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Investigating Women's Satisfaction with LAKWA's Water Kiosk Service Design Features and Service Delivery

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Abstract
This research sought to investigate women's satisfaction with LAKWA'S water kiosk service design features and service delivery in Mpeketoni, Lamu County, Kenya. The research used a mixed-method design in which qualitative and quantitative approaches were used to collect and analyse data. First, data was collected using open and closed-ended questionnaires. Then, they were administered using questionnaires. The research had 200 respondents comprising 100 women from rural settlements and 100 women in the urban settlements in Mpeketoni division of Lamu County in Kenya. The study adopted descriptive statistics used to summarise data and compare the results. The study found out that, respondents were more satisfied with the design aspects adopted by LAKWA water kiosk. Also, the majority of the respondents faulted the opening and closing hours of the kiosks, which they said did not match their other activities. However, majority of the respondents said they were satisfied with the quantity of water and finally, most of the respondents from both the small and large families said they were satisfied with the level of water kiosk services. This study recommends for better ways on inclusion of women's perceptions in water management and planning to improve the water intake and efficiency of the LAKWA water system.

Key terms: Service delivery, water accessibility, water kiosks.

INTRODUCTION

Improving water access to the rural community remain a top agenda globally, as it catalyses women's empowerment. Africa is an arid zone with unfavourable weather and atmospheric conditions for fresh water. The few available water bodies are either contaminated or polluted by different actors in development (Organization, 2014). The world Target, 6.1 of the Sustainable Development Goals, sets to ensure that, by the year 2030, there will be universal and equitable access to safe and affordable water for all (Organization & UNICEF, 2017). It is estimated that 5.2 billion people globally used well-managed drinking water services in 2015. This left an estimated 2.1 billion people without the services (Organization & UNICEF, 2017). Around 100 million people around the world are supplied water using water tankers/ boozers, a source that is considered to be an unimproved water source. This shows that either the water utility network does not reach this population, it's a remedial service due to water network failures, or the capacity of the utility network is inadequate for the population it was intended to serve (Gasson, 2017). This means that the water is either stored in tanks at the household level, exposing it to further contamination.

Lamu County remains to be one of Kenya's counties with significant water accessibility issues, despite the water being one of the major pillars of empowerment and development. Climate change has exacerbated the problem, with the only freshwater lake running dry, causing boreholes and other water sources to become saline, and efforts to improve water accessibility becoming a big burden for stakeholders. Donor money has been essential to the success of investments made by LAKWA to improve the water supply to families. These investments have been made in boreholes, water treatment facilities, and distribution networks.

However, because of resource constraints, improvements in water supply take the form of a two-tier approach where economically able households receive water via piped water connections, while those who cannot afford it are provided with water via water kiosks. Very limited research has been carried out to investigate the impacts of this economic model on household water security, the impact of water kiosk design principles, water accessibility, and the perceived sustainability of water kiosk benefits. Moreover, given the requirement that women are required to participate in the management of water distribution infrastructure, largely water kiosks, there is a paucity of research on how this requirement impacts water service provision, women's livelihoods, and customer satisfaction with services.

They are left to walk long distances in search of water, exposing them to many physical and sexual threats, especially with the outbursts and attacks of terror groups, rape, food production, social chores etc. While they are great agents of economic growth, they have not been able to maximise their potential. Apart from the woman focusing on providing water for drinking, there are other things that women feel unsatisfied with not providing, which contribute to stress levels going up. Women's participation is a key factor in water accessibility since they play a big role in fetching water and ensuring that they have adequate time for a domestic setting, participating in agricultural activities, improving sanitation and participating in other economic activities.

LITERATURE REVIEW

The provision of water for the family is the responsibility of women in most parts of the world. Women make the primary consumer and resource use decisions for their families and their community, and women in all cultures serve as managers of fixed resources (Domosh & Seager, 2001). According to research by Aladuwaka and Momsem (2010), sustainable development, water resources management and women empowerment in Sri Lanka, women are not only involved in water projects in order to satisfy their needs. She explains that "women in Vishaka Women Society decided to initiate the water project because of their desperate need for water over many years". They managed the project to not only meet their day-to-day requirements but also to prove to men they could make decisions on behalf of the community.

This is a rare phenomenon in many countries that requires examining why it is far from being achieved in many countries. In the journal, inadequate accessibility as a cause of water inadequacy by Hussein and Manjur, they purely cite infrastructural constraints of water distribution in Mpeketoni Lamu County, confining

women's role as agents of provision at the household level but not management. This leaves the main gap in women's participation in community water improvements. Nandita (2006) in the research on women's participation in local water governance, focused mainly on the institutional contradictions in India based on the constitutional framework that favours only the younger educated women and traditionally viewed as the elites marginalises the rural women who are viewed as a low class in India. Claudia Uhlendahl (2011), in research, "half a bucket – women's roles in the governance of water resources in Zambia", finds that many women in Zambia can't make independent decisions and choices, which hinders them from participating in project planning and management.

