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## MEASURING URBAN SANITATION AND EMPOWERMENT (MUSE) *PRELIMINARY FINDINGS: Women in Lusaka, Zambia*

### BACKGROUND AND METHODS

#### Background

Women's empowerment is widely acknowledged as central to development, for the benefit of not only women and girls, but society as a whole. Women's and girls' roles in household water, sanitation, and hygiene (WASH) are well-documented. Yet, there are limited data on how WASH conditions, programs, and policies impact women's empowerment, or how women's empowerment impacts WASH. According to the Joint Monitoring Programme's 2020 data, in Zambia, there is 32% coverage of at least basic sanitation (41% in urban areas), 20% coverage of limited sanitation (35% in urban areas), and 37% coverage of unimproved sanitation (22% in urban areas). While these data are informative, they do not demonstrate sanitation coverage in peri-urban areas and they are gender-blind, assuming the same sanitation location for all members of each household. The Lusaka Water Supply and Sanitation Company (LWSC) plans to extend sanitation services to peri-urban areas and has done prior sanitation research mapping activities to support this goal.

#### Aim

The aim of the MUSE project is to create and validate measures of sanitation-related empowerment in urban settings. The quantitative data collected and analyzed as part of the MUSE project provide more specific data than existing JMP data, supplement the qualitative findings of the Lusaka City-Wide Inclusive Sanitation Gender Analysis, and can be used to inform inclusive sanitation programming. In addition to Lusaka, the measures are being validated in seven cities in Senegal, Uganda, India, and Bangladesh.

#### FUNDER

BILL &  
MELINDA  
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#### PARTNERS

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### KEY FINDINGS

- **60.4%** reported insufficient lighting inside their sanitation location and **86.5%** needed to collect water for sanitation.
- **2.4%** currently hold an elected or appointed leadership position in any sanitation-focused committee or group.
- Nearly all respondents (**99.4%**) agreed that women more often than men are expected to assume most responsibilities related to maintaining the cleanliness of their family's sanitation facility.
- **36.0%** reported that they never or only sometimes felt that their sanitation location was clean enough to maintain their health.
- **51.8%** agreed that women in their community face the risk of being physically harmed by men or boys when going to sanitation locations.
- **76.5%** agreed that women typically have to delay going to a sanitation location more often than men because of responsibilities.

## Methods

The Lusaka Water Supply and Sanitation Company and Athena Infonomics, in partnership with Emory University, surveyed 660 adult women in Lusaka District, Zambia from October 21 to November 19, 2021.

The survey was first tested and validated through formative qualitative and quantitative data collection and analysis in Uganda and India. It included 16 scales and six indices representing sub-domains of empowerment, based on a conceptual framework that was adapted from van Eerdewijk (2017) (Figure 4). The survey also included questions on population demographics, characteristics of WASH facilities, and relevant WASH experiences related to the COVID-19 pandemic and lockdown. Prior to data collection in Zambia, the survey was reviewed by an in-country team and piloted by trained enumerators. The scales are being further validated with seven other cities using factor analysis and item response theory.

## Setting

Surveys were conducted in 9 target neighborhoods of diverse incomes in peri-urban areas of Lusaka District selected by LWSC. These areas were: George, George Soweto, Chunga, Bauleni, Chainda, Kalikiliki, Linda, Jack, and Gondwe.

