

Knowledge, Attitudes, and Practice (KAP) from Baseline Data of Acute Watery Diarrhoea (Awd)/Cholera among Adults (15-49) in the Somali Region of Ethiopia

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Abstract

Despite the many positive health benefits of hand washing, latrine use and household practices, cholera, Acute Watery Diarrhoea (AWD), remains a big challenge globally (WHO 2018). The Somali region of Ethiopia faces multiple disease outbreaks despite government interventions by Somali Regional Health Bureau (SRHB) and development Partners (UNICEF 2017). Deaths due to diarrheal diseases reached 16,573 in 2017 which represented 6.41% of the total deaths (WHO 2017).

The purpose of this research study was to establish the role played by family hygiene practices in reducing AWD cases amongst vulnerable children under the age of five and pregnant women in the Somali region. Further, the study sought to target interventions that strengthen individuals (care givers, and community leaders) and institutions' capacities that shape prevention and treatment seeking in the first 90 days of intervention. Data was obtained from May 1, 2017 to August 1, 2017, and data were analysed using a triangulation of qualitative analysis. Data sources included articles, desk interviews, focus group discussions, and quantitative approaches (facility registers) of the consultation (pregnant women and children). AWD tests from 2015 to 2017 were also analysed, and excel software was applied to compile the data as described in tables and figures.

The study identified 45% of the population lacked basic education and knowledge on various ways of preventing diarrhoea such as good hygiene, food preparation, and latrine use practices. The findings revealed disparity in rural and urban communities regarding access to safe water, latrine use, electricity, media, and health facilities. Findings noted percentages of water source consumption as 18.1% use river water, 12.7% rely on open well., 41% use tap water, and only 5.5% use hand pump and ponds. All these factors contributed to the increase of AWD cases. From the literature, public health preventive interventions are a catalyst to avert disease outbreaks such as AWD or cholera with primary focus among children under five, pregnant women, and adults, although this remains challenging. Training of health care workers is a priority for early diagnosis of AWD. Knowledge gaps exist in clinical trials for AWD treatment protocol, prevention, and nutritional services. Further studies are needed to reduce the knowledge gaps, lack of follow-up, diagnosis, treatment, and prevention of AWD and other disease outbreaks. Understanding of the relationship between good hygiene practices and diseases and how this relationship affects the day-to lives of children, women, and the entire community is worth noting. Similarly, there appears to be lack of knowledge about basic prevention options.

Keywords: cholera/acute watery diarrhoea, outbreak, diagnosis, prevention, practices, adults, children, pregnant women, and Somali region of Ethiopia.

Knowledge, Attitudes, and Practice (KAP) from Baseline Data on Cholera, Acute Watery Diarrhoea (AWD) Among Adults (15-49) in the Somali Region of Ethiopia Acute Watery Diarrhoea (AWD) remains a significant public health problem in many parts of Africa and Somali region of Ethiopia where they can spread quickly unless an outbreak is stopped. The transmission of the causative bacteria is usually through the faecal-oral route of contaminated food and or water caused by poor sanitation practices (UNICEF, 2017a; 2017b). This underpins the international partners' evidence on humanitarian responses to AWD in Ethiopia in terms of necessary cross district and/or cross border co-ordination, as well as the human and financial resources needed (Fisseha, 2016; OCHA Somalia, 2018; Oxfam, 2017; UNICEF, 2017a). UNICEF, WHO, and others assessed their own AWD responses in Ethiopia and

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neighbouring countries (WHO (2017a; 2017b; 2018; Fisseha, 2016; UNICEF 2017a, 2017b; Beauregard, 2017; and Oxfam, 2017). Up to 50 per cent of cases die from dehydration and kidney failure, if not adequately rehydrated. Infection without symptoms or with only mild diarrhoea also occurs, particularly in children (UNICEF 2016). This can occur as a short outbreak and protracted epidemic deepened by the enduring problems of lack of access to clean water, adequate sanitation, and the absence of any long-term impact on cholera incidence through perennial responses to major outbreaks. Mass urbanization, climate change, and growing competition for water resources may, in fact, contribute to further increases in the AWD burden (WHO 2016).

