

# Effect of Nutrition Education on Feeding Practices and Nutritional Status of 6-23 Months Old Children at Demba Gofa and Geze Gofa Woredas, Gamo Gofa Zone, SNNPR

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## Background

- Nationally about 44% of u-5 years children are stunted (21% severely), 10% wasted, 44% anemic (3% severely).
- Stunting prevalence in SNNPR is comparable with national average.
- Multifaceted causes: poor IYCF practices, infections, teenage pregnancy, maternal & child caring practices, health services, water & sanitation, maternal edun., birth gap, etc.
- Only 4% of Ethiopian u-2 children are fed appropriately (CSA

2012).



# General Objective

To assess effect of nutrition edun. On feeding practices & nutritional status of 6-23 months children at Demba Gofa & Geze Gofa Woredas, Gamo Gofa Zone, SNNPR.

## Specific Objectives

- To assess existing child practices,
- To assess anthropometric status,
- To investigate predictors of nutritional status,
- To enhance child feeding practices & nutritional status through nutrition edun. intervention



## Methods

- D.Gofa & G.Gofa woredas, 285 & 305 km from Hawassa, 122,715 & 83,853 total pop'n., 38 & 30 kebeles respectively.
- Cereals: sorghum, wheat, barley, teff & maize
- Legumes: faba bean & kidney bean
- Roots & tubers: cassava, *enset*, sweet potato
- Fruits & veg.: mango, guava, avocado, cabbage, tomato & carrot
- Cash crop: coffee, cardamom (G.Gofa)
- Animals: sheep, goat, donkey, cow, ox and hen.
- Agri. is a major economic activity



## Methods

- **Study design:** community based cross sectional & one group quasi-experimental designs were employed with pre- and post-test.
- **Source pop'n:** all mothers or caregivers of 6 - 23 months old children who were living in the study area at the time of survey.
- **Study pop'n:** randomly selected mothers or caregivers of 6 - 23 months old children who were living in the study area at the time of survey.



# Methods

## Sample Size:

- Total 521, calculated assuming DE of 1.25,  $d = 0.05$ ,  $p = 0.44$  plus 10% non-response & lost follow up.

## Sampling:

- 6 kebeles randomly selected
- WHO (2000) procedure was followed to select individuals





## Methods

### Nutrition Education Intervention

- IYCF practices, hygiene & sanitation, CF demo.
- Materials were developed based on key notes from baseline study & adopted from Alive and Thrive, ENA & WHO (2004).
- Manual, poster & leaflet were prepared in English, translated in to Amharic and Gofigna.
- Edu'n was delivered by trained diploma nurses in health posts, for 1 day other than market or churches days in a week for 3 months.



# Methods

## Data Collection and Quality Control

- Structured questionnaire
- Translated, piloted
- Data collectors were trained
- Supportive supervision
- Anthropometric measurement
- FGD
- Twice data collection



# Methods

## Dependent Variables

- Child anthropometric indices (HAZ, WAZ, WHZ, MUACZ)
- Child feeding practices

## Independent variables

- Sociodemographic and economic factors
- Household food security status
- Nutrition education



# Methods

## Data Analysis

- EpiData Version 3.1 for data were entry.
- WHO Anthro 2011 ver. 3.2.2 & SPSS 16.0
- Frequencies & proportions, means and SD were computed.
- Bivariate logistic & multivariate logistic regression.
- Paired t-test
- Crude & adjusted odds ratio with 95% CI reported.  
Cut off point:  $p\text{-value} < 0.05$ .
- FGD data: thematic analysis.
- Result displayed using tables and charts.



# Methods

## Ethical consideration

- Ethical clearance was obtained from SERO of EPHI
- Woreda of administrative communicated
- Oral consent was obtained from each participants



# Results

## Factors affecting nutritional status

- **Table 3.2 and 3.3** indicate predictors of child nutritional status.
- As age increases chance for a child to be stunted increases [AOR (95% CI) =2.69 (1.27, 5.67).
- Non-breast fed child was 2.92 (95% CI, 1.25, 6.85) times more likely to be stunted than breast fed one.
- Compared with male children, females are less likely to be underweight [AOR (95% CI) = 0.44 (0.23, 0.85). Underweight increased with age of children 3.05 (1.16, 8.04) for 9-11 months and 25.53 (1.16, 8.04) for 12-23 months.



