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Women’s time allocation and dietary outcomes: evidence from smallholder livestock production systems in rural Kenya

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Abstract

Food and nutrition insecurity (FNI) remains a persistent challenge in Bungoma County, Kenya, where 14 % of the population was moderate or severe food insecure in 2024. This challenge is widespread, especially among women, with only 51 % achieving minimum dietary diversity.

Existing evidence points to strong linkages between women’s empowerment and food and nutrition security (FNS). Yet, the persistent disproportionate burden of care and domestic work is often an invisible constraint on women’s ability to improve individual and household nutritional outcomes.

This research, conducted within the “Scaling Innovations for reduced and redistributed (I4RR) women’s unpaid care work in smallholder livestock feed provision“ project in rural Bungoma County, investigates how the reduction and redistribution of women’s unpaid care work, e. g. through childcare facilities, can contribute to improved FNS, while identifying social and structural constraints on women’s empowerment. Quantitative data was collected from 133 female project participants, combining the Women’s Empowerment in Livestock Index (WELI)’s Time-Allocation module with Household Dietary Diversity Score (HDDS), Household Food Insecurity Access Scale Score (HFIASS), a negative score for food insecurity, and individual Dietary Diversity Score (IDDS). Eight FGDs with 77 participants provided qualitative insights into perceived changes in work distribution, decision-making and intra-household dynamics.

Quantitative findings show negative associations of time spent on “Gardening and other agricultural production”, “Productive work”, “Leisure / Personal care” and “Social activities / Hobbies” with HFIASS. Increased time allocated to “Productive work”, “Leisure / Personal care” and “Social activities / Hobbies” and “Cooking” is positively linked to IDDS. These associations remain significant after controlling for income and self-produced foods, pointing to non-economic pathways influencing FNS.

Qualitative findings supplement these results, indicating reduced workloads and improved opportunities for women’s income generation. Increased control over own income and greater decision-making power over household food allocation were reported as key mechanisms for improved dietary outcomes. Simultaneously, persistent gender norms and insufficient childcare facilities remain critical barriers.

These results indicate that reducing and redistributing unpaid care work improves FNS by freeing time for non-care activities beyond purely economic gains, while requiring shifts in gender norms and supportive environments that enable women's empowerment.

Keywords: Care work, dietary diversity, food insecurity, Kenya, livestock production, women's empowerment