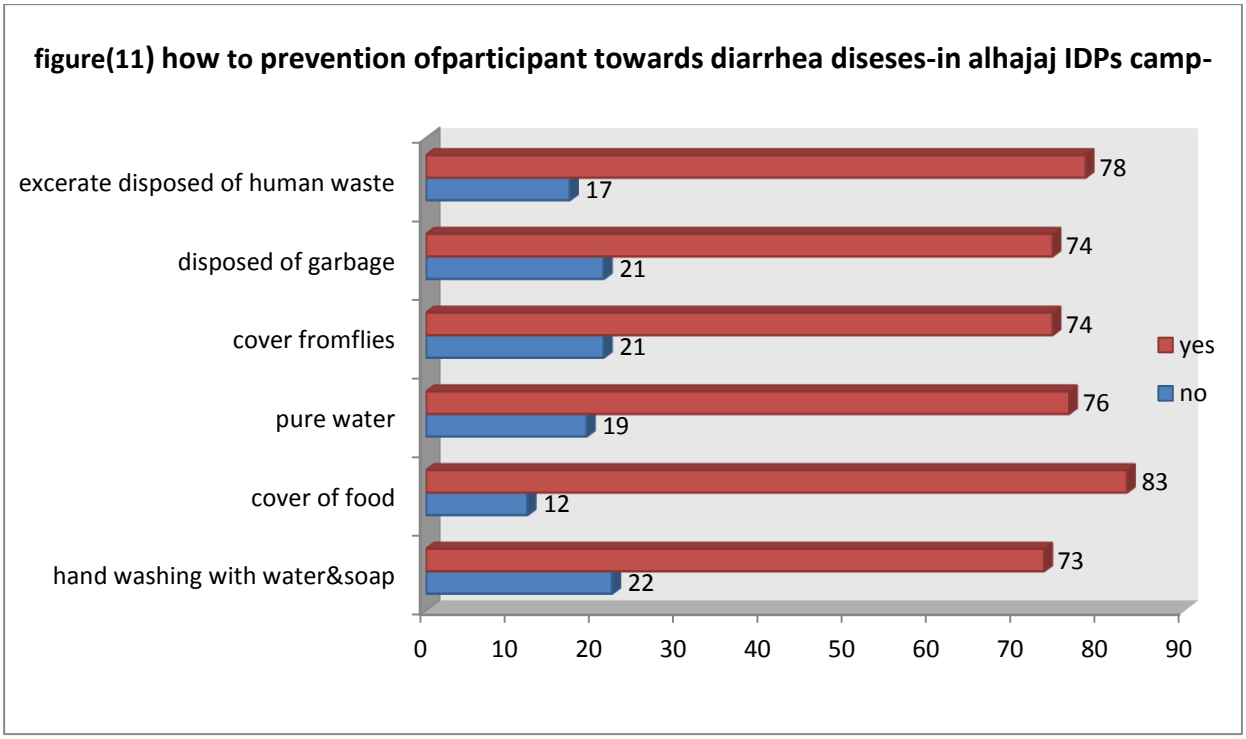

Figure (11) shows: most the things that prevention of diarrhoea are cover of food, execrate disposal, drinking pure water and other.

