# Impact of a combined nutrition and agricultural intervention on time-use and dietary diversity of women smallholder farmers in Teso Sub County, Kenya

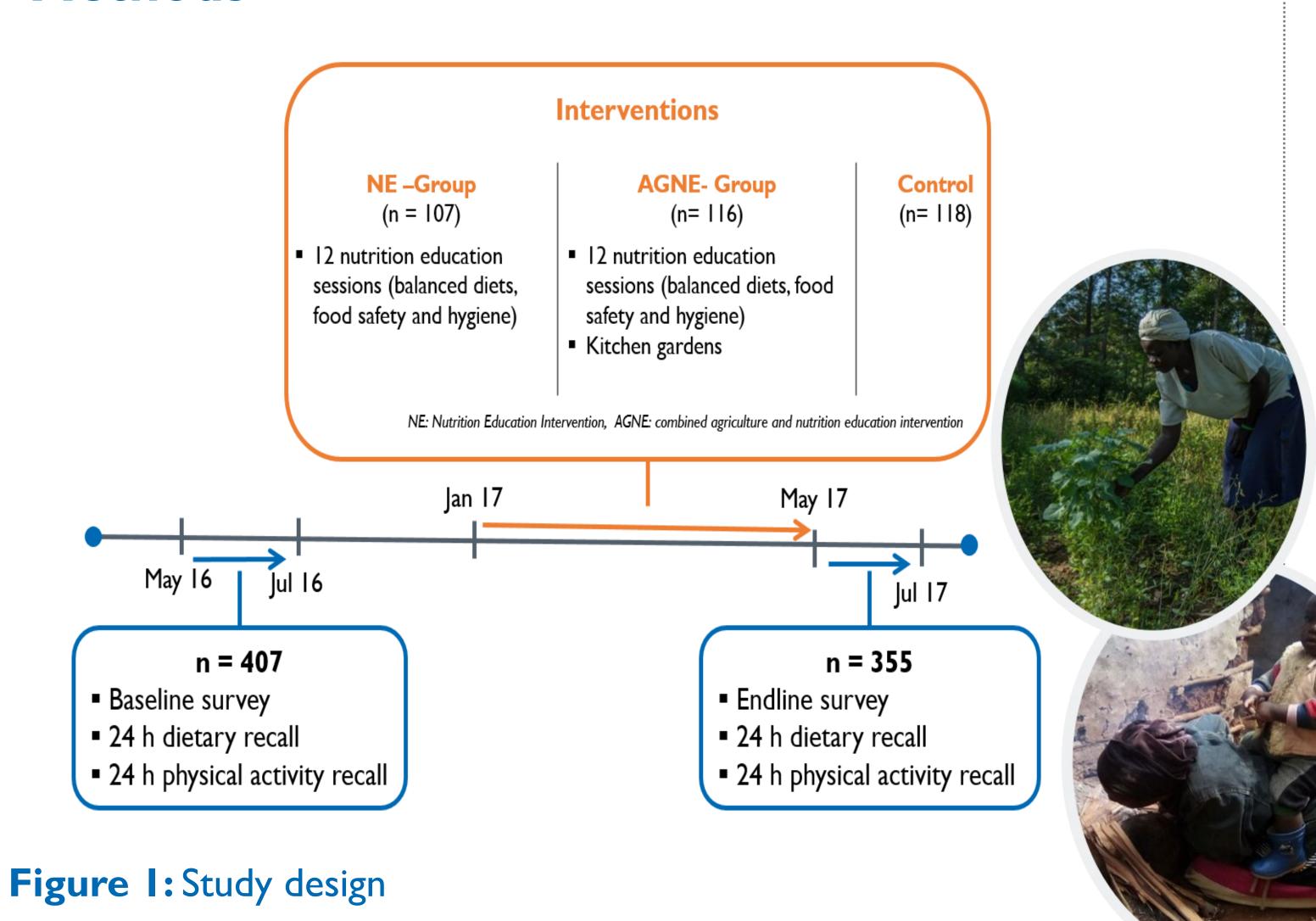
M.Gracia Glas<sup>1</sup>, Barbara Fróes<sup>1</sup>, Samwel Mbugua<sup>2</sup>, Sahrah Fischer<sup>3</sup>, Thomas Hilger,<sup>3</sup> Ernst-August Nuppenau<sup>4</sup>, Irmgard Jordan<sup>1</sup>

<sup>1</sup>Centre for Environmental Sciences and International Research, University of Giessen (Germany), <sup>2</sup>Faculty of Nutritional Sciences, Egerton University (Kenya), <sup>3</sup>Institute of Agricultural Sciences in the Tropics, University of Hohenheim, (Germany), <sup>4</sup>Institute for Agricultural Policy and Market Research, University of Giessen (Germany)

## **Background**

- Women constitute an essential agricultural workforce and play a crucial role in food provision of the entire household.
- Nutrition and agricultural interventions may intensify women's fieldwork by increasing time invest in agricultural activities and unintendedly result in inadequate care and nutrition practices.<sup>1</sup>

