The Research on Shared Sanitation in Africa (RESSA) study is being implemented in Kenya and Ghana, and its main aim is to co-design effective management strategies for high quality shared sanitation facilities in the low income settlements of Kisumu in Kenya and Kumasi in Ghana. The objectives of the study include characterizing sanitation facilities, identifying barriers and opportunities for effective management of shared sanitation, and co-designing management strategies. This learning brief provides a snapshot of findings from the study.

The study is being conducted in Nyalenda ‘A’ settlement in Kisumu, Kenya, and Ayigya and Oforikrom settlements in Kumasi, Ghana. The research fieldwork involved sampling respondents who shared sanitation facilities with two or more households. A total of 484 respondents were sampled in Kisumu and 427 respondents in Kumasi. For each of these respondents, their sanitation facilities were inspected to assess quality attributes and cleanliness of the shared facilities. Trained enumerators assessed and noted the cleanliness of the shared facilities. Toilets were classified as ‘very dirty’ if there was fecal matter, body fluids such as urine, insects and other waste material in the toilet cubicle. ‘Dirty’ toilets were those with some fecal matter, urine, insects and/or other waste material. Toilets were rated as being ‘very clean’ if they did not have any fecal matter or urine, insects and waste material in the toilet cubicle, and ‘clean’ if there was no fecal matter or urine but some little waste on the toilet floor.

Additionally, in-depth interviews and focus group discussions were held with landlords and tenants in the two settlements to understand barriers and opportunities for effective management of shared sanitation facilities.
How are living arrangements within the settlements?

‘Tenant only’ compounds were more common in Kenya, while compounds with tenants and a resident landlord were more common in Ghana (Figure 1).

![Figure 1: Type of compounds within low-income settlements in Kisumu (Kenya) and Kumasi (Ghana)](image)

Within these compounds, respondents shared sanitation facilities with landlords, family members, other tenants residing in the same compound, and sometimes with strangers who were not resident in the compound.

What sanitation (toilet) technologies are shared in the two settlements?

Residents of Ghana had more options of sanitation technologies compared to Kenyan residents. Respondents in Kisumu commonly used a pit latrine with a slab, whereas in Kumasi, pit latrine with a slab was the second most common technology used by approximately 18% of respondents. The most dominant technology in Kumasi was a water closet toilet connected to septic tank or elsewhere, used by approximately half of all sampled households. The ventilated improved pit latrine was the second most dominant technology in Kenya, and was used by approximately 13% of the respondents in both cities. Other technologies in Kumasi included Container Based Sanitation (CBS) facilities, the Kumasi Ventilated Improved Pit latrine (KVIP) and composting toilet technologies. In Kenya, approximately 10% of the respondents used pit latrines that did not have a slab (Figure 2).
How many households were sharing?

An average of six households shared one toilet in Kumasi (range 2-35), while in Kisumu, the average number of households sharing one toilet was eight (range 2-40 households). In terms of actual number of users, an average of 16 users (range from 2-150 users) shared a toilet cubicle in Kumasi, and an average of 21 users (range from 2-120 users) shared one toilet in Kisumu. These numbers were confirmed during interviews and focus group discussions with residents of the settlements.

Cleanliness of shared toilets

From the inspections, more than half of the toilets in Ghana were clean while in Kenya, more than half of the toilets were dirty (Figure 3).
Figure 3: Cleanliness of shared toilets in low-income settlements in Kisumu (Kenya) and Kumasi (Ghana)

Some toilet facilities in Kumasi
Why the difference in cleanliness of the shared toilets in the two settlements?

There were more resident landlords in the settlements in Kumasi compared to the settlements in Kisumu which had majority of the compounds being inhabited by tenants only. It is therefore possible that the resident landlords paid more attention to the cleanliness of their toilets compared to tenants who did not have landlords residing on the same compound. Evidently, studies indicate that although cleaning of shared toilets is often the tenants’ responsibility, resident landlords are also often involved in actual cleaning or in ensuring the cleaning of the shared toilets (Simiyu, Swilling, Cairncross, & Rheingans, 2017; Tidwell, Chipungu, Chilengi, & Curtis, 2018).

