

Environmental Implications of Commercializing Public Toilets and Latrines in Kakamega Town

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Abstract

Background. Waste management has been and continues to be a major challenge facing urban growth (Chadwic, 1842). Absence of basic sanitation facilities results in an unhealthy environment and contributes to illness and death (United Nations, 2007).

Objective. This study sought to establish the environmental implications of commercializing public toilets and latrines in Kakamega Town.

Design. The study was a descriptive cross-sectional study utilizing both quantitative and qualitative methods of data collection.

Study population. The study was carried out in Kakamega Town with residents of the town and those on transit being included in the sample. A total of 351 participants were enrolled in the study.

Analysis. Descriptive statistics for quantitative and qualitative data thematically analyzed.

Results. Majority of respondents (59%) were age 21-30 years while the least respondents were above 40 accounting for (8.2%). Males were more (72.4%) than women (27.6%) with 73.2% having attained tertiary level of education. Commercializing public toilets created; a source of income to toilet investors, employment opportunities and ready market space for entrepreneurs. Uncleanliness was a major factor that inhibited the rate of public toilet usage thus most people prefer commercial public toilets due to their high level of hygienic standards and fear free public toilets due to their uncleanliness and security level. The study also noted that, the presence of illegal urinating and defecation points was a problem difficult to address by relevant authorities due to effectiveness of the management.

Conclusion. Commercializing public toilets appeals to many and helps in reducing health risks that results from poor sanitation and withholding of waste in the body for long. It also increases accessibility to the public toilet services. There is need for enhancing utilization of free public toilets and also promote improvement and provision of facilities for the disabled.

Recommendation. The study recommends that respective government should ensure that, free public toilets are readily accessible for use. Further research should look at sustainable ways of addressing illegal urination, open defecation and flying toilet as pollution mechanisms.

Keywords: *Public toilet, Kakamega, commercialization, environment.*

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I. INTRODUCTION

Waste management has been and continues to be a major challenge facing urban growth (Chadwic, 1842). Absence of basic sanitation facilities results in an unhealthy environment and contributes to illness and death (United Nations, 2007).

In Arabic Africa, most public toilets have been given less attention with people being advised to be ready to tip -bribe- the toilet attendant in order to access better services such as using a toilet paper (Debra 2008). Lonely planet (2018) records that, most toilets in Egypt have a bin outside to drop a tissue after use as most of them are not flushed. Leena (2016) notes that, in some public toilets, privacy is a matter of concern as in some cases filming of ladies in bathrooms has been experienced.

West African countries such as Nigeria, still practice open defecation according to Admin (2018). Lonely planet (2018) advices people to carry a toilet paper and any hand sanitizer for any non-hotel toilet and that public toilets are very scarce. Abah (2017) describes Nigeria as near impossible to realizing SDGs owing to the state of public sanitation.

In Southern African states, such as South Africa, Lonely planet (2018) reports that good public toilets are few with tourist hotels and restaurants being ready to let you use their facilities. Kieran (2015) records a lot of rape cases, robberies and murder being reported in South African toilets and recommends for doubling of public

toilets and lowering of medical and legal expenses as a way of curbing these vices. Kieran further suggests better management and design of toilets towards promotion of dignity, safety and accessibility.

Commercializing public toilets is being employed as a way of maintaining a clean public toilet as proceeds realized are regenerated to ensure its hygienic sustainability with cleanest bathrooms being accessed at \$25 per month in places like New York (Gan, 2015).

Regionally, commercializing public toilets is receiving mixed reaction with guiding documents being launched (CAGIEA 2012). This is because it is hindered by rising levels of poverty whereby most individuals either have no access to money or are caught unaware by the urge to relieve themselves away from their home toilets and latrines. Dearden (2005) records that such issues force people to beg for permission from food and drink joints such as pubs, hotels and guest rooms in urban areas, schools and private institutions to satisfy their need. Eldoret town for instance experiences commercialization of public toilets. Ndung'u (2015) reports that some traders are even grabbing market toilets to commercialize them. Sanga (2014) describes Mombasa as a tourist destination with poor state of public toilets. He notes that most public toilets have been allocated to private developers leaving those without money to resorting to backstreets and bushes to relieve themselves. According to Jumbe (2016), some of the public toilets in Mombasa are being used as hideouts for sexual and drug abuse.

