

Social Demographic Factors Influencing the Utilization of Safe Sanitation Services Among Residents of Daryel Camp in the Tredish Location, Danyille District, Mogadishu, Somalia

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Abstract: This paper presents a study on social demographic factors influencing the utilization of safe sanitation services among residents of Daryel camp in the Tredish location, Danyille district, Mogadishu, Somalia.

Keywords: Social demographic factors, safe sanitation services, internally displaced persons.

1. Introduction

A. Study Background

Globally, the number of displaced persons has been on the rise, with an average of 6.7 million new displacements annually over the past decade due to climate change, political unrest, and conflict. By 2020, an estimated 78 million people were internally displaced, with three-quarters residing in just ten countries—half of which are in sub-Saharan Africa. This displacement crisis poses serious challenges to public health, especially in terms of sanitation and hygiene, as overcrowded camps and limited resources increase vulnerability to diseases like diarrhea, malaria, and respiratory infections.

Although global access to improved water sources has increased from 77% in 1990 to 87% in 2022, sanitation improvements have lagged behind, rising only from 54% to 61% over the same period. Internally displaced populations are disproportionately affected, often lacking safe water and sanitation services due to camp congestion, environmental degradation, poverty, and poor waste management.

Over 1 billion people globally still practice open defecation, especially in South Asia and sub-Saharan Africa. In Africa, over 65% of the population lacks access to safe water and sanitation services, with rural areas particularly underserved. Water supply coverage in urban areas stands at 81%, but rural sanitation coverage is as low as 24%. The sanitation sector in many African nations suffers from poor planning, limited resources, weak governance, and a lack of skilled personnel.

In sub-Saharan Africa, which accounts for 11% of the global population, poor WASH (Water, Sanitation, and Hygiene)

services are linked to high mortality rates. More than 80% of people in this region, especially in rural settings, lack access to safe water and sanitation. Disparities in access, poor funding, limited user awareness, and uncoordinated service delivery continue to worsen the sanitation crisis.

In Somalia, the situation is particularly dire. The country's prolonged instability has weakened institutional capacity, disrupted public service delivery, and led to a reliance on NGOs and private actors for WASH services, often without government oversight. The government's limited financial capacity, compounded by insecurity and a shortage of skilled professionals, has further hindered efforts to improve sanitation.

Given this context, this study sought to assess the factors influencing the utilization of safe sanitation services among internally displaced persons in Daryel camp, Tredish location, Daynille District, Mogadishu, Somalia. By identifying these factors, the research aimed to inform strategies for improving WASH services and addressing critical sanitation challenges in displacement settings.

B. Statement of the Problem

Access to safe sanitation facilities and services is a cornerstone of public health. However, in Somalia, a significant portion of the population lacks adequate access to improved sanitation and hygiene, resulting in a heavy burden of waterborne and sanitation-related diseases. Unsafe sanitation practices such as open defecation, the use of contaminated water sources, and poor hygiene have been directly linked to outbreaks of cholera, dysentery, typhoid, and parasitic infections such as schistosomiasis (Gebrie et al., 2021; WHO, 2016).

According to the Joint Monitoring Programme (JMP, 2015), only 40% of Somalia's population has access to at least basic sanitation services—with stark disparities between rural (20%) and urban (70%) areas (Crocker et al., 2016). Moreover, only 29% of the population has access to an improved water source,

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while 12% (rural: 19%, urban: 1%) still rely on shallow and unsafe water sources (Guo *et al.*, 2017a). Hygiene conditions are even more concerning, with just 16% of the population (urban: 28%, rural: 8%) accessing basic handwashing facilities with soap and water (Alemu *et al.*, 2017).

C. Justification of the Study

Despite numerous interventions by humanitarian organizations and government agencies, waterborne and sanitation-related diseases such as cholera, diarrhea, dysentery, and typhoid remain a major public health concern in Somalia. A critical gap exists in the understanding of the specific behavioral, infrastructural, and environmental factors that influence the utilization of safe sanitation services in informal settlements and displacement camps such as Daryel Camp in the Tredish location. Few empirical studies have been conducted in such contexts to investigate the root causes of poor sanitation practices, and nationally representative data on WASH (Water, Sanitation, and Hygiene) is still lacking.

This study responds to that knowledge gap by providing localized evidence on the barriers and facilitators to the use of safe sanitation services. The findings are especially relevant for policymakers, humanitarian organizations, and public health planners seeking to design context-specific interventions that can improve hygiene behaviors and reduce the prevalence of preventable diseases.

