KNOWLEDGE AND AWARENESS ABOUT WATER SANITATION AND HYGIENE PRACTICE AMONG THE SELECTED URBAN AREA IN SOMALIA.

SUBMITTED BY

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DECLARATION

This is Faysal Maxamed Xasan Bakaal I do this pronounce by presenting this theory entitled **“knowledge and awareness about water sanitation and hygiene practiceamong the selected urban area in Somalia.”,** I therefore pronounce that this postulation is my own work and exertion and that it has not been submitted anyplace for any honor previously and is also not being concurrently submitted for any other degree. Where difference wellspring of data have been utilized, they have been recognized.

Signature

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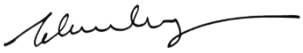
CERTIFICATION

This is to certify that Faysal Maxamed Xasan Bakaal has completed his thesis entitled "**knowledge and awareness about water sanitation and hygiene practiceamng the selected urban area in Somalia**", as part of the requirements for the Master of Public Health (MPH) degree under my direct supervision. To the best of my knowledge, the results presented in this thesis have not been submitted to any other university or institution for the award of any degree.



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Title: **knowledge and awareness about water sanitation and hygiene practiceamng the selected urban area in Somalia**.

Board of Examiners:

Sl. No	Name	Position	Signature

Date of approval: ……..

DEDICATION

I give this work my darling guardians, particularly my adored mother Fadumo Sheikh Abdullah, Adan, and my beloved father, Mohamed Hassan Ali, whose wisdom and encouragement have always given me strength. Your confidence in my abilities has driven me to success, and I am so grateful for your support and for being a part of my journey.

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To my entire family, I sincerely appreciate your encouragement and support, which have enabled me to finish this thesis entirely.

Table of Contents

List of Abbreviation

W.H.O.: World Health Organization
N.G.O.s: Non-governmental organizations
UNICEF: United nation Children's
Fund
C.B.O.: Community-based organization
WASH: Water Sanitation and Hygiene
C.D.C.: Centers for Disease Control
S.W.S.: Safe Water System

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Abstract

The global issue of inadequate access to water supply affects more than 850 million people, whileover 2.5 billion individuals face limitations in accessing sanitation facilities (WHO and UNICEF, 2014). Recognizing the importance sufficient sterilizations, clearness and safe water Improved sanitationreduces health system costs and leads to fewer days lost at work or school, decreased queue timesat shared sanitation facilities, and the elimination of open defecation. This study used by cross- sectional study this means the sample was selected from the target group, and information was obtained simultaneously at a particular point in time. The study result concluded that majority 86 (68.4%) of the respondents were male. The highest number of the respondents 94(75.2%) were aged 20– 25 years. The majority 60(48%) of the respondents were single. The majority 117(93.6%) of the respondents were university level of Education. According to the business respondents, the majority of the respondent's 51(40.8%) student. 108 respondents (86.4%) have the perceived level of knowledge to consider as appropriate for using Aqua Tap, while 17 respondents (13.6%) do not. Aqua Tap is one of the technologies in water treatment, and given that respondents need to choose from various technologies, high knowledge of Aqua Tap indicates good availability and awareness of this particular technology. Highest number of the respondents 104(86%) said yes there is serious problems that can cause poor watersanitation.

The specialists dove into and underscored angles, for example, research configuration, target populace, test size, inspecting procedures, research instruments, information assortment, information examination, legitimacy and dependability, moral contemplations, and test outline. This study was a cross-sectional review. This implies that the example was chosen from the objective gathering, and data was gotten all the while at a specific moment.

Keywords: Somalia, urban residents, water, sanitation, Hygiene, public health, infrastructure, poverty, education, governan

CHAPTER-1
Introduction

Background

The global issue of inadequate access to water supply affects more than 850 million people, while over 2.5 billion Individuals face limitations in accessing sanitation facilities. Recognizing the importance ofsatisfactory sterilization, clearness and safe water, its stress their principles job in wellbeing and financial turns of events. Proved sanitation reduces health system costs and leads to fewer days lost atwork or school, decreased queue times at shared sanitation facilities, and the elimination of open With roughly 215 million individual rehearsing open poo, sub-Saharan Africa faces critical water sterilizations challenges. The region's poor sanitation, Hygiene, and water conditionscontribute to 50% of childhood and maternal underweight and death, reinforcing the link between diarrheal diseases and undernutrition (Poverty Action Lab, 2007).

Despite global progress in water and sterilization, more than 2.3 billion individuals actually need admittance to disinfection offices. In Chitungwiza, admittance to water and essential disinfection has deteriorated because of water proportioning, burst pipes, ill-advised garbage removal, and overpopulation. The medical advantages of further developed water quality are more modest than those accomplished through expanded water amount, which empowers better cleanliness rehearses. Nonetheless, more upgrades in water and disinfection might be expected to mean better wellbeing; consolidating cleanliness training is pivotal for resolving major issues, for example, handwashing, appropriate removal of waste, and protecting drinking water.

