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Maternal and Child Health  
Integrated Program



# Exploring why junk foods are 'essential' foods and how culturally tailored recommendations improved feeding in Egyptian children

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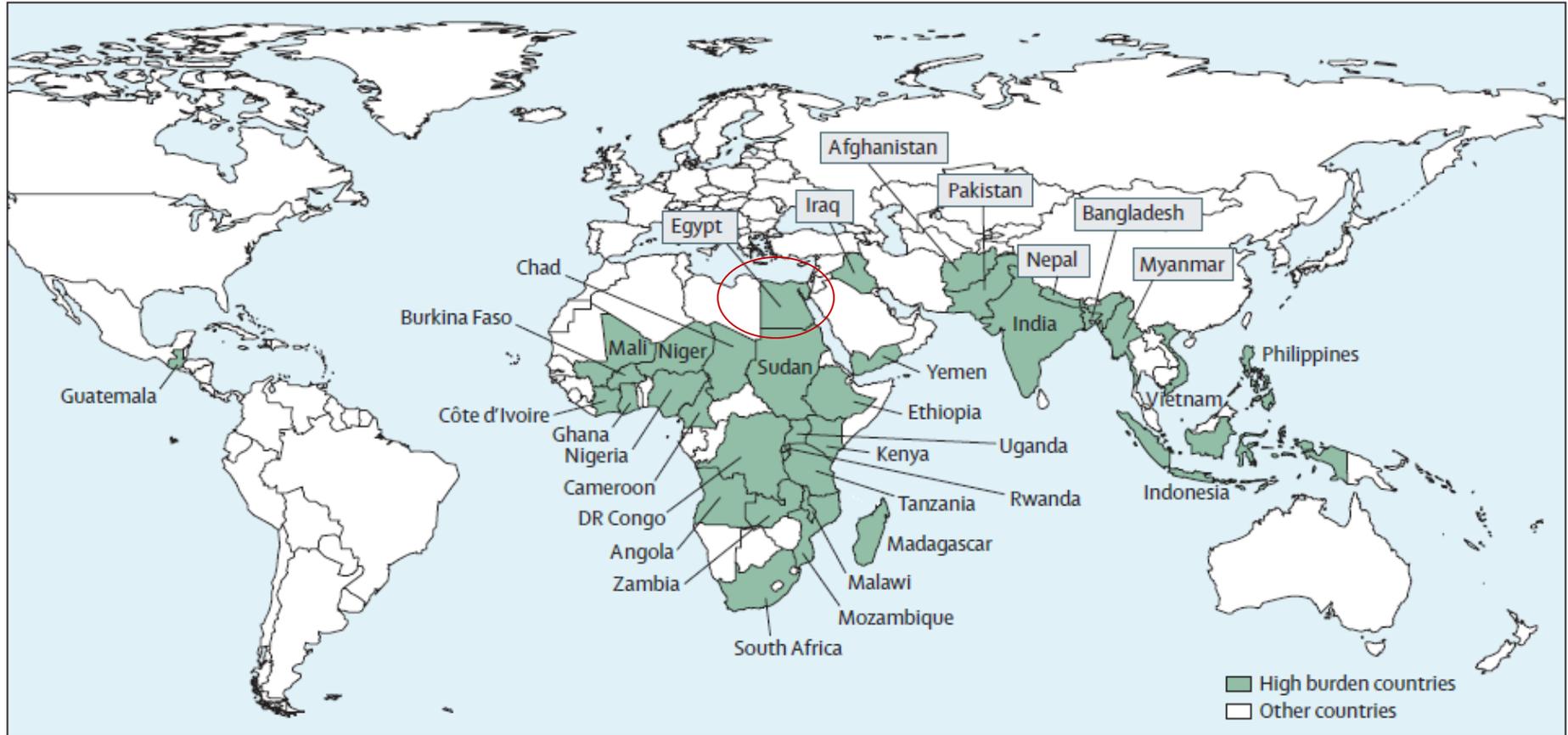


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One in three Egyptian children under five years of age are stunted.

Egypt also faces “ the double burden of malnutrition”  
of stunting and overweight in children younger than 5 years



**Figure 3: Countries with the highest burden of malnutrition**  
These 34 countries account for 90% of the global burden of malnutrition.

