

Women's Participation in Water Sanitation and Hygiene Projects and Associated Factors: A Case of Misungwi and Magu Districts

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Abstract

Background: Women's participation in water, sanitation, and hygiene (WASH) related projects is crucial for promoting public health and achieving sustainable development. However, in many rural settings, women remain underrepresented in WASH-related decision-making bodies and committees. Socio-economic constraints, including low income, high levels of illiteracy, unequal power relations, and heavy domestic workloads, continue to limit women's meaningful engagement. This study explored women's participation in WASH projects and their socio-cultural and structural factors influencing their involvement in Misungwi and Magu districts, Mwanza Region, Tanzania.

Methodology: An exploratory qualitative study design was employed. Data were collected through Focus Group Discussions and Key Informant Interviews with key stakeholders involved in WASH projects. Verbatim transcription and thematic analysis were conducted, and a participation scorecard was used to assess the level of women's participation in WASH-related activities and decision-making processes.

Results: The study found that women's participation in WASH projects was largely passive and often contingent upon men's decisions. Cultural norms, household power hierarchies, and the requirement for permission from husbands or male family members significantly constrained women's active involvement in decision-making. As a result, women's roles were frequently limited to implementation rather than leadership roles.

Conclusion: Women's participation in WASH projects in the study area remains constrained by entrenched socio-economic inequalities and patriarchal cultural norms. Addressing these barriers requires comprehensive strategies that promote women's economic empowerment, challenge restrictive gender norms, and recognize household power dynamics. Policies and programs that intentionally strengthen women's decision-making authority are critical for achieving equitable and sustainable WASH outcomes.

Keywords: Women, WASH, Participation, Public health, Decision-making, Socio-economic imbalance, Cultural norms.

Background

Access to safe drinking water and sanitation facilities is recognized as a fundamental human right. However, a significant portion of the global population, approximately 2.1 billion people, lack access to safe drinking water, while 2.3 billion people lack access to proper sanitation facilities, with 1 billion practicing open defecation (1). This issue is particularly pronounced in developing countries, where women and girls in low-income families encounter challenges in accessing water, sanitation, and hygiene (WASH) facilities that cater to their specific needs (2).

Efforts to address this problem have highlighted the importance of community knowledge-sharing platforms, such as community meetings, where different groups, including women and people with special needs, can understand and choose appropriate and reliable WASH facilities (3). Studies have shown that women often prioritize the acquisition of WASH facilities more than men and are willing to invest scarce resources in this area. Improved sanitation facilities have been linked to increased women's decision-making power at both the household and community levels (4). However, women's participation in community-related activities, including decision-making meetings, can be limited due to household responsibilities and caring duties (5).

The United Nations' Sustainable Development Goal 6 (SDG 6) emphasizes the importance of addressing the needs of women and girls in achieving universal water and sanitation coverage, reducing inequalities, and leaving no one behind (6,7). Women, particularly those in

low-income urban settlements and remote rural areas, are disproportionately affected by inadequate access to WASH services, impacting maternal and neonatal mortality rates. Historically, women have played significant roles in maintaining water, sanitation, and hygiene facilities in many countries, emphasizing the importance of their participation in WASH programs (7,8).

Various studies have highlighted the critical role of women's participation in the effectiveness and sustainability of WASH programs, especially when coupled with women's empowerment, which can promote gender equality and catalyze behavior change while reducing disease burden and gender discrimination (9,10). Despite this knowledge, women's participation in both developed and developing countries remains limited due to various barriers, including language, education, cultural norms, household workload, self-esteem, administrative structure, project approach, and limited control over resources (11,12).

In Tanzania, gender assessments and formative research in Morogoro and Iringa regions in 2019 identified gender norms as key inhibitors of women's decision-making power in the community (13). Another study in Msalala district found women's representation in water source governance but did not explore their participation in decision-making on water source governance (9). Additionally, experiences from the implementation of the National Sanitation Campaign in Njombe district highlighted the significance of women's involvement in the campaign and their proactivity in sanitation-related activities (14).

