



## Household demand for sanitation improvements in low-income informal settlements: A case of East African cities



K. Okurut <sup>a, c, \*</sup>, K.J. Charles <sup>b</sup>

<sup>a</sup> Centre for Environmental Strategy (CES), University of Surrey, Guildford, UK

<sup>b</sup> School of Geography and the Environment, University of Oxford, OX1 3QY, UK

<sup>c</sup> Department of Civil and Environmental Engineering-CEDAT, Makerere University, Kampala, Uganda

### ARTICLE INFO

#### Article history:

Available online 20 August 2014

#### Keywords:

Barrier  
Demand  
East Africa  
Improved sanitation  
Informal settlements

### ABSTRACT

Informal urban settlements present a range of challenges to sanitation provision, including low incomes, insecure tenure, low education levels, difficult topography and transitory populations. A household stratified probability survey complemented with focus group discussions and interviews was undertaken in low-income informal settlements in Kigali, Rwanda; Kampala, Uganda; and Kisumu, Kenya, to assess the household sanitation demand status and identify the barriers and catalysts to demand for sanitation improvements in these areas and between the cities.

A five progressive decision-stage sanitation demand model revealed that similar proportions of respondents had already installed systems in Kigali (13.2%) and Kampala (12.5%), but less than 1.0% in Kisumu. However, there was a higher proportion in Kigali for each of the categories of Preference, Intent and Choice. In Kisumu, only 3.2% of respondents indicated that they had considered installing (or installed) a household sanitation facility. Reported barriers and catalysts varied between the demand stages and across the cities.

The differences in attitudes at the stages of demand, and between these three cities, highlight the need to tailor programmes to meet the local demand for sanitation improvements, specific for each community.

© 2014 Elsevier Ltd. All rights reserved.

### Introduction

The challenges of providing safe and adequate sanitation in informal settlements for improved health and sustainable livelihood are known to include social, environmental, economic, institutional and demographic characteristics (Isunju, Schwartz, Schouten, Johnson, & Van Dijk, 2011). Low-income informal settlements are commonly characterised by transient urban poor locals who cannot easily afford basic services and present unique challenges to urban authorities (Foppen & Kansiime, 2009; UN-HABITAT, 2003). Many dwellers continue to live in these conditions because they are “trapped in poverty” and cannot move on to the formal urban lifestyle in the competitive market forces offered by the city (Marx, Stoker, & Suri, 2013).

Due to the unique challenges in the provision of services in informal settlements, basic sanitation coverage is much lower

compared to the average for urban areas (Foppen & Kansiime, 2009). Where facilities exist, they are likely to be shared, unhygienic, and not afford the users dignity and privacy (Tumwebaze, Orach, Niwagaba, Luthi, & Mosler, 2013; Van Der Geest, 2002).

Efforts to improve access to sanitation have mainly focused on hardware interventions (Murray & Ray, 2010; Van der Hoek, Evans, Bjerre, Calopietro, & Konradsen, 2010). This can be linked to the general understanding of progress as reported by the Joint Monitoring Programme (JMP) on sanitation which considers the number of facilities installed (WHO/UNICEF, 2010, p. 15). Hardware intervention may be necessary as direct support to the economically most vulnerable households/communities who may not afford adequate sanitation from a human rights perspective. Provision of sanitation hardware without considering the local demand may result in the facilities either being abandoned/misused or never used at all (Mara, Lane, Scott, & Trouba, 2010; Solo, Perez, & Joyce, 1993) which amounts to a wastage of resources. Integrated approaches identify the software attributes necessary for any sanitation hardware interventions, through the involvement of all stakeholders (Lüthi, Morel, Tilley, & Ulrich, 2011; Mosler, 2012; Van

\* Corresponding author.

E-mail addresses: [okenan@cedat.mak.ac.ug](mailto:okenan@cedat.mak.ac.ug), [k.okurut@surrey.ac.uk](mailto:k.okurut@surrey.ac.uk) (K. Okurut).

der Hoek et al., 2010) and has proved useful in identifying strategies for scaling-up sustainable access to improved sanitation (Robbins, 2007; Varley, Yacoob, & Smith, 1996) in low-income informal settlements.

Adequate sanitation should observe the principles and practices of collection, removal or storage and disposal or re-use of human excreta with the concept of privacy and dignity from a human rights perspective as recognised by the United Nations bodies (COHRE, WaterAid, SDC, & UN-HABITAT, 2008, p. 50). The realisation of full public health and socio-economic benefits of good sanitation will not only depend on the presence of sanitation hardware, but also, on its indiscriminate and continuous usage (Mara et al., 2010; Schertenleib, 2001; Van der Hoek et al., 2010). Based on this argument, this article adopts the definition of sanitation developed by the Millennium Task Force as “access to, and use of excreta and wastewater facilities and services that ensure privacy and dignity, ensuring a clean and healthy living environment for all” (COHRE et al., 2008).

