

## Community and Individual Preferences For A New Water Infrastructure For Non-Drinking Water In A Schistosomiasis Endemic Area of Uganda

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### Abstract

**Background:** Schistosomiasis is a water-borne parasitic disease affecting 240 million people. Schistosomes reproduce sexually in humans, releasing eggs in urine and faeces which hatch in freshwater and infect snails, where they reproduce asexually releasing hundreds of cercariae/day. These cercariae burrow directly into humans on contact with contaminated water, continuing the cycle. Mass drug administration has been the WHO recommended strategy for nearly 20 years, and whilst successful in some areas, there are hotspots across sub-Saharan Africa. Additional non-pharmaceutical interventions are needed to meet the WHO goal of eliminating schistosomiasis as a public health problem by 2030. The WHO roadmap states that improved access to safe water, sanitation and hygiene (WaSH) is needed. In low-income countries, non-governmental organizations are essential actors that implement WaSH infrastructure however 30-50% of WaSH projects implemented in communities cease to be used after 2 – 5 years. To increase access to safe water, both uptake *and* sustainability of the WaSH infrastructure needs to be considered. Qualitative research in the community can deepen our understanding of the needs of the community and provide an evidence base to help co-design a solution that best meets those needs.

**Methods:** Data were collected in February 2023 with community members from Bugoto, a high-endemicity community located in eastern Uganda on the shores of Lake Victoria through in-depth interviews (IDIs) (n=21) and focus group discussions (FGDs) (n=4). The IDIs were conducted with adult women and the FGDs were conducted with both women and men. The IDIs and FGDs with community members were conducted in Lusoga, the language spoke in Bugoto. Prior to the IDIs and FGDs, the study objectives and overview was read in Lusoga to the participant followed by obtaining consent through a signature or thumbprint. Thematic analyses were used to analyse the data. Data were coded into themes using the software NVIVO14. Iterative characterization was then utilized to analyse chosen themes using the process of descriptive, followed by Interpretive, analysis.

**Findings/Discussion:** Insights were obtained regarding non-drinking water usage patterns, including facilitators and barriers to accessing various water sources. This provided a contextual understanding of the community's water needs. Subsequently, analyses were conducted to determine preferences for future water infrastructure for non-drinking purposes, resulting in the identification of five major themes. These themes, coupled with observational data collected during the researcher's time in Bugoto will be presented and will inform the design of future interventions tailored to the community's preferences and requirements.