

Assessment of Knowledge, Attitudes and Practices (KAP) Among Food Handlers regarding Hand Hygiene in Galkayo District Somalia.

Article in Galkayo July 2022

Abdulkadir Mohamed Mohamud (jiindhe),

Summary

Background

Globally there is an estimated 1.7 billion cases of diarrheal disease caused by lack of proper hand hygiene annually (13). The highest proportions of the burden of infectious diseases related the lack of proper hand hygiene occurs in the middle- and low-income countries in Africa, Asia and Latin America, In developing countries (Including Somalia) diarrhea (due to poor Hand hygiene) ranks as the second leading cause of death among children below the age of 5 years accounting for about 18 % of all the deaths. Africa and South East Asia accounts for about 78% of all the diarrhea related deaths among children below 5 years (16).

Objective

To assess the level of the knowledge, Attitude and Practice among Food handlers regarding the hand hygiene in Galkayo District, Somalia.

Methodology

The study employed a descriptive cross-sectional study design where data was collected using semi structured questionnaires. Simple random sampling was employed to identify respondents of the study, the Sample size was 384 individuals, and we determined through this formula ($PQZ2/D2$), The data analysis was done using Excel.

Results

The study presented using by tables and graphs. Ethical clearance was sought from Puntland State of Somalia Ministry of Health, the administration of Galkayo district and respondents respectively.

Respondents in this study showed low knowledge about the hand hygiene where 75.4% of them have not enough knowledge about the hygienic methods of hand washing. Also this study shows that 59% of the respondents have negative attitude toward the hand hygiene practice.

Conclusion

In this study provides evidence that there are low rates of knowledge and negative attitude about the proper hand hygiene practice in Galkayo city, Somalia. Additionally the data suggests that hand washing before handling the food has significant influence on the rate of many infectious diseases in the city.

Keywords: Hand Hygiene, Knowledge, Attitudes, Practices Food Handlers.

Introduction

Hand washing (or **handwashing**), also known as **hand hygiene**, is the act of cleaning one's hands with soap or handwash and water to remove viruses/bacteria/microorganisms, dirt,

grease, or other harmful and unwanted substances stuck to the hands. Drying of the washed hands is part of the process as wet and moist hands are more easily recontaminated.^{[1][2]} If soap and water are unavailable, hand sanitizer that is at least 60%

(v/v) alcohol in water can be used instead, unless hands are visibly excessively dirty or greasy.^{[3][4]} Hand hygiene is central to preventing the spread of infectious diseases in home and everyday life settings.^[5]

The World Health Organization (WHO) recommends washing hands for at least 20 seconds before and after certain activities.^{[6][7]} These include the five critical times during the day where washing hands with soap is important to reduce fecal-oral transmission of disease: after using the toilet (for urination, defecation, menstrual hygiene), after cleaning a child's bottom (changing nappies), before feeding a child, before eating and before/after preparing food or handling raw meat, fish, or poultry.^[8]

When both hand washing and using hand sanitizer are not available, hands can be cleaned with uncontaminated ash and clean water, although the benefits and harms are uncertain for reducing the spread of viral or bacterial infections.^[9] However, frequent hand washing can lead to skin damage due to drying of the skin.^[10] Moisturizing lotion is often recommended to keep the hands from drying out; dry skin can lead to skin damage which can increase the risk for the transmission of infection.^[11]

Studding in developing countries show that lack of awareness and knowledge among Food Handlers as regard the importance techniques methods and quality of hand hygiene (12).

Globally there is an estimated 1.7 billion cases of diarrheal disease caused by lack of proper hand hygiene annually (13). Diarrheal diseases related the lack of proper hand hygiene among children is the capital of the north-central Mudug region of Somalia. The city of Galkacyo is divided into two administrative areas separated by a loose boundary.

Geographically Galkacyo is divided into four main quarters: Garsoor, Horumar, Israac and Wadajir. Puntland controls Israac horumar and Garsoor Galmudug state controls the Wadajir to the south.