Despite these efforts on management and commercialization, issues of public toilets seem to be partially solved. United Nation International Children's Emergency Fund (UNICEF) (2007) records that, using proper toilets and hand washing preferably with soap prevents the transfer of bacteria, viruses and parasites found in human excreta which otherwise contaminates water sources, soil and food. These issues called for investigation into the availability, types, use and environmental implication of commercializing public toilets. The study therefore sought to establish the environmental implications of commercializing public toilets and latrines in Kakamega Town. The information obtained from the study will help health works and other stake holders e.g. ministry of health at county level and national level to design and set appropriate interventions.

II. MATERIAL AND METHODS

The study was carried out in Kakamega Town in the western region of Kenya, which is largely cosmopolitan and has several public Toilet facilities found within the Central business district.

Ethical considerations were put in place with permission being sort from Masinde Muliro University institutional ethic and research committee and permit from NACOSTI after observing the ethical issues.

Study Design: The study adopted descriptive research design while collecting data both qualitatively and quantitatively.

Study Duration: May 2019 to August 2020.

Sample size: The study targeted populations that are mainly the residents of the town and those on transit. The target populations were 63,426 people living in Kakamega Town plus those on transit. These people were expected to use the public toilet facilities at one time.

Purposive sampling was done for toilets while simple random sampling for participants and a sample of 384 was obtained.

III. RESULT

The study involved 384 household heads residing in Kakamega Town out of which 351 questionnaires were clean and complete for data analysis representing 91.4% of the sample size.

Table 1: Background characteristics of respondents

Demographics	Frequency	Percent	
Gender	Male	254	72.4%
	Female	97	27.6%
Physically challenged	Yes	22	6.3%
	No	329	93.7%
Rate of public toilet use	Often/very often	89	25.4%
	Never/rarely	262	74.6%
Education level	Primary	13	3.7%
	Secondary	81	23.1%
	Tertiary level	257	73.2%
Age Bracket	20 years and less	66	18.8%
	21-30 years	207	59%
	31-40 years	49	14.0%
	41 years and above	29	8.2%

Table 1 above shows majority of the respondents were male, notably without physical challenge except for 6.3% of them and 74.6% never or rarely used public toilets. It is also evident that majority have tertiary level of education (73.2%) and belong to age group of 21-30 years (59%).

Economic Aspects of Commercializing Public Toilets in Kakamega Town

An informant near the Kenya Power commercial toilets was asked about the economic implications of commercialized public toilets and she replied.....

“We have cereals and groceries next to the facility, we also have shops and other people are going on with their businesses near the facility..... “We sell water....., at K.sh 5/=, bathroom service at K.sh 30/= and toilet services at K.sh10/=.”

The informant also noted that, they didn’t have different prices for different toilets in town but maintained standard charges.

When asked, how they manage customers who don’t have loose or liquid money or have no money at all, She responded.....

“If a customer doesn’t have money, we listen to them understandingly and respond accordingly. Those without smaller denomination, we look for change and balance for them from other sources if we don’t have. Those who genuinely don’t have cash, we allow them to utilize the facilities in order to protect their health and environment.”

She also noted that, the main challenges they encounter was lack of water and deliberate soiling of the premises by some clients.

These responses on challenges were also echoed by an informant who reported that deliberate soiling of toilet facilities was most common among clients.

Another common challenge reported by most respondent was that, they hardly provided services for the physically challenged as a result of the fact that facilities use a lot of water, were very expensive to install and required special attention. Some of their toilet facilities had facilities for the physically challenged but were vandalized, not completed for operation or converted into stores.

When the informants were asked about time the facility operates, most of the informants stated that they operate from 5.30 a.m or 6.00 a.m to 6.30 p.m or 8.30 p.m. one key informant noted by saying.....,

“These were main business hours in Kakamega Town.”