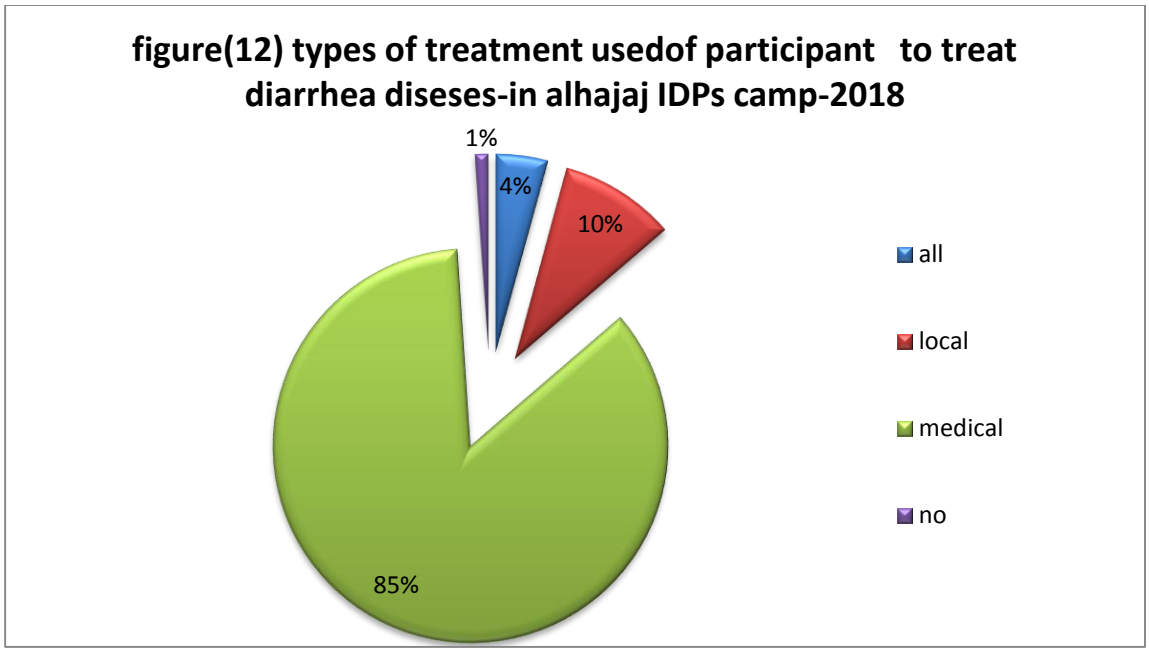

Figure (12) shows: 85% of the people use medical treatment, 10% of them use local treatment, 4% of them use medical and local treatment.

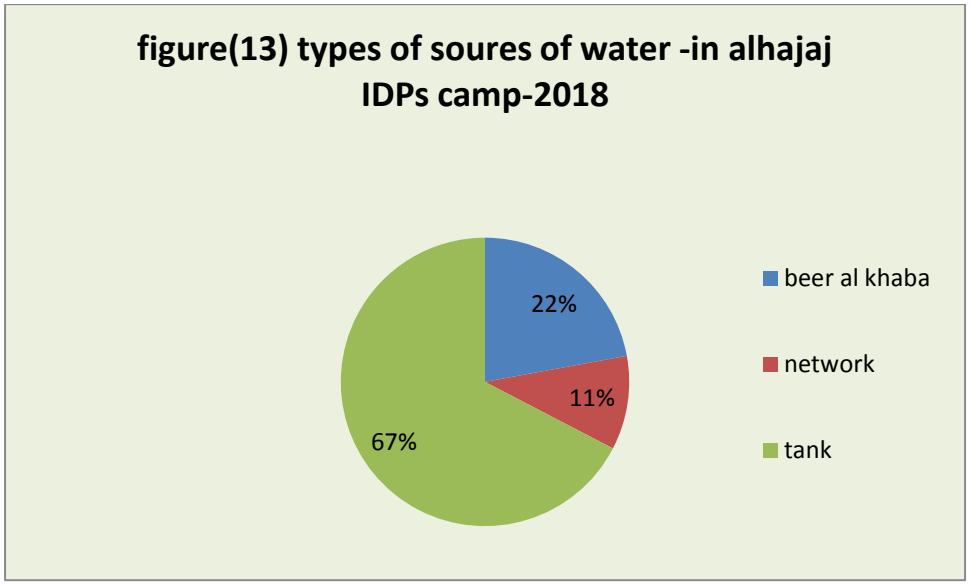

Figure (13) shows: 67% of people in camp using tank as source of water and 22% from people using well of forest and 11% network.