A great many school-going kids miss or experience insufficient tutoring because of illnesses connected with hazardous drinking water and deficient sterilization. In 2002, north of 500 million school-matured youngsters lived in families without admittance to further developed water supply, and many schools needed adequate disinfection offices. Research demonstrates that kids tainted with gastrointestinal worms frequently perform ineffectively scholastically, underscoring the more extensive effect of unfortunate day to day environments on instruction results (UNESCO, 2016). Africa faces significant challenges with poor access to clean water, a lack of basic sanitary facilities, andwidespread open defecation, resulting in high healthcare costs and a considerable burden of infection- related illnesses (Ejemot-Nwadiaro, 2009). While Uganda has a well-developed water sector, water supply and sanitation progress has stagnated in recent years. In the developing world,

In Somalia, kids' wellbeing and healthful prosperity are intently attached to admittance to safe

water, appropriate disinfection, and Cleanliness. In any case, unusual precipitation designs, continuous struggle, and the absence of support of water sources have come about in just 45% of the populace approaching superior water sources and just a quarter with further developed sterilization offices inside 10 meters. Waterborne sicknesses, like loose bowels, are a critical reason for youngster mortality and are firmly corresponded with kid unhealthiness (UNICEF, 2020).The absence of sterilization, safe water offices, and unfortunate cleanliness contribute altogether to the sickness rate in Somalia. A thorough way to deal with lessening hunger and illness should focus on expanding admittance to disinfection and safe water benefits and tending to cleanliness conduct change. Dissecting Water, Sterilization, and Cleanliness (WASH) information from family studies, the planning of admittance to water and disinfection in Somalia shows a nearby connection between's areas of high hunger and those with unfortunate admittance to water and sterilization. Unfortunate cleanliness, unfortunate disinfection rehearses, and the utilization of hazardous water are critical supporters of constant and intense loose bowels. Incorporated mediations, including nourishment and WASH parts, can assist with decreasing the rate of loose bowels (Lap worth et al.,.2020).

1.2. Problem Statement

The health burden of inadequate water, sanitation, and Hygiene (WASH) conditions is a significant issue, particularly in developing regions. Insufficient WASH facilities are primary contributors to preventable diseases and fatalities, with diarrhoeal deaths in children being a leading consequence.

The development of the WASH sector faces notable challenges due to limited human and financial resources, adversely affecting the sustainability of WASH initiatives (UNICEF Somalia). Somalia, grappling with an arid climate, chemical concentration in water sources, and conflict-driven disruptions,struggles to ensure access to clean and safe water. Existing water sources are deficientin accessibility, quality, and quantity, with groundwater often rendered unsafe for consumption due to high chemical components and salinity. The protracted conflict in Somalia has the residents of Wadajir district face subpar WASH services and generally do notpractice WASH. Furthermore, there is a notable research gap regarding water and sanitation programs inSomalia, particularly in Wadajir District. Thus, this study seeks to actively participate in improving WASH services in Wadajir District and raising awareness among the population to adopt essential water and sanitation hygiene practices to mitigate diseases associated with poor Hygiene.

1.3 Justification

Various reasons have motivated me to look into the water, sanitation, and hygiene (WASH) problem inSomalia, Wadajir District in particular, but mainly because of the health burden the problem has on thepopulation. One of the causes of preventable diseases is inadequate sanitation, Hygiene, and water facilities, especially the diarrheal disease rate, which is one of the causes of most death cases, especiallyin children (WHO/UNICEF, 2012). Water and sanitation are some of the most daunting sectors where Somalia has limited resources, such as human and financial ones, aggravated by the long-lasting conflict,dry weather, and chemical pollution on water surfaces, a severe health issue. The challenges are the main reason that lead to the unsuccessful implementation of WASH projects and other aspects of sustainability, such as groundwater depletion, contamination, and conflict (UNICEF Somalia). Incursionin water in Somalia, where 45% of the population takes water from safe sources, increases the probability of waterborne disorders like cholera. Therefore, bad sanitary practices, the example of whichis inappropriate toilets, that are common in the countryside (56 % of the estimated population), contribute mainly to the spread of water-borne diseases like cholera, the most affected being children and women (I.O.M. Somalia). Because water and sanitation-related diseases emanate from unhealthy conditions, thus they result in massive death rates, and these require serious attention.

The primary Purpose of this study is to help improve WASH services and encourage the use of these services in the Wadajir sub-district, where degenerate WASL services and a low rate of WASH practices are shared. On top of this, the need for more research on water and hygiene through programs conducted in Somalia,particularly in Wadajir District, has been noticed. This study attempts to solve the issue of poor Hygiene.It carries people's awareness of essential water and sanitation issues and addresses associated diseases in the community through direct involvement and assistance of communities.

Research objectives

General objectives

The Purpose of this study is to identify the knowledge and awareness about water to sanitation and hygiene practices among the selected urban areas of Somalia.

Specific objectives

A. To Identify socio-demographic characteristics of the participants
B. To assess the knowledge and awareness about water sanitation and hygiene practice.
C. To assess the factor leading to water sanitation and hygiene practices among the selected urban areas of Somalia.

Research questions:

What are the knowledge and awareness about water sanitation and hygiene practices among the selected urban areas of Somalia?

1.4 Conceptual framework

It is a diagrammatic show of the review factors, where the exploration factors and their connections are converted into a visual picture to represent the interconnections between the free Factors (IV), subordinate factors (DV), and extraneous variables (E.V.).

