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INFLUENCE OF COMMUNITY HYGIENE PRACTICES ON SAFE WATER AND SANITATION AMONG MOTHERS OF UNDER FIVE YEAR OLDS IN MIGWANI DIVISION, KITUI COUNTY

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ABSTRACT

The purpose of this study was to assess the influence of community hygiene practices on safe water and sanitation among mothers of under five year olds in Migwani Division, Kitui County, Kenya. The study adopted a descriptive survey research design. A sample of 94 mothers of children under 5years old, 3 public health officers and 57 community health workers was used for the study. The total number of respondents was 154 and the response rate obtained was 89%. Data was collected using interview schedules, questionnaires and observation checklists. Quantitative data was coded to develop code sheet quantitative data. Qualitative data was thematically categorized and analyzed using Statistical Package for Social Science Version 20. The results of the study showed that Community hygiene practices have great influence on levels of adoption of safe water and sanitation practices among mothers of children under five years old. Recommendations of the study were that: community involvement in assessing their health, training of community health workers on concepts of health care and development, change in human behavior in community response towards disease outbreaks and emergencies and poverty alleviation in order to improve adoption of community hygiene strategies for safe water and sanitation.

Key Words: *Community Hygiene, Water and sanitation*

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INTRODUCTION

In Africa, it is estimated that at least 300 million people lack access to safe drinking water supply where as 33 million lack access to basic sanitation. As a result, waterborne diseases present a major burden to human health with 1.8 million people losing their lives every year of which 1.5 million are children aged below five years (WHO, 2012). One of the Millennium Development Goals (MDGs) target was to half the proportion of people without sustainable access to safe drinking water and basic sanitation by 2015, likewise, Sustainable Development Goal (SDG) 6 aim is to ensure availability and access to water and sanitation for all by 2030.Yet, most African countries lag behind, especially those in sub-Saharan Africa (WHO/UNICEF, 2015).Going by WHO standards on access to connected sewage system in Kenya the proportion of rural households connected to a sewage system by 2012 was 7.5%.In Kenya the proportion of rural population with access to clean and safe water was 9.4% by 2012 (WHO/GoK, 2012) and 45% had access to clean and safe hygienic sanitation facilities (UN, 2012). Kitui County is classified as arid and semi-arid land (ASAL) and experiences prolonged spells of inadequate water supply and limited access. In Kitui about 6% of the inhabitants have access to safe drinking water (Borst & De Haas, 2006). Water scarcity in the county forces women and girls to walk up to 20 kilometers during the biannual dry seasons of the year {January-March and June-October} to get the drinking water from the water sources such as springs and scooped holes within the sand on river-beds of dry seasonal rivers, man-made dams and shallow wells. These sources of water are likely to be contaminated due to common use by both humans and animals (FAO, 2005).

Due to poverty, very few people in rural Kitui County would afford to buy safe water from the sparsely distributed boreholes. Most of these people would rather get water from the free contaminated sources at no cost (Borst & De Haas, 2006).

In Migwani Division the proportion of rural population with access to clean and safe water was 6.0% by 2012. Very few people in the Division can afford to buy safe water from safe water sources due to poverty (Mutungi, 2012). The poor rural population lives below the poverty line which is defined by spending less than 1.2

U. S Dollars per day (WHO, 2012). Majority (66%) of the people in Migwani Division of Kitui County prefer getting unsafe water at no cost from contaminated sources from distances ranging between 20-30 kilometers away from their homesteads (Mutungi, 2012).

Just like many other economically disadvantaged parts of Kenya, Migwani Division has experienced an increasing number of child mortality of under five year olds that are related to unsafe hygienic practices among mothers of under five year olds (MoH, 2013). Therefore, it is against this background that there was need to assess the influence of community hygiene practices among mothers of under-five year olds in Migwani Division of Kitui County, Kenya.

Statement of the Problem

Sanitation and hygiene are important to child survival, development and growth especially in the developing world where about 120 million children are born annually. It is estimated that 88% of diarrhea related cases of children under-five years result from poor hygiene and lack of access to improved sanitation (WHO, 2012). Poor water quality, sanitation and hygiene account for about 1.7 million under-5 year deaths worldwide annually.