Following independence, Galkacyo was made the center of the Galkayo District. The city has grown considerably in recent times and serves as a commercial hub. Population estimates range from 80,000 to 315,000.

Study design

below 5 years accounts for about 84% of the global burden of diarrheal diseases [13].

The highest proportions of the burden of infectious diseases related the lack of proper hand hygiene occurs in the middle- and low-income countries in Africa, Asia and Latin America [14].

In developing countries (Including Somalia) diarrhea (**due to poor Hand hygiene**) ranks as the second leading cause of death among children below the age of 5 years accounting for about 18 % of all the deaths. Africa and South East Asia accounts for about 78% of all the diarrhea related deaths among children below 5 years (16). In Africa alone there are about 4 billion cases of diarrhea among children annually that are associated with poor hygiene [17,18].

In Somalia only about 45% of the population is able to access improved water sources to maintain the hand hygiene. The poor access to safe water is attributed to the unpredictable rainfall patterns, conflict and inadequate maintenance of the water sources. Relatedly only about 25% of the population have access to improved sanitation facilities within a distance of 10 meters. Consequently, the morbidity rates and malnutrition rates among Somalia children are always alarming (15).

Methodology

Study Area

The study was conducted in Galkayo district. Galkayo (Somali: Gaalkacyo, Arabic: جالكعيو, also known in Italian as Gallacchio or formerly Rocca Littorio

The research employed descriptive cross-sectional design to determine the level of knowledge, Attitude and Practice of Food handlers towards the hand hygiene in Galkayo city, Somalia.

Procedure:

Data collection, Sample size determination and sampling technique

Data was collected using a semi structured questionnaire. The study was ethically approved by Puntland Health Research Centre. Permission and consent were sought from the administrative leadership of the district and participants respectively. A sample size of 384 Food Handlers was participated, simple random sampling was used to enrol participants in the study.

Data analysis and presentation

The data was analysed using by an excel.

Results

Table (1) Rates of knowledge about the hand hygiene among respondents (Food Handlers)

	Yes %	No %
Do you receive training or seminars related the hand hygiene	18 (4.7%)	366 (95.3%)
Do you know the materials used in hand hygiene	317 (82.6%)	67 (17.4%)
Do you know the hand hygiene can stop the spread of many infectious diseases	123 (32%)	261 (68%)
Is hand drying after hand wash so important	49 (12.8%)	335 (87.2%)
Do you know common bacteria found on hands	15 (4%)	369 (96%)

Table (2) Rates of Attitude about the hand hygiene among the respondents (Food handlers)

	Agree %	Disagree %
The Islamic religion and Somali culture encourage the general cleaning and hand hygiene specifically	211 (55%)	173 (45%)
Contaminated hands can contribute the occurrence of diarrheal diseases	125 (32.5%)	259 (67.5%)
When your hands contaminated with dirt substances, only water is enough for hand washing	277 (72.1%)	107 (27.9%)
Hand hygiene is very important in human health	185 (48.2%)	199 (51.8%)

Rates of practices of hand hygiene among the respondents (Food handlers)

Figure (1) Do you wash your hands before you handle the food?

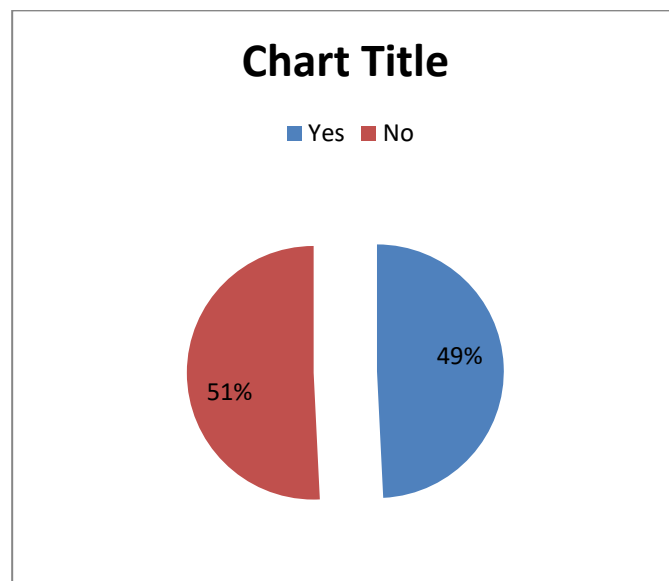


Figure (2) why you are not washing your hands before you handle the food?