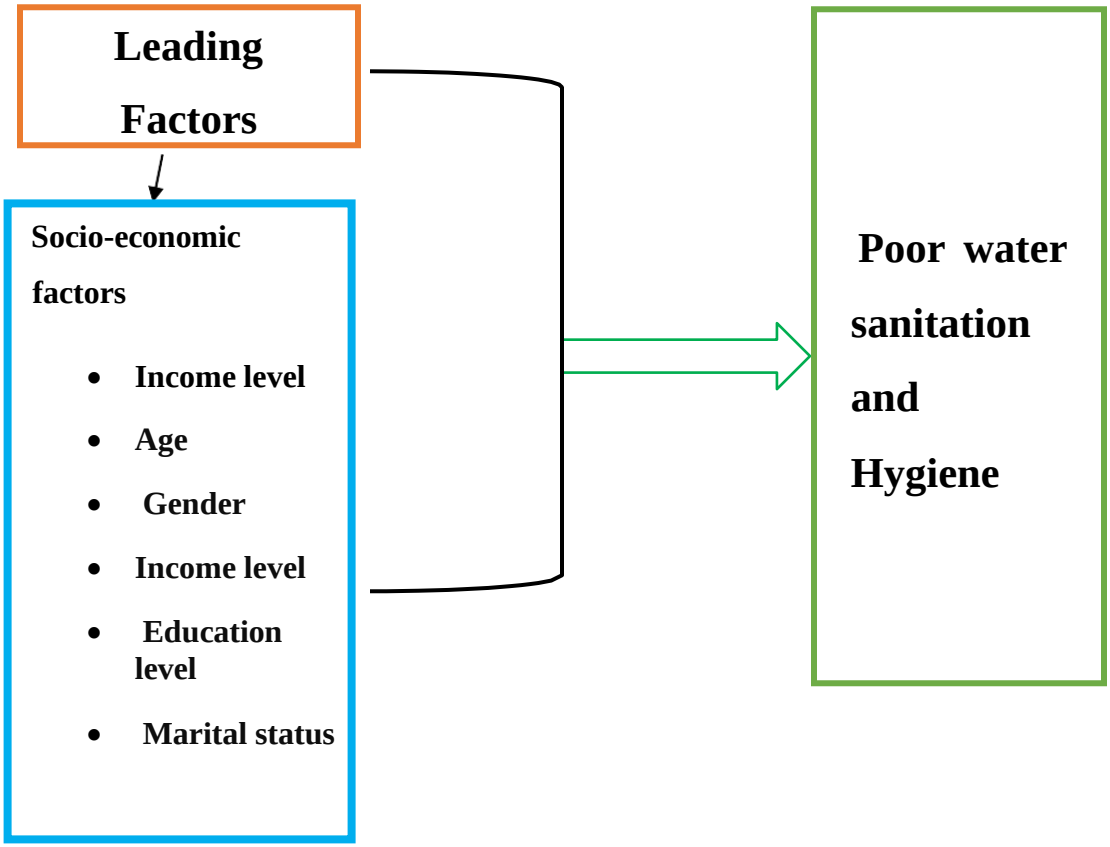

Figure 1: Conceptual framework

CHAPTER 2
Literature review

Socio-Economic Factors

In Somalia, more specifically in urban areas, the roles and impact of many socioeconomic determinants are seen as among the many factors that play a part in worsening the water and sanitation-related problems. Poverty level is one of the significant factors, and low-income households cannot afford proper sanitation and water treatment plants. This financial obstacle promotes a long-lasting process of limits regarding water treatment and sanitation services. Moreover, the educational level is directly connected with hygienicpractices, and limited education leads many people to influence the insignificance of sanitation and Hygiene (Cairncross & Valdmanis, 2018). However, the University has a more substantial basis for differentiating or discriminating based on a health condition. In addition, Somalia has logged a very exponential urbanization rate, which has left the available water and sanitation infrastructure overburdened, mainly due to the high population density of such areas (World Bank, 2019). This increases water insecurity and compounded inequalities in access to clean water and sanitation, mainly affecting poor populations (UNICEF; Somalia Situation Report, 2021). Moreover, cultural norms and traditions will help determine what is morally right regarding handwashing and food handling (WHO, 2017). Cultural barriers that lead to poor sanitation and hygiene behaviors call for the need to address cultural problems.

Further, limited employment opportunities are also an issue since poor people with low incomes cannot afford better water sources and sanitation facilities, and in this case, poverty and poor sanitation go on simultaneously. The World Bank reported on this issue in 2019. Eventually, tackling the various economic and social determinants becomes critical for developing sound strategies that can help improve water sanitation and Hygiene in the urban sections of Somalia.

The area's dependence on subsistence agriculture, the prevalence of temporary housing, and acute environmental degradation, coupled with a lack of information on sustainable resource use, characterize the region (Author, Year). Challenges include poor settlement planning, outdated farming methods, undefined water disinfection practices, low-income activities, high illiteracy rates, and elevated concerns about waterborne diseases. To address these issues, a study was conducted in the Bufundi sub-county, investigating the impact of socio-economic factors on human health and providing essential baseline data for future planning

2.1 Income level

Numerous obstacles and impediments to maintaining good Hygiene are prevalent in lower-income countries, with the foremost challenge being the scarcity of clean water. Globally, hundreds of millionslack access to improved drinking water sources, resulting in 1.6 million annual deaths attributed to diseases transmitted through unsafe water practices. Despite the absence of clean water in certain situations, evidence suggests that adopting hygiene practices, suchas handwashing, even with unsafe water, proves beneficial in reducing the spread of diseases comparedto not washing at all.

In situations where access to safe water is limited, The community of the for infectious Prevention and counteraction (CDC))recommends utilizing unsafe water for hygiene practices, emphasizing the importance of handwashing before eating, after using the toilet, and at crucial intervals. Alongside the water challenge,another hurdle to Hygiene in lower-income countries is the limited access to soap. Evenwhen available,soap is typically allocated for laundry and bathing rather than handwashing. Various international programs concentrate on imparting the significance of using soap for handwashing. The tippy tap is oneinnovative solution aimed at providing a straightforward, cost-effective handwashing station to communities in lower-income countries. These devices utilize considerably less soap and water compared to traditional handwashing methods. The C.D.C.'s Safe Water System (S.W.S.) employs tippytaps for handwashing in regions facing water scarcity. The S.W.S., a systematic intervention to enhance water quality and accessibility in lower-income countries, comprises three key Steps: place of- purpose treatment for polluted water, safe water stockpiling. utilizing specially designed containers, and behavior change techniques to raise awareness and promote good hygienepractices. While education programs focusing on safe water access are crucial for water resource enhancement, hygiene challengespersist as a significant issue for millions in lower-income countries.

