Household Hunger in the SADA Area

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Outline

Introduction to HH measurement

Determinants of Household Hunger in the SADA Area, Ghana

What is the HHS?

- Simple tool composed of **three questions** about **experiences** common in households experiencing food deprivation:
- In the past [**4 weeks/30 days**]…
- …was there ever **no food to eat of any kind** in your household because of lack of resources to get food?
- …did you or any household member **go to sleep at night hungry** because there was not enough food?
- …did you or any household member **go a whole day and night without eating anything** at all because there was not enough food?

What is the HHS?

- If yes, respondent asked **how often** this occurred in the past 4 weeks/30 days
- Rarely (1-2 times)
- Sometimes (3-10 times)
- Often (more than 10 times)

Responses scored	
No	0
Rarely or Sometimes	1
Often	2

What is the HHS?

Household Hunger Score	Household Hunger Categories
0-1	**Little to no hunger** in the household
2-3	**Moderate hunger** in the household
4-6	**Severe hunger** in the household

Source: Ballard, Coates, Swindale, Deitchler (2011)*

* Ballard, T., J. Coates, A. Swindale, M. Deitchler. *Household Hunger Scale: Indicator Definition and Measurement Guide*. Washington, DC: FANTA-2 Bridge, FHI 360. (August 2011)

Household hunger measurement

Objective:

- The percent of households experiencing *moderate to severe hunger*, as indicated by a score ≥ 2 on the household hunger scale.

Measured by:

$$\text{Indicator} = \frac{\text{\# of households with a HHS score} \geq 2}{\text{\# of households with HHS data}}$$

HHS in the SADA area

household hunger scale	Prevalence of household hunger	population of households in the SADA area
Little to no hunger	60.57 %	568,715
Moderate hunger	38.48 %	361,304
Severe hunger	0.95 %	8,920

household hunger scale	Prevalence of household hunger	population of households in the SADA area
Little to no hunger	60.57 %	568,715
Moderate to Severe hunger	**39.43 %**	**370,224**

HHS by region

Region*	households with moderate to severe hunger	population of households with moderate to severe hunger value	Total population of households
Brong Ahafo	26.50 %	38,325	144,624
Northern	31.09 %	151,330	486,749
Upper East	59.74 %	105,634	176,822
Upper West	57.54 %	75,230	130,743

HHS by Gendered Households

Gendered Households	households with moderate to severe hunger	population of households with moderate to severe hunger Value	Total population of households
Male and Female Adults	39.50 %	302,385	765,531
Adult Female, No Adult Male	42.26 %	34,552	81,761
Adult Male, No Adult Female	36.41 %	33,369	91,647

HHS by Locale

Locale*	households with moderate to severe hunger	population of households with moderate to severe hunger Value	Total population of households
Rural	43.30 %	304,326	702,832
Urban	28.10 %	66,346	236107

Examples of How HHS can be used

- Global Monitoring of prevalence of hunger over time
- Monitor and evaluate policy and program impact
- Provide information for surveillance systems
- Research

Part II

Determinants of Household Hunger in the SADA Area, Ghana

Introduction

- The 1996 **World Food Summit** in Rome defined **food security** as existing "when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life"
- At that time, the **Rome Declaration** called us to **"** …reduce by half the number of chronically undernourished people on the Earth by the year 2015 …."
- This formed the basis for the first **MDG : eradicate extreme poverty and hunger**

Introduction

- **At the household level**, food security implies access by all members at all times to enough food for an active and healthy life.
- Hunger is the severe manifestation of **food (in)security**
- **HH** captures one domain of food insecurity

Objective

- Identify household level **determinants** of the prevalence of households with **moderate to severe hunger**
- contribute in designing, implementing, and evaluating appropriate policy and program interventions
- Increase the resilience of these vulnerable households and communities.

