Effect of Household Livestock Production on Risk of Childhood Anemia in a Low Income Setting: A Propensity Score Matching Analysis

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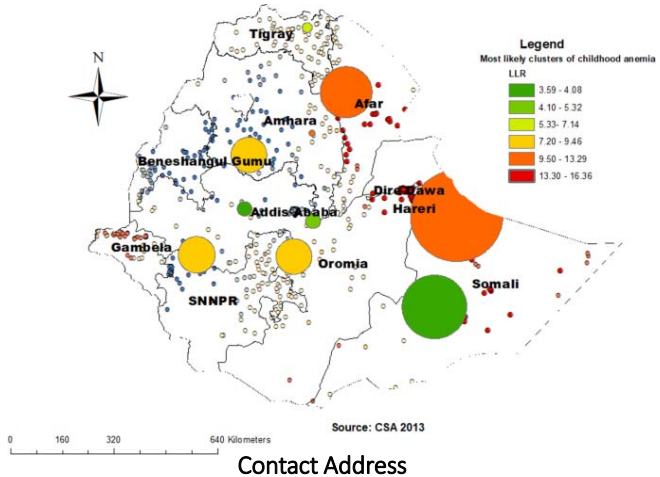
Background

- Consumption of animal source foods, through livestock production, improves children's growth and micronutrient status.
- However, research on the relationship be-tween livestock ownership and childhood anemia has produced conflicting results.
- Using robust analytical approaches, we examined the effect of house-hold livestock ownership on children's anemia

Methods

- We analyzed secondary data from the EDHS – 2-16.
- We followed a 1:1 closest neighbor-hood propensity score matching analysis.
- A propensity score was generated using the binary logistic regression model to compute the probability of owning livestock.
- From a total of 18,008 households enrolled in the EDHS 2016, data of 721 index children aged 6–59 months from households owning livestock were matched with a comparable number (721) of children from households without livestock.
- The paired and independent t-test, matched relative risk (RR), and standardized mean differences were used to compare the distributions of hemoglobin concentration and anemia risks between treatment and control groups.



Findings

- Aggregate ownership of livestock was not associated with hemoglobin concentration or anemia status (RR = 0.95, 95% confidence interval [95% CI] [0.87–1.04]).
- Poultry was associated with a lower (RR = 0.88, 95% CI [0.84–0.95]) anemia risk, while owner-ship of goat/sheep was associated with higher (RR = 1.10, 95% CI [1.03–1.17]) risk.

Conclusion

Ownership of small livestock species (sheep/goats and poultry), but not aggregate livestock ownership, was associated with the risk of anemia among children in Ethiopia

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