2.2 Educational level

Individuals living in destitution stricken regions experience poor ecological wellbeing because of hazardous drinking water. They likewise have unfortunate cleanliness conduct and absence of sterilization because of fast and erratic urbanization, prompting swarmed and unhygienic settlements. Nations experience monstrous monetary misfortunes through wellbeing costs for infections that can be handily forestalled. Useful Activity focuses on the weak populace, particularly ladies and youngsters. To work on their wellbeing and prosperity. In particular, the center is further developing admittance to safe drinking water and ensuring admittance to better sterilization offices. Moreover, the dispersal of better handwashing rehearses and other cleanliness ways of behaving prompts a decrease in water-borne sicknesses and, eventually, a decrease in wellbeing costs. An absence of clean water and sterilization can spread infections, particularly disorder and the runs. This prompts kids being missing from school and influences their ability to learn. Additionally, with instruction, it is simpler to break out of destitution. Giving safe water and disinfection offices in schools makes a protected and sound actual learning climate, helping the training and wellbeing of younger students. Instructing younger students on fundamental Cleanliness and disinfection is vital. Youngsters are by and large anxious to advance as well as to duplicate one another and can impart and advance positive social change in different kids. Youngsters additionally play fundamental parts in their family, doing large numbers of the cleanliness related errands. They are in a great situation to drive change in their families and networks. These youngsters are lik ewise the guardians representing things to come who will pass on the great cleanliness rehearses that they have figured out how to their kids. Putting resources into kids' school sterilization and cleanliness training has many advantages, for instance:

- Advances compelling learning.
- Builds enlistment of young ladies.
- Diminishes rates of sickness and worm diseases.
- Advances ecological neatness (UNICEF/WASH, April 30, 2003).

2.3 Environmental Factors

Water and sanitation lie at the core of environmental concerns and collectively are pivotal development drivers. Effectively managing water resources to prevent depletion and contamination and ensuring proper sanitation practices play a central role in safeguarding the well-being of communities and the surrounding environment. The repercussionsof inadequate water and sanitation services extend beyond individual impact, affecting entire communities.

Poor Sanitation from one person can lead to contaminated food or water for others. Even in the case of piped systems, if mismanaged, they can exacerbate downstream issues, such as pollution in rivers,lakes, and seas, further deteriorating wildlife habitats and contributing to human health problems.

In public health, communicable diseases with epidemic potential are significantly influenced by various environmental factors. These factors are water supply, sanitation facilities, food, and climate. Insufficient access to safe water, inadequate excreta disposal facilities, poor Hygiene, substandard living conditions, and unsafe food all contribute to the prevalence of diarrheal diseases, a major cause of suffering and death, particularly in emergencies.

Climate exerts a diverse range of influences on disease transmission. Local climate conditions can significantly impact disease vectors' distribution and population size. Instances of flooding after heavy rains may lead to sewage overflow and widespread water contamination. Additionally, evidence suggests that pathogens can be transmitted between regions through air streamsor wind.

Furthermore, environmental factors are crucial in distinguishing coastal communities fromother types of settlements. The surface water and soil conditions in coastal areas directly influence the available options for sanitary waste disposal within the community.

2.4 Climate and Water and Sanitation Hygiene

Water and climate change are inextricably linked, as the effects of climate change are first felt through water: droughts, floods, and storms. These disasters can destroy water suppliesand toilets, Abandoning tainted water and putting the existences of millions of kids atrisk. Without clean water, youngsters are in danger of illnesses, for example, the runs, which as of now kills north of 800 kids under five consistently.

2.5 Water Supply

Drinking water supply accounts for up to 15% of water use worldwide. Ensuring sufficient water

For household purposes depends on effectively managing water resources, which are subject to competition for different uses. Therefore, adequate water resources management is crucial to assuring WASH results in many contexts. Children's healthand A comprehensive approach to reducing malnutrition and disease must include increasing access to sanitation and safe water services and addressing hygiene behavior change. The mapping of access to water and sanitation taken from ananalysis of Water, Sanitation, and Hygiene (WASH) data collected during FSNAU household surveys in 2009 and 2010 shows a close correlation between areas of high malnutrition and areaswith poor access to Water and sanitation. Poor hygiene and sanitation practices, combined with the use of unsafe water, frequently cause chronic and acute diarrhea. Integrated interventions, which include nutritionand WASH components, can help reduce the incidence of diarrhea.

2.6 Sanitation and Hygiene

Without further developed sterilization - an office that securely isolates human waste from human contact - individuals must choose the option to utilize deficient common lavatories or to rehearse open poo. For ladies and young ladies, tracking down a spot to go to the latrine outside, frequently holding on until the front of murkiness, can leave them defenseless against misuse and rape. In the quick climate, the uncovered feces will be moved once again into individuals' food and water assets, assisting with spreading serious illnesses like cholera.

2.7 Surface Water Condition

The state of Puerto Princesa Sound decides the worthiness of straightforwardly discarding human waste into the water without treatment. As over and again referenced in this proposal, this training is OK in the event that the accompanying circumstances are fulfilled: first, water isn't polished off for drinking; 2) the excrement are constantly saved in water and not ashore; and 3) adequate flow for weakening. These circumstances intend to guarantee that the excreta are discarded appropriately and to forestall the contact of waste to the local area. With regards to Puerto Princesa Narrows, the main necessity is fine since the straight's water is saline and isn't drunk as drinking water. The water nature of Puerto PrincesaBay, in light of the water, the Public Defilement Control Commission's water test on Walk 11, 1988 uncovered that the bay's general water quality is as yet phenomenal. Despite the fact that this outcome shows the unadulterated state of the whole line, it's critical to keep up with the organic balance the way things are. A disturbing contamination issue was found during the review when it was seen that human waste, wastewater, and junk were being discarded along the banks of the strait. This standard propensity, which was previously neatly alright and satisfactory, increments contamination hardships as the neighborhood area extends. In contrast with the headway zones, the second and third circumstances make the immediate evacuation of human waste in water regions less fundamental. In homes developed during the review.