Considering the existing gaps in understanding women's participation in WASH-related projects in Tanzania, this study aimed to analyze the current level of women's participation in decision-making processes at the community level concerning WASH projects in Misungwi and Magu districts, located in the Mwanza region. By examining the factors associated with women's participation, this research seeks to inform policymakers and experts on how to enhance and improve the WASH sector. Despite the importance of this issue, few studies have extensively examined the proportion of women's participation in WASH or explored the factors influencing their involvement.

Thus, this study aimed to provide a deeper understanding of the factors associated with women's participation in water, sanitation, and hygiene projects. This knowledge will be valuable in developing targeted interventions

and strategies that address women's economic and social needs while ensuring access to adequate WASH facilities. By focusing on the Misungwi and Magu districts in Mwanza region, this research aims to contribute to national policy perspectives and advance efforts to improve the WASH sector in Tanzania.

Methods

Study area

The study was conducted in Misungwi and Magu district councils, two of the seven districts in the Mwanza region, situated around Lake Victoria. According to the National Bureau of Statistics of Tanzania in 2017, Misungwi and Magu districts had estimated populations of 408,019 and 347,853 people, respectively. In each district, women comprised 51% of the population (Tanzania NBS statistics 2017).

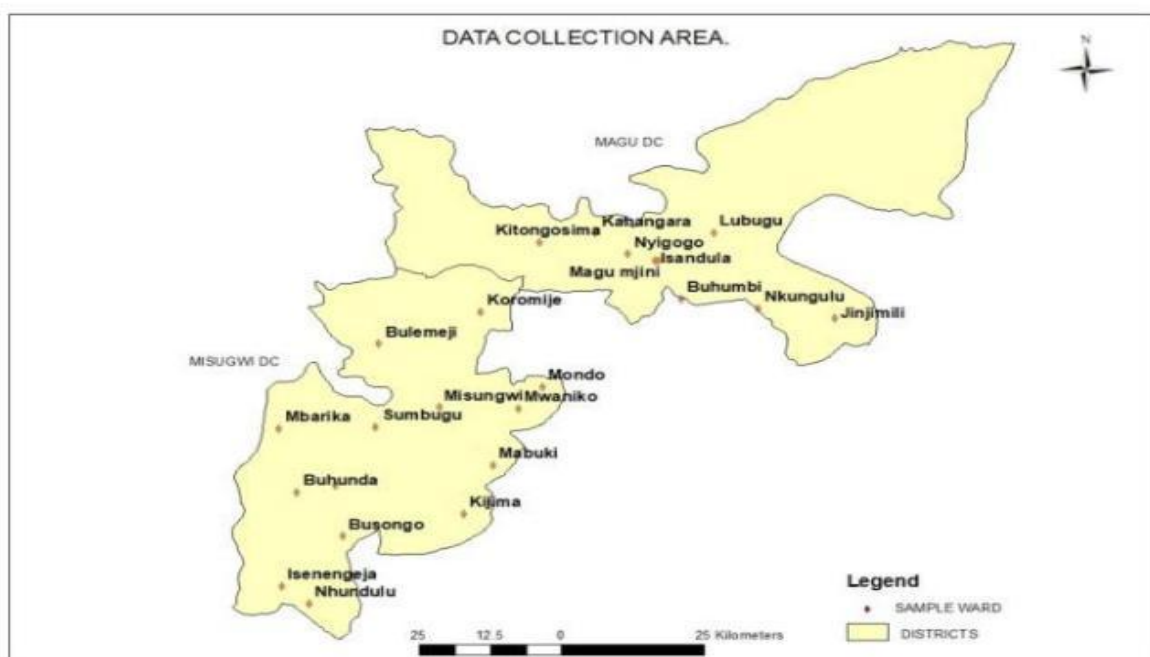


Figure 1. Data collection sites Misungwi & Magu DC

Study design and participants

This research utilized a cross-sectional survey design, primarily employing qualitative data collection methods. Data were gathered through Focus Group Discussions (FGDs) and Key Informant Interviews (KIIs) using structured interview guides and checklists. All FGDs and KIIs were recorded using specialized audio recorders, and the recorded data were later transcribed and analyzed based on the predefined study themes.