The stadium public toilets are free and services are run by the management. Other commercial public toilet services are paid for. According to one key informant of commercial public toilets at the bus stage, collection approximate to an average revenue of K.sh 1500 per day amounting to K.sh 45000 per month from each toilet facility. This amount was subject to fluctuation depending on location of the facility, day of the week and the occasions within Kakamega Town such as; agricultural shows, exhibitions, trade fares and promotions, sports and seminars.

The informants from Iko toilet service stated that.....

“...it is good to commercialize public toilet service in order to create jobs, pay for water and electric bills, earn an income for the Iko initiative and add beauty to the town. This is because we provide beautiful Iko toilet facilities across the country.”

These same sentiments were also echoed by informants of public toilets at Fish market and Main municipal market in Kakamega Town.

The study also used questionnaires to assess why we had different preference of public toilet in relation to commercialized and free public toilets. The responses indicate that, 37.9% (n=133) of the total respondents felt that free public toilets are averagely being managed. According to the Table 2 below, only 6.2% (n=22) think free public toilets are being managed excellently.

Table 2: Environmental Implications of Commercializing Public Toilets

		Respondents	%
Are management of free public toilets.....?	Excellent	22	6.2%
	Good	74	21.1%
	Average	133	37.9%
	Below	61	17.4%
	Average		
	Worse	61	17.4%
Are management of commercialized public toilets good or bad	Good	303	86.3%
	Bad	48	13.7%

Health and Hygiene Aspects of Commercializing Public Toilets in Kakamega Town

The SDG-6, “achieving universal and equitable access to safe water and sanitation for All.” Is a key concept where toilets and latrines pose a key strategy in achieving these. The ways and mechanism have to be put in place to enhance sanitation level. Kakamega County has put measures to improve its sanitation level by commercializing most of its public toilets in Kakamega Town except for those found within county offices premise. For instance, those found at Kakamega Referral Hospital, County Assembly Hall, and County Headquarters offices among others are free of service and are managed by respective departments where they are located. However, the study found out that these facilities are not frequently utilized by the public. When asked about the accessibility of these facilities, one respondent said... “...the facilities are located behind buildings, are far away from public access or are unclean.” This was a sentiment echoed by 51% of the respondents

Table 3: Responses on Environmental Pollution in Kakamega Town

		Responses	%
Have you noticed open defecation, urination points and flying toilets in Kakamega Town	Yes	132	37.6%
	No	219	62.4%
Do you know any place in Kakamega Town where people urinate along streets/corridors	Yes	119	33.9%
	No	232	66.1%
Have you ever noticed total closure of public toilets in town by health officers	Yes	88	25.1%
	No	263	74.9%

The study found out that much measures have been put in place leading to reduced environmental pollution of the town with only 37.6 % of the population reporting witnessing open defecation, urination points and flying toilets in Kakamega Town. 33.9% reported to be knowing places in Kakamega Town where people urinate along streets/corridors. The respondents that reported to have witnessed total closure of public toilets in town by health officers were only 25.1% and only at specific areas of the town.

Commercial Public Toilets

The study reveals 57.14% of commercial toilet facilities located within the CBD and Markets in Kakamega Town and charge a fee for their services which includes water sale service, toilet services and other services like shoe shining, credit card sales, news-paper vending and even snacks sales. The main objective of commercializing public toilets according to one informant of Iko Toilet Initiative is,

“...to make a toilet a friendly environment integrated with other economic activities.”

However, the service time according to the respondent is *between 5.00 A.M and 8.30 P.M.*” and on further probing she said.....

“...beyond this business time, customers have to look for services from their homes or elsewhere.”

Majority of respondents reported to have noted an illegal urinating point near their premises and explained that most of the pollution was done at night by street families, drunkards and irresponsible people.

Anti-social behavior such as drug abuse, rape and cottaging, was also reported, a factor that was a threat to health status of public toilet users and the commonest was smoking that accounted for 35% of the response.

Aesthetic Aspects of Commercializing Public Toilets in Kakamega Town.