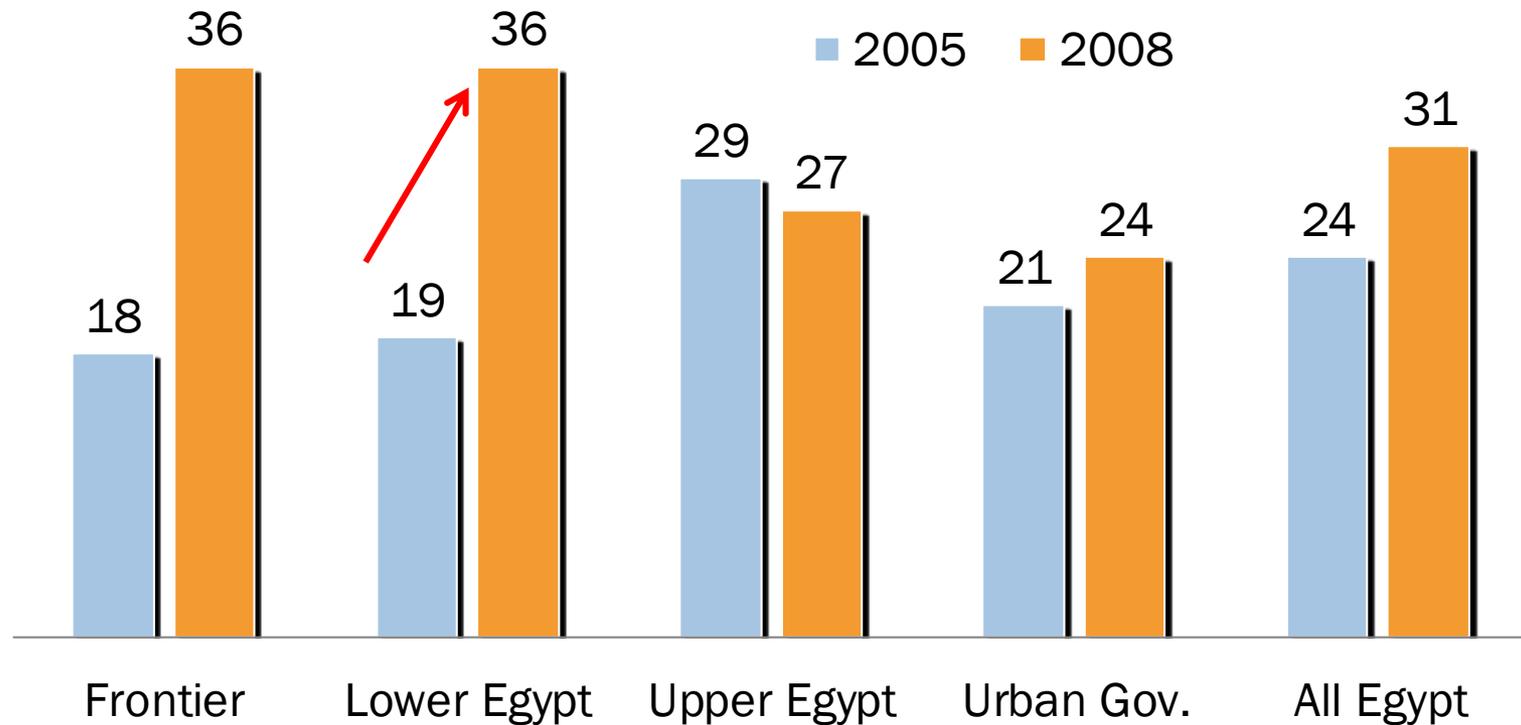
Black, 2013, Lancet



## Study Rationale, Objectives, and Methodology

# Rationale for study: Stunting in children has nearly doubled in Lower Egypt, which coincided with the avian influenza outbreak, yet little is known about what may explain this rise