Focused Group Discussions involved engaging key stakeholders with substantial knowledge of the sanitation and hygiene environment in the district, including both men and women aged between 24 and 45 years, as well as

representatives from WASH Committees. Additionally, in-depth interviews were conducted with key stakeholders in the Health, Solid Waste Management, and Community Development departments. Participants who were unwilling to participate or were unwell during the data collection period were excluded from the study.

The recruitment of study participants followed a purposive sampling technique, ensuring that ethical considerations were upheld throughout the interview process. A total of 10 KIIs and 16 FGDs were conducted in both Misungwi and Magu districts, with each FGD comprising an average of 8 to 12 members. The distribution of participants is presented in (Table 1).

Table 1: Key stakeholders and community members who participated in the study

SN	Level	Key Informants & FGDs	Magu	Misungwi
1	Local government	KIIs: => Health, Solid Waste Management and Community Development Officials	5	5
2	Community	FGDs: => Ward WASH Committees, Women group (24 – 45) & Men group (25-45)	11	6
Total			16	11

Data collection process

For data collection, six research assistants, well-versed in qualitative research methods, were engaged. They received comprehensive one-day training before the data collection phase to acquaint them with the data collection tools, study objectives, and ethical considerations. The field data collection was carried out in April 2021. During the actual data collection process, the researcher served as the moderator for the FGDs, while research assistants operated the audio recorders and took notes. All FGDs and KIIs were conducted in quiet locations, such as

village or ward offices or beneath trees, to ensure minimal disruptions. The average duration of each FGD and KII was between 60 and 80 minutes.

Data Analysis

The transcribing of collected data was performed by the trained research assistants, using verbatim transcription methods to ensure accurate representation of the information. To maintain data integrity, quality checks were conducted by cross-referencing the transcribed documents with sample parts of the audio recordings. To assess the different levels of

women's participation in WASH-related projects, a score card was introduced. This score card featured a ranked participation ladder, classifying women's engagement as follows: Token Participation, Active Participation, and Decision Makers. Quotes supporting the study's findings were extracted from the transcribed data, and conclusions were drawn based on the interpretation of these findings.

Ethical Considerations

The study adhered to the fundamental ethical principles outlined in the Declaration of Helsinki of the 25th World Medical Assembly. These principles included respect for participants, beneficence, justice, and ensuring anonymity. Prior to each interview, participants were provided with written consent forms, and they were assured of the confidentiality of their information. Participants had the freedom to continue or withdraw from the interview at any point without facing any consequences. Additionally, the study obtained ethical approval from the Muhimbili University of Health and Allied Sciences, with clearance number MUHAS-REC-08-2022-1302, and informed consent was obtained from all research participants. The survey data were treated with strict anonymity and confidentiality. All audio recordings and collected data were securely stored in a database accessible only to the IT manager, ensuring the protection of participants' privacy.

Results

Women's Participation in WASH Committee

The study conducted sixteen FGDs with an average of 8 to 12 participants in both Misungwi and Magu districts. These groups were segregated by age and sex to foster active

engagement and shared interests. The study also ensured the inclusion of people with disabilities in the discussions to capture their valuable contributions.

The findings revealed that women were indeed well represented in WASH committees. However, their participation did not always translate into equal influence and decision-making power within the committees. The committees comprised various roles, including chairman, secretary, and general committee members, with women, elders, and youths also being part of them. Despite the guidelines calling for diverse representation, men predominantly held influential positions in the committees. This was exemplified by a participant from the FGD, who said,

"...people with disabilities are not mentioned in the whole structure, but in the village government, they are all given a chance to participate. Positions are available but they need to apply to become members of the committee which they normally don't apply..."