Water-resource planners representing national governments and donors have focused on women's reproductive responsibilities, primarily domestic. This has been a fundamental error because the strategic interest of women in water is closely related to their productive roles (which, in turn, are often synchronous with their reproductive tasks). By deliberately disregarding this reality, planners have severely undermined the capacity of women to make a considerable contribution to the processes of national development. As a result, huge water resources have been lost in Africa.

Low community contributions during the initial stages of projects should increase as the project increases according to the ladder of participation. Nguyen (202), in her research on the participation of women in rural water supply and sanitation projects in Maubara, Timor-Lester, says that women are the invisible actors in water management, leading to glaring gender inequality advanced by traditional gender practices and values. All services provided by women are geared towards ensuring the healthy maintenance of their families, including cooking, cleaning, and child care. Because reliable and convenient access to potable water is important in helping women fulfil these tasks, donors and governments often assume that women's primary strategic interest in water relates to their domestic roles, not management.

The situation is not necessarily better in urban areas, and when household cash resources are meagre, it may be worse. For example, in Nairobi, slum dwellers buy water from vendors or collect it from communal water points, which are often highly unsanitary, and in Mombasa, more than 60 per cent of slum dwellers have no access at all to clean water (UNICEF, 2018a). In Kumasi, Ghana (as in many other African cities), water connections are shared by numerous families, and hygienic conditions are inadequate. As a result, the poorest families are forced to purchase water from more prosperous neighbours who have access to water connections. Generally, in slum areas in African cities, there is considerable water contamination. Human and other waste is dumped into streams and drainage ditches or dries and becomes airborne, thereby creating a serious health hazard.

Cultural patterns may also have an impact. Research in Tanzania revealed that even when water was readily available, women hesitated to use it to keep their children's faces clean because this was not considered a priority and went against the wishes of their husbands. A study in Kenya (UNICEF, 2018a) noted that there is evidence that in some communities, men will give precedence to building a corrugated iron-roofed house, purchase of a bicycle or marrying a second wife over the supply of basic household necessities such as food and water. It is evident that prevailing cultural role expectations for both men and women can have critical importance in determining attitudes toward water-resource use and management.

Extreme poverty and hunger eradication will be achieved if agricultural activities include females and girls. The findings in the Wanariya water project in Sri Lanka by Aladuwaka and Momsem (2010) bring out the potential women to manage water. The project was also efficient enough that they were able to participate in other income-generating activities. As a result, they were able to irrigate and improve food security in their community. Lack of water for livestock is also a major concern. Most communities trek for long distances in search of water for their livestock.

FINDINGS AND DISCUSSION

Table 1 below shows the satisfaction level of Lakwa kiosk design.

Table 1: Satisfaction Level of LAKWA Kiosk Design

How satisfied are you with the following features of the water kiosk???		Dissatisfied	Neither satisfied nor dissatisfied	Satisfied
a) Affordability – LAKWAs water prices by 20-litre jerrican are very affordable	Small	31.8 %	4.7 %	63.6 %
	Large	25.3 %	0 %	74.7 %
b) Proximity – The water kiosk is within walking distance from my household	Small	44.2 %	1.6 %	54.3 %
	Large	28.2 %	0 %	71.9 %
c) On average, it takes a short time to serve each customer	Small	11.6 %	6.2 %	82.2 %
	Large	5.6 %	8.5 %	85.9 %
d) LAKWA's water kiosk opening and closing schedule – The time my Water kiosks opens and close fits well with my family's work demands	Small	51.1 %	10.1 %	38.8 %
	Large	47.9 %	5.6 %	46.5 %
e) The water pressure is usually high enough to fill customers' containers quickly	Small	3.1 %	4.7 %	92.2 %
	Large	5.6 %	2.8 %	91.5 %
f) Safety of LAKWA's water kiosks – Water kiosks are located in safe places for children, girls and women	Small	7.8 %	24.8 %	67.5 %
	Large	14.1 %	2.8 %	83.1 %
g) LAKWA's Water kiosks are vandalism proof	Small	4.7 %	62.8 %	32.6 %
	Large	16.7 %	40.8 %	42.2 %
h) LAKWA's Water kiosk well is designed to ensure hygienic conditions – cleanliness; for instance, premises are very clean and well drained	Small	3.1 %	5.4 %	91.5 %
	Large	8.4 %	0 %	91.6 %
i) LAKWA's Water kiosk provides me with other services – that I need, for instance, to buy basic goods	Small	20.1 %	31 %	48.8 %
	Large	31 %	14.1 %	54.9 %
j) LAKWA's Water kiosk is close to other services that water customers usually need	Small	52.7 %	32.6 %	14.8 %
	Large	35.3 %	19.7 %	45.1 %

(Source: field data 2018)

Several sets of data were collected to investigate women's satisfaction with LAKWA's water kiosk design, namely affordability, proximity, time spent, security of customers and kiosk operators, water pressures at the kiosk, opening and closing hours of the LAKWA water kiosk, hygiene designs of the LAKWA kiosk and security of the LAKWA kiosk. When respondents were asked about the affordability of LAKWA water, the majority of small and large families, 63.6 per cent and 74.7 per cent respectively, said they were satisfied. This is encouraging, and the majority of residents should be able to use LAKWA water in good quantities.

