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with planetary health”

Modified traps and take-home fish (*kitoweo*) for nutrition and resource sustainability in coastal Kenya

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Abstract

Globally, food insecurity and malnutrition continues to persist with almost 30 % of the world's population affected and another 40 % unable to afford a healthy diet. Approximately eight million people are food insecure with significant numbers coming from small-scale food producing households. Additionally, one in five children is chronically malnourished. Here, we adopt a longitudinal, cluster-designed study comparing outcomes across three groups: 1) control; 2) social marketing for behaviour change; and 3) social marketing plus modified fishing gear (traps with escape gaps) at Kanami, Kuruwitu, Uyombo and Mayungu fishing communities in coastal Kenya.

Based on community-based trials in Kenya, we demonstrate the combined importance of social marketing and modified fishing gear (traps with escape gaps) in enhancing nutrition adequacy, particularly protein intake among children less than five years. More specifically, we demonstrate the significant role played by adoption of modified gated trap in contributing to take home fish (*kitoweo*) quantities and improving child nutrition and resource sustainability respectively. Correlation between the three groups was significantly different, with group categories demonstrating the significant role played by targeted context specific interventions in ensuring food security and resource sustainability. The study is a demonstration that both human health and resource sustainability may be simultaneously achieved through context-responsive, integrated strategies. Similar studies across a range of representative sites and countries are needed to determine if our findings are unique or a more general characteristic of nearshore coastal fishing communities. Results from such studies are likely to policies that seek to achieve both human and environmental health.

Keywords: Basket trap, *kitoweo*, nutrition, resource sustainability, take-home fish