**This report presents preliminary findings from the data collected in Lusaka District, Zambia.**

## PARTICIPANT DEMOGRAPHICS

- Mean age: **37 years (range: 18–87 years)**
- **56.5%** married
- **5.5 people**: mean people living in the household
- **93.0%** completed at least primary education
- **3.4 hours**: average time spent outside home
- **42.4%** employed and **58.5%** unemployed

## IMPACT OF COVID - 19

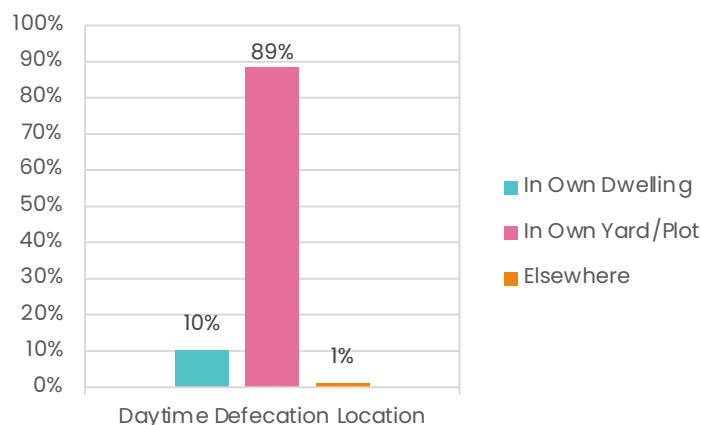
### As a result of the coronavirus pandemic or resulting lockdowns or restrictions:

- More than half (**58%**) of women reported difficulties purchasing sanitation-related items, such as toilet paper or soap.
- **44%** of menstruating women reported difficulties purchasing menstrual materials
- **26%** reported spending increased time cleaning sanitation location
- **96%** reported using the same location for defecation as before the pandemic and resulting lockdowns.

## WASH ACCESS AND PRACTICES

### Sanitation

- **27.4%** of respondents used at least a basic sanitation facility (an improved facility that is not shared with other households); **65.6%** used limited sanitation facilities (improved facilities shared between two or more households); and **1.8%** used unimproved facilities (pit latrines without a slab or platform, hanging latrines, or bucket latrines).
- Of the respondents who used shared sanitation facilities, the majority (**92.5%**) shared with known households for daytime defecation needs. An average of **3.8** households shared the same sanitation location.
- A majority (**88.5%**) used a facility located in their own yard or plot (**Figure 1**).
- **64.7%** reported their sanitation facility was lockable from the inside and **39.6%** had sufficient lighting inside their sanitation location.



**Figure 1.** Locations where women reported defecating during the daytime

### Water

- **86.5%** needed to collect water for sanitation (Figure 2).
- Of those, **85.8%** had to pay for the water used for sanitation-related purposes.
- Respondents needed to collect water an average of **6.7** times per week and spent an average of **8.9** minutes collecting water each time.

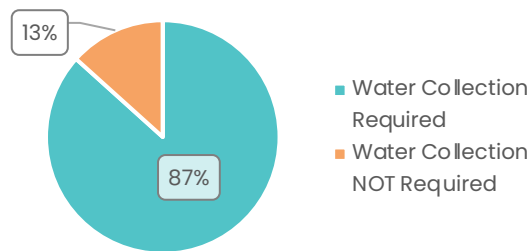


Figure 2. Proportion of women reporting they need to collect water for sanitation

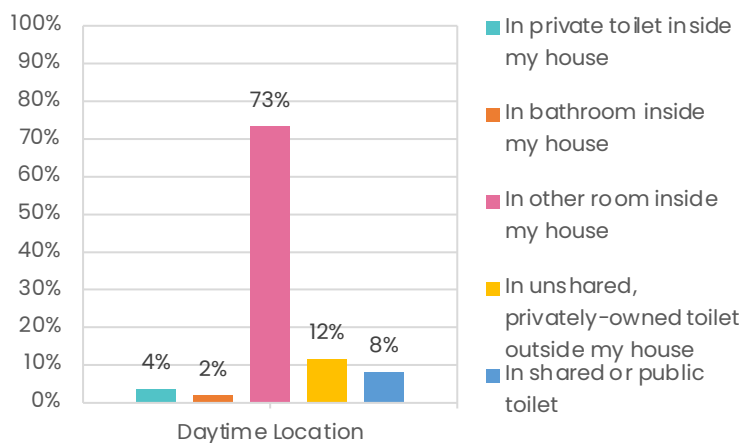


Figure 3. Locations where women reported changing menstrual materials

### Menstruation

Among the **63.9%** of respondents who menstruate:

- **88.4%** used single-use /disposable materials.
- **63.5%** disposed of materials by burning them; **23.5%** flushed them in the toilet or put them in the pit latrine; **6.4%** put them in rubbish bins, and **5.9%** did not dispose of materials.
- **25.1%** avoided engaging in income-generating activities during their periods.
- Most used a room other than a bathroom (**73.2%**) inside the house or privately-owned toilet (**11.6%**) outside their house for changing materials (Figure 3).

## EMPOWERMENT DOMAINS

For this study, empowerment is defined as “the expansion of choice and strengthening of voice through the transformation of power relations, so women and girls have more control over their lives and futures. It is both a process and an outcome.” Empowerment is composed of 3 domains: Agency, Resources, and Institutional Structures (Figure 4). The MUSE survey includes 16 scales and 6 indices representing sub-domains of empowerment within these 3 domains.

### WOMEN’S AND GIRLS’ WATER- AND SANITATION-RELATED EMPOWERMENT

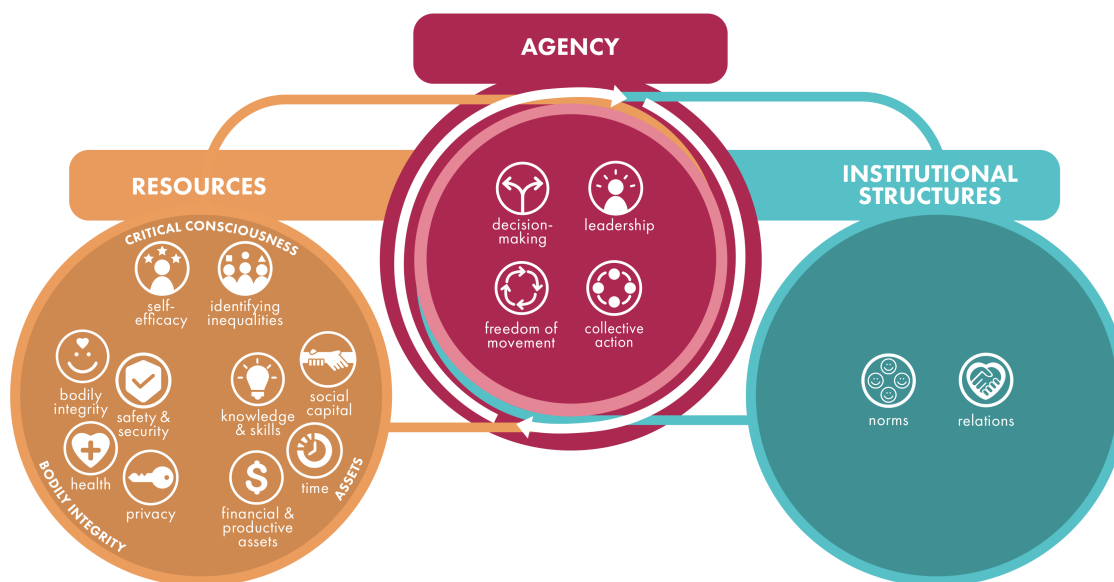


Figure 4. Conceptual Model of Empowerment adapted from van Eerdewijk, et al. 2017