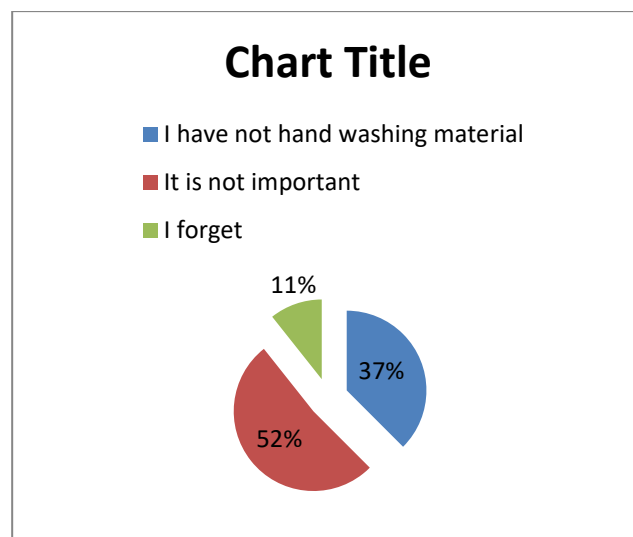


Figure (3) do you wash your hands with water and soap or other detergent after you visit the toilet?

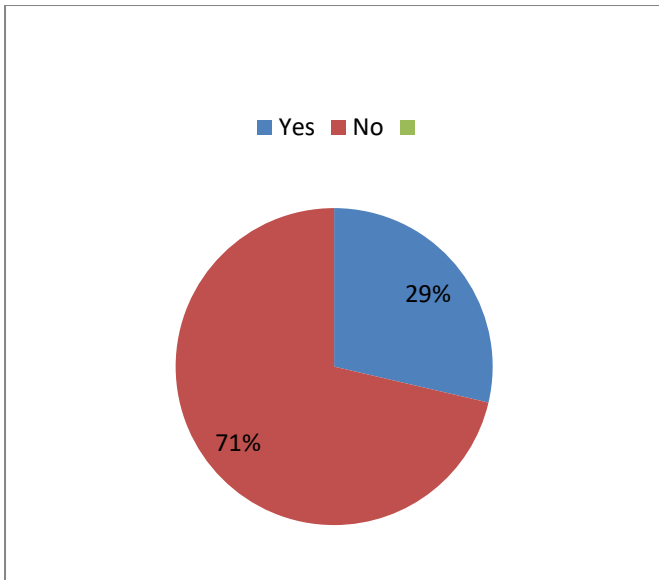


Figure (4) do you use gloves as hand hygiene when you are handling the food?

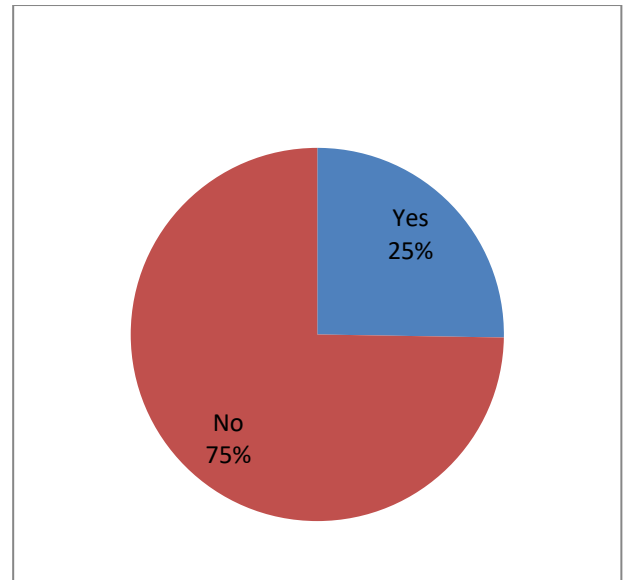


Figure (6) how do you practice your hand hygiene?

