

Seasonal variation in diet quality of women and young children from two agro-ecological zones in Kenya

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Background and objective: Climate change can disrupt food availability, reduce access to food, and affect diet quality. This study examined the effect of seasonality on household dietary diversity (HDDS) and diet quality of women and children in two agro-ecological zones of Rongai sub-county, Nakuru, Kenya.

Methodology: A cross-sectional study of 388 mother-child pair was conducted during lean and plenty season. Household food insecurity access scale was used to measure food security. The HDDS were computed based on 12 food groups. A 24-Hour Dietary Recall was used to generate dietary diversity scores (DDS) of women and children.

Results: The HDDS of households from low agricultural potential areas was not affected ($P>0.05$) by seasonality despite increased food access during plenty season (57.3%) as compared to lean season (36.8%). However, in high potential areas, food access increased ($P>0.05$) from 55.8% to 73.5% while HDDS decreased. Women who achieved minimum dietary diversity (MDD) increased [low potential areas (13.9% vs. 57.8%, $P<0.001$)] and high potential areas [20.0% vs. 49.1%, $P<0.001$] in lean and plenty seasons respectively. Furthermore, children who achieved MDD significantly decreased from 58.9% in lean season to 47% during plenty season in low potential areas while there was no change in the dietary diversity of children from high potential areas. Binary logistic regression showed no effect of seasonality on child diet quality, however, seasonal changes significantly ($P<0.001$) reduced household food access, HDDS and diet quality of women.

Conclusion and Recommendation: Child diet quality was not affected by seasonal variations in the two agro-ecological zones; however, it negatively affected household food access, household dietary diversity and diet quality of women. It is important to develop targeted season-specific nutrition interventions to adequately address food access and diet quality for improved nutrition outcomes.

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