



Evaluating the Effect of Fortified Complementary Food (Likuni Phala) on Linear Growth Faltering in Malawian Infants Aged 6 to 23 Months: A Research Protocol

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Abstract

Linear growth faltering remains a significant public health challenge in Malawi, with high rates of stunting among children under five. The complementary feeding period from six to 23 months represents a critical window of vulnerability. While fortified complementary foods like the nationally available Likuni Phala are a potential intervention, evidence of their effectiveness in routine community settings is limited. This protocol describes a study to evaluate the effect of a Likuni Phala supplementation programme on linear growth faltering in infants. The primary objective is to compare the change in length-for-age Z-scores (LAZ) over a nine-month period between an intervention group receiving Likuni Phala and a control group receiving standard nutrition education only. A community-based, cluster-randomised controlled trial will be conducted in Mangochi District. Villages will be randomised to either the intervention or control arm. Infants aged 6-8 months will be enrolled. The intervention group will receive a monthly supply of Likuni Phala for nine months, alongside standard behaviour change communication. The control group will receive behaviour change communication alone. Anthropometric measurements will be taken at baseline, and at three, six, and nine months. Data will be analysed using a mixed-effects linear regression model. As this is a protocol for a future study, no empirical findings are available. The anticipated primary outcome is a smaller decline in mean LAZ score in the intervention group compared to the control group over the study period. The study will generate evidence on the real-world efficacy of a scalable,

fortified complementary food programme in preventing linear growth faltering during infancy. Findings will be disseminated to Malawi's Ministry of Health and relevant stakeholders to inform national nutrition policy and programming. If effective, scale-up of the supplementation strategy should be considered. stunting, complementary feeding, fortified food, cluster-randomised trial, Likuni Phala, Malawi, infant growth This protocol details a study designed to provide evidence on the effectiveness of a national fortified complementary food within a routine programme context, addressing a key gap in knowledge for public health nutrition in Malawi.

Keywords: *Complementary feeding, Stunting, Linear growth faltering, Food fortification, Sub-Saharan Africa, Child nutrition, Anthropometry*

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