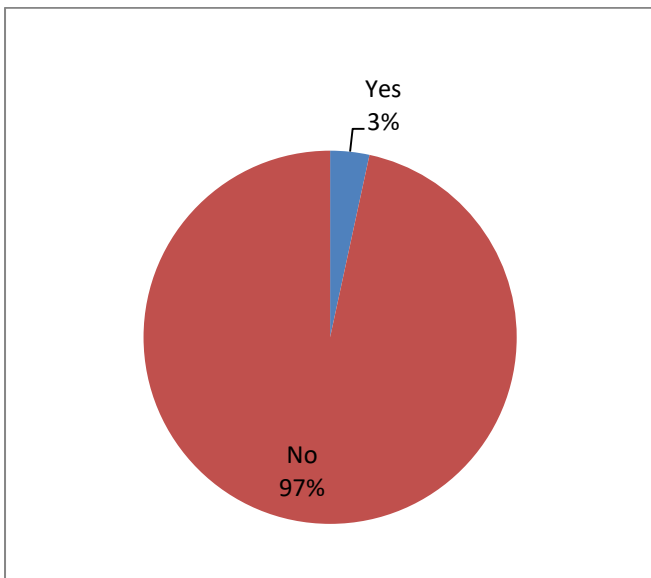
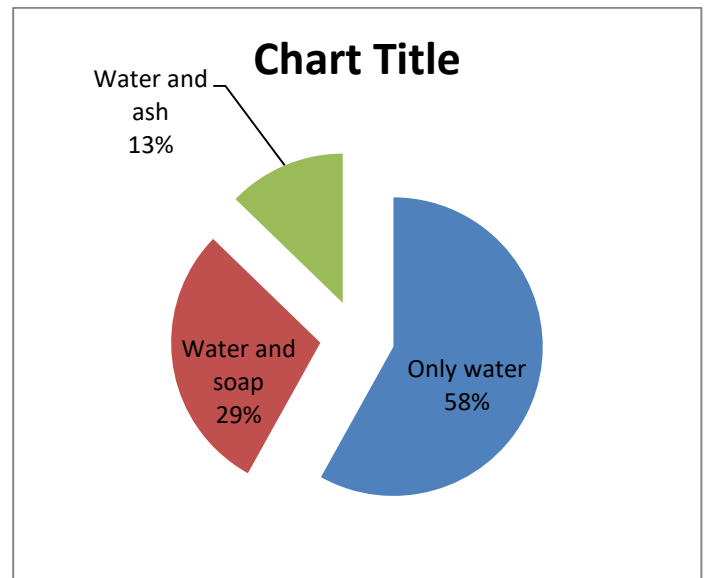


Figure (5) do you practice hand hygiene, when your hands are visibly soiled with dirt, contaminated fluid, excretion, or blood?



Discussion

In this study **Table (1)** presented the results obtained from the five types of related questions. Respondents in this study showed low knowledge about the hand hygiene where 75.4% of them have not enough knowledge about the hygienic methods of hand washing. Only 25.6% known the proper hand hygiene practices and washed their hands thoroughly with soap and hot water before handling foods. Many of the previous studies proved that it is crucial to practice self-hygiene especially hand hygiene because hand is the major agent that transmit microorganisms and intestinal parasites to foods (19).

In this study **table (2)** shows that 59% of the respondents have negative attitude toward the hand hygiene practice, the major cause is lack of enough knowledge about the importance of hand hygiene in human health, so this can be solve continuous hand hygiene education and awareness among the food handlers.