Community hygiene practices significantly contribute to the growth and stability of low income rural population in many ways. Despite marked health progress in the world, Kenya continues to grabble with preventable diseases and unresolved issues of community public health service delivery (UNICEF, 2012). In view of the issues of community public health related problems, Kenya has embarked on the implementation of community health strategies and

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practices as an intervention measure in order to uplift the standards of safe water, sanitation and hygiene practices especially among children aged under five years (GoK, 2012). Water scarcity and low quality influences the level of health status in many households owing to poor sanitation and hygiene practices, especially those related to excreta disposal and hand washing (Kariuki, 2013).

Despite the basic knowledge of inadequacy of water and hygiene sanitation and practices among rural community; water supply, sanitation and basic household hygiene practices in Migwani Division lack priority from the government in relation to health, economic and environmental burden it places on the people in the Division (Mutungi, 2012). Therefore, despite the many initiatives made by the government through the Ministry of Health and Sanitation, most people, especially mothers of under five year olds continue to adopt unsafe hygiene practices despite an array of diversified efforts put towards adequate sanitation. Approximately 49% of the total population in Migwani Division does not have access to adequate sanitation such as safe, hygienic, easily accessible, acceptable and affordable system of disposing human excreta, waste water and household refuse (Mutungi, 2012). The unhygienic practices affects quality of life, cause diseases hence place burden on families and increased risks to personal safety. In Migwani Division, diseases associated with water, sanitation and hygiene practices are leading causes of children mortality rate which stands at 1.95 per 1000 per day (HMIS, 2016).

Thus, this study focused on the influence of community hygiene practices as an intervention to safe water and sanitation among children under five years old in Migwani Division, Kitui County, Kenya.

Study Objective

The purpose of this study was to assess the influence of community hygiene practices on safe water and sanitation among mothers of under five year olds in Migwani Division, Kitui County.

LITERATURE REVIEW

This study was based on the Health Belief Model (HBM) (Croyle, 2005). It's one of the first theories of health behaviour developed in 1950s by a group of United States of America (U.S.A) public health service social psychologists who wanted to explain why so few people were participating in programs to prevent and detect diseases. The model proposes that a person's health-related behaviour depends on the person's perception of four critical areas: the severity of a potential illness, the person's susceptibility to that illness, benefits of taking a preventive action, and the barriers to taking that action (Croyle,2005).

The model postulates that health-seeking behaviour is influenced by a person's perception of a threat posed by a health problem and the value associated with actions aimed at reducing the threat. HBM addresses the common type of a person's beliefs and behaviours. It provides a way to understand and predict how clients will behave in relation to their health and how they will comply with health care therapies. It is a model for addressing problem behaviours that evoke health concerns for example, high-risk hygiene behaviour among mothers with children under five years and the possibility of these children contracting diarrhea (Croyle, 2005). The theory was chosen to guide this study in that, it explains a person's hygienic behaviour due to perceived susceptibility and severity. For instance, the perception that a health problem is personally relevant and perceives diagnosis of the illness as being accurate.

Action is taken after perception of the severity is seen to be high that is, to have serious organic or social complications. A person's hygiene behaviour is acquired due to perceived benefits and costs; like the patient's belief that a given treatment will cure the illness or help to prevent it. A person's hygiene behaviour due to motivation and modifying factors is the desire to comply with a treatment and the belief that it is correct. The modifying factors are personality variables, patient satisfaction and socio-demographic factors (Croyle, 2005).

