Long-Term Effects of Community-Led Water Sanitation Interventions on Child Malnutrition in Kenyan Villages

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Abstract

Community-led water sanitation interventions have been implemented in various Kenyan villages to improve hygiene practices and reduce waterborne diseases. The research employed mixed-methods including quantitative data from health records and qualitative insights from community surveys to assess changes in child nutrition status. After analysing four years of post-intervention data, there was a statistically significant reduction ($p < 0.05$) in malnutrition rates by 15% compared to pre-intervention levels, with no adverse trends observed. The findings suggest that community-led water sanitation interventions can lead to sustained improvements in child nutrition outcomes over time. Further research should explore the specific mechanisms through which these interventions impact malnutrition and consider scaling up successful models across more villages. Water Sanitation, Child Nutrition, Community Interventions, Long-Term Effects Treatment effect was estimated with $text\{logit\}(\pi) = beta\,0 + \beta^{\neg} p\,X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *African, Anthropometry, Community Participation, Hygiene Education, Malnutrition Prevention, Water Supply Systems, Interventions Evaluation*

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