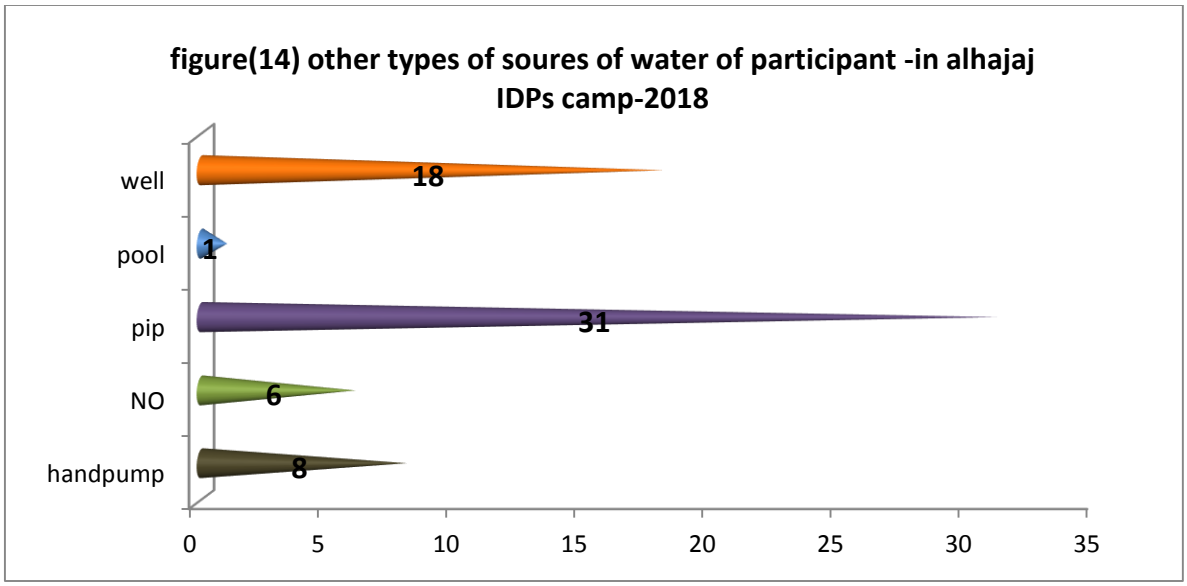

Figure (14) shows: other types of sources of water 31 of people in camp use pip and 18 other well and 8 hand pump and 1 pool.

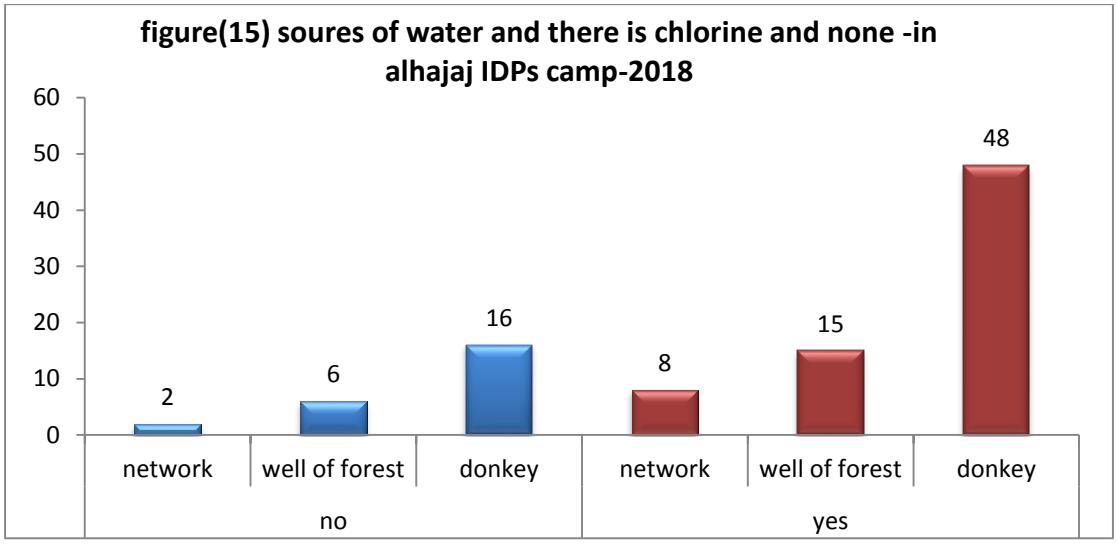

Figure (15) shows: more chlorination occurs in donkey, well and public water network is lost chlorine.