# Results

## Child Health

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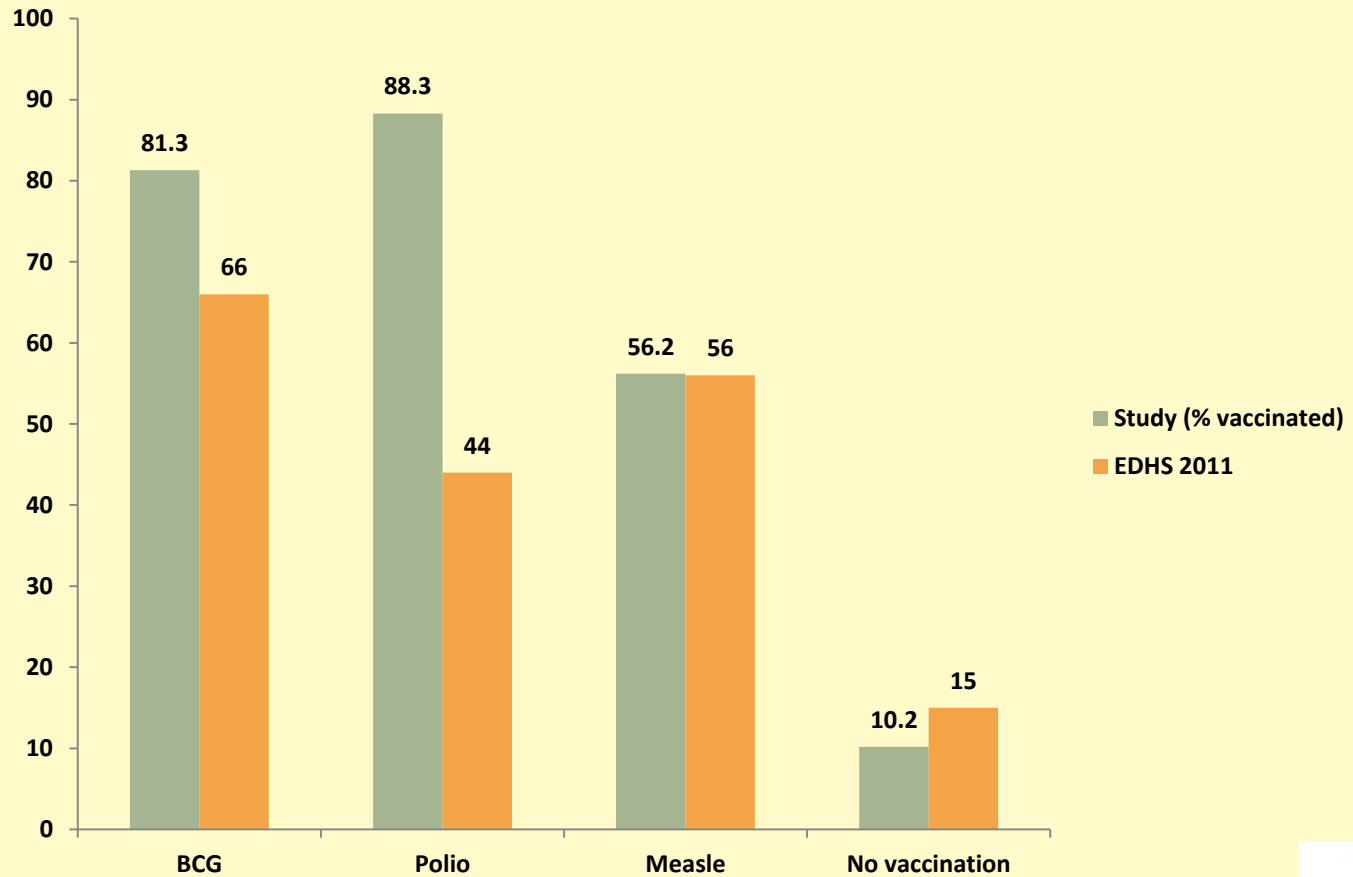
<b>Variable</b>	<b>no. (%)</b>
<b>Vaccination coverage</b>	<b>467 (89.8)</b>
<b>Child sick in last two weeks before data collection</b>	<b>329 (63.3)</b>
<b>Fever</b>	<b>252 (48.5)</b>
<b>Cough</b>	<b>181 (34.8)</b>
<b>Diarrhea without blood</b>	<b>128 (24.6)</b>
<b>Diarrhea with blood</b>	<b>26 (5.0)</b>
<b>Measles</b>	<b>10 (1.9)</b>

