

# PRELIMINARY REPORT

2022



Photo: Amelia Conrad, Emory University

## MEASURING URBAN SANITATION AND EMPOWERMENT (MUSE) PRELIMINARY FINDINGS: Women and Men in Warangal, India

### BACKGROUND AND METHODS

**Background:** 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.

**Aim:** The aim of the MUSE project is to create and validate measures of sanitation-related empowerment in urban settings. Data generated can be used to inform Citywide Inclusive Sanitation (CWIS) programming.

**Methods:** The Administrative Staff College of India (ASCI) and Athena Infonomics, in partnership with Emory University, surveyed 703 adult women and 300 adult men in Warangal, India from August 12 to September 9, 2021. The survey included 16 scales and five indices to assess the three domains of empowerment: Resources, Agency, and Institutional Structures and their associated subdomains, adapted from van Eerdewijk (2017) (Figure 4). The survey also included questions on population demographics, WASH facility access and practices, and relevant WASH experiences related to the COVID-19 pandemic and lockdown. Further validation of scales in other locations is ongoing.

**This report presents preliminary findings from data collected in Warangal, India with adult women and men.**

#### FUNDER

BILL &  
MELINDA  
GATES  
foundation

#### PARTNERS

ATHENA  
INFONOMICS



#### RESEARCH TEAM



ROLLINS  
SCHOOL OF  
PUBLIC  
HEALTH

Bethany Caruso, PhD, MPH  
Sheela Sinharoy PhD, MPH  
Amelia Conrad, MDP  
Madeline Patrick, MPH  
Thea Mink, MPH  
Rinchen Doma, MPH  
Mary Ellen Grap, MPH

Hubert Dept. of Global Health & Gangarosa  
Dept. of Environmental Health  
Emory University

### KEY FINDINGS

- More women (**67%**) than men (**33%**) reported needing to carry water to the location they used for daytime defecation.
- Fewer women (**64%**) than men (**80%**) reported that their family would encourage or help them to participate in a community initiative to improve sanitation.
- More women (**19%**) than men (**1%**) agreed that women in their community face the risk of being physically harmed by men or boys when going to sanitation locations.
- Fewer women (**50%**) than men (**95%**) reported that they have control over money they could use to pay for household latrine/toilet improvements or repairs.
- More women (**33%**) than men (**9%**) agreed that the sanitation-related needs and responsibilities of their household often make them miss out on other activities.
- Fewer women (**28%**) than men (**76%**) reported that they have skills, like budgeting, organization, or mobilizing, to contribute to sanitation-related projects in their community.

## PARTICIPANT DEMOGRAPHICS

### WOMEN (703 participants):

- **35.2 years:** average participant age
- **87.8%** married
- **3.9 people:** average that live in household
- **90.5%** completed at least primary education
- **48.2%** employed outside the home
- **3.5 hours:** average time spent outside home

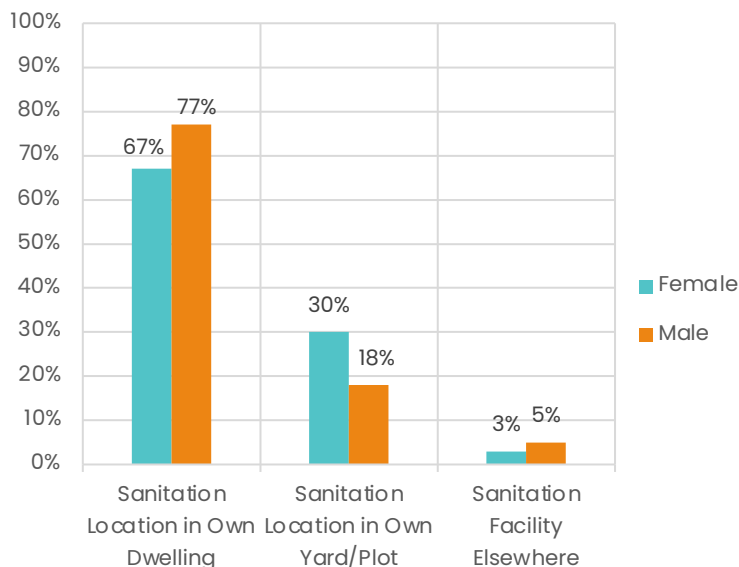
### MEN (300 participants):