While there are some contextual and environmental factors involved, such as decreased rainfall and decreased vegetation cover, the sanitation and poor family practices is the main driver of the complex outbreaks (UNICEF 2017b). The government of Ethiopia through its regional Somali Regional Health Bureau has worked closely with development partners (UN family), International Non-Governmental Organizations (INGOs), and communities on implementing lifesaving interventions. These interventions consist of improved surveillance for early case detection, Non-food Items (NFI), timely response, and effective case management to lessen or prevent further outbreaks of AWD/cholera in the target population. This has had an impact in affected areas, but the challenges of infrastructure access, untreated water sources, and poor family practices such as water quality, food handling, storage, and latrine use are some of the challenges that remain.

Methods

Description of site

The Somali Regional State of Ethiopia is the largest and easternmost of the nine ethnic divisions of Ethiopia. The state borders the Ethiopian states of Afar, the chartered city Dire Dawa, Oromia to the west, Djibouti to the north, Somalia to the north, east, and south, and Kenya to the south-west. With Jigjiga as its capital, presently the state comprises nine administrative zones and 49 woredas to mean wards. The baseline study was done in five zones namely: Jigjiga, Jarar, Dollo, Shabelle, and Fafan. These zones were selected due to active AWD cases out of the nine administrative zones. Zones with large populations had a variety of services provided at the operational level of the health pyramid by partners.

Study design

A cluster sampling was designed (qualitative, quantitative, comparative, and analytical in nature) to assess the role played by family practices in promoting health seeking behaviours that shape prevention and treatment seeking using a combination of health education strategies (intervention) on AWD testing and sustaining good family hygiene practices among adults aged 15-49 years in five zone communities. This was compared to standard care seeking (control) in five communities all in the Somali region of Ethiopia.

Choice of design

The study design focused on evaluating specific interventions and allowed for reduced economy study. However, cluster sampling made blinding more likely and minimized the chances of selection and informed bias.

Data sources

Information was obtained from structured interviews, questionnaires, telephone survey, and examination of Cholera Treatment Center (CTC) records of the study participants in the five active zones with AWD. A review of the literature included the past and present published research material along with historical information on AWD/cholera (Desai, Akalu, Teshome, Teferi, Yamuah, Kim, Yang, Hussein, Park, Jang, Mesganaw, Taye, Beyene, Bedru, Singh, Wierzba, & Aseffa (2015).

Data collection methods

Participants were adults, 15-49 years of age, in the five zoned communities. Data were obtained through an interview schedule using a questionnaire at least 250 interviews (50 in each of the five zones)

with members of the Somali communities. Adapted, semi-structured interviews, participant observation desk reviews, and Focus Group Discussions (FGD) were conducted with Kebele leaders, CTC managers, and Health Extension workers across the five selected zones. Review of the professional research literature on the topic. Collection of data was conducted with local community-based organization, UNICEF, on all focal points in the zones and active participation of local community leaders. In addition, data collectors were selected from each of the five zones, who were able to speak the local language and trained in a central place at Jijiga city for 2 days and provided reading/data tools and methodology to collect data. As they could speak the local language there were no language gaps.

Statistical method

All sources of data collected were filed using the Excel software. We used the correlation analysis technique to calculate the frequencies, proportion of screened adults (15-49), family prevention practices, and the prevalence of AWD per the 90days (3 months) in the different groups. Figures and graphs representing the data were designed on Excel software.

Ethical considerations

The fact that this work involved legal adult participants implies limited ethical issues. Secondary data meant no written consent was sought, but as public health professionals, we kept secret all information. Due ethical requirement process was followed including confidentiality rights. An administrative authorisation of the study area was obtained from the Somali Regional Health Bureau (SRHB) leadership before data collection to address recommendations for implementation. We also kept results available within the study locations.

