



Assessing the Impact of Borehole Rehabilitation and Water Committee Training on Childhood Diarrhoea Incidence in Cameroon's Logone-et-Chari Division: A Community-Based Intervention Study

Jean-Baptiste Mbarga¹, Aminata Ndifon²

¹ University of Yaoundé I

² University of Dschang

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Correspondence: jmbarga@yahoo.com

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Author notes

Jean-Baptiste Mbarga is affiliated with University of Yaoundé I and focuses on Medicine research in Africa.

Aminata Ndifon is affiliated with University of Dschang and focuses on Medicine research in Africa.

Abstract

Inadequate access to safe water is a leading cause of childhood diarrhoea in sub-Saharan Africa. The Logone-et-Chari Division of Cameroon exemplifies this challenge, with many communities dependent on non-functional or poorly managed boreholes. This study assessed the impact of a combined intervention—rehabilitating non-functional boreholes and training local water point committees—on the incidence of childhood diarrhoea in the division. A community-based intervention study was conducted. Selected villages were allocated to an intervention group (receiving borehole rehabilitation and committee training) or a control group (receiving no intervention). Household surveys were administered at baseline and follow-up to caregivers of children under five to collect data on diarrhoea incidence. Data were analysed using comparative statistical methods. A significant reduction in the reported two-week prevalence of childhood diarrhoea was observed in intervention villages compared to control villages. The reduction was approximately 40% in the intervention group at follow-up. The combined intervention of borehole rehabilitation and water committee training was effective in reducing childhood diarrhoea incidence in this setting. This underscores the importance of coupling infrastructure with community management for sustainable water access and health improvement. Programmes aiming to improve water security and public health should integrate physical rehabilitation of water points with capacity building for local management committees. Further research should investigate the long-term sustainability of such interventions. Water, sanitation and hygiene (WASH), diarrhoeal diseases, borehole rehabilitation, community management, Cameroon, child health This study provides empirical evidence from a field-based intervention on the combined effect of infrastructure repair and community training, contributing to the literature on practical WASH implementation in rural African contexts.

Keywords: *Community-based intervention, Childhood diarrhoea, Borehole rehabilitation, Water, sanitation and hygiene (WASH), Sub-Saharan Africa*

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