2.8 Ground Condition

For parts of the local area arranged in the raised and change zones, the ground condition assumes a vital part in laying out sterilization frameworks. The seaside ghettos have decently inclining or moving geology, with heights going from +3.064m to +0.21m over the mean most reduced low water (MLLW). Notwithstanding being raised, the regions have low inward waste limit and unfortunate water assimilation because of the shallow water table. The dirt is profound, clayey,

inadequately depleted, fine, and loamy in surface. It is fundamental to dissect ground conditions to forestall groundwater defilement and narrows contamination in light of the fact that the high water table and direct pressure driven association with seaside waters present huge wellbeing chances. Garbage removal here can imperil the local area's wellbeing since numerous inhabitants draw water from wells close to family latrines. Groundwater pollution can work with illness transmission. Discarding untreated human waste in seaside areas dirties the sound as overflow rapidly arrives at the beach front water bowl, with negligible regular cleaning. Ecological elements like soil type, porosity, groundwater level, power through pressure, and nearness to surface water influence pollution levels. Ground conditions, especially groundwater level, soil porousness, and steadiness, are key elements in choosing fitting sterilization advancements. Most disinfection frameworks are attainable just when the groundwater level is more than one meter underneath the surface, requiring penetrable soil for gushing drench away and stable ground for development. Disinfection advancements are characterized in view of soil prerequisites, with some contained over the ground and others requiring soil. Over the ground frameworks, including fertilizing the soil latrines, the vault and cartage framework, container lavatories, shallow sewer frameworks, and little drag sewer frameworks, are in fact practical in each of the three seaside local area zones (UN-Water, 2008).

CHAPTER-3
Methodology

3.1Study design and type:

The study used a cross-sectional study.

3.2Sampling Strategy for Understanding the Research Design.

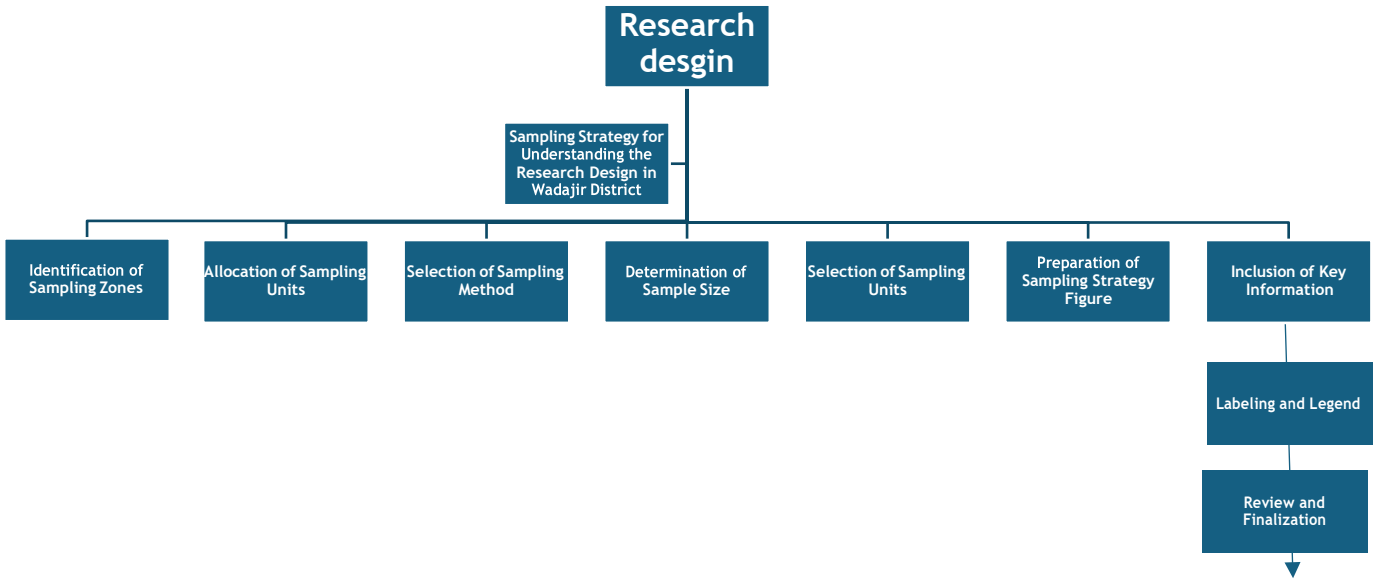

Table 1: The Research design infographic

3.4 Study of Population

The study is targeted at the population living in the Wadajir district

3.5 Inclusion criteria

- Residents of the selected urban area in Somalia
- Willing to participate of the study.

3.6 Exclusion criteria

- Individual who do not reside in the selected urban area in Somalia.

3.3 Sampling method

Stratified random method for determination, the purpose of which was to ensure the study subjects were representative of the target population. A stratification system based on the significant aspects of demographic information, such as age, gender, and, to some extent, social status, leads to the inclusiveness ofvarious domains in society.

3.4 The scientific method sampling

The respondents for the survey were obtained from all three levels by selecting a proportionate number of respondents using a computer-generated random number generator. This strategy, therefore, meant that the entire population sampled underwent the same process of being selected for the study, which removed the chances of selection bias and allowed the study's findings to apply to the general population. Applying the sample size calculation formula took us to the result that we required (125) respondents, and these figureswere allocated proportionally to each stratum. This logical strategy of the orbital procedure adapted to the scientific and methodical accuracy gives the study dependability and confidence.

3.5 Study Approach

The study approach is quantitative factors leading to poor water sanitation and Hygiene amongresidents

3.13 Research instrument

Self-administered questionnaires and observations were used for the collection study.