In this study **figure (1)** 51% of the respondents shows that they are not wash their hands before the food preparation, Hand Hygiene and sanitation related factors documented to significantly influence prevalence of diarrhea specially hand washing before preparing food. Similarly based on a study conducted in Nigeria poor hand washing before food preparation and feeding was associated with diarrhea (20). Relatedly in a study done in Vietnam higher risk to diarrhea in children was reported among caregivers who did not wash hands properly with soap and water before feeding (21). Studies have documented that simple hygiene practices such washing hands with soap and water significantly reduces the rates of Microorganisms (22).

When food handlers did not practice good personnel hygiene or proper handling, they can be the vector for growth of microorganisms through hands, cuts, mouths, skins and hairs (23)

In this study, **figure (2)** shows that 37% of the respondents cannot access hand washing material to practice hand hygiene in work places, and this corresponds the related study in Ethiopia, that shortage of clean water will affect the hand hygiene practice and increase the opportunity of cholera outbreak (24)

In this study **figure (3)** shows that 71% of the respondents do not wash their hands with soap and water after they visit the toilet, a lot of people aren't washing their hands after going to the bathroom. In one study that examined the post-bathroom hand-washing behaviors of 3,749 people in the U.S., only 67% of them attempted to wash their hands with soap. And among hand washers, only 5% washed properly with soap for the recommended amount of time. (25)

In this study **figure (4)** shows that 97% of the respondents they do not wear gloves when they

are handling the food, The FDA (U.S. Food and Drug Administration) says that hand washing alone is not sufficient to prevent transmitting these pathogens. That's why using gloves is so important! It provides another barrier between potentially dangerous pathogens and the food the worker is preparing. This is especially important when preparing foods that will not go through a cooking step before it reaches the customer. (26)

Conclusion

In this study provides evidence that there are low rates of knowledge and negative attitude about the proper hand hygiene practice in Galkayo city, Somalia. Additionally the data suggests that hand washing before handling the food has significant influence on the rate of many infectious diseases in the city. In general the findings of this study may have policy implications on health interventions and suggests that focusing on hand washing and improving the knowledge attitude and practices of hand hygiene to prevent many infectious diseases related the poor personal hygiene specially hands in galkayo city,Somalia.

Acknowledgement

I like to thank the administration of Galkayo district for their support in this study. I also wish to appreciate the participants of this study for their cooperation.

References

1. "Show Me the Science – How to Wash Your Hands". www.cdc.gov. 4 March 2020. Retrieved 6 March 2020.
2. a b c Huang C, Ma W, Stack S (August 2012). "The hygienic efficacy of different hand-drying methods: a review of the evidence". *Mayo Clinic Proceedings*. 87 (8): 791–8. doi:10.1016/j.mayocp.2012.02.019. PMC 3538484. PMID 22656243.
3. "Coronavirus Disease 2019 (COVID-19)". Centers for Disease Control and Prevention. 11 February 2020.
4. Centers for Disease Control (2 April 2020). "When and How to Wash Your Hands". cdc.gov.