When asked about the LAKWA kiosk's proximity to the residents, the majority of both small and distant. This is contrary to Gedo and Morshed (2013), who had cited distance to kiosks as an impediment to LAKWA water usage. When asked about the time spent at the water kiosks to be served, the majority of the respondents in small and large families, 82.2 per cent and 85.9 per cent, respectively, said they were satisfied. However, when asked about the opening and closing hours of the LAKWA water kiosk, the majority of the respondents in small and large families, 51.1 per cent and 47.9 per cent, said they were dissatisfied with the timing since they don't favour them.

When asked about the water pressures at the LAKWA kiosks, the majority of the respondents from both small and large families, 92.2 per cent and 91.5 per cent, said they were satisfied. When asked about the safety of the sites of the LAKWA kiosks in relation to girls and children when they go to fetch water, the majority of the respondents, 67.5 per cent and 83.1 per cent said they were satisfied. When asked about the safety features of the LAKWA water kiosks, the majority of the small families, 62.8 per cent, said they

were not sure about it, but the majority of the large families, 42.2 per cent, said they were satisfied.

When asked about LAKWA kiosk designs in relation to hygiene, the majority of the respondents in both small and large families, 91.5 per cent and 91.6 per cent, said that they were satisfied. However, when they were asked about the location of the water kiosks in relation to other services that water users need, it was found to be divided within the small families, with 31 per cent being undecided and an equal fraction of respondents being completely satisfied. On the other hand, most of the large families were completely satisfied, 35.2 per cent. It is very interesting to have found out that women are active participants in the management of LAKWA water kiosks and that their active role is true since they gave their views, especially during this research, with confidence and information. It was noted from the above results that most women had no issue with the design and water quality but were so much concerned about the opening and closing hours, especially the smaller families who, according to the coast culture and practices, seem to be affected. However, the majority of them would embrace open operating hours. With the large families, since they have less burden with collecting water, they seem to be satisfied.

Satisfied with the Quantity of LAKWA Water

Looking at the study results, when respondents were asked about their satisfaction with the quantity of LAKWA water, most of them were satisfied. Looking at the satisfaction level with the quantity of LAKWA water, the majority of small families, 62.8 per cent (81 people), responded in the affirmative that they are satisfied, as is those in the large families, 78.9 per cent (56 persons) who agree that they get the acceptable quantity of water.

Table 2: Satisfaction Quantity of LAKWA Water

	Quantity of LAKWA water sufficient			
	Details		**Yes**	**No**
Family Size	**Small**	Count	81	48
		%	62.8 %	37.2 %
	Large	Count	56	15
		%	78.9 %	21.1 %
Category	**Rural**	Count	70	30
		%	70 %	30 %
	Urban	Count	67	33
		%	67 %	33 %

Satisfaction Level of Water Kiosk Services

When respondents were asked about their satisfaction with the LAKWA water kiosks services, 82.2 per cent of the small families said that they were satisfied, while 74.6 per cent of the large families were equally satisfied with the services in the LAKWA kiosks. When categorised based on their settlements, the majority of the rural respondents, 76 per cent, said they were satisfied with the services at the LAKWA kiosk, while the majority from the urban settlements, 83 per cent, equally said they were satisfied with the services.

Table 3: Satisfaction Level of Water Kiosk Services

			Satisfied with the LAKWA kiosk services	
			Satisfied	Dissatisfied
Family size	Small	Count	106	23
		% age	82.2 %	17.8 %
	Large	Count	53	18
		% age	74.6 %	25.4 %
Category	Rural	Count	76	24
		% age	76 %	24 %
	Urban	Count	83	17
		% age	83 %	17 %

CONCLUSION AND RECOMMENDATIONS

Conclusion: Three questions were posed to respondents to evaluate their level of satisfaction. When asked about the design aspects, respondents were more satisfied, especially with the affordability of the water, the proximity of the water kiosks to their residence, time spent at the kiosks, water pressures, safety of the water users, especially women, girls and children while fetching water, hygiene of the water kiosks and provision of other services at the water kiosks. The majority of the respondents faulted the opening and closing hours of the kiosks, which they said did not match their other activities. There was a deferred opinion between small and large families on the security of the water kiosk and the closeness of the LAKWA water kiosks to other services that LAKWA water users may need. The majority of small families were not sure about how secure the water kiosks were, while the majority of the large families said they were satisfied. When asked about their satisfaction level with the quantity of water, the majority of the respondents said they were satisfied. This is a great indication that the uptake of safe drinking water satisfies the target population. When asked about the level of water kiosk services, most of the respondents from small and large families said they were satisfied. They also cited water discolouration as a big problem for them because they were not confident that it was safe. It is equally evident from this research that women are satisfied with the design aspects of the LAKWA water kiosks.

Recommendations: LAKWA should look for better ways of including women's perceptions in water management and planning to improve the water intake and efficiency of their water system

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