3.14 Ethical issues in research

To consent to the moral issues, the review convention was submitted to Exploration Morals Council (REC) of the Faculty of the Allied Healthy Science (FAHS), DIU for survey and endorsement of the review. Before the beginning of any meetings, the questioners advised the members about the foundation and goals of the review. Obscurity and secrecy were kept up with stringently.

3.15 Data Analysis

Data analysis is carried out using SPSS version 12, and it will present as follows:

Tables, Charts. Graphing will be mean, medium—comparison between variables as percentages.

Analysis Plan: 1

Independent Variables:

Income Level: This variable represents the income earned by individuals or households and its potential influence on their ability to access clean water, sanitation facilities, and hygiene resources.

Age: Age refers to the chronological age of individuals participating in the study. It may be a significant factor as older individuals may have different attitudes and practices regarding water, sanitation, and Hygiene than younger individuals.

Gender: Gender refers to whether participants identify as male or female. Gender dynamics can influence access to resources, roles in household sanitation practices, and engagement in hygiene behaviors.

Education Level: The education level indicates the highest level of formal education attained by participants.

Higher education levels correlate with better knowledge about water, sanitation, and hygiene practices, leading to improved behaviors.

Marital Status: Marital status denotes whether participants are single, married, divorced, widowed, or in another marital arrangement. Marital status may impact household dynamics, resource allocation, and responsibilities related to water and sanitation practices.

These independent variables will be examined to understand their relationship with the dependent variable, the level of WASH practice. Statistical analysis will be conducted to determine the extent to which each independent variable influences WASH practices among the study participants. sThe study period will extend from January, 2024, to July

CHAPTER-4
RESULT

Introduction

This section presents and investigates information god for respondents data is presented in tables and figures to show the results of data collected on **Knowledge and awareness about water sanitation and hygiene practiceamongthe selected urban area in Somalia.,** in the period January 2024 to July 2024. The respondents were 125 persons residing in Wadajir district. Data was analyzed in SPSS Version 23. Tables and graphs were presented as below.

4.0 Gender Of Respondents

The majority 86 (68.8%) of the respondents were male and 39 (31.2 %) of the respondents were female.

Table 4.1 Gender of respondent's

	Frequency	Percentage
Male	86	68.8%
Female	39	31.2%
Total	**125**	**100%**

4.1 Respondents by Age

Table 4.2 Respondents by Age group

Age group	Frequency	Percentage
15-20	12	9.6%
20-25	94	75.2%
25-30	17	13.6%
30-35	2	1.6%
Total	**125**	**100%**

4.2 marital status of respondents

Most of the respondents are single, few are engaged, almost none are married, proving the age parameter that shows a young population. This could affect specific areas of 'living and responsibilities' attached to water usage in practicing sanitation.

Table **4.3 marital status**

Marital status	Frequency	Percentage
Single	60	48.0%
Married	37	29.8%
Separate	2	1.6%
Engaged	26	20.6
Total	**125**	**100%**

4.4 level of Education.

Level of education amongst the surveyed population, with most respondents having a university-level education. This high level of education may influence the respondents' perception or their treatment of sanitation and related hygiene questions.

Table 4.4 level of Education.

Educational level	Frequency	Percentage
primary level	2	1.6%
secondary level	4	3.2%
University level	117	93.6%
illiterate level	2	1.6%%
Total	**125**	**100%**

Table 4.5 Employment status

Occupation	Frequency	Percentage
Employed (full-time):	38	41.5%
Employed (part-time):	13	9.5%
Student	51	30.9%
Jobless	23	18.1%
Total	**125**	**100%**

The Majority of the respondents 38 respondents (41.5%) are employed full-time, and 13 respondents (9.5%) are employed part-time. There are 51 students (30.9%), and 23 respondents (18.1%) are unemployed. Notably, there are no retired respondents. This distribution highlights the variability of the occupation profile and the relatively high number of students, which is essential in understanding the demographic status and its impact on financially feasible and efficient sanitation practices.

4.6 Place of Residence

Table 4.6 Place of Residence Respondents

Place of Residence	Frequency	Percentage
Urban	107	87.7%
Rural	18	12.3%
Total	**125**	**100%**

The total responses amount to 125. Among these, 107 respondents (87.7%) reside in urban areas, while 18 respondents (12.3%) live in rural areas. Most of the respondents live in urban areas, which could contribute to the positive response regarding the availability of flush sanitation facilities.

4.7 Respondents' that do you believe climate change can contribute to poor water sanitation and hygiene?

Table 4.7 Respondents' that do you believe climate change can contribute to poor water sanitation and hygiene

	Frequency	Percentage
Yes	116	95.1%
No	9	4.9%
Total	**125**	**100%**

Most of the respondent agree that climate change affects water sanitation and hygiene. This reflects a growing awareness of environmental issues and their potential health impacts on the population.

4.8 Respondents if improper handling of water can cause poor water sanitation and hygiene

Total responses 125 As shown in the table 4.8 and figure 4.8 below, the majority of the respondents 113(89%) said Yes that Improper handling of water can cause poor water sanitation, while 12 (11%) said No.