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# Results

## Vaccination coverage





# Results

## Child feeding practices

Variable	n (%) BI	n (%) AI
Early initiation of breast feeding <sup>1</sup>	473 (91.0)	NA
Exclusive breastfeeding under 6 months <sup>2</sup>	304 (58.5)	NA
Continued breastfeeding at 1 year <sup>3</sup>	158 (88.8)	155 (98.7)
Minimum diet diversity <sup>4</sup>	197 (37.9)	360 (76.9)
Ever breastfed <sup>5</sup>	488 (93.8)	NA
Bottle feeding <sup>6</sup>	78 (15.0)	14 (3.0)
Continued breastfeeding at 2 years <sup>7</sup>	NA	92 (70.2)



# Results

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# Results

## Child feeding practices: FGD

Variable	Before intervention	After intervention
Initiation of breast feeding	<p>“I started breast feeding 12 hrs after breast feeding, because my breast doesn’t start secreting milk immediately after delivery.</p> <p>“I started breast feeding a week after delivery, because my breast doesn’t start secreting milk immediately after delivery.</p> <p>“I give boiled water with bottle for two hours till my breast starts secreting milk.”</p> <p>“We start breast feeding after discharge of placenta, because it is believed to be bad to breast feed before this”.</p>	<p>“I come to know that early initiation of breast feeding helps to expel placenta and reduce postpartum hemorrhage”</p> <p>“I have learned the importance of early initiation of breast feeding, for the baby it protects from diseases and makes stronger, for mother expel placenta, stops bleeding, helps to return the uterus to its original place and delays menstruation.”</p>



# Results

## Child feeding practices: FGD

Variable	Before intervention	After intervention
Exclusive breast feeding	<p>“I have been giving boiled fenugreek, linseed, and rue or “tenadam” together with breast milk since birth to treat stomach ache locally called “gitta”.</p> <p>“I am giving fenugreek mixed with water 30 days after birth; bitter taste of the fenugreek is medicine for infant’s abdominal cramp”.</p>	<p>“I have learned feeding breast milk only for the first six months.”</p> <p>“I observed that exclusively breast feed infants are healthy”, but introduction of complementary food before six months results in bigger belly.”</p>
Frequency of breast feeding	<p>“I breast feed five times within 24 hours”</p> <p>“I breast feed my baby six times within 24 hours”</p>	<p>“I have learned to breast feed 8 -12 times a day.”</p>



# Results

## Child feeding practices: FGD

Variable	Before intervention	After intervention
Introduction of complementary food	<p>“I am giving fenugreek mixed with water 30 days after birth; bitter taste of the fenugreek is medicine for infant’s belly cramp”.</p> <p>“I am giving boiled fenugreek, linseed, and rue or “tenadam” together with breast milk since birth to treat cramp locally called “gitta”.</p> <p>“We start giving boiled fenugreek, linseed and rue or “tenadam” two months after birth.</p> <p>“I started to give boiled fenugreek at two months and cow milk four months after birth.</p> <p>“I started giving gruel four months after birth. This is</p>	<p>“I came to know introducing complementary food before six months can result in different infections”</p>