During the FGDs, women participants pointed out that joining the WASH committees often required proving one's worth through engagement in various community activities, including politics. This aspect disadvantaged many women, resulting in male dominance within the committees. A ward-level government official also commented on the issue, stating,

"...in this community, we select both women and men in WASH committees, but it is not surprising that a few men can conclude on the matter, leaving many women affirming the decisions made".

The study further identified cultural norms as a hindrance to women's active participation in WASH committee meetings. In some areas, husbands controlled their wives' involvement in community activities, limiting their attendance at committee meetings. One Ward Health Officer remarked,

"...our mothers are mostly left at home taking care of kids and other household activities; men always don't stay at home. This limits women's attendance at different committee activities..."

Women and Sanitation

The study explored women's roles and decision-making influence concerning sanitation facilities in their households. It was evident that men primarily made decisions on when and where to construct sanitation facilities since they were often the household owners. One male respondent asserted,

"...women can't allocate where to build or locate anything in my household, it has to follow what I decide since I am the head of the household and the owner of the premise..."

This decision-making disparity extended to women's limited control over sanitation resources and facilities. Women's preferences were often disregarded, with men making the final decisions. A Ward Health Officer from Magu district highlighted,

"...women have to be involved in many sanitation initiatives at the community and household level and proactive in driving the national sanitation agenda...in regard to where, when, and how to construct the toilet, only a man can do so"

Women's Participation in Hygiene Practices

The study examined how men supported women in household hygiene-related activities through the lens of focus group discussions and key informant interviews. The findings indicated that men rarely contributed to household hygiene activities, often being absent from home or showing limited support. A male participant from Misungwi expressed,

"...we have so many issues to do outside of home; general cleanliness is women's role, I can just support her if she is sick, otherwise...No"

However, during the national sanitation campaign, women played a significant role in ensuring their households had handwashing facilities when health workers visited. Consequently, women actively participated in the installation of handwashing facilities, while men perceived these activities as less valuable.

Women's Participation in Decision Making

The study investigated women's participation in decision-making processes beyond WASH committee meetings, including broader community gatherings. While women attended community meetings, they often lacked confidence and felt hesitant to contribute actively to discussions. This lack of confidence placed women at the "Token Participation" level on the participation ladder, where they attended meetings but had limited influence on decisions. Language barriers also hindered women's active participation, as many women in rural areas preferred to speak their vernacular language, Sukuma, rather than Swahili. Village executive officers, who chaired WASH committees and conducted meetings in Swahili, inadvertently excluded those less conversant with the

language. A participant from an FGD in a rural area shared,

"...Swahili language is rarely spoken in the rural area".

To address the issue of women's hesitancy to participate actively, a village chairman from

Nyenguge suggested that the chairperson should be fair in recognizing the presence of women and other socially excluded groups, giving them priority to speak during meetings.



Figure 2. A ladder showing level of participation

Discussion

The findings of this study shed light on the critical role that women play in driving water, sanitation, and hygiene initiatives within their communities. Despite their active participation in promoting WASH agendas, women face significant challenges in being involved in decision-making processes. These findings are consistent with a study conducted in the Msalala district of Shinyanga, which also reported women being marginalized in WASH project-related decision-making (9). Similarly, a study in Njombe district emphasized women's proactive role in driving the national sanitation agenda but noted their lack of control over resources (14).

Women's active involvement in pushing the "Nyumba ni Choo" campaign for total sanitation coverage is commendable. However, it is concerning that they have limited influence over

resources and decision-making related to sanitation facilities. This situation is exacerbated by the dominance of men in community committees and meetings, which diminishes women's representation and influence in most areas. Barriers such as language limitations, lack of access to education, and cultural norms further hinder women's active participation in WASH projects (15).