Table 4.12 Respondents if improper handling of water can cause poor water sanitation and hygiene

	Frequency	Percentage
Yes	113	89%
No	12	11%
Total	**125**	**100%**

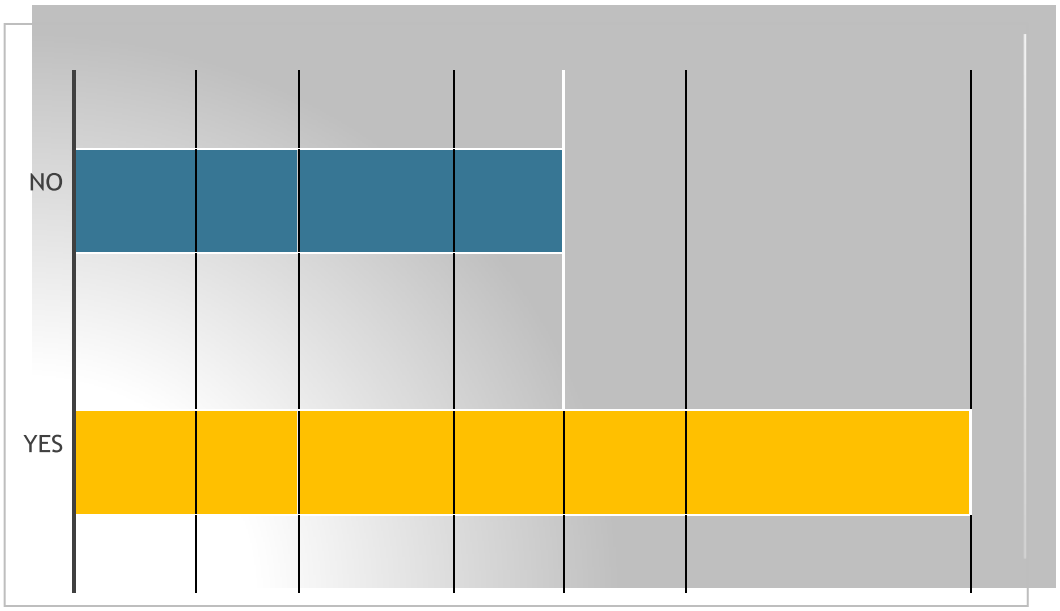

Figure 1: Respondents if improper handling of water can cause poor water sanitation and hygiene

4.9 Respondents about whether the bad behavior of people like open defecation can take part poor water sanitation and hygiene or not

Table 4.9 respondents about whether the bad behavior of people like open defecation can take part poor water sanitation and hygiene or not

	Frequency	Percentage
Yes	102	84.3%
No	23	15.7%
Total	**125**	**100%**

The majority of respondents 102 (84.3%) believe that behaviors such as open defecation do contribute to poor water sanitation and hygiene. This underscores the importance of addressing such behaviors through improved sanitation facilities and awareness campaigns to promote healthier practices.

4.10 Respondents about whether the animal faces are affected water source or not

Total responses 125, When they were asked whether the animal faeces are affected water source, most of the respondents 102(85%)said Yes, and 23 (15%) said No.

Table 4.14 Respondents about whether the animal feces are affected water source or not

	Frequency	Percentage
Yes	102	85%
No	23	15%
Total	**125**	**100%**

4.15 Respondents whether they believe or aware that sanitation and hygiene facilities might be able to cause water contamination?

As shown in the table 4.11 and figure 4.9 below, when they were asked about whether they believe or aware or aware that sanitation and hygiene facilities might be able to cause water contamination? , most respondents 104(86%) said Yes, while 21 (14%) said No.

Table 4.11 Respondents whether they believe or aware that sanitation and hygiene facilities might be able to cause water contamination?

	Frequency	Percentage
Yes	104	86%
No	21	14%
Total	**125**	**100%**

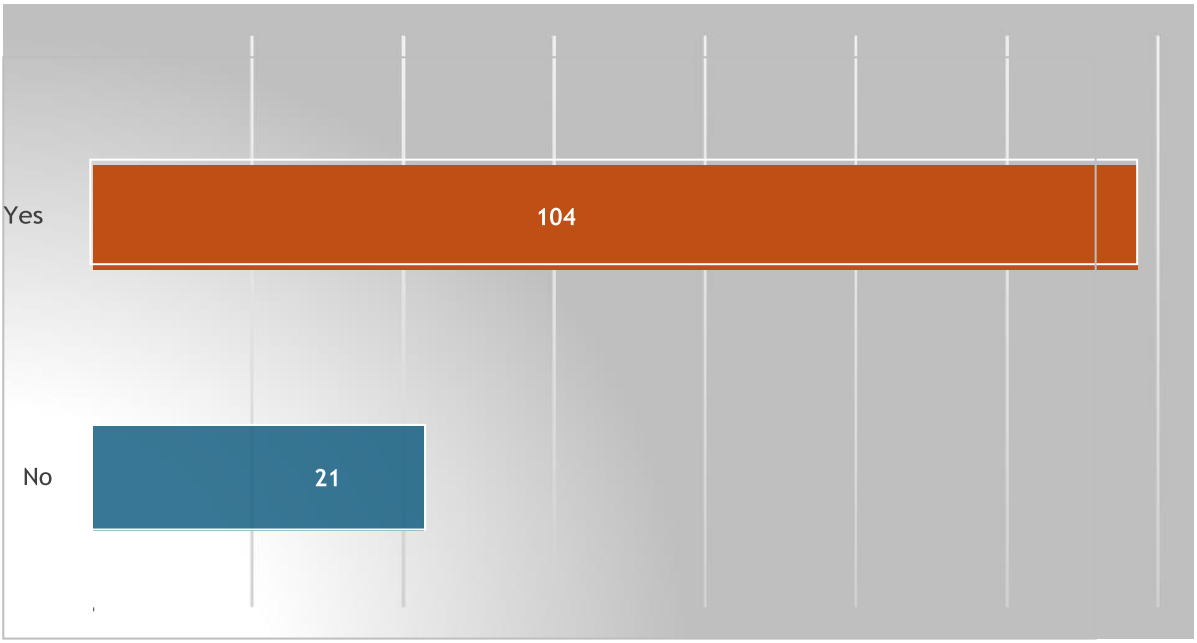

Figure 2: Respondents whether they believe or aware that sanitation and hygiene facilities be able to cause water contamination.

4.12 Respondents whether they know how to use aqua tap or not

The total responses amount to 125. Among these, 108 respondents (86.4%) have the perceived level of knowledge to consider as appropriate for using Aqua Tap, while 22 respondents (13.6%) do not. Aqua Tap is one of the technologies in water treatment, and given that respondents need to choose from various technologies, high knowledge of Aqua Tap indicates good availability and awareness of this particular technology.