## Egypt Demographic and Health Surveys



# Study Sites: Allow for comparisons between highest and lowest levels of stunting in Smart Project sites

**Kafr Shokr,  
Qaliobia,  
Lower Egypt**

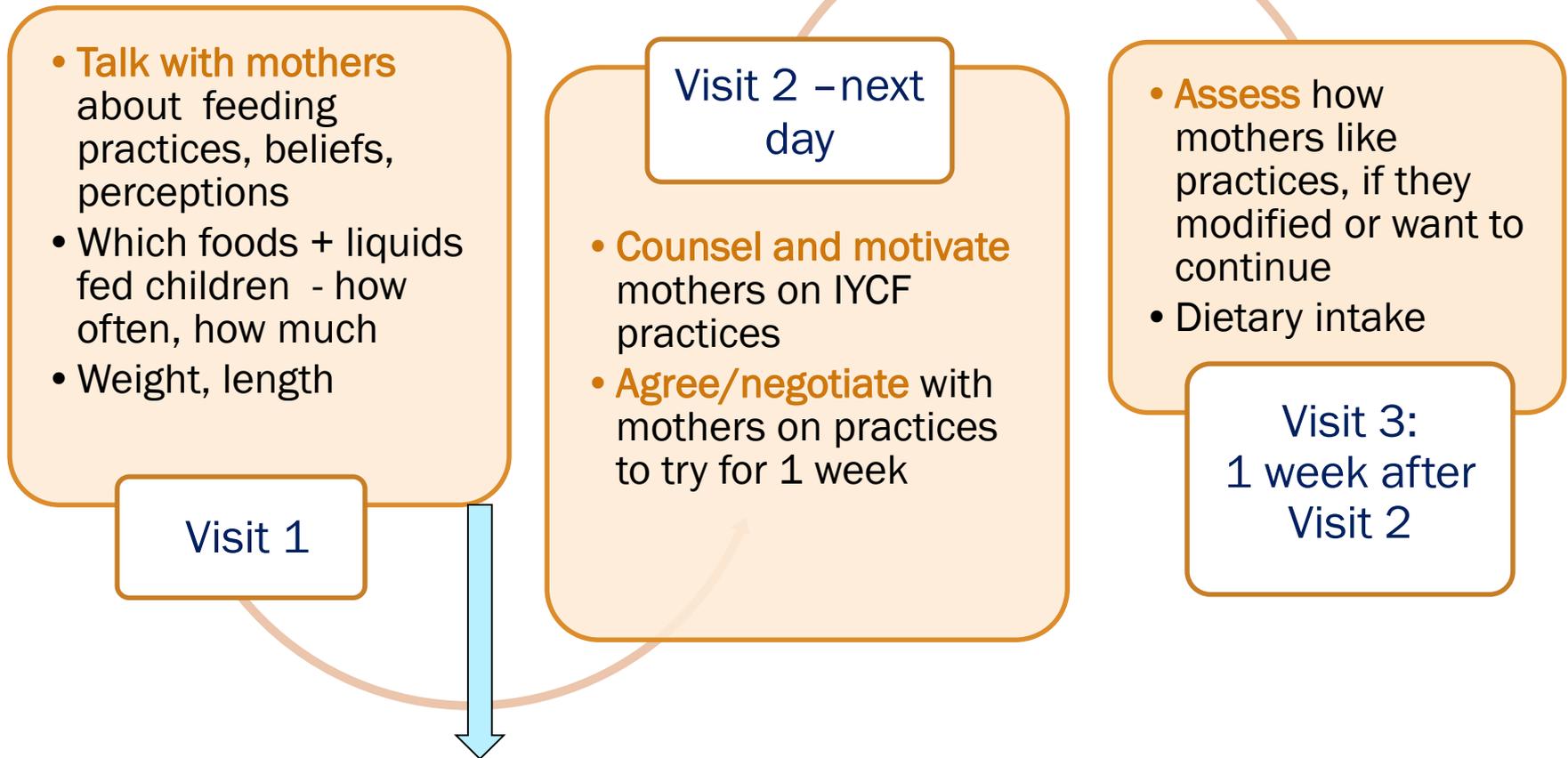


**El-Maragha,  
Sohag,  
Upper Egypt**



# How does TIPs work?

*TIPS involves talking with, counseling and motivating mothers for feasible changes in feeding their children*



**Analyze information** to understand gaps/misperceptions in IYCF to counsel mothers.

# Methods for analyzing TIPs and in-depth interviews

- All semi-structured in-depth interviews were conducted in Arabic, audio-recorded, transcribed, then translated into English.
- Dominant themes were identified and a coding scheme was developed. Qualitative analyses were carried out using NVIVO 10.0.
- Food frequency and 24 hour recall – Egyptian Food Consumption Tables

# Key Findings: TIPs with mothers, and in-depth interviews with fathers, grandmothers and health providers



Mothers are committed to breastfeeding and understand its benefits. However, cultural beliefs are barriers to exclusive breastfeeding.

Only 25% of Egyptian mothers, participating in TIPs, were exclusively breastfeeding in the first 6 months of life.