# Results

## Anthropometric status

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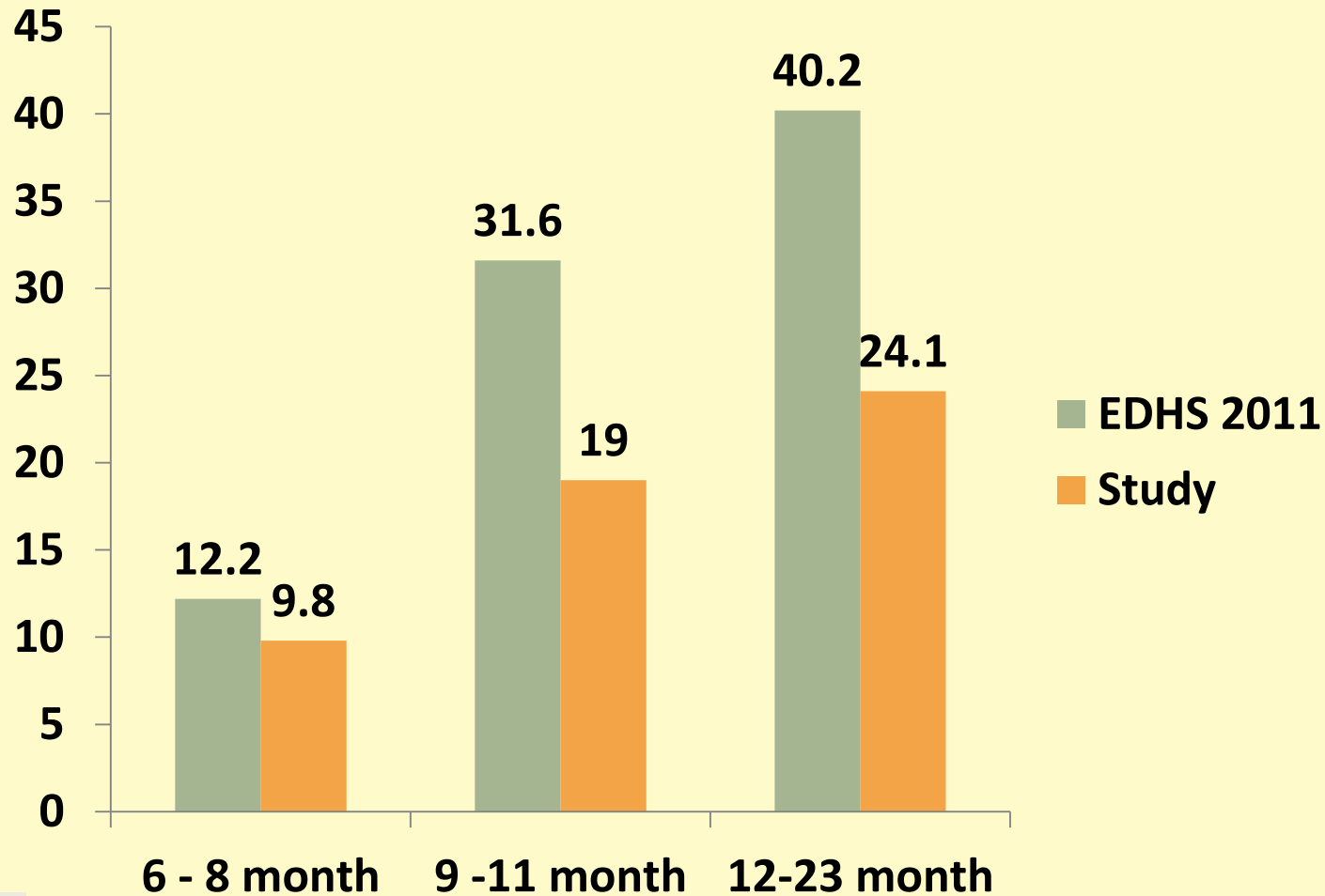
<b>Variable</b>	<b>n (%)</b>
Prevalence of stunting	96 (18.5)
Prevalence of underweight	47 (9.0)
Prevalence of wasting	19 (3.6)

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# Result

## Prevalence of stunting compared to national rates across age



# Result

## Effect of nutrition edun. on nutritional status

	Paired Differences		Sig. (2-tailed)
	Mean (SD)	95% CI	
Pair 1 Height for age Z-score - Height for age z-score	-0.15(1.88)	(-0.34, 0.03)	0.106
Pair 2 Weight for height Z-score - Weight for height z-score	-0.21(1.26)	(-0.34,-0.09)	0.001
Pair 3 Weight for age Z-score - Weight for age z-score	-0.18(1.25)	(-0.30, -0.53)	0.005
Pair 4 MUAC Z-score - MUAC Z-score	0.23(1.40)	(0.09, 0.37)	0.001





# Strength and Limitation of the Study

## Strength

- Pre- and post intervention test was conducted.

## Limitations

- Children's age was not taken from birth certificate for majority
- Variables such as genetic variations which could be potential confounders of stunting were not measured in this study.
- It is difficult to establish causal association between the dependent and independent variables since this study used cross-sectional study design.



# Recommendation

- The authors recommend the following things to decrease malnutrition in the study areas
- Scale-up nutrition education on IYCF, sanitation and hygiene, and maternal and child health
- Mothers' capacity building
- Education and awareness creation for fathers



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- Mr. Zelalem Abera, Demba Gofa
- Health Extension Workers in all six kebeles
- Our data collectors and nutrition educators

Study participants

Andinet Hotel , Demba Gofa



# Thank You!

