

Nutritional status and associated factors of under-five years old children from food secure and food insecure households in Rural Communities of Saesie Tsaeda-Emba Woreda, Eastern Zone, Tigray, Northern Ethiopia: A comparative cross sectional study

NNP related research finding dissemination workshop



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**Amaha Kahsay (B.Sc, PHN)
Mekelle University**



Federal Democratic Republic of Ethiopia



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Background

- Nutritional status of under-five children is:
 - ✓ Important indicator of a household's living standard
 - ✓ Main determinant of child survival (Kanjilal et al, 2013).
- Malnutrition is responsible for nearly half (45%) of all deaths in children under five. (<http://dx.doi.org/10.1016/>, 2013)
- In 2004, Ethiopia initiated a PSNP (RHVP, 2007)
- Ethiopia is striving for-ward to ensure food security and become food self sufficient.
- **However**, it doesn't necessarily mean that food secure households are nutritionally secured and;
 - ✓ Malnutrition is common in many food secure households (Teshome et al, 2009)



Objectives

- To determine the prevalence of under-nutrition in 6 months to 5 years of age children among food secure households
- To determine the prevalence of under-nutrition in 6 months to 5 years of age children among food insecure households
- To identify the associated factors of under-nutrition in 6 months to 5 years of age children among the food secure HHs
- To identify the associated factors of under-nutrition in 6 months to 5 years of age children among the food insecure HHs



Methods

- Saesie Tsaeda Emba Woreda is PSNP beneficiary
- Data collection period: January 27-April 1, 2014
- **Study design:** A comparative community CSS
- **Sou. pop.:** All 6 mon. to 5 yrs of age children/woreda
- **Study pop.:** All 6 months to 5 yrs/7 kebelles
- ✓ **IC:** All 6 mon. to 5 yrs of age/data collection period
- ✓ **EC:** With severe illness and deformities
- **Study subjects:** All 6 months to 5 yrs/7 kebelles/IC
- **Sample size determination:** Two pop. prpo. Formula
- ✓ Thus, the total SSs were **860,783 and 180**; with 10% CR f
- ✓ Finally, **860** was taken as study SS



methods (Sampling procedure)

Tsaeda Emba Woreda (purposely)

Seven rural kebeles (randomly)

Households in the 7 rural kebeles stratified into FS & FI HHs using (PSNP eligibility criteria)

List of 6 months to 5 years of age children

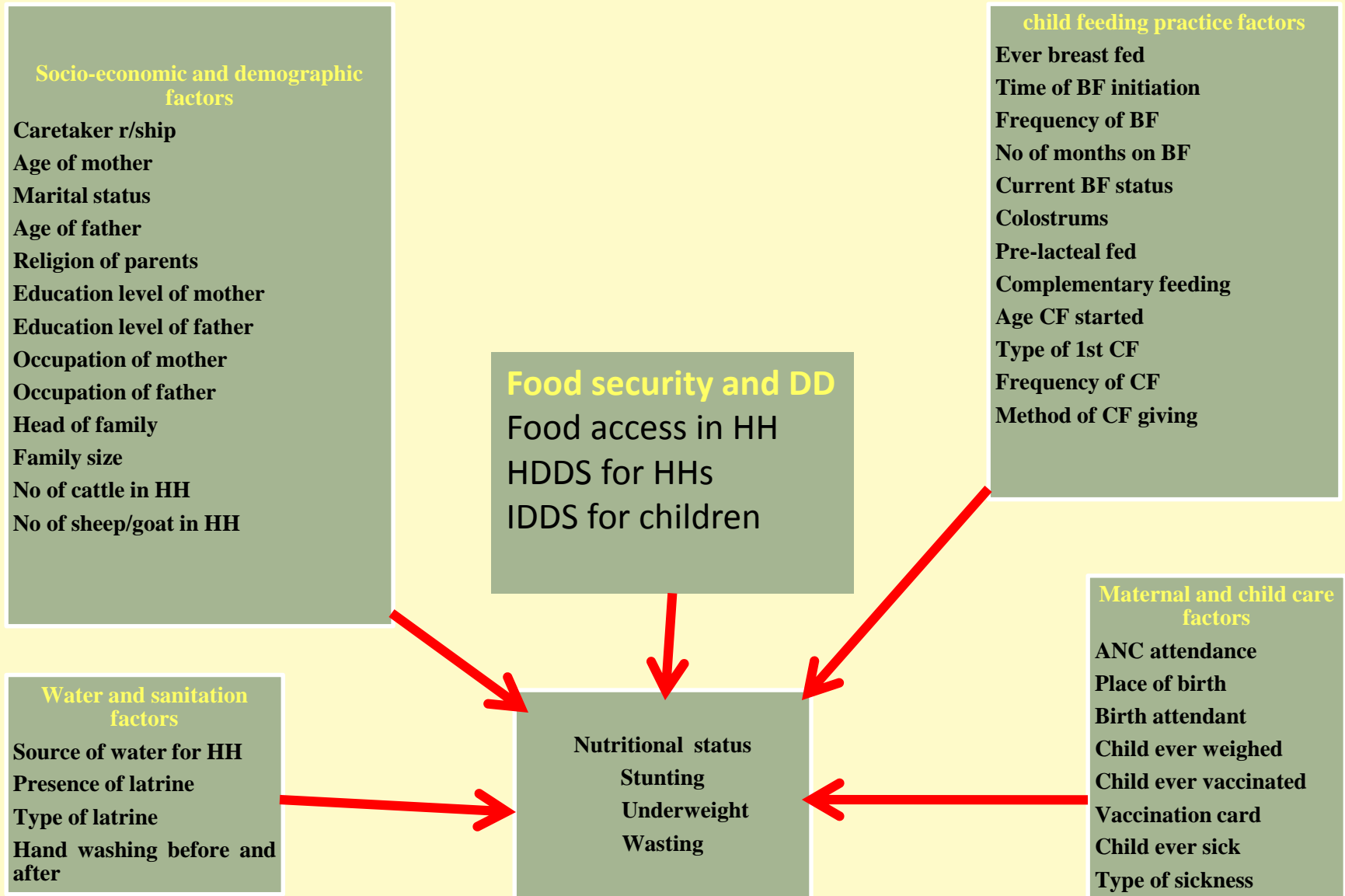
Total sample size (860) divided equally into two