The results also suggest that there were fewer users per toilet in Ghana than in Kenya. The fewer number of users per toilet may also explain why toilets in Ghana were cleaner compared to the toilets in Kenya. Studies have indicated that shared toilets are likely to be clean if they are shared by fewer users, compared to toilets that are shared by a larger number of users (Günther et al., 2012; Simiyu, Swilling, Cairncross, & Rheingans, 2017; Tumwebaze, 2013). In depth interviews and studies from Ghana (Foggitt, Cawood, Evans, & Acheampong, 2019) further suggest that residents also make use of public toilets, which further reduces the number of households using each toilet in the compound.

Additionally, results highlighted that respondents in Kumasi cleaned their shared toilets more regularly than those in Kenya, as shown in Graphics.

Some toilet facilities in Kisumu

![Image of Kisumu toilet facilities]

18% of Kenyan toilets had a fecal matter on the slab

12% of Ghanaian toilets had a fecal matter on the slab
Toilets that are cleaned more regularly are likely to be cleaner than those that are not cleaned on a regular basis.

Another possible explanation is attributed to the type and hygienic quality of toilets that were being shared. In Ghana, majority of the shared toilets were water closets, and in Kenya, majority of the shared toilets were pit latrines. In terms of hygiene, over 90% of the toilets in Kenya were smelly and had some flies, and approximately 40% were almost full. In Ghana, 25% of the toilets had flies and approximately 35% were smelly. Eighteen percent of the toilets in Kenya had fecal matter on the slab, compared to 12% of the toilets in Ghana. Interviews and discussions with residents in the settlements in Kisumu confirmed that users were less motivated to clean shared toilets that had poor quality attributes e.g. pit latrines that did not offer privacy, were not strong standing, were filling up, and had fecal matter on the slab. It is therefore possible that more effort is put into cleaning and/or proper use and management of toilets that have better quality attributes compared to toilets that are of poor quality.
How about the preferences of the users?

Results from interviews highlighted that users in both countries appreciated having toilets within their compounds. They mentioned that these toilets reduced open defecation and disease transmission, were convenient and easily accessible, and saved time that would otherwise be spent travelling to use public toilets.

“…If there is no toilet in your house, that is when you use the rubber (polythene) bags… defecate inside, tie it and throw it around… That is actually the cause of many diseases… having a toilet has really been of great help.” (A Landlord in Kumasi).

However, they had concerns that not all users were involved in cleaning, which resulted in the toilets being dirty.

“The toilet becomes dirty every time… and no one is willing to do cleaning…. the problem lies in cleaning.” (A tenant in Kisumu).

Other concerns included overcrowding and long queues to use the toilets and conflicts that arose when some users did not participate in cleaning.

Such concerns have also been reported in low income settlements in Kenya (Simiyu, Swilling, Cairncross, et al., 2017) Uganda (Tumwebaze, Orach, Niwagaba, Luthi, & Mosler, 2013) Zambia (Chipungu, Tidwell, Chilengi, Curtis, & Aunger, 2018) and Ghana (Addo, 2015) especially where several households have to share spaces such as toilets.

What are the implications of these results and what improvement approaches can be adopted?

The results from our study indicate that interventions may focus on improvement of quality attributes related to shared sanitation structure and cleanliness with a focus on user behaviour. Contextual differences in the two countries should be taken into consideration. In Kisumu focus should be on behavior that results in cleaner shared sanitation facilities, and in Ghana, interventions should focus on behaviour change practices that further enhance the quality of the shared toilets such as improved relations among compound members.

A trans-disciplinary approach that includes all disciplines would be key in all these approaches. Such an approach includes working with stakeholders from different disciplines in the improvement approaches. In Kenya for instance, environmental engineers would be instrumental in designing sanitation technologies that would be appropriate in the low income settlements, and in Ghana, social and behavioural scientists would be instrumental in social and behavioural approaches for improving shared sanitation quality.

It is evidently clear that interventions should target improving the relationships among the users of the shared sanitation facilities, who can then collectively participate in improvements at the local level. Such approaches should target key decision makers such as tenants and landlords. Such learning points would be our focus in the extension of our shared sanitation study.
References


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