ORIGINAL RESEARCH

53. Enhancing WASH Practices and Health Outcomes in a Remote Community in the Peruvian Amazon: a Community-Based Intervention

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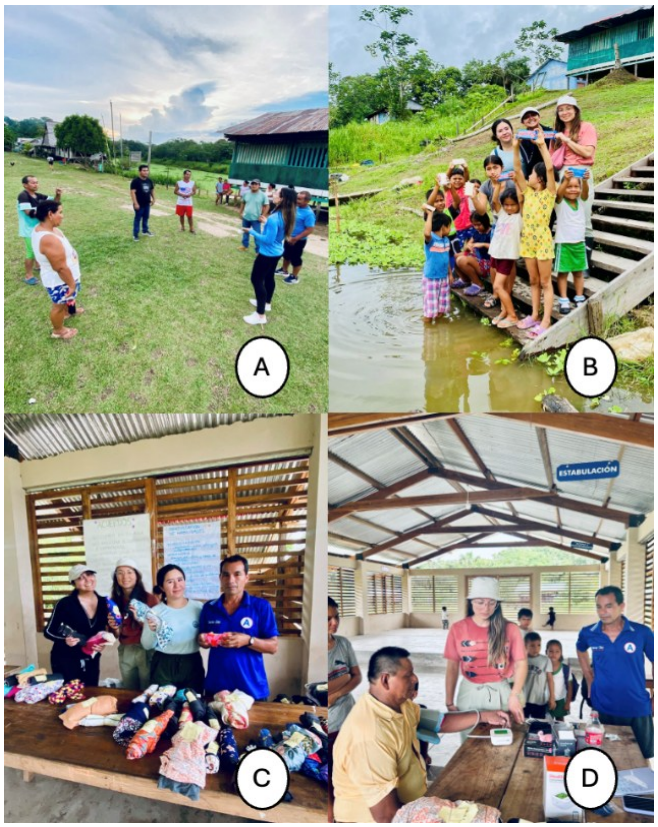
Background: Florida International University Herbert Wertheim College of Medicine (FIU HWCOM) students initiated a community health and Water, Sanitation, and Hygiene (WASH) initiative in San Juan de Yanayaku, a remote Peruvian Amazon village of 105 individuals, from November 28 to December 2, 2024. The purpose of this project was to provide essential healthcare services and address critical WASH issues. The project was conducted in collaboration with Nevada Building Hope Foundation, which has provided support to the community for over a decade.

Methods The team established and operated a temporary health clinic in a central community space to evaluate the overall health status of community members. Screenings included common acute and chronic health conditions, nutritional assessments, and vital sign monitoring. Each participant underwent a basic health assessment, with brief interviews to collect self-reported hygiene practices, water consumption, and prior illness history. Data were used to identify hygiene-related illness trends and inform future WASH interventions. New clothing was also distributed to community members. In addition, WASH education at the local primary school emphasized proper handwashing techniques and hygiene practices to reduce communicable disease spread.

Results: The clinic provided health screenings for 40 individuals. Of these, sixty percent were female and most were between 20 and 60 years old. Eighty percent reported direct exposure to Amazon River water. While 65% reported no known medical conditions and 92.5% were not on medications, this may reflect limited healthcare access rather than absence of disease. Diarrhea was more common in river water consumers (50% vs. 12.5%). Stomachaches were also more frequent in river water users (37.5% vs. 25%). Higher glucose levels were observed in individuals drinking river water, suggesting a possible nutritional or metabolic impact linked to chronic infection or lack of food and care. Headaches and muscle aches were found in both groups, with no notable differences. The school-based intervention provided interactive handwashing demonstrations to instill hygiene practices.

Conclusion: This project highlights the urgent need for targeted WASH interventions in San Juan de Yanayaku. The association between river water consumption and diarrheal disease indicates inadequate water sanitation as a major health risk. Elevated blood glucose levels and underdiagnosis of chronic illnesses further suggest limited healthcare access and health literacy. Community-based health screenings provided diagnostic and educational benefits, but a single intervention is insufficient. Ongoing follow-up, educational campaigns, and installation of a permanent water sanitation system are essential to improve long-term outcomes. This initiative demonstrates that community-driven health assessments can guide sustainable WASH programs and integrate medical outreach with public health advocacy in underserved regions.

Figure 1. Different aspects of the community-based intervention in San Juan de Yanayaku, Peru.



Legend: Different aspects of the community-based intervention in San Juan de Yanayaku, Peru. (A) Medical student discussing the WASH intervention and installation of the water system in the community; (B) medical students educating primary school students on proper handwashing techniques; (C) medical students distributing new clothing to community members; (D) medical student measuring a community member's blood pressure..

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