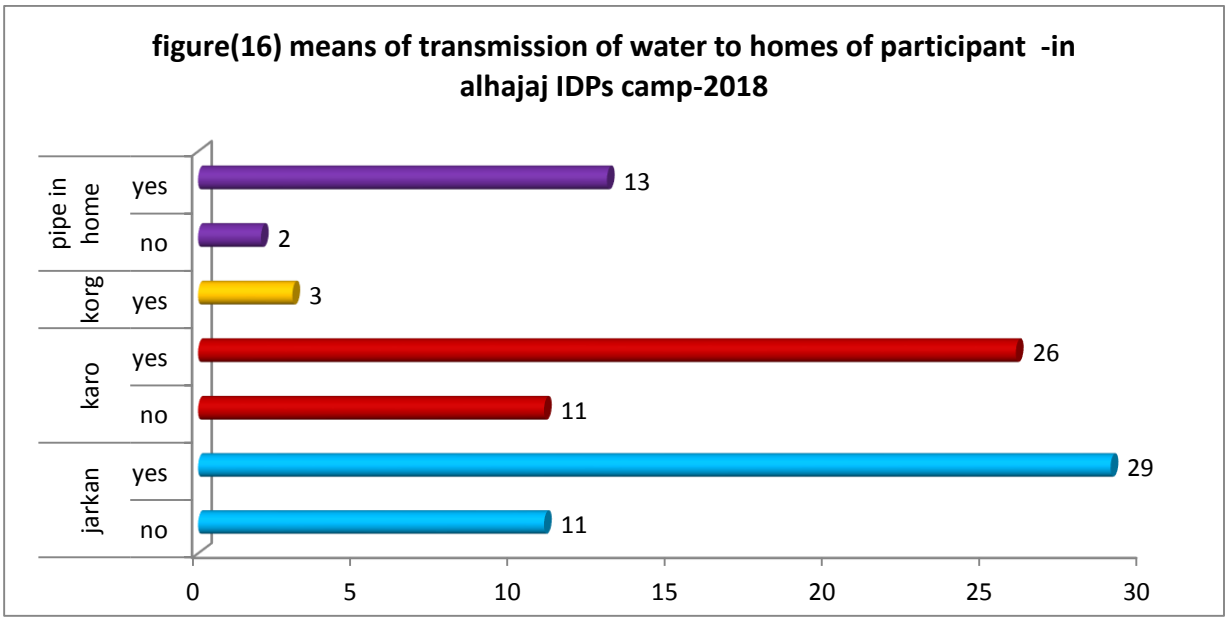

Figure (16) shows: in the camp, the most efficient of transporting water is the jerkin and karo and other in home pip.