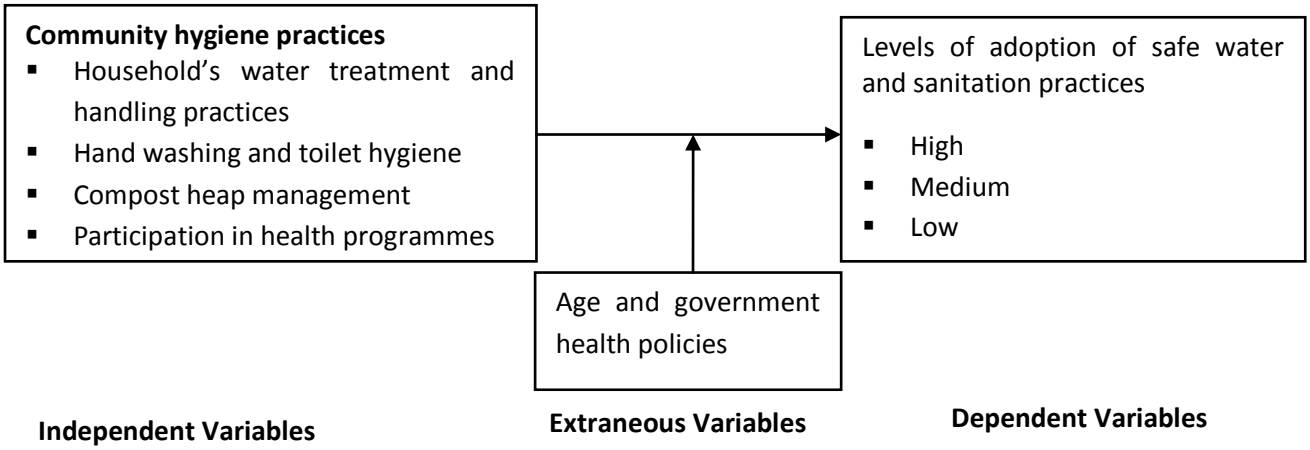

Figure 1: Relationship between community hygiene practices and levels of adoption of safe water and sanitation practices among mothers of under fives

Globally, improved water sources use is up to 87% worldwide, but still 884 million people lack access to safe drinking water (WHO, 2011). About 340 million of these people, which is a bit more than one third of them live in SSA, Kenya included (WHO/UNICEF, 2010). Drinking water coverage and sanitation is lowest in the SSA's population. Improved water supply, proper sanitation and adequate hygiene practices are important for sustaining high water quality and reducing water borne diseases among children aged less than five years (WHO/UNICEF, 2010). One of the most important public health issues is drinking - water-safety. It is mostly affected by emergencies and natural disasters that mothers of children under five years need to know so as to take precautionary community health measures against the likelihood of the outbreak of communicable diseases. Some of these diseases include food borne, waterborne, malnutrition-related diseases (WHO, 2008).

The greatest waterborne health risk in most emergencies is the transmission of faecal pathogens, due to inadequate sanitation, hygiene and protection of water sources. Different types of disasters affect water quality in different ways. When people are displaced by conflict and natural disaster, they may move to an area where unprotected water sources are contaminated. When the population density is high and sanitation is inadequate, unprotected water sources in and around the temporary settlements are highly likely to become contaminated (WHO, 2008). Malnutrition increases the risk of waterborne disease's outbreak. The quality of urban drinking-water supplies is particularly at risk following earthquakes, mudslides and other structurally damaging disasters. Sewers and water transmission pipes may be broken, causing contamination of drinking-water in the distribution system. Floods may contaminate wells, boreholes and surface water sources with faecal matter washed from the ground surface or from overflowing latrines and sewers. During droughts, people may be forced to use unprotected water supplies when normal supplies dry up; as more people and animals use fewer water sources, the risk of contamination is increased (WHO, 2008). Others who are affected by these emergencies and natural disasters include people living in places with unfavorable geographical conditions especially in the most adversely affected geographical landscapes with unsafe human life conditions (Sachs & McArthur, 2005). Some of the unfavorable geographical conditions for human habitation include: landlocked and mountainous regions, which may attract high cost of transport, for example water landlocked areas like an islands and how people living in these islands maintain the community health among their ecological niche, or how people living on the slopes

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of a mountain maintain safe community health hygiene standards (Sachs & McArthur, 2005).