5. Bloomfield, Sally F.; Aiello, Allison E.; Cookson, Barry; O'Boyle, Carol; Larson, Elaine L. (December 2007). "The effectiveness of hand hygiene procedures in reducing the risks of infections in home and community settings including hand washing and alcohol-based hand sanitizers". *American Journal of Infection Control*. 35 (10): S27–S64. doi:10.1016/j.ajic.2007.07.001. PMC 7115270.
6. "WHO: How to handwash? With soap and water". YouTube.
7. "Hand Hygiene: How, Why & When" (PDF). World Health Organization.
8. "UNICEF Malawi". www.unicef.org. Retrieved 5 January 2020.
9. Paludan-Müller AS, Boesen K, Klerings I, Jørgensen KJ, Munkholm K (April 2020). "Hand cleaning with ash for reducing the spread of viral and bacterial infections: a rapid review". *The Cochrane Database of Systematic Reviews*. 4 (7): CD013597. doi:10.1002/14651858.cd013597. PMC 7192094. PMID 32343408.
10. de Almeida e Borges LF, Silva BL, Gontijo Filho PP (August 2007). "Hand washing: changes in the skin flora". *American Journal of Infection Control*. 35 (6): 417–20. doi:10.1016/j.ajic.2006.07.012. PMID 17660014.
11. Wilkinson JM, Treas LA (2011). *Fundamentals of Nursing* (2nd ed.). Philadelphia: F.A. Davis Co.
12. Practical guidelines for infection control in health care facilities. WHO 2004, Annex1:76-80.)
13. **Bartlett S.** Water, sanitation and urban children: The need to go beyond "improved" provision. *Environ Urban*. 2003;15(2):57–70.
14. **Workie GY, Akalu TY, Baraki AG.** Environmental factors affecting childhood diarrheal disease among under-five children in Jamma district, South Wello zone, Northeast Ethiopia. *BMC Infect Dis*. 2019;19(1):804.
15. **UNICEF.** Water, Sanitation and Hygiene [Internet].2015. Available from: unicef.org/somalia/wes.html
16. **Degebasa M, Dawit Z, Marama M.** Diarrheal status and associated factors in under five years old children in relation to implemented and unimplemented community-led total sanitation and hygiene in Yaya Gulele in 2017. *Pediatr Heal Med Ther*. 2018;Volume 9:109–21.
17. **Mashoto K.O., Malebo H.M., Msisiri E., Peter E.** Prevalence, one week incidence and knowledge on causes of diarrhea: household survey of under-fives and adults in Mkuranga district, Tanzania. *BMC Public Health*. 2014;14(985):1471–2458.
18. Farthing M, Dite P, Khalif I, Salazor-Lindo E, Ramakrishna BS, Goh K, et al. Acute Diarrhea in Adults and Children: A Global Perspective [Internet]. 2014. Available from: <https://www.worldgastroenterology.org/guidelines/global-guidelines/acute-diarrhea/acute-diarrhea-english>
19. (Aarnisalo, K., Tallavaara, K., Wirtanen, G., Maijala, R. & Raaska, L. 2006. The hygienic working practices of maintenance personnel and equipment hygiene in the Finnish food industry. *Journal of Food Control* 17: 1001-1011.)
20. (Oloruntoba E.O, Folarin T.B, Ayede A.I. Hygiene and sanitation risk factors of diarrhoeal disease among under-five children in Ibadan , Nigeria. *African Heal Sci*. 2014;14(4))
21. (Takanashi K., Chonan Y., Quyen D., Khan N., Poudel K., Jimba M. Survey of food- hygiene practices at home and childhood diarrhoea in Hanoi, Viet Nam. *J Heal Popul Nutr*. 2009;27(5):602–11.)

22. (Oloruntoba E.O, Folarin T.B, Ayede A.I. Hygiene and sanitation risk factors of diarrhoeal disease among under-five children in Ibadan , Nigeria. African Heal Sci. 2014;14(4))
23. (Bryan, F.L. 1988. Risks of practices, procedures and processes that lead to out-breaks of foodborne diseases. Journal of Food Protection 1: 663-673.).
24. (*World health organization health emergency program health emergency information and risk assessment. Weekly bulletin on outbreak and other emergencies; (2018)*)
25. (<https://health.clevelandclinic.org/why-you-really-should-wash-your-hands-after-using-the-bathroom-every-single-time/#:~:text=The%20importance%20of%20hand%2Dwashing,in%20turn%2C%20onto%20other%20things.>)
26. (<https://www.statefoodsafety.com/Resources/Resources/training-tip-wearing-gloves-for-food-safety#:~:text=Wearing%20gloves%20can%20keep%20food%20safe&text=The%20FDA%20decided%20that%20handwashing,food%20the%20worker%20is%20preparing.>)