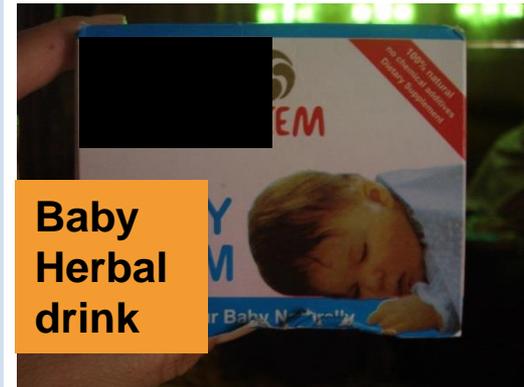
# Breastfeeding is valued, yet prelacteal feeding is common

*“ I had a natural delivery at a private doctor’s clinic. The first breastfeeding session was 2-3 hours after birth. When I went home my mother gave my baby herbal drink using a syringe as prescribed by my doctor. I gave her herbal drink for about two days, once in the morning and once at night until my milk came in and the baby was able to latch on.”*

- Mother, Lower Egypt

## Following delivery, herbal drinks and teas delay initiation of breastfeeding. Continued use makes exclusive breastfeeding difficult in the first 6 months.

- Health providers often prescribe herbal drinks / teas in first days of life – greater frequency in Lower Egypt.
- Prelacteal feeding is supported by grandmothers.
- Believed to stop child from crying -mother initiates breastfeeding or until milk “comes in”
- Mothers are often separated from infants, after birth
- Continued use “helps babies sleep at night”, soothes and calms “cries of hunger” - breastmilk is “not enough.”





*“I knew he was ready to eat when he kept crying at four months. I told the mother - your breastfeeding is not nourishing him, and the child is a human like us who needs to eat - what will your milk do for him?”*

*- Grandmother, Lower Egypt*

Breastfeeding is valued as a natural choice  
only if mothers have enough breastmilk and of good quality  
“thick and heavy, not weak and light, or little”

- Perceived insufficient breast milk is the main reason mothers introduce foods and liquids early
- Children “not nourished enough” by breastmilk alone and are “still hungry”
  - Some combine breastfeeding with infant formula
  - Feed “light and simple” foods, like yogurt and sugary biscuits, as early as 2 months
  - “Talhees” – licking
  - Encouraged by some doctors and grandmothers

# Mothers are cautious and believe “simple and light” foods should be fed in small amounts

- Mothers desire and/or receive advice to feed nutritious foods
- Mothers have doubts and fears- appropriate foods for child
  - Reluctant to feed variety - yogurt, milk, rice, pasta, potato
  - Fear of illness or inability to digest food “*with oil/fat*”
  - Fear of development of allergies – give egg yolk/white
  - Over-rely on herbal teas, drinks, and other liquids - some health providers and grandmothers recommend

# Snack foods are “good and natural - not outside food”

- Address fears of illness, digestion, and allergy
- “Easy to swallow and digest”
- “Soft, squeezable, easy for children to hold”
- Acceptable, convenient first food - satisfy a child’s hunger



NBC News, 2012

## Snack foods are integral part of daily meal

*“We give him one container of yogurt, in the beginning, when he gets used to eating we can put a biscuit in the box, we do things gradually, this way, if he accepts, then we can increase the number of yogurt containers to two with a biscuit in each. She currently eats a bit of rice, eggs, a boiled potato, a container of yogurt (with honey or sugar), a pack of biscuits, that’s about it”*

- Grandmother, Lower Egypt

# Snack foods are an easy way to feed infants 12-23 months of age

## Encouragement to eat

*“I do not find it difficult to feed Reda if she refuses food, I get her a different type of food like sponge cake, also she must have milk, fruit and eggs”*

- Mother Lower Egypt

## Desire to feed foods children “like”

*At night, the father helps by getting [purchasing] yogurt and cream-filled sponge cakes and feeding the child... he likes fried potatoes not boiled, these foods are light” and easy to give and easy to chew ...but he doesn't like the taste of home cooked food, he likes yogurt, infant cereal, sweetened with sugar, and cream- filled snack cakes”*

- Mother Lower Egypt

## Limiting to snack foods means delayed introduction of family foods. Snack foods seen to be “nourishing” when breastfeeding ceases.

