

Using accelerometry devices to capture intra-household seasonal patterns of energy expenditure, time-use, and food intake in agricultural and rural livelihoods: Findings from Ghana

In this study we integrate energy expenditure data from wearable accelerometry devices with data on time-use and food intake to capture seasonal intra-household differences in agricultural and rural livelihoods in developing country contexts. We report the preliminary findings from a study in Northern Ghana respondents wearing accelerometry devices for four non-consecutive weeks (7 days) matching key phases of the agricultural season, i.e. land preparation, sowing and seeding, land maintenance, and harvest. The accelerometer data triangulated with individual daily survey on time-use and food intakes provide a robust and precise delineation of seasonal gender-differentiated intra-household allocation of food and labour in rural households. Results will provide a seasonal dimension to agriculture-nutrition linkages in developing countries. We conclude discussing the potential applications of using accelerometry devices for a better understanding of agriculture-nutrition linkages in developing countries.

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