- **40.2 years:** average participant age
- **88.7%** married
- **4.0 people:** average that live in household
- **85.6%** completed at least primary education
- **100%** engaged in some form of income-generating activity
- **11.9%** were from the same household as the women

## WASH ACCESS AND PRACTICES

### Sanitation

- **92.3%** of women and **94.7%** of men used a privately-owned sanitation facility.
- **67.3%** of women and **76.7%** of men used a sanitation facility located in their own dwelling, while **29.7%** of women and **18.3%** of men used a sanitation location in their yard or plot (**Figure 1**).
- More women (**67.3%**) than men (**32.7%**) reported needing to carry water to the location they used for daytime defecation.
- More women (**6.7%**) reported insufficient lighting inside their sanitation location compared to men (**1.1%**).



**Figure 1.** Locations reported for defecating during the daytime

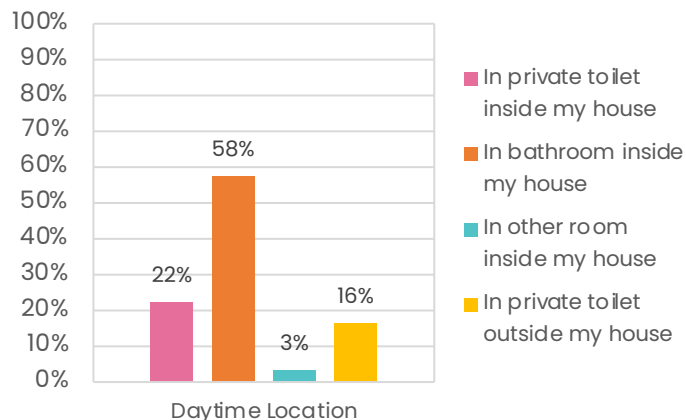
### Water

- **38.3%** of women and **35.0%** of men had to collect water for sanitation purposes.
- Women spent an average of **3.8** minutes and men spent **9.4** minutes per water collection trip.
- **7.0%** of women and **18.7%** of men reported not being able to access their preferred water source due to cost.

### Menstruation

**79.7%** of women reported experiencing menstrual periods. Among those:

- The majority (**79.8%**) relied on single-use/disposable menstrual pads.
- Over half (**57.5%**) reported changing their menstrual hygiene materials in the bathroom inside their house (**Figure 2**).
- The majority (**77.5%**) disposed of their menstrual hygiene materials in a rubbish bin.



**Figure 2.** Locations where women reported changing menstrual materials

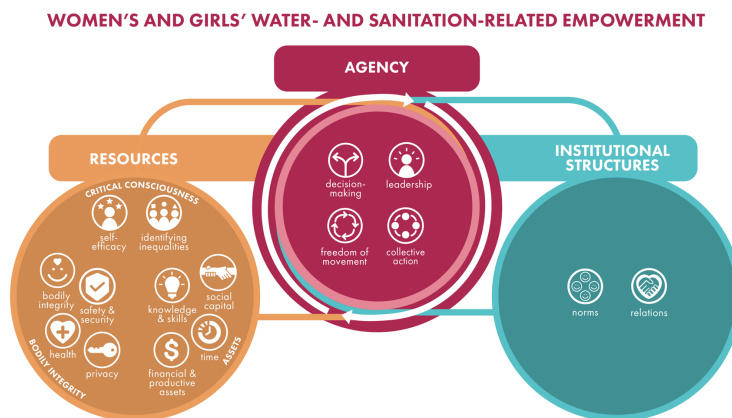
## IMPACT OF COVID-19

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

- More women (**58.9%**) than men (**6.7%**) reported using a different location for sanitation.
- **89.2%** of women and **82.0%** of men reported difficulties purchasing sanitation-related items.
- **85.2%** of women who menstruate reported difficulties purchasing menstrual materials.
- **37.0%** of women and **21.0%** of men reported spending more time caring for the sanitation-related needs of household members.
- **63.3%** of women and **17.3%** of men reported spending increased time cleaning their sanitation location.