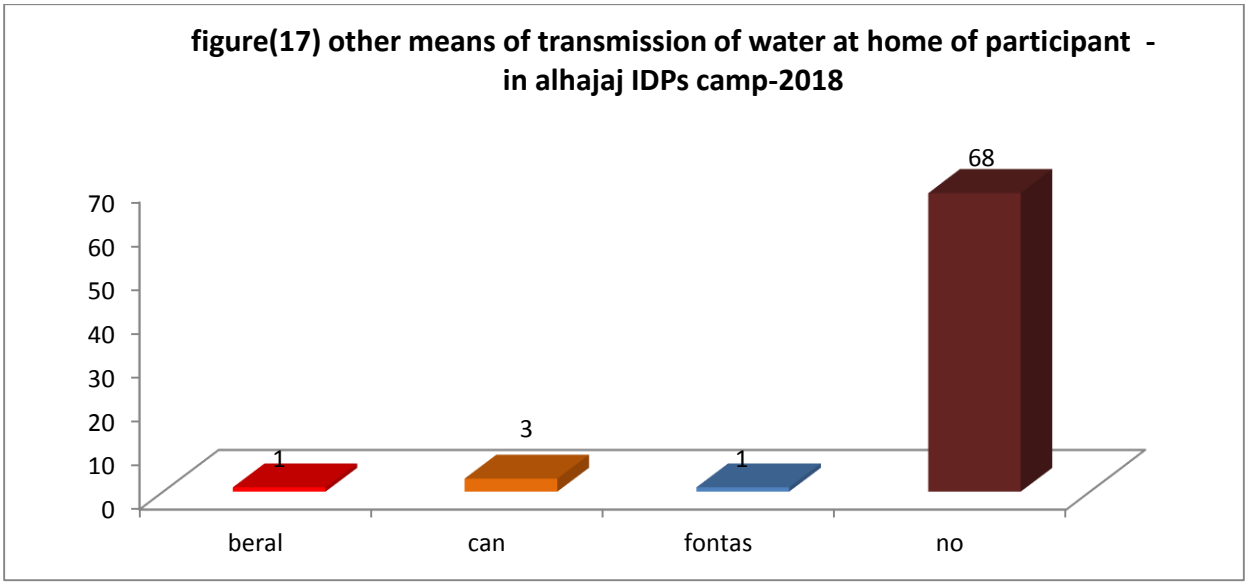

Figure (17) shows: there have other transport of water can, barrel and fontas.

A total of 95 individual over 18 years age, in alhajaj IDPs camp in west Darfur state march2018,were conducted to this study by interviews, observation and based on questionnaire.

In the study the age group 18-29 of participant that percentages of male (58%) is higher than female this findings agrees with a study in Sudan (rabab2013) mention that mother age 26-33 is higher.

-The university graduates represent (61%) of the participants this findings disagrees with a study in Sudan (Ahmed -Alfashir-2009), which means that the percentage of awareness is high.

-Income between (500-1400) pounds per month there is a high proportion of poverty which leads to the inability to purchase food and drugs, This findings agrees with (WHO-2007) during the disease period (87%) of them suffer from weight loss during disease.

- most of participants in university level are the most exposed to the disease as a result of the diversity of food and eating from different places 'the pest ways of transmission of diarrhea is through food to (57) of them mentioned that' and said that the coverage of food is the most effective ways to prevent the disease' compered by (63%), This findings agrees with a study in Sudan (Safaa 2015) mention that most of participant are university educated.

- Abdominal pain are the most common symptoms in people who have diarrhea disease about (88) of them This findings agrees with a study in Sudan (Safaa 2015) mention that most of participant suffering from abdominal pain.

-medical treatment is preformed (85%) This finding agrees with a study in Sudan (Nour Eldin 2012) illustrated that 74% of participant practices medication.

-the water source on camp of participants depend is tank (64) of them this finding disagrees with a study in Sudan (Rabab Gorashi 2013)88% of the participant have network.

-Chlorinated in tank (48) of them and other people depending of other method in home like boiling 53of them, agrees with this study (care-Kenya 2005) 83% of the participant used the method of boiling water as treatment method.

-the transmission of water from the source by the jerkins (29) of them and keeping in zir (90) of them this finding agrees with a study in Sudan (Rabab Gorashi 2013) mention that 80% used zir as keeping method.

- (22) Of the participant are less than 5 people and there are (4) rooms in their homes, this findings agrees with a study in Sudan (Safaa 2015) 91% of family less than five

-who cover the food (67) people so as not to be infected diarrhea This findings agrees with a study in Vietnam. (Bui Viet Hung-2006) illustrated that unsafe storage of food for later use the most risk factor of diarrheal diseases.

-some families in study have rubbish scattered in their homes (26%) that lead to diarrhea as well as there is breeding of flies inside the garbage This findings agrees with a study in Nairobi (HUMPHREY MBUTI KIMANI) mention that the presence of insect vectors in the house and uncollected solid waste posed ill health to the community.

-although there are public latrines the open defecation is available on (22) people in the camp and defecation in garbage dump in the camp this finding agrees with a study in Sudan (Rabab Gorashi 2013) mention that is 74% of participant are open defecation.

