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Impact Evaluation of Vitamin A Supplementation on Child Growth Outcomes in Northern Uganda: Anthropometric Measures and Hospitalization Rates Reduction

Achola Tukambe[1], **Otombe Nalwadi**[2], **Kizza Okothi**[3], **Akello Muhumuza**[4,5]

[1] National Agricultural Research Organisation (NARO)

[2] Department of Surgery, Mbarara University of Science and Technology

[3] Kyambogo University, Kampala

[4] Mbarara University of Science and Technology

[5] Makerere University, Kampala

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Correspondence: atukambe@gmail.com

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Author notes

Achola Tukambe is affiliated with National Agricultural Research Organisation (NARO) and focuses on Medicine research in Africa.

Otombe Nalwadi is affiliated with Department of Surgery, Mbarara University of Science and Technology and focuses on Medicine research in Africa.

Kizza Okothi is affiliated with Kyambogo University, Kampala and focuses on Medicine research in Africa.

Akello Muhumuza is affiliated with Mbarara University of Science and Technology and focuses on Medicine research in Africa.

Abstract

Vitamin A deficiency is a significant public health issue in Northern Uganda, affecting child growth outcomes and hospitalization rates. A cross-sectional study was conducted with a sample size of 450 children aged 6-59 months, using a validated questionnaire to assess dietary intake and vitamin A status. Anthropometric measurements were taken for height-for-age z-score calculation, while hospitalization rates over the past year were recorded. Height-for-age z-scores improved by an average of 0.2 SD units in children receiving vitamin A supplementation compared to non-supplemented groups, indicating a potential positive impact on growth outcomes ($p < 0.05$). There was also a reduction in hospitalization rates by 30% among supplemented children. The study supports the efficacy of vitamin A supplementation programmes in improving child height-for-age z-scores and reducing hospitalization rates, suggesting potential benefits to public health strategies. Continued implementation of vitamin A supplementation programmes should be considered as a cost-effective intervention for improving child growth outcomes and reducing healthcare utilization. Treatment effect was estimated with $text{logit}(\pi) = beta 0 + \beta^{\rightarrow} p X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Vitamin A deficiency, Northern Uganda, Anthropometry, Growth monitoring, Public health intervention, Hospitalization rates, Community-based nutrition programme*

ABSTRACT-ONLY PUBLICATION

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