## EMPOWERMENT DOMAINS

Empowerment, as defined for this study, is composed of 3 domains: Agency, Resources, and Institutional Structures (Figure 3). The MUSE survey includes 16 scales and 5 indices for sub-domains of empowerment within these 3 domains. Below, we present example findings for individual items from each domain.



**Figure 3. Conceptual Model of Empowerment** adapted from van Eerdewijk, et al. 2017.

### AGENCY

Agency involves Decision-Making, Leadership, Collective Action, and Freedom of Movement.

#### Decision-Making

81.2% of women agreed that they would be welcome to participate in a discussion if their household was making a decision about sanitation-related issues, as did 93.7% of men. At the community level, 39.7% of women and 23.0% of men agreed that others were likely to listen if they spoke up in a community meeting about sanitation issues.

#### Leadership

82.2% of women and 79.7% of men agreed that women are as capable as men to take on official leadership roles in sanitation initiatives.

#### Collective Action

45.1% of women and 39.3% of men agreed that they were confident members of their community will work with one another to achieve sanitation-related goals.

#### Freedom of Movement

92.9% of women and 100.0% of men reported that they could go to a sanitation location alone, without asking permission or requiring accompaniment. 72.0% of women and 81.0% of men reported that they could go to a community meeting or training outside of their neighborhood alone, without asking permission or requiring accompaniment.

## INSTITUTIONAL STRUCTURES

Institutional Structures include the subdomains of Norms and Relations.

#### Norms

78.9% of women and 86.7% of men 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. 72.0% of women and 77.7% of men agreed that it is appropriate for women to attend sanitation related meetings where men are present.

#### Relations

Fewer women (63.6%) than men (80.0%) reported that their family would encourage or help them to participate in a community initiative to improve sanitation. 63.3% of women and 81.0% of men reported that their interactions with local leaders or authorities about sanitation-related issues are generally free of conflict. 74.4% of women and 88.0% of men reported that they feel comfortable reporting sanitation-related problems to service providers when they arise.

## RESOURCES

Resources includes the subdomains of Bodily Integrity, Critical Consciousness, Financial and Productive Assets, Time, Social Capital, Knowledge and Skills and Health, Privacy, and Safety.

### Bodily Integrity

85.2% of women and 95.0% of men often or always felt satisfied with the sanitation location they used most often. 2.1% of women and 3.3% of men often or always withheld consuming water to avoid the urge to urinate when at home during day or night.

### Health

More women (16.2%) than men (3.0%) reported using a sanitation location often or always that they believed might make them ill. 5.7% of women and 2.0% of men felt anxiety, stress, or tension often or always when needing to access a sanitation location.

### Safety and Security

More women (19.1%) than men (0.7%) agreed that women in their community face the risk of being physically harmed by men or boys when going to sanitation locations. 6.0% of women and 3.0% of men personally felt unsafe in the place where they typically go for sanitation during the day in the past 30 days.

### Privacy

4.7% of women and 1.3% of men 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.

### Financial and Productive Assets

More women (54.2%) than men (24.7%) reported that they would need to ask permission before spending household money on small sanitation-related expenses, such as soap, or pay-per-use latrines. Fewer women (49.5%) than men (95.0%) reported that they have control over money they could use to pay for household latrine/toilet improvements or repairs.

### Time

33.4% of women, compared to 8.7% of men, agreed that the sanitation-related needs and responsibilities of their household often make them miss out on other activities they would like to do.

### Social Capital

More women (46.2%) than men (8.0%) 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.

### Knowledge and Skills

Fewer women (27.5%) than men (76.3%) reported that they have skills, like budgeting, organization, or mobilizing, to contribute to sanitation-related projects in their community.

### Self-Efficacy

36.3% of women and 29.3% of men felt that they could change sanitation conditions in their community if they wanted to.

### Critical Consciousness – Identifying and Questioning Inequalities

58.9% of respondents agreed that women typically have to delay going to a sanitation location more often than men because of their responsibilities.

## REFERENCES

van Eerdewijk, A. H. J. M., Franz Wong, Chloe Vaast, Julie Newton, Marcelo Tyszler, and Amy Pennington. "White paper: A conceptual model on women and girls' empowerment." (2017).