Results

With the help of the data collectors (Cholera Treatment Center managers, UNICEF focal points, Non-Government Organization (NGO), focal points, and Kebele leaders) we consulted records, registers and interviews to collect the total number of adults, and pregnant women tested at the Cholera Treatment Center (CTC). The graphs and figures below provide analysis of the findings (See figures 1-5). The data analysis revealed a lack of basic prevention measures, proper knowledge, and awareness among the people as the main reason for AWD outbreak in the Somali region of Ethiopia. This was worsened by poor latrine use, unsafe water sources, the lack of proper health education in communities, and around health facilities. The measures adopted for the purification of water treatment needed modification. The primitive methods of water purification did not fit into current contexts. Further, the data indicated exacerbation of AWD/cholera cases resulted from the delay in early diagnosis of AWD cases and treatment care seeking were inadequate.

Discussion

Linking with objectives

The objective themes below merged from the study

Objective 1: Health seeking behaviour of ethiopia citizens from the somali region

Response to health seeking behaviour of Ethiopia citizens from the Somali region. The medical health condition of the people is inadequate in the Somali region of Ethiopia. Inadequate infrastructure access and poor medical facilities makes the government helpless to effectively address severe cases of AWD outbreak. The tribes of the Somali region are mainly nomads surviving in the extreme climatic conditions. The daily living hygiene practices varies from tribe to tribe and is unhealthy. Food handling, unsafe water sources, lack of latrine use, unhygienic living conditions, and family practices exacerbates the situation of AWD.

Objective 2: The extent of awareness, attitude shaping and seeking care for AWD among somali region people

Response of awareness, attitude shaping and seeking care for AWD. It is observed that flooding leads to accumulation of stagnant water that becomes a breeding source for numerous diseases including

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AWD. The use of a proper disposal system is needed to keep the environment clean and healthy. Citizens need adequate information, education, and motivation on proper AWD awareness on the benefits of latrine use, drinking and use of safe water sources, practices of proper handwashing, food preparation, and handing in the prevention of AWD. This also confirms the evidence from other authors such as Somali Regional Health Bureau (SRHB) data which indicates that 45% of the population lack basic health education and knowledge on various ways of preventing diarrhoea, including good hygiene, food preparation and latrine use practices (UNICEF 2017a). This underpins the international partners' evidence on humanitarian responses to AWD in Ethiopia, in terms of necessary cross-district and cross-border coordination, as well as the human and financial resources needed. It has been identified that the creation of awareness among the people is vital and needs to be executed in an organized manner.

Objective 3: The factors that have impacted the health seeking behaviour of the region people

Factors that have impacted the health seeking behaviour of Somali region of Ethiopia people. There were numerous factors that were responsible for making the health seeking behaviour of the people of Ethiopia region of Somali worse. It has been observed that the natural disaster plays an important role in making the health care of the entire area suffer. The repeated flood and poor sanitation conditions create multiple challenges in the health pyramid. It has been identified that the unavailability of the proper healthcare infrastructure contributed yet another factor for the poor health condition of the people of the Somali region of Ethiopia (Seid et al., 2015). This is in line with an assessment published by African Ministers' Council on water covered four countries Uganda, Kenya, Ethiopia, and Somalia (AMCOW 2016) indicated that there were wide discrepancies in access to rural water supplies between and within regions. The data indicated that 73% of the urban population had access to safe water compared to 30% in the rural setting. There was a big disparity in the use of sanitation facilities between urban and rural populations (UNOCHA 2017c). This indicates that poor sanitation conditions are one of the vital factors contributing to outbreak of epidemic diseases like AWD.

Future scope of research to answer the results

The research work shall be an important source of literature for the future researcher and provide a definite base for further research studies. The research paper contains a detailed explanation of the factors contributing to the occurrence of the AWD diseases and the resource is an essential source of information. The AWD tracking system needs to be more robust and effective to identify the disease pattern at an early stage to offer timely options for prevention and treatment. The development of rapid response team (surveillance, case management, social mobilisation, nutrition etc) database will fill the skill gaps and provide a basis of preparedness mechanism in the region. Creating awareness and changing attitudes was the main reason for conducting this research. Hence, the research paper has numerous advantages as it contains vital information regarding the reaction of the people towards the severe epidemic like that of AWD.