Adverse disease ecological natural conditions that mothers of children under five years need to know include: high disease burden of tropical diseases such as malaria, and areas with adverse conditions for sustainable agriculture related disease outbreaks: for example dependency on rain fed agriculture in tropical humid and sub humid or tropical arid and semi-arid lands (ASAL) and arid regions are associated with diseases' outbreak like bilharzias, cholera, and diarrheal-related diseases among the entire population and more severe among the children aged less than five years (Sachs & McArthur, 2005).The continual donation of drugs and treatment could control many waterborne diseases effectively by 2015, which is an intervention for attaining SDG 6 (UN, 2016). However, disease transmission will still continue unless we tackle the root causes of these diseases, which are poor access to safe water and basic sanitation. Supplying basic sanitation is neither difficult nor costly, especially in rural areas, but the key requirement is sustainability of these basic sanitation facilities. After the donors provide these water and sanitation facilities the community need to have been capacitated to monitor and manage the community safe water and sanitation services at local level to ensure sustainability. In this way the same community safe water and sanitation services should still work in over 10-20 years and beyond. Therefore, the local community ownership of water and sanitation initiatives by the community health strategy should include the local community needs through the local community participation, which should be encouraged by Donors and the Government (WHO/UNICEF, 2006).

If the local community people can afford to pay, even a small amount towards the provision of safe drinking water and hygienic sanitation facilities, they are supposed to be encouraged by the Donors and the Government to do so. The local community is likely to look after these facilities in the long-term after the Donors and the Government leaves these facilities under the community management. Similarly, it is important for the community people in charge to get incentives to enable such safe water and sanitation systems to properly run, be repaired and well maintained. (WHO/UNICEF, 2006). Interventions in water and public sanitation services management should be focused on local community's capacity to manage boreholes and wells rather than the community's passive attitude on allowing the government, donors and NGO's to step in and do the job, for them since empowering local authorities sustainability is ensured (Skinner, 2009).

In developing regions, 88% of the rural population lack improved water sources. In Africa, women and girls are burdened with water collection. Walking distances increase especially if there are break downs, unsafe and nonexistent water supplies. Alternative water from rivers and marshes is usually contaminated. Little water compromises family hygiene, leads to wastage of productive time and energy, school dropouts and absenteeism. Therefore, the provision of safe water constitutes the basis of human development (Adekunle *et al*., 2007). Access to quality healthcare among mothers of children aged less than 5 years is therefore critical in most of the developing countries. The mothers also need to be trained so as to be able to identify the possible risks to the health of these children that emanate from poor hygienic household living standards (Adekunle *et al.,* 2007).

Chronic political conflicts, natural disasters, disparities in urban-rural settings and rapid population growth rates are only some of the obstacles to accelerating the rate of progress for African populations (WHO/UNICEF, 2006; WHO, 2008). In rural Africa, 2 out of 3 people do not have access to improved water supply (WHO, 2008). Adverse disease ecological natural conditions that mothers of children under five years need to know include: high prevalence of tropical diseases such as malaria, and areas with adverse conditions for sustainable agriculture related disease outbreaks: for example dependency on rain fed agriculture in

tropical humid and sub humid or tropical arid and semi-arid lands (ASAL) and arid regions are associated with diseases' outbreak like bilharzias, cholera, and diarrheal-related diseases among the entire population and more severe among the children aged less than five years (Sachs & McArthur, 2005). Santosham (2010) notes that community strategies in the United States of America (USA) focuses on promoting and understanding how diseases are transmitted. Promoting essential hygiene practices such as washing hands, using latrines and preventing the contamination of safe water during access, transport, storage and use are key to achieving this goal. The health strategy involves hand washing at critical times, open defecation free communities and keeping water safe (Cabral, 2010). High levels of poverty underlie the health problems in rural and urban poor communities (Santosham, 2010). In Australia for instance, native children living in rural areas experience relatively high rates of poor growth, common childhood infections and diseases like acute rheumatic fever, rheumatic heart disease and trachoma compared to their non-rural poor peers living in North America and New Zealand (Santosham, 2010).