Table 4.12 Respondents whether they know how to use aqua tap or not

	Frequency	Percentage
Yes	103	85.8%
No	22	14.2%
Total	**125**	**100%**

4.13 Respondents about Awareness of Serious Problems Causing poor water sanitation.

The majority of respondents 96 (80.7%) indicated awareness of mental health and ill-health issues related to poor water sanitation. Out of 29 respondents, only 19.3% were not aware of these issues. Many participants emphasized the importance of good water sanitation and its health implications, which is widely recognized as crucial for health enhancement.

Table 4.13 Respondents about Awareness of Serious Problems Causing poor water sanitation.

	Frequency	Percentage
Yes	96	80.7%
No	29	19.3%
Total	**125**	**100%**

4.14 Respondents about if yes specify the problem

Cholera: A breakdown of the number of respondents according to their choice of sport illustrated that the chosen sport is Snowboarding, and 49 of the 125 respondents (47.2%) chose this sport as their preference.

Diarrhea: 45 of the respondents represented 36.0%. Typhoid: Out of all the respondents, 21 were found to be 16. 8%

Table 4.14 Respondents about the problems related to the poor water sanitation

	Frequency	Percentage
Cholera	59	47.2%
Diarrhea	45	36.0%
Typhoid	21	16.8%
Total	**125**	**100%**

4.15 Respondents about the Preferred Water source

The majority respondents 71 (58.7%) prefer groundwater, making it the most popular choice.

Spring-fed wells: 19 respondents (15.7%) prefer spring-fed wells. Shallow wells: 20 respondents (16.5%) prefer shallow wells. Boreholes: 15 respondents (9.1%) prefer boreholes, making it the least popular choice.

Table 4.14 Respondents about the Preferred Water source

	Frequency	Percentage
Ground water	71	58.7%
Spring-fed wells	19	15.7%
Shallow wells	20	16.5%
Boreholes	15	9.1%
Total	**125**	**100%**

CHAPTER 5
Discussion

4.2 Discussion

In this cross-sectional study knowledge and awareness about water sanitation and hygiene practice among the selected urban area in Somalia. The global issue of inadequate access to water supply affects more than 850 million people, while over 2.5 billion Individuals face limitations in accessing sanitation facilities. Recognizing the importance ofadequate sanitation, Hygiene, and safe water, it emphasize their fundamental role in health and socio- economic development. Improved sanitation reduces health system costs and leads to fewer days lost atwork or school, decreased queue times at shared sanitation facilities, and the elimination of open defecation .With approximately 215 million people practicing open defecation, Sub-Saharan Africa facessignificant water and sanitation challenges .The region's poor sanitation, Hygiene, and water conditions contribute to 50% of childhood and maternal underweight and death, reinforcing the link between diarrheal diseases and undernutrition (Poverty Action Lab,2007).

A great many school-going kids miss or experience insufficient tutoring because of illnesses connected with hazardous drinking water and deficient sterilization. In 2002, north of 500 million school-matured youngsters lived in families without admittance to further developed water supply, and many schools needed adequate disinfection offices. Research demonstrates that kids tainted with gastrointestinal worms frequently perform ineffectively scholastically, underscoring the more extensive effect of unfortunate day to day environments on instruction results (UNESCO, 2016).

Africa faces significant challenges with poor access to clean water, a lack of basic sanitary facilities, andwidespread open defecation, resulting in high healthcare costs and a considerable burden of infection-

CHAPTER 6
Conclusion and Recommendation

4.3 Conclusion

The majority 86 (68.4%) of the respondents were male. The highest number of the respondents 94(75.2%) were aged 20– 25 years.The majority 60(48%) of the respondents were single. The majority 117(93.6%) of the respondents were university level of Education. As indicated the business status, most of the respondents 51(40.8%) were student. 108 respondents (86.4%) have the perceived level of knowledge to consider as appropriate for using Aqua Tap, while 17 respondents (13.6%) do not. Aqua Tap is one of the technologies in water treatment, and given that respondents need to choose from various technologies, high knowledge of Aqua Tap indicates good availability and awareness of this particular technology. Highest number of the respondents 104(86%) said yes there is serious problems that can cause poor watersanitation.

4.4 Recommendations

1. People should drink purified water because water purification is very important to human being for its sourceof life.
2. The poor people must be given clean water by government or charity agencies so as to sustain their better lifeand good water sanitation.
3. Every person should have access to at least 20 litter of clean water each day and reduce infectious disease likewater related disease.
4. To give Health education the community to avoid water contamination and water related disease.
5. The community builds their own purifier or well and maintains it collectively as well as

improving generalwater sanitation hygiene.

6. The government should develop a policy against poor water sanitation hygiene.The people should be taught safe stool disposal.

4.5 Limitations and strengths.

Limitations:

1. The study was conducted with a limited sample size, focusing on selected urban areas. This may not fully represent the diverse population and conditions across all urban areas in Somalia.

2. Impact: The findings may not be generalizable to other regions or settings, potentially limiting the applicability of the results.

Data Collection Methods

1. **Limitation**: The study relied on self-reported data through surveys and interviews, which can be subject to recall bias and social desirability bias.

2. Impact: These biases may influence the precious unwavering quality of the information gathering, promotion expected misinterpretations of the discoveries.

Strengths:

1. The study Focused Research Topic provides an in-depth analysis of methods for water sanitation and hygiene in urban areas in Somalia, addressing a critical public health issue.

2. Impact: This focused approach allows for detailed insights and a comprehensive understanding of the specific challenges and needs in these urban areas.

3. The review adds to the current assembly of information on urban regions of underdeveloped nations of water sanitation and hygiene, particularly in Somalia.

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