**Introduction**

Malnutrition can occur in the presence of adequate energy intake. In Kenya, a third of both under-fives and women suffer from chronic malnutrition. Diets are dominated by starchy, energy-dense foods, with low consumption of nutrient-rich fruits and vegetables, and animal source foods. This study assessed household food security status and determined its relationship with dietary practices and nutrition status of mothers and children in Laikipia County, Kenya.

**Material and methods**

- Two sites selected in Laikipia County, east and west sub-counties (Fig. 1), an arid and semi-arid region of Kenya.
- 152 households with mothers and children age 6-59 months interviewed.
- Anthropometric measurements taken – weight, height
- Structured questionnaire used to collect data – food production and purchase, dietary diversity and Months of Adequate Household Food Provisioning (MAHFP).
- Spearman’s rho – to establish relationships between variables
- Chi-square tests – to test the association between variables (*, ** significant at P < 0.05, 0.01 respectively).

**Results – household food security**

- Mean land size – 0.7ha and 55%, 41% and 33% of households grew staples/fruit, vegetables and fruits on-farm respectively, mostly for consumption, while 81% kept livestock (Fig. 2).
- Mean weekly expenditure on food – KES820±660 ($8.2±6.6) (mostly meat, milk and vegetables).
- Median MAHFP of 9 (Mean 8.1± 3.0 months)
- Mean land size – 0.7ha and 55%, 41% and 33% of households grew staples/fruit, vegetables and fruits on-farm respectively, mostly for consumption, while 81% kept livestock (Fig. 2).

**Results – dietary diversity of children and their mothers/caregivers**

- Dietary diversity is an indicator of an individual’s diet quality.
- Only 35% of mothers/caregivers consumed foods from 5 or more food groups (Fig. 4).
- 57% of children (<2 years) did not achieve Minimum Dietary Diversity (MDD) of 4 out of 7 food groups a day (Fig. 4).
- Most consumed starchy staples and dairy produce (Fig. 5 & Fig. 6).

**Results – food security, dietary diversity and nutrition status**

- Cultivation of fruits and vegetables positively correlated with children’s dietary diversity and nutrition status of mothers and children (Table 1).
- Weekly expenditure on food correlated with women’s BMI but not children’s nutritional status (Table 1).

<table>
<thead>
<tr>
<th>Table 1. Results of Spearman’s correlation to establish the relationship between household food security, dietary diversity and nutrition status of mothers/caregivers and children</th>
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<tr>
<td><strong>Mothers/Caregiver’s BMI</strong></td>
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**Results – food security, dietary diversity and nutrition status**

- Double burden of malnutrition: 16% of mothers/caregivers overweight, 31% obese
- Prevalence of stunting was 28%, underweight 16% and wasting 2% (Fig. 8).
- Dietary practices and nutrition status of mothers and children (Table 1).

**Conclusion**

- Fruits and vegetables not as commonly consumed as starchy/staple foods, and with less weekly expenditure.
- Majority of mothers/caregivers and children not meeting the minimum dietary diversity.
- Dietary practices and nutrition status of mothers and children in Laikipia County influenced by food access (purchase) and availability (production).

**Recommendations**

- Site-suitable fruit and vegetable species identified, and integrated agriculture and nutrition education training provided to the community.


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