The aim of the community hygiene strategies is to support household-based care givers through a range of community owned resource persons (CORPs) who are experienced in many aspects of community health care services to bring such services closer to the people in their local community, village and family household levels (GoK, 2012). Mutungi (2012) observed that community hygiene strategies and other community based health care providers are resilient and resourceful. Maintaining stability requires dedication in managing costs and improving efficiency in the face of challenging economic environment. Therefore, adoption of community hygiene strategies and practices is paramount in ensuring safe hygiene practices.

METHODOLOGY

The research adopted a descriptive survey design. The study was conducted in Migwani Division, Kitui County, an arid and semi-arid, thus receives erratic and unreliable rainfall for subsistence and commercial farming. The study was carried out in September before the rainy season as water borne disease prevalence increased during wet seasons. Population of the study comprised of all the mothers who had children aged below five years from Migwani Division. There was a total of 1,458 mothers with children aged below five years in the Division based on the statistics provided from the Sub-County Records office during the study period (HMIS, 2015). The targeted population also included 135 community health workers and 3 public health officers. The research study employed probability sampling methods to select respondents for the study. The total sample size was 154 study participants. The main respondents for the study were mothers whose children were aged below five years. Public health officers and community health workers were also included in the study. A total of 94 mothers, 57 community health workers and 3 public health officers were sampled for this study. The researcher used three instruments to obtain data from the respondents, an interview schedule for mothers of under five years old children, questionnaires for the public health officers and community health workers and an observation checklist. Quantitative data was coded to develop code sheet quantitative data. Qualitative data was thematically categorized and analyzed descriptively. The findings were processed using Statistical Package for Social Science (SPSS) version 20. The statistical analysis involved determination percentages, means, correlation analysis, odds ratios, logistic regression and chi square.

FINDINGS

Community Hygiene Practices

Community hygiene practices are important factors that influence the morbidity and mortality of children under five years. The study therefore, sought to find out from mothers the practices they

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used to combat sanitation related sicknesses. The factors considered for the study were water treatment and handling practices, hand washing and toilet hygiene, compost heap management and participation in health programmes.

Water Treatment and Handling Practices

Water treatment and proper handling practices reduces chances of contamination. Mothers of under-fives were asked how they handled and treated water. The results were summarized in Table 1. The study revealed that 40.5% of the mothers were boiling drinking water, 22.4% treating with chemicals while 37.1% were using untreated water. This implied that mothers were knowledgeable on water treatment although there was need to sensitize those who never treated water on the importance in order to reduce sanitary diseases. Water handling practices were fair at 69.7% and 79.8%.

Table 1: Water treatment and handling practices among mothers of under fives

Practice	Frequency	Percent (%)
Boiling water	36	40.5
Chemical treatment	20	22.4
No treatment of water for drinking	33	37.1
Covering water for drinking	62	69.7
Clean water containers	71	79.8

Hand Washing and Toilet Hygiene

To manage water borne diseases, hand washing and toilet hygiene is important. The hygiene practices include hand washing at the four critical times using soap, drying of hands after washing and keeping the toilet clean. These are important strategies used to reduce chances of children less than five years contracting sickness associated with poor sanitation practices. The results were presented in Table 2. The findings revealed that majority of mothers (94.4%) washed their hands at the four critical times. The researcher was keen to know if washing was accompanied by use of soap and drying. Of those who washed their hands, 25% used water only, 55% used soap, while those who dried their hands after washing were 48%. Use of soap in hand washing and drying reduces chances of transmitting and spreading germs. The maintenance of proper toilet hygiene reduces the spread of sanitation related diseases to children. These diseases include diarrhea, cholera, gastroenteritis, worms, amoeba and dysentery. The study sought to know if there were attempts to manage hygiene of toilets through proper cleaning, covering and disinfection to keep off flies which are carriers of germs and disease causing bacteria. The findings revealed that 64% of the homes under study had clean toilets while 60.7% were noted to be covering toilets to keep off flies. The general cleanliness was equally considered an important practice in sanitation and hygiene. It was observed that the general toilet compound hygiene was good in 75% of the homes under study. Therefore, in order to reduce sanitary diseases, there is need to strengthen hand washing and toilet hygiene in all homes.