Domain	Sub-Domain	Working Operationalized Definition
AGENCY	Decision-Making	Women influencing and making decisions about sanitation inside and outside the home
	Leadership	Women assume leadership positions, effectively participate, and support women's leadership in informal and formal sanitation initiatives and organizations
	Collective Action	Women gain solidarity, increase collective efficacy, and take action collectively on sanitation-related issues
	Freedom of movement	Women's autonomy to move freely to access sanitation facilities, collect water for sanitation-related needs, and/or attend forums on sanitation issues, and women's freedom of movement despite sanitation circumstances
RESOURCES	Bodily Integrity	Women's control over their bodies and ability to access and use their preferred sanitation location
	Safety and Security	Women's freedom from acts or threats of violence (physical or sexual), coercion, harassment, or force when accessing and using sanitation locations or engaging in sanitation-related decision-making processes in the public sphere
	Health	Women's complete physical, mental, and social well-being as affected by sanitation options and conditions; not merely the absence of disease or infirmity
	Privacy	Women's ability to maintain desired levels of privacy when accessing and utilizing sanitation locations
	Critical Consciousness	Women identifying and questioning how inequalities in power operate in their lives in relation to sanitation access and decision-making processes, and asserting and affirming their self-efficacy inside and outside of the household as it relates to sanitation
	Financial/Productive Assets	Women's control over economic resources and long-term stocks of value such as land, for the purposes of meeting individual and household sanitation needs
	Knowledge and Skills	Women's control over their time and labor spent on sanitation-related tasks and activities
	Time	Women's knowledge and skills related to sanitation (e.g. operation and maintenance of sanitation facilities) and their abilities to apply those knowledge and skills
	Social Capital	Women's relations and social networks that provide tangible and intangible value and support, including those that enable them to complete sanitation-related tasks and activities
INSTITUTIONAL STRUCTURES	Norms	Collectively held expectations and beliefs of how women and men should behave and interact inside and outside the household, specifically with regard to (a) the division of labor, (b) decision-making, (c) leadership, (d) collective action, and (e) mobility
	Relations	The interactions and relations – including conflicts, support, hostility, and communication – with key actors that shape women's sanitation-related experiences

Table 1. Table of Definitions

## AGENCY

### Decision-Making

While the majority (**87.2%**) reported independently making decisions about how their household cleans and maintains their sanitation facility, **38.4%** reported independently making decisions about household latrine repairs or enhancements, like new floor tiles, doors, locks, or lights. Additionally, **22.0%** reported independently making major decisions about household sanitation, such as construction or large repair projects.

### Leadership

The majority of respondents (**96.4%**) agreed or strongly agreed that women are as capable as men to take on official leadership roles in sanitation initiatives. Of those who agreed or strongly agreed, **20.8%** reported they were single, **55.9%** were married, **7.1%** were divorced or separated, and **15.9%** were widowed. **2.4%** of respondents reported currently holding an elected or appointed leadership position in any sanitation-focused committee or group. Of those who reported holding an elected or appointed leadership position, **25%** reported they were single, **50%** were married, **6.3%** were divorced or separated, and **18.7%** were widowed.

### Collective Action

**81.4%** agreed or strongly agreed that they were confident members of their community will work with one another to achieve sanitation-related goals. **38.6%** reported that in the last year, they had gathered with neighbours in their plot to discuss sanitation-related problems.

### Freedom of Movement

**98.8%** of respondents reported that they could go to a sanitation location alone, without asking permission or requiring accompaniment. **68.4%** reported that they could go to a community meeting or training outside of their neighborhood alone, without asking permission or requiring accompaniment. Of those who reported needing permission, only allowed to go with accompaniment, or not allowed at all to go to a community meeting or training outside of their neighborhood, **28.2%** reported they were single, **56.8%** were married, **5.6%** were divorced or separated, and **9.4%** were widowed.

## INSTITUTIONAL STRUCTURES

### Norms

Nearly all respondents (**99.4%**) agreed that, in their communities, it is women more often than men who are expected to assume most responsibilities related to maintaining the cleanliness of the sanitation location that their family uses. **94.6%** agreed that it is appropriate for women to attend sanitation related meetings where men are present. Additionally, **40.3%** agreed that even if women were trained, it would be socially unacceptable for women to do construction, repairs, or upgrades for latrines. **73.3%** disagreed that it is appropriate for women to discuss menstruation-related sanitation issues in front of men.