## Methods



Nutrition Nutritional Education & Time-Use Agriculture Outcomes Interventions Intra-households dynamics, social norms, migration Change agriculture **Nutritional Status** practices Changes in household, individual productive activities introduction of kitchen subsistence cropping gardens with buffer  $\rightarrow$  farming strips and new crops **Food Consumption** child feeding practices, nutrition knowledge, food intake, dietary diversity Change in nutrition Changes in care practices activities **Food Environment** age appropriate feeding household tasks, food

Figure 2: Project activities embedded in the Theory of Change: framework (Modified after: Johnston et al., 2015)

preparation  $\rightarrow$  cooking,

feeding, care

# Results 5 A 1.9 A 1.3 A 1.3 A 1.3 Nutrition Education (n = 107) Reduction (n = 116) Combined Agriculture and Nutrition (n = 118)

Figure 3: Children's Dietary Diversity Scores at Baseline and Endline

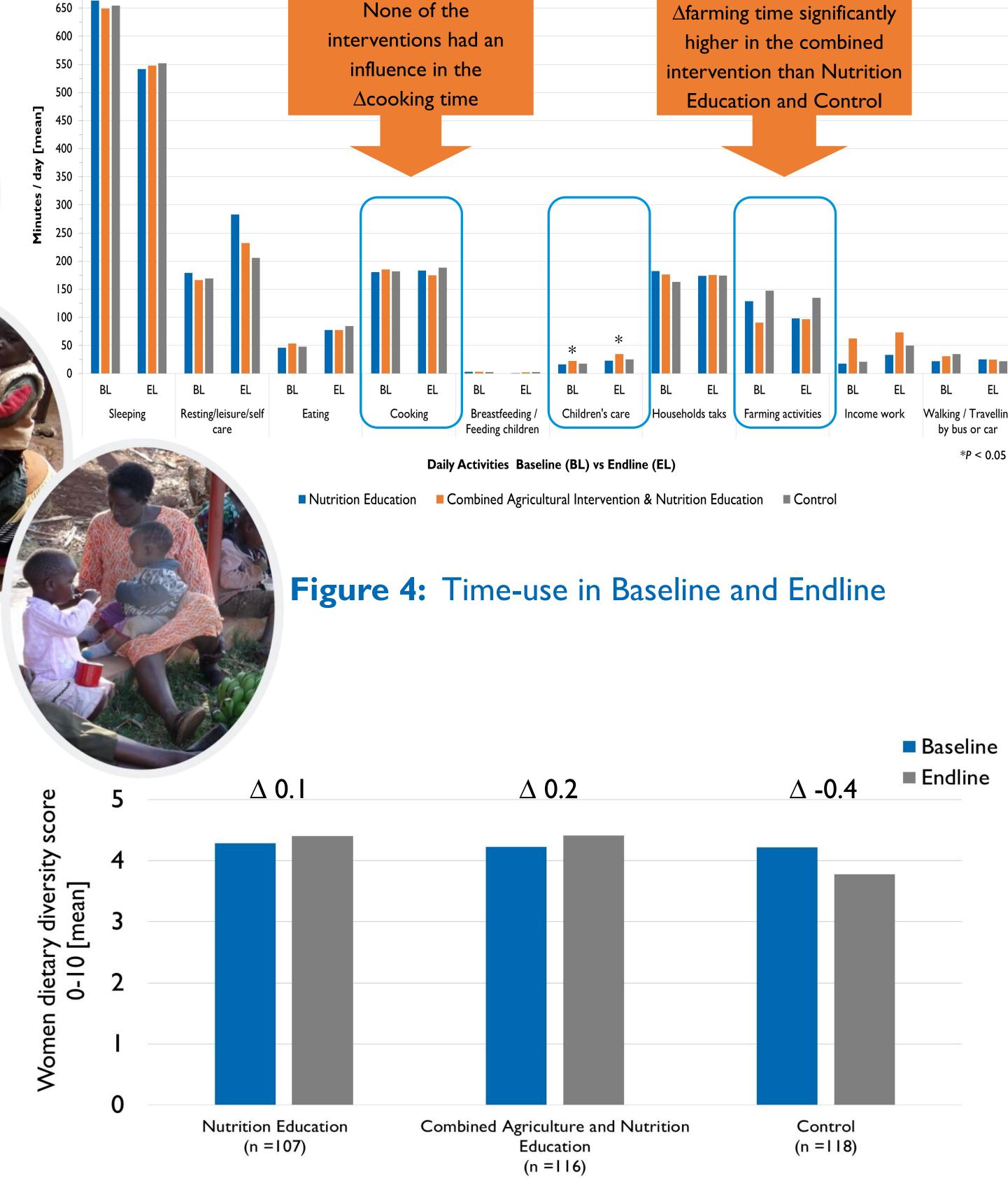


Figure 5: Mother's Dietary Diversity Scores at Baseline and Endline

### Conclusions

- Nutrition Education changed positively dietary diversity of children and women without impacting cooking time but negatively time used for farming activities.
- Time-use data is decisive for nutrition security when promoting nutrition education and innovative agricultural approaches.

References: Johnston, D., Stevano, S., Malapit, H., Hull, E., & Kadiyala, S. (2015). Agriculture, gendered time use, and nutritional outcomes: A systematic review. IFPRI Discussion Paper 1456.



practices, diversification

of diets, number of

meals





food availability, cultural and

social acceptability