Additionally, the study is aligned with Sustainable Development Goal 6, which advocates for universal access to clean water and sanitation. It goes beyond water access to address the sustainability and quality of sanitation practices that are essential for human dignity, health, and environmental well-being. Furthermore, the study supports the Somalia Ministry of Health, Water, and Sanitation Policy, which emphasizes the critical role of improved WASH practices in achieving national development priorities, including poverty reduction, improved education outcomes, and better health indicators.

By addressing both behavioral and structural dimensions of sanitation access, this study contributes to a better understanding of how to promote safe hygiene practices in vulnerable populations and displacement settings, ultimately aiming to inform effective public health interventions in Somalia and similar contexts.

2. Literature Review

A. From a Global Perspective

57% of the world's population, or 4.6 billion people, made use of a sanitation service that was safely managed in 2022. Basic sanitation facilities, like private restrooms or latrines, are still unavailable to more than 1.5 billion people. Of these, 419 million continue to urinate outdoors, into open bodies of water, beneath bushes, or in street gutters (WHO, 2023). 44% of the wastewater produced by homes worldwide in 2020 was released into the environment without receiving a safe treatment (Shrestha *et al.*, 2020a). It is estimated that at least 10% of people on Earth eat food that has been irrigated by wastewater management. Because of effects like anxiety,

increased risk for sexual assault, and missed opportunities for employment and education, inadequate hygiene hinders growth in society and the economy as well as human well-being. Typhoid, intestinal worm infections, polio, and diarrheal illnesses like dysentery and cholera are all associated with poor sanitation. It makes stunting worse and aids in the development of resistant bacteria to antibiotics. (Grimes, JET, 2017). 88% of the world's population (7.2 billion) used a minimum of a basic sanitation service in 2022, while 57% of the population (4.6 billion) used a properly administered sanitation service; 33% (2.7 billion) deployed private sanitation facilities that were linked to sewers from which waste water was treated; and 21% (1.7 billion) used toilets or toilets where excreta were appropriately disposed of in situ (UNICEF, 2023).

B. From an African Perspective

According to Daniel *et al.* (2020), 387 million people did not have access to basic drinking water, 737 million did not have sufficient sanitation facilities (including 197 thousand who practiced accessible defecation), and 811 million did not have access to fundamental personal hygiene services. Around fifty percent of educational and medical institutions lacked access to adequate water, sanitation, and hygiene services (WSS). A total of 247 million Africans and 37 million more people lacked basic sanitation and access to water for drinking over the previous few decades. There are still notable disparities between rural and urban areas within nations (Eliud *et al.*, 2023b). Most people without access to water and sanitation—roughly 86% of them—live in rural areas. Lastly, the continent is witnessing a rapid trend toward urbanization, with more than 350 million more Africans expected to live in cities by 2030. Despite this, major cities are already becoming less livable due to dwindling bulk water supplies and users receiving only a small portion of the drinkable water they require (Armah *et al.*, 2018a).

Diarrheal diseases, which continue to be the region's leading cause of death and account for over 8% of child fatalities, are also made worse by inadequate access to sanitation, hygiene, and water (WASH). Stunting affects nearly 35% of children worldwide, and can be partly attributed to contaminated water, poor sanitation, and poor hygiene (Philippe *et al.*, 2022). Hand washing is one easy hygiene measure that can significantly enhance health outcomes. Women and children particularly benefit from having access to drinking water and sanitary facilities nearby. The safety, dignity, and general well-being of women and girls—who are frequently targets of gender-based violence—can be protected by providing them with easy access to adequate sanitation and water supplies.

C. From a Sub-Saharan African Perspective

In sub-Saharan Africa (SSA), obtaining information about the state of sanitation, cleanliness, and clean drinking water is still difficult. The current article uses theoretical data from 2017 to 2019 (Lerebours *et al.*, 2021) to advance the WASH initiatives' goal of eliminating open waste disposal by 2030 in ten SSA countries. Furthermore, the need for sufficient improvement drivers within the SSA regions to comprehend the

rapidly growing rural population—where unemployed youths make up over 60% of the total population—was the reason behind the recent, unprecedented increase in the rural-urban population. People who live in rural areas are referred to as members of the rural population, according to national statistical offices. Less than five million people residing in less than five square meters was another definition of it (Conaway et al., 2023).

