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**Effect of Nutrition Information on Feeding First Food Enriched with
Orange Fleshed Sweet Potatoes on Vitamin A Status in 6-12
Months Children in Morogoro Region, Tanzania**

Abstract

Vitamin A deficiency is widespread and has severe consequences for young children in the developing world. Food-based approaches may be an appropriate and sustainable complement to supplementation programs. We assessed the effect of nutrition information on feeding first food enriched with orange fleshed sweet potatoes on vitamin A status of 6-12 months children in Morogoro region of Tanzania. This one month intervention did not improve vitamin A status of the subjects as measured by Retinol Binding Protein: Transthyretin ratio. All subjects were vitamin A deficient at baseline where two subjects had severe vitamin A deficiency. The subjects remained vitamin A deficient post intervention with more subjects having severe VAD than those at baseline (cut off value $\leq 0.7\mu\text{M}$). We observed a significant reduction of RBP:TTR ratio concentration during the intervention (p-value; 0.001). The subjects gained an average weight of $0.82 \pm 0.14\text{kg}$ and average growth of $2.07 \pm 0.27\text{cm}$. There was no significant difference in total protein and C-reactive protein levels (p-value; 0.4, 0.37 respectively) between baseline and post intervention periods. However, we did observe a significant reduction in TTR levels (p-value; 0.02) at baseline and post intervention. Although this intervention study did not have a positive effect on vitamin A status of the children; it has shed some light on the fact that it is possible to enrich maize porridge which is the main first food for 6-12mo children in this country with orange fleshed sweet potatoes as other possible food based approach in combating VAD.