- “Heavy and simmered” family foods are too difficult to digest
- Some health providers and grandmothers forbid meat < 12 months.
- By 18-23 months, half of mothers stopped breastfeeding. *“A child needs to eat solid food more than breastfeeding at this age”*  
*“Breastfeeding too long will affect the child’s intelligence”*
- Snack foods and liquids (juices, teas) are perceived to satiate children’s hunger, since mothers stopped breastfeeding
- Supported by some health providers, grandmothers and fathers

# 11% of children stunted overall, Lower Egypt (12%) > Upper Egypt (10%)

## Most non-stunted and stunted children suffered multiple micronutrient deficiencies- zinc, vitamin A, iron, energy, calcium

### Main reasons for deficiencies

- Small amounts of food
- Little to no animal source foods
- Low intake of fruits and vegetables
- No intake of eggs, or incomplete egg
- Daily intake of snack foods
- Consumed tea, herbal drinks, canned juice

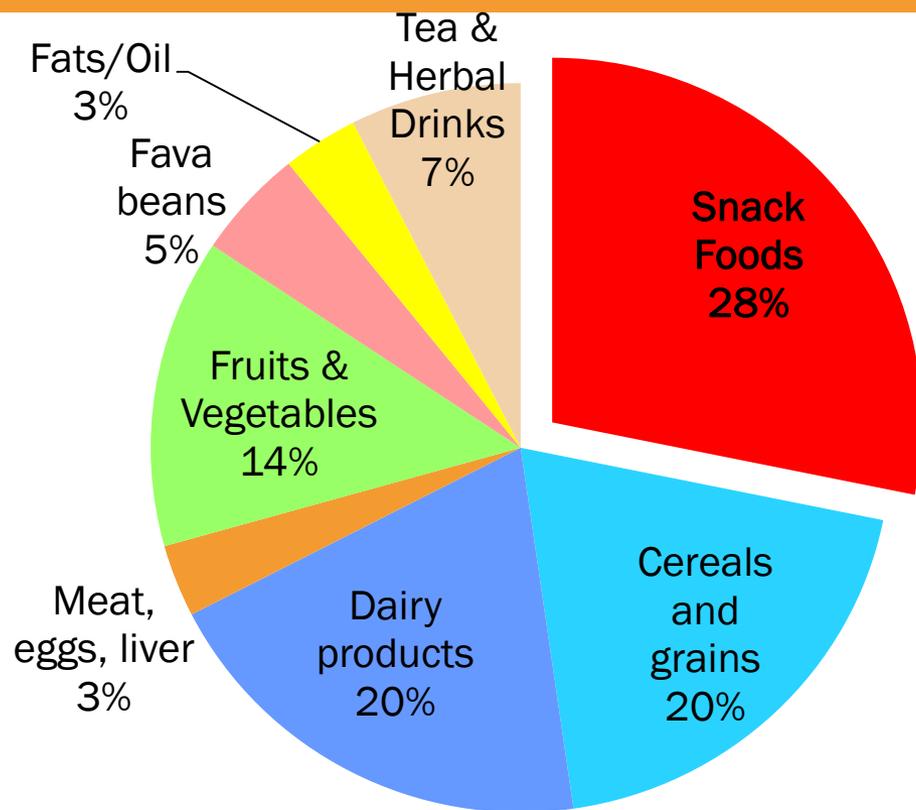


Figure 1 Daily Food Frequency for Upper & Lower Egypt (n=120)

# An example of how TIPs to address snack food feeding problem in both sites



Feeding Problem

- Baby is fed **non-nutritive foods or liquids** (soda, chips, store bought cakes)