Similarly, those who reside in cities are referred to as the urban population. The World Bank's predictions and the United Nations' (UN) world urbanization potential clients' urban ratios can be used to estimate this. The population as a whole is not equal to the sum of the populations of the urban and rural areas. According to estimates, COVID-19 is expected to have a significant negative impact on nearly one billion people who live in slums and informal settlements in the SSA, both rural and urban (Kanyangarara et al., 2021). Most of them lack basic personal hygiene and sanitation facilities (better toilets and soap and water for handwashing by every household), as well as an improved a commonality water supply that is accessible in less than 30 minutes round trip. The majority of rural slums are devoid of safe and decent housing as well as limited or nonexistent access to waste disposal, water, and sewage systems. In isolated rural areas where the water is left untreated or contaminated, these people are cut disconnected from safer sources of water (Amadu et al., 2023).

D. From an Eastern African Perspective

340 million people, or more than 70% of the population, live in Eastern and Southern Africa without access to basic sanitary facilities. Of them, 179 million use undeveloped facilities, 63 million use shared sanitation facilities, and 98 million (19%) practice open defecation. Countries like Eritrea, South Sudan, and Ethiopia have the highest percentages and numbers of people engaging in public feces disposal, while Ethiopia, Uganda, Kenya, and Tanzania have the largest populations in the region lacking access to fundamental sanitation facilities (Mwai et al., 2022). Because more than 1% of people in the region don't wash their hands frequently with soap and water, the number of people without access to basic sanitation supplies is even higher (386 million).

For instance, 117 million school-age children (62 percent) lack access to washing your hands facilities, and over 50 million (27 percent) lack access to sanitation services in schools (UNICEF, 2023). The rate at which access to basic sanitation services is expanding is the biggest worry in the area. Since 2000, the percentage of communities with fundamental sanitation amenities available has increased by just 6%, and by 2030, only 36% of the population is expected to have such services (Njuguna, 2019a). Even though many nations are making progress toward ending open defecation, far too many homes are at risk of remaining at the bottom of the sanitation service hierarchy. People in urban areas begin to use shared facilities, while those who are rural areas continue to use inadequate sanitation facilities. It is crucial to move people up the service ladder rather than just away compared to open defecation. Institutional WASH programming needs to expand

because it hasn't been that extensive up to this point (Njuguna, 2019b).

E. From a Somalian Perspective

In Somalia, just 52% of the people have access to some sort of basic water source (UNICEF, 2023). Families are frequently forced to fetch water from unsafe open wells and great distances due to the high costs associated with the restricted oversight of unregulated water suppliers. Defecating in the open is a common practice, with 28% of people doing so. The risk of catching diseases that are easily preventable, like diarrhea, sudden bouts of watery diarrhea, cholera, along with respiratory infections, is increased in areas without access to sanitary water, toilets, and appropriate hygiene practices. More than 900 individuals in Somalia have perished from cholera in the last three years, the bulk of them were young children (Challa et al., 2022). Mothers' and infants' lives are also in jeopardy when women are compelled to give birth in these substandard circumstances.

The likelihood of catching diseases that are easily preventable, like diarrhea, sudden bouts of watery diarrhea, diarrhea, and respiratory infections, is increased in the absence of water that is safe to drink, toilets, and good hygiene practices. Girls and women are typically in charge of gathering water, which can be extremely risky. Conflicts at water points and the possibility of either sexual or physical assault are commonplace for women and girls. Their time and ability to attend work and school are also restricted by the time they spend gathering water. This affects not just the women and girls but also their surrounding neighborhoods and the overall economy (Challa et al., 2022).

3. Methodology

An analytical cross-sectional research design was utilized in this research. The design of the research was appropriate as it aided in determining the precise factors influencing safe access to sanitation services. Both qualitative and quantitative methods of data collection were employed in the study for triangulation purposes. This study was conducted in Daynile District, located in the southeastern Banaadir region of Somalia. A population is defined as a set of cases or subjects who have a common characteristic that is observable. The target population for this study was household residents who were residing in the Daryel Camp in the Tredish location, Danyille District, Mogadishu, Somalia. The study population of this study was 850 household heads who were residing in the Daryel Camp in the Tredish location, Danyille District, Mogadishu, Somalia. The study employed the Yamane (1967) formula to define the size of the sample for this study. The study employed both purposive selection techniques and systematic random selection to recruit the study respondents who participated in this study. Daryel Camp camp was purposively selected due to a notable poor sanitation practice standing at 33% which is a worrying trend for refugee camps where people are densely populated. Systematic random sampling was employed to recruit study respondents from the various household heads residing in the camp. Both focused group conversations and key informer

consultations were put in place to obtain qualitative data. Both a focused group discussion guide and a key informer monitor were utilized to obtain the qualitative data.