This study found that Commercializing Public Toilets in Kakamega Town helped improve the aesthetic value of the town. From the figure 1 below, it is evident that many areas of the town were reported to be having good sanitation. This shows that availability of public toilets has helped to improve the towns’ appearance and beauty.

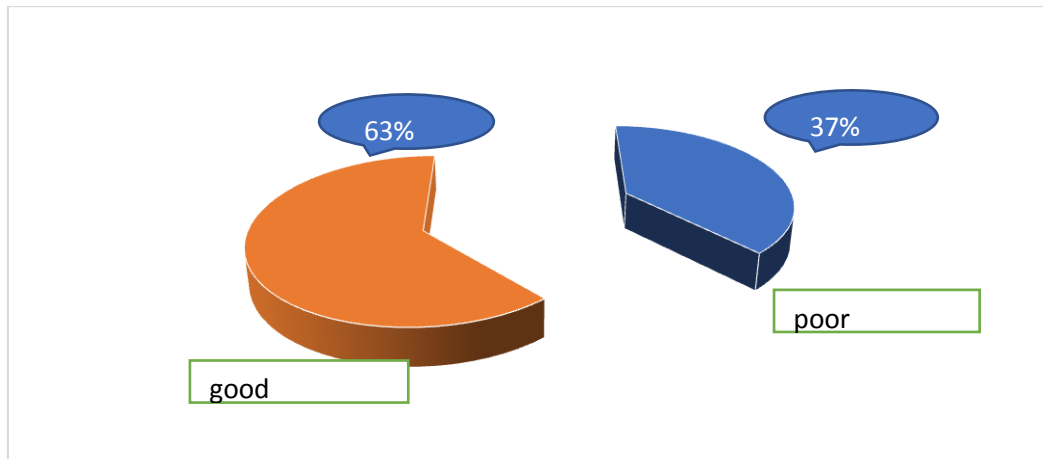


Figure 1: Identified Areas of Poor Sanitation in Kakamega Town.

Key informant attending to Kenya Power-line commercial public toilets was asked, “How has initiation of your service influenced environmental implication in terms of aesthetic?” she answered,

“...it is attractive to the eyes and has attracted many clients thereby keeping the environs clean.”

Most of commercial toilets have improved service access such as presence of bulbs, glass tiled floors, equipped showers, clinical wastes, no cracks, among others that are accessible thus enhancing an aesthetic environment in Kakamega Town. Most of these service access were missing in free public toilets.

III. DISCUSSION

The objective of the study was to establish the environmental implications of commercializing public toilets and latrines in Kakamega Town and 59% of the respondents were of age bracket 21-30 years.

Majority of the respondents were male young adult with a modal age group of 21-30 indicating their characteristic nature of being out to work as house hold heads thus utilizing public toilets in Kakamega Town. Osumanu’s (2019) study in Ghana shows similar findings with majority of the respondents being male reflecting dominance of males as house hold heads and are traditionally responsible for community decision including provision of sanitation and vital information to the outside world or to strangers. This also resounds with their high rate of willingness to participate in the study. The study contradicts with Greed’s (2006) that, women are particularly in need of public toilets as they are the ones who are out and about in the day time, travelling on public transport more than men and are often accompanied by children or by elderly and often by disabled relative.

In as much as the age above 41years only accounts to 8.2 % of the respondents, it is a known fact majority of this cohort have physical mobility issues. This explains why accessibility to physical facilities in the study was limited and concurs Bichard et al (2011) study on designing age friendly public toilet. The findings also revealed that some of these toilet facilities had facilities for the physically challenged but were vandalized, not completed for operation or converted into stores, these agrees with Almeida (2006) that physical accessibility of public toilet facility by disabled is a challenge.

Opinion on commercializing public toilets and latrines in terms of economic impact, was reported to have benefits such as; creation of employment, promotion of trade and an income generating activity for the government. This concurs with WSP (2004) findings that user fees can provide finance needed to sustain public toilet operation. They may be able to support the development of additional public toilets in the city. It also increases the productivity of employees, speed up decision making and if firmly monitored can consistently maintain clean and hygienic toilets.