Table 2: Hand washing and toilet hygiene among mothers of under fives

Practice	Frequency	Percent (%)
Washing hands at the four critical times	84	94.4
Use of soap when washing hands	55	61.8
Use of water only to wash hands	25	28.1
Drying of hands after washing	48	53.9
Well maintained toilet compound	75	84.3
Covering toilets	54	60.7
Clean toilets	57	64.0

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Compost Heap Management

Domestic waste generated from kitchen, food remains and wastes can be a source of diseases for children under five years. The practices considered include use of compost heaps, covering of pits/bins and general disposal as shown in Table 3. The study revealed that there were deliberate efforts to manage domestic waste. The strategies included use of covered dustbins (41.6%), covered compost pits (27.0%) and use of improvised tins as compost heaps. There were 46.1% of the homes surveyed that had open composts. This implied that there was need to improve and strengthen the strategies and practices employed in the management of domestic waste.

Table 3: Compost heap management

Practice	Frequency	Percent (%)
Covered dustbin	37	41.6
Covered compost pits	24	27.0
Improvised tins for compost	45	50.6
Open compost	41	46.1

Participation in Health Programmes

Participation in community health programmes was considered an important practice in managing and reducing sicknesses that affect children under five years. The study therefore sought to find out the level of participation of the mothers who had children less than five years in health programmes. The data was presented as shown in Table 4. The study revealed that less than half of the mother's usually participated health programmes. There were 49.4% of the mothers with children aged less than five years who participated in health programmes. These programmes included health education forums, immunization and open defecation free campaigns. This implied that the knowledge of mothers on adoption of safe sanitation and hygiene strategies and practices would improve if they actively took part in these programmes.

Table 4: Participation of mothers of under-fives in health programmes

Participation in health programmes	Frequency	Percent (%)
Yes	44	49.4
No	45	50.6
Total	89	100

Community hygiene practices to safe water and sanitation

Adoption of community hygiene practices determines the knowledge of the community members on safe water and sanitation. Therefore, the study sought to know if there existed any significant relationship between community hygiene practices and safe water and sanitation. A logistic regression analysis was done since the variables were dichotomous in nature. The variables included in the regression equation were boiling of water, treatment of water using chemicals, covering of drinking water, hand washing and covering of toilets. The findings revealed that adoption of community hygiene practices was significantly related safe water and sanitation knowledge. The coefficients in the regression equation which were statistically significant were covering drinking water and toilets with $p<0.05$. The coefficient for covering toilets was 2.805 implying that mothers who had knowledge on safe water and sanitation were less likely to leave toilets uncovered. Covering drinking water was also significantly related to safe water and sanitation knowledge, $p<0.01$. The data is as shown in Table 5.

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Table 5: Adoption of community hygiene practices to safe water and sanitation among mothers of under-fives

Practice	B	S.E.	Wald	Sig.	Exp (B)
Boiling water(1)	.714	.859	.692	.405	2.043
Water treatment using chemicals(1)	1.188	.787	2.280	.131	3.281
Drinking water covered(1)	-2.708	.810	11.187	.001	.067
Hand washing with water only(1)	-24.512	13298.158	.000	.999	.000
Covering toilet(1)	2.805	.873	10.317	.001	16.531
Hand washing with Soap(1)	22.423	13298.158	.000	.999	5473020863.895
Constant	-25.201	13298.159	.000	.998	.000

Variable(s) entered on step 1: Boiling water, water treatment using chemicals, drinking water covered, hand washing with water only, covering toilets and hand washing with soap

Key: boiling -1, not boiling- 0, chemical treatment -1, not treating- 0, covering toilet-1, not covering toilet -0, hand washing with soap-1, hand washing without soap -0

Stake holder Participation in Health and Hygiene

The role of stake holders in sanitation and hygiene is critical in the success of community hygiene programmes. The major stakeholders considered in the study were the National Government, CHWs, County Government (MoH&S), NGOs, Religious organizations and Public health officers. The role played by National and County Governments include the construction of health facilities and drainage systems, recruitment of health staff, water supply and policy development. NGOs and churches provide supportive roles which include education, training, sensitization on health and hygiene strategies and practices that help in the management of water borne diseases.