-the study observed that 9%the environment around the houses is not clean and All participant care about personal hygiene this finding disagrees with a study in Sudan (Rabab Gorashi 2013) mention that 61% of the participant were good personal hygiene.

CONCLUSION & RECOMMENDATION

Most of participant in university level are the most exposed to the disease as a result of the diversity of food and eating from different places, (81%) of them mentioned the pest ways of transmission of diarrhea is through food, they don’t care about healthy eating just beat what they have. Some families in study have rubbish scattered in their homes (26%) that lead to diarrhea as well as there is breeding of flies inside the garbage, this in turn leads to the transfer of the microbes to eat, hands and feed through flies and causes diarrhea. Although there are public latrines the open defecation is available on (22) people in the camp, we fine that the main cause of diarrhea is open defecation in camp and one of the most common diarrhea in the camp is

watery diarrhea to had (79) people affected by watery diarrhea . Of the observation there are 9% of the environments around houses are dirty and (19) kitchens are unclean.

Recommendations

- Raising health awareness at the university level in the form of lectures and raising awareness of the community through seminars.
- All families must put the dirt in the specified place to burn it or bury it through the home visits it exists through the health committee must be reminded of it, (this can be reminded by the sanitation committee at the camp alerting citizens to this).
- Develop laws with the health committee and leader of the camp to solve the problem of open defecation through lectures and workshops or seminars.
- The environment must be cleaned around the camp weekly and cleaning the home daily, supervision that by the sanitation committee in camp during home visits.
- Provision of safe water supply and sanitation in the camp.
- To call for national and international origination for support the community in the camp.
- All these recommendation reduce the proportion of diarrhoea that occurs in alhajaj IDPs camp.

REFERENCES

1. PARK's TESTBOOK OF PREVENTIVE AND SOCIAL MEDICINE-edition 19 http://www.who.int/topics/diarrhoea/en/(2:50-21/2/1018\
2. The management and prevention of diarrhea –practical guidelines-Third edition-world health organization- Geneva-1993.
3. Kosek M, Bern C, Guerrant RL. The global burden of diarrhoeal disease, as estimated from studies published between 1992 and 2000. Bull World Health Organ 2003; 81 (3): 197-204.
4. Urio EM, Collison EK, Gashe BA, Sebunya TK and Mpuchane S. Shigella and Salmonella strains isolated from children under 5 years in Gaborone, Botswana, and their antibiotic susceptibility patterns. Trop Med Int Health; 2001; 6(1): 55–9.
5. Assessement Of Diarrhoeal Disease Attributable To Water, Sanitation And Hygiene Among Under Five In Kasarani, Nairobi County -Humphrey Mbuti Kimani P57/Pt/10518/2008-July2013
6. World Gastroenterology Organization Global Guidelines Acute diarrhea in adults and Children - a global perspective-February 2012.

7. https://www.dabangasudan.org/en/all-news/article/about-15-000-suspected-diarrhoea-cases-reported-in-sudan-ocha\en(2\2018
8. http://www.who.int/topics/diarrhoea/en/(2:50-21/2/1018\
9. Armon K, Stephenson T, MacFaul R, Eccleston P, Werneke U. An evidence and consensus based guideline for acute diarrhoea management. Arch Dis Child; 2001; 85:132-42.
10. Gracey M. Diarrhea and Malnutrition: A Challenge for Pediatricians. J Pediatr Gastroenterol Nutr; 1996, 22(1): 6-16.
11. Jensen PK, Ensink JH, Jayasinghe G, van der Hoek W, Cairncross S, Dalsgaard A.
12. Domestic transmission routes of pathogens: the problem of in-house contamination of drinking water during storage in developing countries. Trop Med Int Health; 2002; 7(7): 604–9.
13. Curtis V, Cairncross S, Yonli R. Review: Domestic hygiene and diarrhoea –pinpointing the problem. Trop Med Int Health; 2000; 5 (1): 22–3.
14. Jane SH, Swanson LN. Diarrhea. A Jobson Publication. Available from URL: http://www.uspharmacist.com/2\2018