Improved sanitation technology that hygienically separates human excreta from human contact (WHO/UNICEF, 2010), and meets the conditions of safety, accessibility, acceptability, privacy, dignity and cleanliness as required from the human rights points of view; qualifies to be an improved sanitation facility. Sanitation technologies that are expected to meet the conditions include: flush/pour flush toilets connected to a sewer system, a septic tank, or a pit latrine; ventilated improved pit (VIP) latrine; pit latrine with a slab; composting toilet and other special cases (WHO/UNICEF, 2010). However, the system may not provide full public health and socio-economic benefits to the household/community if it does not give access, privacy, dignity, cleanliness, and is affordable.

Many reasons have been put across to explain the slow progress in achieving the Millennium Development Goal Target 7(c): to halve the proportion of people without sustainable access to safe drinking water and basic sanitation by 2015 (UN, 2002), and include demographic, technological, financial, regulatory, institutional, and political reasons (Isunju et al., 2011; Kariuki, 2011) but the one aspect that still comes out clearly is the conventional supply-led model that has failed to generate demand for improved sanitation among targeted households (Jenkins & Sugden, 2006; Roma, Buckley, Jefferson, & Jeffrey, 2010; WSP, 2001, p. 4). Lessons learnt worldwide show that the provision of facilities does not guarantee proper usage, and efforts should not only reduce the huge number who remain without access to a toilet but also the huge number who do not use facilities hygienically even when they are available (Peal, Evans, & van der Voorden, 2010, p. 157; Tumwebaze et al., 2013). Understanding the local demand will guide in identifying appropriate software attributes to go with the hardware so as to increase acceptability and usage. The attributes may involve: empower users with knowledge, enable a change in behaviour, create demand for services, facilitate establishment of supply chains, and improve the planning and implementation of hygiene and sanitation projects to go with appropriate hardware (Evans, 2004; Peal et al., 2010; Van Wyk, Cousins, & Lagardien, 2004). Hence, the importance to understand the households demand status and identify the barriers and catalysts at the different

stages in the sanitation demand decision process model, in order to develop appropriate intervention strategies (Jenkins & Scott, 2007).

The demand for improved sanitation services is not a simple concept as it is influenced by a number of factors that include among others: demographic characteristics, availability, reliability, cost and convenience, household situations and attitudes, household awareness and understanding, technical, competing priorities, tenancy and geophysical settings (Jenkins & Sugden, 2006; Parry-Jones, 1999, p. 46).

Drawing from the works of Jenkins and Scott (2007) and Parry-Jones (1999), we consider household demand for sanitation improvement as a decision behavioural process based on psychological, economic and engineering theories and defined as a process of an informed expression of willingness, and ability, to adapt to a new or better sanitation and appropriate sanitation services of preference (Okurut, Kulabako, Chenoweth, & Charles, 2014). Behaviour change can create demand for sanitation improvement, and numerous models have been suggested to assess behaviour change (Devine, 2009; Dreibelbis et al., 2013; Mosler, 2012) and demand (Jenkins & Scott, 2007; Santos, Roberts, Barreto, & Cairncross, 2011) for sanitation improvements. This study has adapted the three progressive decision stages model developed by Jenkins and Scott (2007) and, extended to a five stage model to include those who have not considered installing an improved sanitation system (No preference) and the actualised category of installed (Fig. 1).

In the model “Preference” indicates that the household has considered installing a household sanitation facility (toilet), but do not intend to install within a year; “Intent” indicates they have a low to medium likelihood of installing within a year; and “Choice” indicates a high likelihood of installing within a year and “Installed” is respondents who have indicated that they have already installed a household sanitation facility. Preference, intent and choice are further grouped into “Demand”.

This paper aimed to characterise demand for household sanitation improvements and builds on household survey findings on sanitation study that identified barriers and catalysts to improved sanitation in informal settlements in East Africa (Charles & Okurut, 2013). The study involving a multi-disciplinary team has used mixed methods to assess the household sanitation demand characteristics and point out barriers and motivations to demand for improvements. Any intervention in the settlements would then be designed specifically to address the barriers and facilitate the motivations to stimulate demand for improved sustainable sanitation services at households. Where there is an informed and expressed demand for sanitation improvements, interventions designed to meet the local demand will highly be acceptable and adopted by the target households (Evans, 2004; Mara et al., 2010; Peal et al., 2010).

## Methodology

A diagnostic study of the sanitation situation in three case study cities: Kampala (Uganda); Kigali (Rwanda); and Kisumu (Kenya) was conducted to understand what is known about the cities. The diagnostic report aided a purposive selection of eight low-income

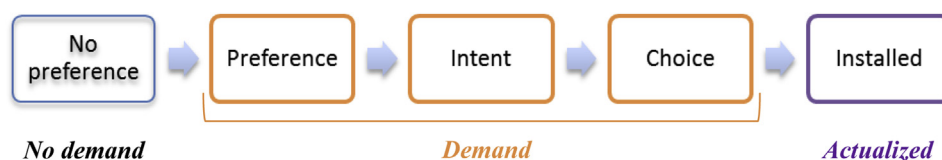


Fig. 1. Household demand model adopted from Jenkins and Scott (2007).

Download English Version:

<https://daneshyari.com/en/article/1047781>

Download Persian Version:

<https://daneshyari.com/article/1047781>

[Daneshyari.com](https://daneshyari.com)