Conclusion

At the end of the study, we attained most of our objectives: community leaders, community health workers, and facility staff at the Cholera Treatment Center (CTC) are aware of the importance of collecting data for analysis on AWD/cholera of adults, pregnant women, and children. Better training of health professionals and appropriate health education of the people at all levels on AWD increases their response to seek early AWD screening test and prevention efforts. It was observed that in Somali region of Ethiopia across the five zones the number of pregnant women affected by AWD is higher than men in the same age group. The number of children screened for malnutrition who also present as positive for AWD is increasing at the facility level. The lack of proper sewage system, as the zones are drought prone areas, is a vital reason for the outbreak of the AWD. The lack of awareness among the people as well as the scarcity of fresh and purified drinking water force the people to consume unsafe water sources for survival. The low economic conditions of the people and the poor medical facilities available are responsible too for acute watery diarrhoea. It is vital for the citizens to have access to a health facility and know basic prevention approaches on AWD. Creating this awareness is needed for

the people to live healthy and diseases free. AWD is a preventable disease but if, not treated can be life threatening.

Difficulties

The main difficulty we found during the study was the collection and compiling of data from the CTC registers as this method of protection of data has its limits. The main challenge we faced was security limitations to access remote locations as Ethiopia region of Somali is in what is considered a high security risk region. Also, there was an unavailability of study participants in the households except children who could not provide consent without their parents.

Limits of the study

As with cluster sampling, when unequal size of some of the subsets are selected, an element of sample bias tends to arise due to data source. For example, nothing is registered about the male partners' screenings, needs, or loss to follow-up in the AWD activities at the CTC facility. Then it becomes difficult to estimate the real prevalence of AWD in this group. Another limit of this study is few pregnant women present late at facility for AWD screening due to infrastructure access and preferred native doctors rather than qualified personal including home delivery. There were no limitations expected on the part of the respondents who are the primary recipients as we used the local population (data collectors) trained and deployed. The time was the major issue faced while conducting the research.

Recommendations

The following recommendation is for the improvement of the healthcare system of the Somali region. The Ministry of Health (SRHB) needs to develop standards, policies, and frameworks relevant to use by the care givers and development partners for effective and efficient strategic communication practice. Also recommended is an increase in the number of medical facilities in the Somali region available to address in a timely manner the rural-urban disparity. Improvement in the AWD detection machine is needed as well.

There was a positive correlation between waste disposal and AWD infection. With this view in mind there is a need to work towards the improvement of the drainage facilities and strengthen the community engagement plan and preparedness before any intervention is done in the region.

The creation of proper awareness mechanisms among the people is needed for the improvement of the health of the people. Inter-personal communication (IPC) strategies with mass media channels needs to be reinforced to address the high levels of illiterate in the region. This will address the gaps of inconsistent messaging and increase awareness of community members using the main trusted sources of information (radio, health care workers, relatives and religious leaders). Key areas of focus should cover AWD mode of transmission and ways of preventing it. The data collected from baseline assessment need to be put to professional use to inform project implementation of Strategic Behavioural Change Communication (SBCC) activities and help create increased awareness of early childhood diseases and adoption of positive household practices.

The data was used to generate baseline report to inform cholera response plans and implementation for government, partners and NGOs. In addition, findings were used to inform the SBCC strategy development and information, regional advocacy briefs, education and communication (IEC) materials development.

Figures, charts, and tables

The descriptions of the charts and tables below represent the findings from the baseline study.

Figure 1: Sources of Drinking Water: 18.1% of the respondents use river water for consumption, 12.7% of them rely on the open well, 41% of them use water from the tap, and around 5.5% use water from hand pump and ponds. The use of unsafe water sources, lack of knowledge on water treatment, and food preparation and handling are some of the main sources for AWD outbreak.