The influence of socio-cultural factors on women's engagement in WASH decision-making is evident. Studies conducted in Mandera county, Kenya, Narok South district, Kenya, and Laos all concluded that socio-cultural dynamics played a major role in limiting women's participation in community development projects (11,12). The study emphasizes that women's empowerment and increased participation in development initiatives, especially in low- and middle-income

countries, are imperative to overcome these challenges.

Understanding the socio-economic context of the community is vital in promoting women's active engagement in WASH projects. Economic responsibilities often confine women to family care and household duties, leaving them with less time and energy to attend meetings. Studies in Kenya have found that socio-economic activities, such as engaging in business for income generation, compete with attending meetings, making women less likely to participate (15). Similarly, the study in Odisha, India, revealed that women's low socio-economic status and dependence on male family members for financial decisions hindered their involvement in sanitation decision-making (16).

Addressing the issue of male dominance and socio-cultural norms is essential to enable women to participate actively in decision-making. The study in Ghana highlights the role of male dominance and socio-cultural norms as major barriers to women's participation in decision-making (17). Additionally, intra-household power dynamics, influenced by factors such as marital status, age, and the number of children, can impact women's freedom to engage in WASH community meetings (18).

The association between women's attendance at community WASH meetings and their belief in the importance of women's involvement is noteworthy. Encouraging women's active participation in meetings is crucial to ensure their perspectives are adequately represented. To achieve this, challenging traditional norms and stereotypes and promoting women's empowerment are essential steps (19).

Despite the relevance of these findings, several limitations should be acknowledged. Women's participation in WASH decision-making relied on self-reported data and may be subject to social desirability bias. The study did not directly assess intra-household power relations, economic autonomy, or decision-making authority, which may influence women's participation in WASH decision-making. Furthermore, the cross-sectional design precludes causal inference between meeting attendance and perceived participation. These limitations underscore the need for longitudinal and mixed-methods research.

Conclusion

Women's participation in WASH initiatives is essential for achieving sustainable, inclusive, and equitable development. This study demonstrates that women's involvement in decision-making remains limited, largely due to entrenched cultural norms, gender roles, low educational attainment, community perceptions, and reduced self-confidence, challenges that are more pronounced in rural settings. Nevertheless, exposure to new environments and targeted empowerment interventions can significantly enhance women's engagement. Evidence from the national sanitation campaign in Njombe District, Tanzania, highlights how capacity-building and confidence enhancement enabled women to become effective advocates and active decision-makers in sanitation initiatives. Addressing socio-cultural and economic barriers and fostering inclusive, empowering environments are therefore critical to unlocking women's full potential and improving the effectiveness of WASH interventions.

Recommendations

The study recommends prioritizing gender-sensitive WASH policies that address socio-cultural and economic barriers to women's participation. Integrating women's empowerment and capacity-building programs into WASH projects is essential to strengthen confidence, leadership, and technical skills. Inclusive community decision-making platforms and balanced female representation in WASH committees should be ensured, supported by affirmative action where necessary. Community-wide awareness campaigns should challenge restrictive gender norms, while recognition of women's contributions can motivate engagement. Finally, sustained collaboration, continuous monitoring, and ethical research practices are vital to advancing gender equity and improving WASH outcomes.

Abbreviations

FGD: Focus Group Discussion

KII: Key Informant Interview

MUHAS: Muhimbili University of Health and Allied Sciences

NBS: National Bureau of Statistics

SDG: Sustainable Development Goal

WASH: Water, Sanitation, and Hygiene

Declarations

Conflict of interests

All authors declare that they have no competing interests.

Authors' contributions

The corresponding author collected all primary quantitative data, conducted the analyses, and wrote the first draft. All authors contributed to the research design, data collection, interpretation of the results, and writing the manuscript.

Availability of data

The data cannot be publicly available since they contain sensitive information about the participants. Also, the participants did not provide their approval for the sharing of their information. However, for researchers who meet the requirements for access to confidential data, data are available with a reasonable request to the corresponding author.

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