Methods

1. Pearson's Chi-Squared Association test (contingency tables)
2. Univariate logistic regression

1. Multivariate logistic regression

Data

- PBS 2012 survey data
- Probability weights used
- Sample size 2760

Selection of Variables

Gender and Socio-economic

- Education of the father
- Education of the mother
- Household Size
- Age and marital status of household head
- locale

Key Crops (Maize, Rice, Soya)

- Cultivation of key crops
- Area allocated to key crops

Demographic

- Consumption Expenditure
- Women's empowerment (inadequacy count)

Descriptive statistics of the variables used

Description	Mean	Std. Dev	Min	Max
Education of father (1 = Basic or more, 0=None)	**0.17**	0.38	0	1
Education of mother (1 = Basic or more, 0=None)	**0.07**	0.25	0	1
Household size	**6.32**	3.19	2	35
Age of household head (years)	**46.00**	16.31	18	100
Marital status of household head (1=Married , 0=Otherwise)	**0.98**	0.13	0	1

Descriptive statistics of the variables used in the study

Variable	Mean	Std. Dev	Min	Max
Cultivate maize (1=Yes ,0= No)	**0.78**	0.42	0	1
Cultivate rice (1=Yes ,0= No)	**0.40**	0.49	0	1
Cultivate soya (1=Yes ,0= No)	**0.21**	0.41	0	1
Land size maize (acre)	**2.85**	4.59	0	100
Land size rice (acre)	**0.95**	2.44	0	60
Land size soya (acre)	**0.40**	1.13	0	15
Locale (1=Urban ,0= Rural)	**0.23**	0.42	0	1
Women's inadequacy count	**0.34**	0.19	0	1

Percentage Distribution of household hunger status by selected characteristics in the SADA area (sample size =2760)

Variable		Little to No Hunger	Moderate to Severe Hunger
Father's Education (1 = Basic or more, 0=None)	0	57.4	42.6
	1	74.5	25.5
Mother's Education (1 = Basic or more, 0=None)	0	58.7	41.3
	1	82.5	17.6
Marital status of head of household (1=Married , 0=Otherwise)	0	46.4	53.6
	1	60.6	39.4
Cultivate Maize	No	65.3	34.7
	Yes	58.9	41.1
Cultivate Rice	No	63.6	36.4
	Yes	55.3	44.7
Cultivate Soya	No	62.9	37.1
	Yes	50.6	49.4
Locale	Rural	56.7	43.3
	Urban	72.8	27.2
Total		60.4	39.7

Logistic regression results of the outcome variable household hunger scale in the SADA area

Explanatory Variable	Estimated Coefficient	standard error
Education of father (1 = Basic or more, 0=None)	-0.463***	0.154
Education of mother (1 = Basic or more, 0=None)	-0.449*	0.243
Household size	0.068***	0.017
Age of household head (years)	0.015***	0.003
Household consumption per day in 2010 USD	-0.659***	0.077
Locale (Urban=1 , Rural =0)	-0.332**	0.131
Marital status of household head (Married =1 , Otherwise=0)	-0.358	0.399

Logistic regression results of the outcome variable household hunger scale in the SADA area

Explanatory Variable	Estimated Coefficient	Standard Error
Cultivate maize (Yes=1 , No=0)	0.966***	0.243
Cultivate rice (Yes=1 , No=0)	0.29**	0.13
Cultivate soya (Yes=1 , No=0)	0.67***	0.164
Land size maize (acre)	2.315***	0.458
Land size rice (acre)	-0.064*	0.033
Land size soya (acre)	-0.097	0.062
Women's inadequacy count	-0.646**	0.275

Empirical Results

- Households with educated father, educated mother, relatively higher income, larger land size allocated to maize, rice, and soya, that live in urban area are less likely to experience moderate to sever hunger
- Household with larger household size, older household head, including those households cultivating maize, rice, and soya are more likely to experience moderate to sever hunger
- Households where the women are considered relatively disempowered (higher inadequacy count) are less likely to experience moderate to sever hunger

Empirical Results

Marginal analysis

- Households with formal education of the father are 9.4 % less likely to experience HH
- Households with formal education of the mother are 9.0 % less likely to experience HH
- Household that live in urban areas are 6.8 % less likely to experience HH

Summary and Conclusion

- Interesting results so far, although preliminary
- Further refinement of the analysis needed
- Understand some of the variables (e.g. women's empowerment) within the context of the region

Thank You

Conversations

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