Quantitative data were initially entered into a Microsoft Excel spreadsheet for cleaning to eliminate inconsistencies and errors. Once cleaned, the data were exported to Statistical Package for the Social Sciences (SPSS) version 26 for statistical analysis. Descriptive analysis involved the use of frequencies and proportions to summarize the data. For bivariate analysis, cross-tabulations and Chi-square (χ^2) tests were employed to assess the relationships between independent variables and the dependent variable. Qualitative data, on the other hand, were analyzed using NVivo software. A thematic content analysis approach was employed to systematically interpret the data. The process began with transcribing responses from interviews and open-ended questionnaires. Approval to conduct the study was obtained from the Mount Kenya University Institutional Research and Ethics Review Committee. Additional authorization was secured from the Somalia National Commission for Science, Technology, and Innovation (NACOSTI). Further permits were granted by relevant local authorities, including the Daynille District Commissioner's office, the Daynille Department of Health, and local education offices.

4. Results and Findings

A. Social Demographic Characteristics of the Study Respondents

Table 1 below provides the descriptive statistics of the study partakers regarding social demographic characteristics. Concerning the level of income, more than half (59.1%) of the study respondents were earning below the poverty line and this could be linked to Somalia being a low-income nation. On the contrary, more than a quarter (40.9%) of the study respondents were earning above the poverty line. Regarding education level, the majority (65.1%) of the study partakers in this research had no formal education, this could be linked to the lack of learning facilities in the IDP Camp, while a few (6.3%) of the study

participants had attained a tertiary level of education. Concerning household size, more than half (56.1%) of the study partakers had a household size of 4-6 members while only a few (20.4%) of the study partakers had a household size of more than seven members. Regarding household heads, more than three-quarters (78.8%) of the study partakers had males as the household heads while only a few (21.2%) of the homesteads had females as the household head. Lastly, concerning the age of the study partakers, close to half of the study partakers were aged 35-44 years while only a few (11.9%) of the study partakers were aged 55-64 years.

B. Social Demographic Factors Influencing the Utilization of Safe Sanitation Practices

The relationship between social demographic factors and the utilization of safe sanitation services is examined in this section using both bivariate and multivariate analyses. The outcomes of the research are shown in Tables 2 and 3.

1) Gender and Utilization of Safe Sanitation Practices

As indicated in Tables 2 and 3 below, close to half (47.2%) of the study partakers who reported utilizing safe sanitation practices were males while close to three-quarters (74.5%) of the study partakers who reported not utilizing safe sanitation practices were females. There was a statistical correlation when the chi-square test for independence was done between gender and utilization of safe sanitation practices ($\chi^2=9.42$, $df=3$, $p<.001$). These findings were not consistent with the multivariate analysis as there was no statistical association when binary logistic regression was carried out ($P=0.09$).

These results were not in harmony with the qualitative findings as the majority of the study partakers in the focused group discussion noted that;

"I would say, that women are likely to observe safe sanitation practices such as proper handwashing practices and even ensuring latrines are clean and are properly used. It's in their blood to be clean, for us men we don't care, for instance, I can urinate at the roadside and even not wash my hands since it's a taboo for us....."

The findings of this research were in agreement with two

Table 1
Social demographic characteristics of the study respondents

Independent variables	Categories	Frequencies	Valid percentage
Income level	Below the poverty line	159	59.1%
	Above the poverty line	110	40.9%
Education level	No formal education	175	65.1%
	primary	52	19.3%
	secondary	25	9.3%
	tertiary	17	6.3%
Marital status	single	57	21.2%
	married	127	47.2%
	divorced	17	6.3%
	Separated	34	12.6%
	widow	34	12.6%
Household size	1-3	63	23.4%
	4-6	151	56.1%
	More than 7	55	20.4%
Household head	male	212	78.8%
	female	57	21.2%
Age	25-34	63	23.4%
	35-44	123	45.7%
	45-54	51	19%
	55-64	32	11.9%

Source: Primary Data

Table 2
Social demographic factors associated with the utilization of safe sanitation practices