### Relations

The majority of respondents (**95.5%**) reported that their family would encourage or help them to participate in a community initiative to improve sanitation. **75.9%** reported that their interactions with local leaders or authorities about sanitation-related issues are generally free of conflict, and **85.8%** reported that they feel comfortable reporting sanitation-related problems to service providers when they arise.

## RESOURCES

### Bodily Integrity

**70.8%** reported that they often or always felt satisfied with the sanitation location they used most often. However, **48.1%** reported that they found their sanitation location to be dirty and disgusting at least sometimes.

### Health

A small percentage of respondents (**5.6%**) reported using a sanitation location often or always that they believed might make them ill. However, **36.0%** reported that they never or only sometimes felt that their sanitation location was clean enough to maintain their health.



## RESOURCES, continued

### Safety and Security

Just over half of respondents (**51.8%**) agreed or strongly agreed that women in their community face the risk of being physically harmed by men or boys when going to sanitation locations. **32.8%** reported at least sometimes fearing being harassed or injured when accessing their sanitation facility.

### Privacy

**13.8%** of respondents reported that they often or always had to use a sanitation location that was not private enough while at home in the past 30 days. While **80.9%** reported that their sanitation location was often or always private enough for their needs, **23.8%** of participants also reported that they sometimes or never had been able to urinate and defecate without concerns about being seen or heard.

### Financial and Productive Assets

Over one-quarter of respondents (**27.1%**) reported that they would need to ask permission before spending household money on small sanitation-related expenses, such as toilet paper, soap, or pay-per-use latrines. **58.5%** reported that they have control over money they could use to pay for household latrine/toilet improvements or repairs.

### Time

**13.5%** of respondents agreed or strongly agreed that the sanitation-related needs and responsibilities of their household often make them miss out on other activities they would like to do. **60.5%** agreed or strongly agreed that the sanitation-related responsibilities of their household often require them to wake up earlier than they want.

### Social Capital

The majority of respondents (**72.0%**) reported that they have someone in their household who would help with chores, such as cooking or providing childcare, so that they could tend to their own sanitation needs. Additionally, **85.8%** agreed or strongly agreed that they have someone who could get small sanitation-related items if they asked them to.

### Knowledge and Skills

**39.4%** of respondents reported that they have skills, like budgeting, organization, or mobilizing, to contribute to sanitation-related projects in their community. **54.1%** reported knowing how to make minor repairs or improvements to a latrine or toilet, like unclogging, replacing a lightbulb, or fixing a door, while **45%** knew an individual or company that provides sanitation-related services in their community. The majority of respondents completed primary education (**33.9%**), lower secondary education (**27.0%**), or upper secondary education (**27.2%**).

### Self-Efficacy

Under half of respondents (**45.0%**) felt that they could change sanitation conditions in their community if they wanted to.