A study by Bradley Corporation (2018) in America indicates that 56% of Americans consider paying as long as they were guaranteed a clean, well-stocked public restroom concurring with this study where by majority of the respondents used commercial toilets as they were clean and accessible. Bichard et al (2011) also identify hygiene as a central aspect to majority of users in enhancing accessibility. The study identifies hygiene to be a major concern that cuts across all public toilet accessibility and note that hygiene proves to be a paramount requirement in enhancing high rate of public toilet usage. This also concurs with Wakaba’s (2013) findings in Nakuru that, out of any population, a given percentage of public toilet users are driven by the need to relieve themselves rather than the state of the facility. This therefore explains why our study finding shows that only 21% of respondents with higher education were able to utilize public toilets often or very often while the remaining percentage avoided.

However, some respondents felt that lack of money paused a risk to those who had no money or lacked the required currency, a finding that concurs with Crouch's (2018) study in Sweden who quoted a respondent that reported suffering and withholding waste for long in the body which is quite uncomfortable. A study by Osumanu (2019) concurs with the findings that financial constraint is a challenge that hinders individuals from using public toilet thereby encouraging open defecation and that children defecate freely anywhere. Greed's (2006) findings concurs with the study findings by noting that, transmission of classic diseases and many urinary, vaginal and anal infections are from human faeces. From these responses, the researcher noticed that, most of the hygienic state of Kakamega Town is not self-regulatory. This is because it is clean during the day and the worst picture is realized after night. This can be related to Agitator's Model by Darlington (2006) whereby inefficiency in time, management and toilet ratio, results to poor hygiene, threat to health and compromised aesthetic value.

Uncommercialised public toilets come with a lot of problems. These include closure and risk to closure which concurs with a study by Isunju et al (2018) in Kampala that reveals barriers to operation and management of public toilets as high operation costs, failure to break even and a lack of investment in occupational health. A total 74.9% (263) of the respondents reported to have witnessed closure of public toilets in town by health officers citing cleanliness as the major culprit and thus serious health risk. Bhatt et al (2019) in Nepal reveals that people are compelled to practice open defecation due to constrain of norms restricting latrine use in general.

The study found out that open defecation, illegal urination and flying toilets in Kakamega Town was at 37.6%. This is much higher than Njuguna's (2017) findings that reported mean open defecation in 47 counties in Kenya at 23.5% in 2017. The study findings also correspond Bhatt et al (2019) and Oyaya et al (2017) findings on hygienic issues which explains that, they end up contributing to environmental pollution. Anti-social behavior such as drug abuse, rape and cottaging, was also reported as a factor that had a threat to health status of public toilet users.

The study noted that removal of perceived constrains through community support mechanism could stabilize and help to sustain long-term latrine usage since according to Harrison's (2018) findings, 'several facilities as being rated of excellent condition even though they have limitations'. The study also found out that location and beautiful decoration of public toilets adds beauty to natural environment thus concurring to Chrisnell (2008) study findings.

IV. CONCLUSION

The study established that commercializing public toilets created; a source of income to toilet investors, employment opportunities, ready market space for entrepreneurs such as hawkers, green grocers, vegetable vendors, shoe shiners, dress makers, hair dressers among others. The study also found out that uncleanliness was a major factor that inhibited the rate public toilet usage. With regard to health and hygiene aspects, the study found out that most people prefer commercial public toilets due to their high level of hygienic standards. It was noted that, most people fear free public toilets due to their uncleanliness and security level. The study also noted that, the presence of illegal urinating and defecation points were unable to be addressed. The study recommended that respective government authorities (County Government and National Government) should continue to enhance provision of public toilet service. Commercialization should be encouraged. Respective governments should also ensure that free to use public toilet facilities are available next to or equidistance to commercial public toilet. Improving management standards in public toilets will enhance improvement in the aesthetic aspects of public toilets. In addition, further research should look at sustainable ways of addressing illegal urination, open defecation and flying toilet as pollution mechanisms in Kakamega Town.

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