



Quantitative Assessment of Water Sanitation Improvements via Community-Led Filters in Nigerian Slums, 2004

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Abstract

This study examines the effectiveness of community-led water filtration systems in improving sanitation in Nigerian slums. Water samples from filter-fed wells were analysed for contaminants, while surveys collected demographic and behavioural data. Feedback forms facilitated community engagement and provided insights into user satisfaction and system maintenance practices. The analysis of water quality showed a significant reduction in *E. coli* levels by more than 90% compared to pre-filter stages, coinciding with an increase in reported use rates among households adopting the filters. Community-led water filtration systems effectively improved sanitation outcomes in Nigerian slums, particularly evident through enhanced user engagement and reduced contamination levels. Further studies should explore scalability of these interventions to broader urban areas and consider integrating community education programmes for long-term sustainability.

Keywords: *Nigerian, slums, sanitation, filtration, community participation, epidemiology, water quality, intervention effectiveness*

ABSTRACT-ONLY PUBLICATION

This is an abstract-only publication. The complete research paper with full methodology, results, discussion, and references is available upon request.

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