Distributed to each the seven kebelles using proortionate allocation

SS Collected by Syst.RS



Study variables



Conceptual frame work for causes of malnutrition in children

methods (Data processing and analysis)

Data entered and cleaned by SPSS 20 & anthropometric data by ENA SMART

Descriptive statistics (frequency & crosstabs) was done

Bivariate analysis was done using $p\text{-value} < 0.25$

Collinearity diagnosis was done using the linear reg. model

Enter method standard regression was used for the candidate IVs

Multivariable analysis was done & goodness of fit was checked by Hosmer & Lemeshow $p\text{-value} > 0.05$ & confounders avoided here

finally, IV was set as predictor of the DV at $p\text{-value} < 0.05$ and AOR (95%CI) never cross 1



Results

- Eight hundred forty one (421 from FS and 420 from FI HHs) children:
 - ✓ 6 mon. to 5 years of age participated in the study
 - ✓ RR of 97.9% for FS HHs and 97.6% for FI HHs

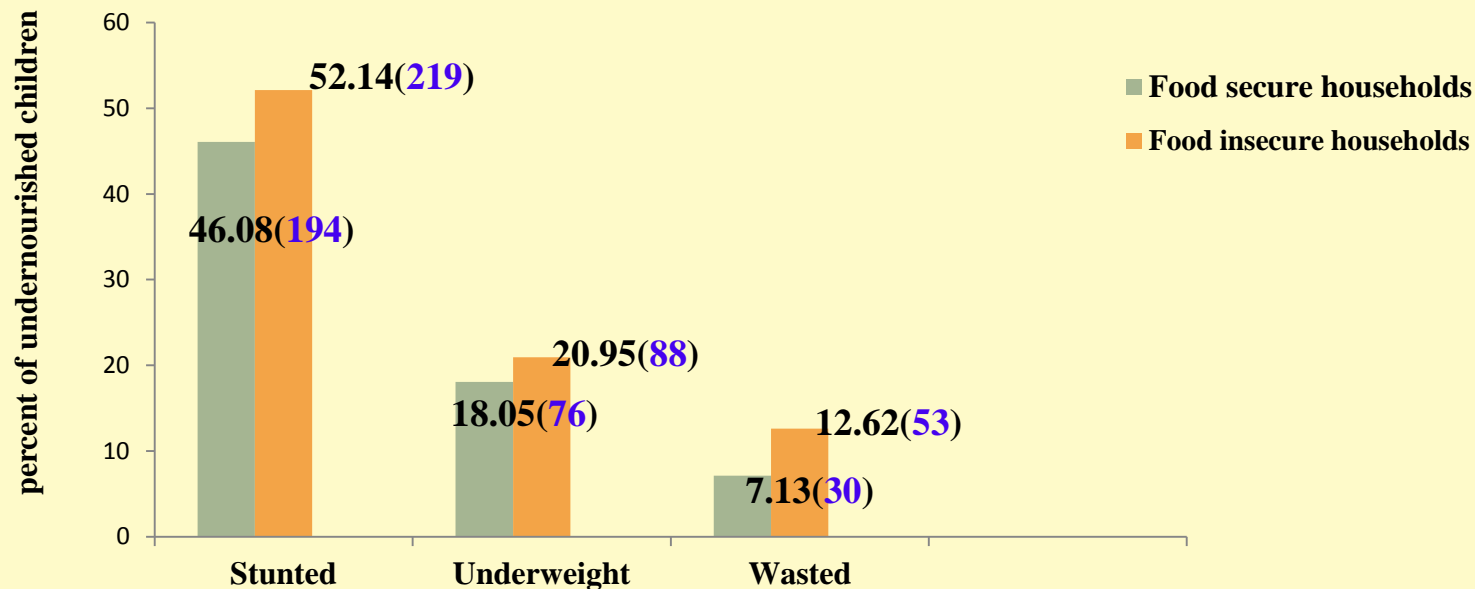


Fig. 3: magnitude of stunting, underweight, and wasting among 6 months to 5 years of age children from food secure and food insecure households of rural communities of Saesie Tsaeda Emba Woreda, Eastern Tigray, 2014



Results

- **Comparison of prevalence of under nutrition of the current study with EDHS 2011 and targets of NNP 2014/15:**

Type of U/nutrition		Current study %	EDHS 2011%	Targets/NNP 2014/15 %
Stunting	CFSHHs	46.08	44	33
	CFIHHs	52.14		
U/weight	CFSHHs	18.05	29	21
	CFIHs	20.95		
Wasting	CFSHHs	7.13	10	3
	CFIHHs	12.62		



Results

- **Comparison of prevalence of under nutrition of the current study between the comparative groups:**

Type of under nutrition of the current study		prevalence% (95%CI)	AOR (95%CI)
Stunting	CFSHHs	46.08 (41.1, 51.1)	1
	CFIHHs	52.14 (43.1, 52.4)	1.480 (1.101,1.991)**
Underweight	CFSHHs	18.05 (14.7, 21.6)	1
	CFIHs	20.95 (17.1, 24.8)	0.880 (0.599, 1.294)
Wasting	CFSHHs	7.13 (4.8, 9.7)	1
	CFIHHs	12.62 (9.8, 16.2)	2.361 (1.387,4.020)**



Results

Determinants of child stunting

- Variables that were predictors of child stunting in children from the **FS** HHs namely:
 - ✓ Occupation of the father; **AOR**: 3.757 (1.431, 9.864) and 3.506(1.178,10.431)
 - ✓ Family head; **AOR**: .278 (.097, .793)
 - ✓ Duration of continued breastfeeding; **protective**