Motivation

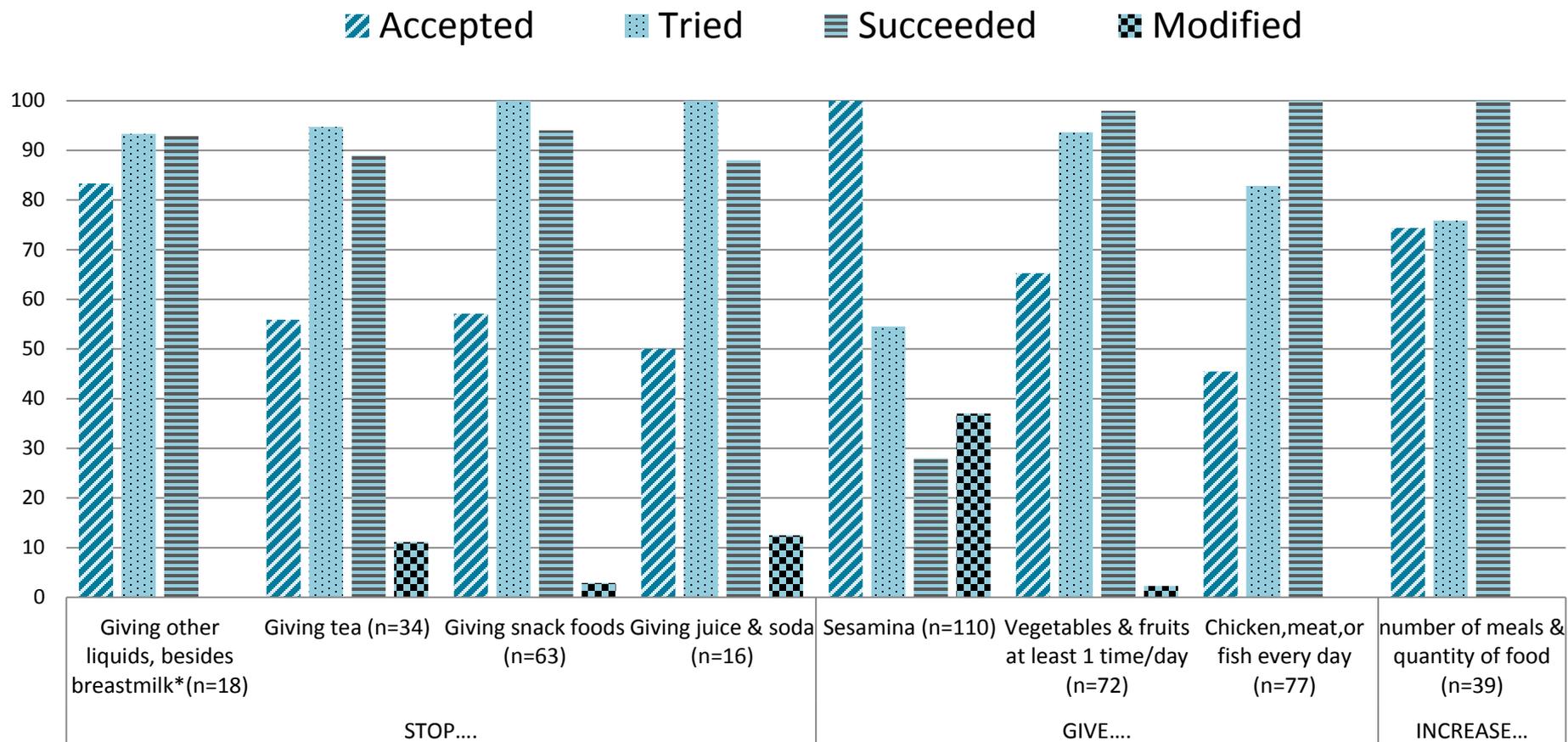
- **Not nutritious** for baby, do not help him/her grow
- **Very expensive** – cheaper to buy egg or fruit
- **Preservatives, coloring, and food additives** can be harmful for your baby
- **Suppress baby's appetite, refuses other foods**

Recommended practices to try

- Give half of banana, a piece of sweet potato or pear as a snack



# Figure 3 Main outcomes of Trials for Improved Practices, children, 0-23 months of age in Lower and Upper Egypt (n=150)



\* 0-6 months only

## Mothers were **Empowered** to Change their Child's Dietary Intake when Child's Health Improved. Nutrient Intake Improved Markedly **after 1 Week** of Mothers Trying Recommended Practices

- Women were **excited** and **happy** as recommended changes in feeding resulted in improvements in children's sleep, better appetite and less illness.
- At the third TIPs visit, after 1-week trial period, improvements in fat, energy, calcium, iron, and vitamin A (slightly improved) were noted for all children.
- Energy increased slightly as a result of increasing the number of meals and amounts given
  - The greatest improvement in children 9–11 months old, as 41% more children met the nutrient requirement
- Increase in median caloric intake of 143 calories

# Challenges / Limitations

- Health providers leverage their experience and influential position – yet some encouraged snack foods
- Cultural practices may contradict best practices
- Mothers tried practices for short time, a few mothers struggled with the recommendations
  - Increased fruits and vegetables; meat was more difficult
  - “Not enough time to cook” “ I felt lazy” mother-in-law cooks”
- Sesamina is a promising local complementary food, more work needed on variations of recipe

# Thank You!

## إشكرا

The results presented are available in the Maternal  
and Child Nutrition Journal at:

<http://onlinelibrary.wiley.com/doi/10.1111/mcn.12165/full>

