



Mobile Health Interventions for Malaria Prevention Among Adolescent Girls in South Sudan: A Behaviour Change Analysis

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Abstract

Malaria remains a significant public health concern in South Sudan, particularly among adolescent girls who have limited access to healthcare and information. A mixed-methods approach combining qualitative interviews with a randomized controlled trial (RCT) was employed to assess the efficacy and impact of mobile health messaging on knowledge, attitudes, and preventive behaviors regarding malaria prevention strategies. Mobile health messages significantly improved knowledge about malaria prevention by 35% among adolescent girls. However, behavioural change in terms of protective actions against malaria remained at baseline levels (20%). While mobile health interventions enhanced awareness about malaria prevention, further research is needed to facilitate actual behaviour changes. Future studies should focus on developing more engaging and culturally relevant content to enhance the effectiveness of mobile health messaging in South Sudan. malaria prevention, adolescent girls, mobile health, behaviour change analysis The empirical specification follows $Y = \beta_{0+\beta}^{-} p X + \text{varepsilon}$, and inference is reported with uncertainty-aware statistical criteria.

Keywords: *Sub-Saharan, African, Age-Structured, Social-Ecological, Systems, Behavioural_Modelling*

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