- **Whereas**, predictors of child stunting in children from the **FI** HHs were:
 - ✓ Age of the child; **AOR**: 1.636 (1.004, 2.668)
 - ✓ Head of the family; **AOR**: .435 (.191, .994)
 - ✓ Duration of continued breast feeding; **protective**



Results

Determinants of child underweight

- Variables that were predictors of child underweight in children from the **FS** HHs namely:
 - ✓ Educational status of father = Odds of UW 73.9% lower
 - ✓ Sex of the child = 2.23 times higher
 - ✓ Current breast feeding status of the child = 61.5% lower
- **Correspondingly**, predictors of child underweight in children from the **FI** HHs were:
 - ✓ Age of mother = 6.4% lower
 - ✓ Occupational status of father = 88.2% lower
 - ✓ Sex of child = 78.9% higher
 - ✓ 1st complementary food given to the child = 84.3% lower
 - ✓ Main source of water to the household = 2.75X higher



Results

Determinants of child wasting

- Variables that were predictors of child wasting in children from the **FS** HHs namely:
 - ✓ Age of the father = Odds of wasting 11% higher
 - ✓ Number of cattle owned by the household = 83.4% lower
- **Likewise**, predictors of child wasting in children from the **FI** HHs were:
 - ✓ Age of child = 52.1% lower
 - ✓ Main source of water to the household = 2.95 and 3.54 times higher



Recommendations

A. To the government at large

- Addressing food security using the locally implemented PSNP

B. To the nutrition sensitive sectors at all levels

Health sector

- Strengthening the health extension package...

Education sector

- Addressing at least primary education to the community

Agriculture sector

- Playing a role in tackling food insecurity by providing...
- Encouraging the community to have and breed productive livestock



Recommendations

Water and energy sector

- Address adequate and safe water for consumption

Industry and trade sectors

- Providing highly nutritious and cost affordable formulas to the community

Women, children and youth affairs sector

- Encourage and empower mother headed families

Labor and social affairs sector

- Attention to be given for children who live in parents who are elderly particularly fathers

To NGOs and other concerned bodies



Integrate & co-ordinate their nutrition related obje



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THANK YOU

Thank you