Figure 2. If respondents treat the water before using it for drinking or another purpose

It was interesting to note that around 75.8% of the respondent admitted that they treat their water before drinking while 23.8% of the respondent not believe in treating of water before consuming it. This data indicating a lack of proper knowledge of the people towards their safety towards health.



Attitude: If respondents consider their water to be safe for consumption



The collected data indicated: 26.1% of the respondents stated that they wash their hands after using the toilet; 23.3% of them shared that they wash their hands before eating; 16.5% of the people wash their hands before preparing foods, and only 13.7% wash their hands after providing care to the sick person. These factors are an indication that they lack awareness of the impact of not washing hands frequently.



Figure 4. What people use to wash their hands

58% of the respondents use soap for cleaning their hands. Whereas around 20.2% of the respondents use ash, and around 21.0% of the respondents use only water for cleaning. This indicates a great deal of reluctancy on basic hygiene.



Figure 5. Where People in the Family Defecate

The primary data shows that around 64.9% of the respondents indicated regular use latrine for family defecation purposes; 29.8% of the respondents go to bushes to defecate. While 2.4% of the respondents use the area near the rivers. With about half of the population using bush and near river for defecation there is an increased risk of AWD incidence.



Figure 6. Information source frequencies

Information through radio with 31.5% is most popular; 4.7% of the respondents stated that they get information from their friend's; and 7.3% obtain information from family; 8.9% of the respondents get information from their neighbours. Information through mobile phones and announcements were the least of all sources according to the respondents.



Figure 7. In the past three months have you heard any radio advertisements about awd?

51.1% of the respondents stated that they heard the advertisement on the radio regarding the AWD; while about 48.4% of them did not hear any such advertisements. The lack of proper mass communication in the region was the reason for the huge difference in the selected criteria.



Figure 8. Radio Messages Frequencies

20.3% of the respondents stated that the advertisement was about water treatment, while 17.2% indicated the advertisement was on use of soaps; 12.2% stated that the advertisement indicated cooking food well. This shows that mass awareness is important for providing proper knowledge to the respondents concerning outbreaks.



Figure 9. TV message frequencies

17.7% of the respondent stated that the advertisement was about the treatment of the water; 18.8% stated that it was regarding the use of soaps; 12.5% stated that the advertisement related to cooking food well. The above data states that mass awareness is important for imparting proper knowledge among the respondents with the help of television.



Figure 10. In the past three months, have you read any poster on awd.?

54% of the respondents have seen a poster regarding AWD; while 46% have not. The lack of awareness is clear with the above data.



Figure 11. Poster message frequencies

20.6% of the respondents stated that the advertisement was about water treatment; while 18.5% stated a bit was on use of soaps; 12.1% stated that the advertisement was on cooking food well. This emphasizes the importance of mass awareness for imparting proper knowledge among the respondents with the help of poster messages.



Figure 12. Place of Poster Frequencies

Number of people who have seen any of the posters

72.6% of the respondents have seen a poster regarding AWD; while 27.4% have not. The lack of awareness is clear with the help of the above data that only 72.2% have seen a poster regarding awareness.

37.6% of the respondent stated that they have seen the poster on the wall of the clinic; while 18.8% said that the poster was seen by them on the notice board; 16.1% of them said the posters were shown by the health extension worker (HEW). The place of poster is critical in creating awareness and shifting attitudes and the minds of the people residing in the area.



Figure 13. Whole Frequencies

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20.8% of the respondents said that the community discussion was led by religious leaders; 32.2% stated that the health extension workers were the leaders of the discussion; 31.5% stated it was the Kebele or government officers. Awareness is vital to reduce severe diseases. The person leading the discussion must have a strong convincing personality.



Figure 14. Have you taken part in any discussion about AWD in your community?

75.4% of the respondents had taken part in the discussion over AWD; while 24.6% of the respondents kept away from any such kind of discussions. The awareness can only be created among the people with the help of mass-participation of the people in the discussion regarding AWD.



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