Independent Variables	Categories	Dependent Variable (Safe Sanitation Practices)		Statistical Significance (Chi-square Test)
		YES (N=104)	NO (N=165)	
Gender	Male	77(47.2%)	86(52.8%)	$X^2=9.42$ df=3 p=<.001
	female	27(25.5%)	79(74.5%)	
Age	25-34	33(52.4%)	30(47.6%)	$X^2=9.42$ df=3 p=0.02
	35-44	47(38.2%)	76(61.8%)	
	45-54	17(33.3%)	34(66.7%)	
	55-64	7(21.9%)	25(78.1%)	
Marital Status	single	23(40.4%)	34(59.6%)	$X^2=4.306$ df=4 p=0.37
	married	42(33.1%)	85(66.9%)	
	divorced	9(52.9%)	8(47.1%)	
	Separated	16(47.1%)	18(52.9%)	
Educational Level	window	14(41.2%)	20(58.8%)	$X^2=8.76$ df=3 p=0.03
	No formal education	57(32.6%)	118(67.4%)	
	primary	28(53.8%)	24(46.2%)	
	secondary	12(48%)	13(52%)	
Household Size	tertiary	7(41.2%)	10(58.8%)	$X^2=0.05$ df=2
	01-Mar	24(38.1%)	39(61.9%)	
	04-Jun	58(38.4%)	93(61.6%)	
Income level	More than 7	22(40%)	33(60%)	$X^2=4.65$ df=1 p=0.03
	Below the poverty line	53(33.3%)	106(66.7%)	
	Above the poverty line	51(46.4%)	59(53.6%)	

Source: Primary data

Table 3
Multivariate analysis on social demographic factors associated with the utilization of safe sanitation practices

Step 1a	Variables	B	S.E.	Wald	Df	Sig	Exp(B)	95% C.I for EXP(B)	
								Lower	Upper
	Income level	.434	.269	.2602	1	.107	1.5 ref	.91	2.62
	Education			7.127	3	.006			
	No formal education	.68	.54	1.60	1	0.01	1.9	.69	5.72
	primary	-.14	.59	.05	1	.82	.87	.27	2.80
	secondary	.18	.67	.07	1	.78	1.19 ref	.33	4.40
	Gender	.54	.324	2.81	1	0.09	1.72 ref	0.91	3.25
	Age			8.36	3	.04			
	25-34	-1.39	.51	7.38	1	.007	4.2	.09	
	35-44	-.82	.48	2.94	1	.087	.44	.17	1.13
	45-54	-.67	.54	1.57	1	.21	.51 ref	.17	1.46
	Constant	.21	.74	.08	1	.78	1.24		

Source: Primary data

other studies carried out in Ethiopia(Assefa et al., 2021; Novotný & Mamo, 2022). However, another study carried out in Kenya was contrary to these results as women were more likely to observe safe sanitation practices as compared to men(Winter et al., 2019).

2) Age and Utilization of Safe Sanitation Practices

As indicated in Tables 2 and 3, more than half (52.4%) of the study partakers who utilized safe sanitation practices were aged between 25-34 years this could be linked to their young age coupled with the need to observe hygiene measures. The majority (78.1%) of the study partakers who did not utilize safe sanitization practices were aged 54-64 years old and this could be linked to their old age. There was a statistical correlation when the chi-square test for independence was done between age and utilization of safe sanitation practices ($X^2=9.42$, $df=3$, $p=0.02$). These findings were consistent with the multivariate analysis where age was an independent factor for utilizing safe sanitation practices($P=0.04$). Furthermore, study respondents aged 25-34 were 4.2 times more likely to utilize safe sanitation

practices as compared to those aged 55-64 years. Younger individuals, especially those in school or recent graduates, may have received education on the importance of hygiene and sanitation. This education can positively influence their knowledge and practices regarding safe sanitation.

These findings were consistent with those of a study carried out in Uganda(Ssemugabo et al., 2019). However, another study carried out in Tanzania was contrary to these findings(Mshida et al., 2020).

3) Marital Status and Utilization of Safe Sanitation Practices

As indicated in Table 2, more than half (52.9%) of the study respondents in this study who reported utilizing safe sanitation were divorced, Divorced individuals may have increased responsibility for managing their households and living spaces. This heightened sense of personal responsibility could lead to a greater emphasis on maintaining a clean and sanitary environment. while close to three-quarters (66.9%) of the study partakers who were married reported not utilizing safe sanitation practices. There was no statistical correlation when

the chi-square test for independence was done between marital status and utilization of safe sanitation practices ($X^2=4.306$, $df=4$, $p=0.37$).