### Critical Consciousness – Identifying and Questioning Inequalities

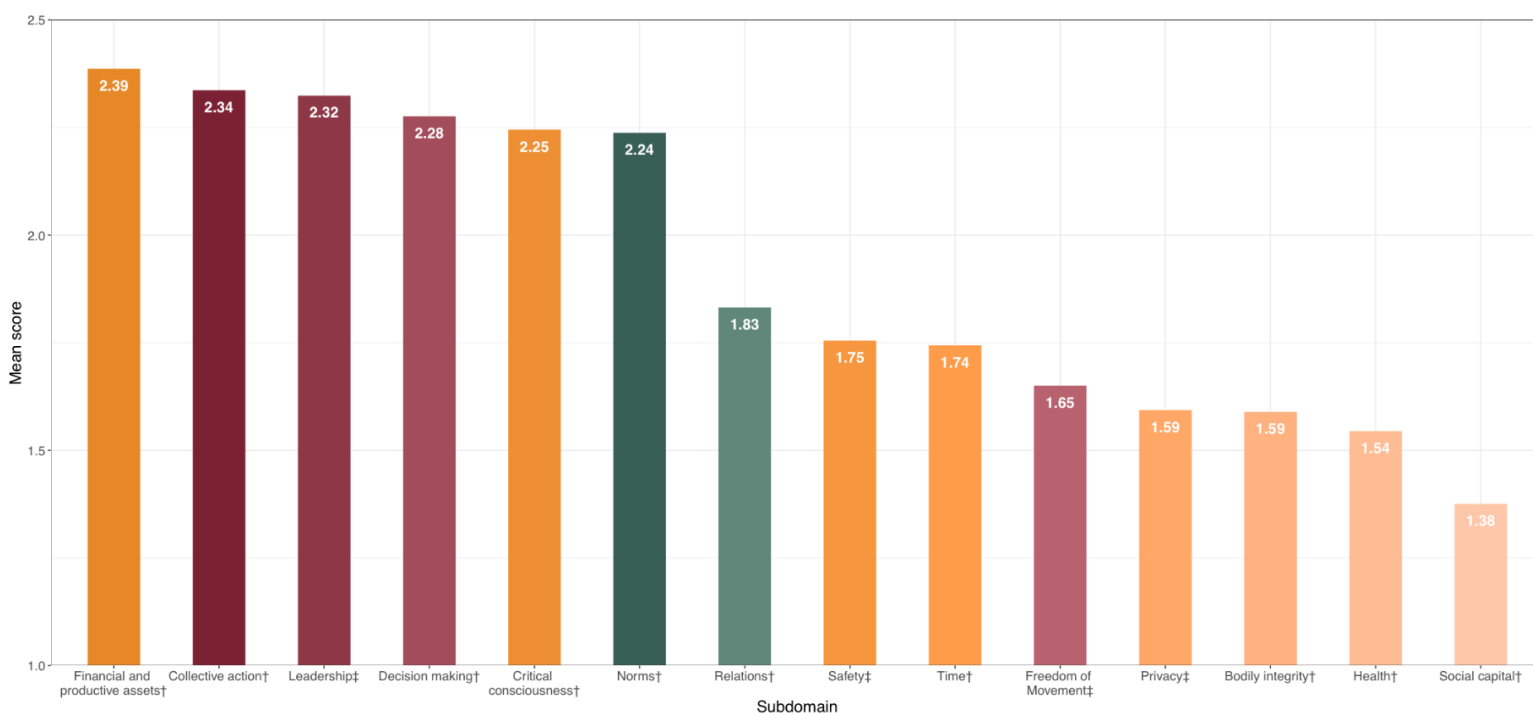
More than three-quarters of respondents (**76.5%**) agreed or strongly agreed that women typically have to delay going to a sanitation location more often than men because of their responsibilities. Additionally, **98.7%** agreed or strongly agreed that women have more sanitation-related responsibilities than men, such as cleaning latrines or toilets.

## PRIORITIZATION OF EMPOWERMENT SUB-DOMAINS

To learn how participants prioritized the empowerment sub-domains, participants were asked about the degree to which each empowerment sub-domain was a concern or a problem to them.

For each sub-domain prioritization question, participants responded to scores ranging from 1 to 4. Higher scores indicate a greater priority. The prioritization scores were then averaged across participants.

The Financial and Productive Assets sub-domain had the highest mean prioritization score (2.4). Also among the seven highest mean scores were three of the four Agency sub-domains and both Norms and Relations sub-domains (**Figure 5**).



† Indicates degree to which subdomain is a concern

‡ Indicates degree to which subdomain is a problem

The scores range from 1 to 4:

(1) Not concerned at all (2) A little concerned (3) Moderately concerned (4) Extremely concerned

(i) Not a problem (2) A very small problem (3) A medium sized problem (4) A big problem

**Figure 5.** Participants' prioritization of empowerment sub-domains

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