A likert scale was used to measure the perceived level of participation and involvement. The highest perceived level of involvement was 1 while the least perceived level of involvement was 5. The findings were presented in Table 6.

The perceived level of involvement among the community health workers was noted to be very high (m=1.39, std =0.49), followed by NGOs (m=1.49, std=0.59). The perceived involvement by the County Government (MoH) was observed to be high (m=1.7, std =0.46). The mean score obtained for perceived involvement with public health officers was also high (m=1.81, std = 0.78). The stakeholders rated least in the ranking were the National Government (m=2.67, std=0.94) and the religious organizations (m=2.7, std=1.01). The perceived involvement in hygiene and sanitation is an indication of their active participation and involvement with the local community.

The low rating obtained for the National Government would be related to the fact that health is a devolved function of the County Government. The low standard deviation obtained on the mean score was an indication that the two entities were together actively involved in the provision, support, and strengthening hygiene and sanitation practices.

Table 6: Participation of stakeholders in hygiene and sanitation

Stakeholder	N	Maximum	Minimum	Sum	Mean	Std Deviation
National Government	89	1	4	237	2.66	0.904
Community Health workers	89	1	2	124	1.39	0.491
County Government (MoH&S)	89	1	2	151	1.70	0.462
NGOs	89	1	3	133	1.49	0.59
Religious Organizations	89	1	4	240	2.70	1.02
Public health officers	89	1	4	161	1.81	0.782

CONCLUSION AND RECOMMENDATIONS

Various community hygiene and sanitation practices were identified among mothers. The practices included sharing of toilets for those homesteads that would not afford their own toilets, drinking water treatment and handling, hand washing, use of compost bins or pits and home cleanliness. The study revealed that parents washed their hands before feeding their children as well as washing hands after toilet visits. Hand washing was practiced by 94.4% of the mothers sampled in the study. Boiling of water was also used as a strategy for minimizing water borne diseases. Mothers who had hand washing facilities outside toilets were 61.8%. 49.4% of the homesteads surveyed revealed that mothers participated in community hygiene programmes to learn how to reduce sanitation and hygiene related sicknesses and diseases.

Most of the mothers of children under five years old had low literacy levels. Most of the mothers of children under five years old had very little knowledge concerning the government's policy on community hygiene strategies and practices. This was perceived to have partly contributed to the low level of adoption of safe water and sanitation practices. Therefore, Community hygiene practices have great influence levels of adoption of safe water and sanitation practices among mothers of children under five years old.

The recommendations were suggested out of the study findings and conclusion. The community should be involved in the process of assessing their health situations, dialogue with them on causes, and current actions in order to identify gaps that may require additional knowledge and skills and thus influence improvement of health practices and therefore health status. The community health workers should be trained in the concepts of community health care and development, principles of a healthy community and its implications to the general socioeconomic growth and development of the community, and how the two aspects are interrelated to hygienic care of the mothers and their children aged less than 5 years.

Improvement of living standards, availability of basic needs, poverty alleviation and community participation in sanitation programmes and political commitment can improve adoption of community hygiene strategies and practices among mothers with children under five years old. Creation of community demand for health services requires a multidimensional approach. Health-promotion programs can reach and motivate more community members if outreach activities take place in schools, in sports venues, in faith-based organizations (including churches and mosques), and through innovative means such as Health Action Days and educational theatres. The sustainability of community-based initiatives depends on both partnering with and strengthening the abilities of community-based organizations. By the same token, health programs should ensure strong, ongoing links between CBOs and regional structures connected to the Ministry of Health and Sanitation, including health facilities.

Suggestions for Further Studies

Comparative studies could be carried out on interventions that do not utilize the safe water, hygiene and sanitation knowledge, to weigh the effectiveness of community hygiene strategies and practices among mothers of children under five years old.

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