These findings were not consistent with qualitative data where the majority of the discussants in the focused group discussion noted that;

"I would say those who are married are likely to observe safe sanitation practices as compared to those who are single or divorced. The presence of a spouse motivates the need to observe good hygiene measures. For instance, being alone or single promotes a culture of laziness which is always linked to poor sanitation practices...."

The findings from this study agreed with those of a study carried out in Malawi(Hinton et al., 2023). This was contrary to an investigation carried out in South Africa where marital status was found to be associated with the utilization of safe sanitation practices(Tseole et al., 2022).

4) Income Level and Utilization of Safe Sanitation Practices

As indicated in Tables 2 and 3 below, only a quarter (33.3%) of the study partakers who observed safe sanitation practices were earning above the poverty line while more than half (53.6%) of the study partakers who were earning below the poverty line didn't utilize safe sanitation practices. There was a statistical correlation when the chi-square test for independence was done between income level and utilization of safe sanitation practices ($X^2=4.65$, $df=1$, $p=0.03$). However, this was not consistent in the multivariate analysis ($P=0.11$).

These findings were not consistent with qualitative data where the majority of the discussants in the focused group discussion noted that;

"Income can determine the quality of sanitation infrastructure. Higher-income households are more likely to have access to well-constructed, durable, and hygienic sanitation facilities, while lower-income households may rely on less sophisticated or shared facilities. Furthermore, Income influences the ability to purchase hygiene products such as soap, hand sanitizer, and sanitary products. Higher-income individuals may have better access to these products, promoting better hygiene practices..."

The findings from this study agreed with those of a study carried out in Kenya(Njuguna, 2019a). This was contrary to an investigation carried out in Kenya where poor income was found to increase the odds of not utilizing safe sanitation practices(Simiyu et al., 2020).

5) Education Level and Utilization of Safe Sanitation Practices

As indicated in Tables 2 and 3, close to half (48%) of the study partakers who reported utilizing safe sanitation practices had attained a secondary level of education. While close to three-quarters (67.4%) of the study partakers who reported not utilizing safe sanitation practices had no formal education. There was a statistical correlation when the chi-square test for independence was done between education level and utilization of safe sanitation practices ($X^2=8.76$, $df=3$, $p=0.03$). These findings were consistent with the multivariate analysis where the level of education was an independent factor for the utilization of safe sanitation practices($p=0.006$). Furthermore,

study respondents with no formal education were 1.9 times less likely to utilize safe sanitation practices. Poor education can contribute to poor utilization of safe sanitation practices due to several interconnected factors. Education plays a crucial role in shaping people's awareness, knowledge, attitudes, and behaviors, including those related to hygiene and sanitation.

The findings from this research were consistent with those of a study carried out in Ghana and Nigeria(Abubakar, 2017; Appiah-Brempong et al., 2018). However, another study carried out in Somalia found no association between education level and utilizing safe sanitation practices(Turyare et al., 2020).

6) Size of the Household and Utilization of Safe Sanitation Practices

As indicated in Table 2, more than a quarter (38.1%) of the study respondents who reported utilizing safe sanitation practices had a household size of 1-3 members, while more than half (60%) of the study respondents who reported not utilizing safe sanitation practices had a household size of more than 7 members. There was no statistical correlation when the chi-square test for independence was done between household size and utilization of safe sanitation practices ($X^2=0.05$, $df=2$, $p=0.97$). This could be linked to loss of power association when executing bivariate analysis.

The findings from this research were consistent with those of a study carried out in Ethiopia and Nigeria(Bamlaku Golla et al., 2023; Sridhar et al., 2020). However, another study carried out in Tanzania revealed that a bigger household size reduced the odds of utilizing safe sanitation practices(Mshida et al., 2020).

5. Summary, Conclusion and Recommendations

A. Summary

The following social demographic variables were found to have a statistical association with the utilization of safe sanitation practices when the bivariate analysis was done hence, they were Imported for the multivariate analysis; gender, education level income, and age of the study respondents. However, marital status and size of the household didn't reveal statistical association during bivariate analysis.

B. Conclusions

Being aged 25-34 years increased the odds of Utilization of Safe Sanitation Practices while a lack of formal education reduced the Utilization of Safe Sanitation Practices.

C. Recommendations

1. The Somalia national government, the Somalia Ministry of Health and Sanitation, and other concerned stakeholders should ensure community members are adequately engaged on matters related to safe sanitation practices.
2. The Somalia national government, the Somalia Ministry of Health and Sanitation, and other concerned stakeholders should ensure community leaders are trained and given an upper hand on matters related to safe sanitation practices.

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