

### Comparative Analysis of Food Security Measures by Vitamin A-rich Food Consumption Among Mother-Child Dyads in Uganda

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**Objectives:** This study examined mother-child differences in vitamin A-rich food consumption and conduct a comparative analysis of three food security indicators on household vitamin A-rich food consumption for 375 mother-child dyads from selected sweet potato growing households in Uganda.

**Methods:** This study examined baseline data collected by the International Potato Centre (IPC) for an initiative on the development and delivery of biofortified crops in Uganda. Dietary intake and livelihoods data was collected from women residing in households that grew sweet potatoes in selected regions in Uganda. Eligibility criteria included women who were pregnant or lactating and/or had children 6–24 months. The analytical dataset had 375 woman-child dyads. An adjusted Hellen Keller International (HKI) guide was used to examine data on vitamin A consumption. Scores were weighted for animal- and plant-based sources of vitamin A. Data were

stratified by woman or child to allow for within- and between-person variances in vitamin A-rich food consumption. Dependent sample Student's t-tests, Pearson's correlation analysis and a repeated measure analysis of covariance (ANCOVA) tested for differences in the vitamin A-rich food consumption mother-child dyads.

**Results:** There was a statistically significant difference in the mean consumption of vitamin A-rich foods for women and children ( $F(1,370) = 6.51, p = .011$ ). Women had a higher vitamin A consumption ( $M = 2.08, SD = 2.11$ ) than children in the same household ( $M = 1.39, SD = 2.17$ ). This was qualified by a significant interaction with the household wealth index ( $F(1,370) = 4.31, p = .039$ ), however not with household dietary diversity ( $F(1,370) = 3.16, p = .07$ ), and household food insecurity access ( $F(1,370) = 0.32, p = .57$ ). HDDS and the wealth index were associated with the mother's consumption of vitamin A-rich food but not with the children's.

**Conclusions:** Initiatives that target mother-child dyads should be aware of factors such as intrahousehold food distribution and cultural practices that may differentially impact child consumption of vitamin A-rich and other micronutrient-rich foods. Child-friendly initiatives are recommended to maximize nutritional benefits for children under five years.

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