



STATE UNIVERSITY OF CAMPINAS - BRAZIL

**HOUSEHOLD FOOD SECURITY
MEASUREMENT IN BRAZIL: INFORMING
POLICY MAKERS.**

Ana Maria Segall Corrêa MD, PhD

Leticia Marín-León MD, PhD

Departamento de Medicina Preventiva e Social

FCM - UNICAMP

segall@fcm.unicamp.br

OBJETIVES

- TO SUMARIZE PROGRESS IN FOOD INSECURITY MEASURES IN BRAZIL
- TO PRESENT EBIA RELEVANCE FOR BRAZILIAN PUBLIC POLICES THAT IS AIMED TO FACE FOOD INSECURITY AND HUNGER.

ANTECEDENTS

Brazil the Hunger Zero (FOME ZERO) policy in 2003.

Direct Cash transference and others strategies

Opportunities for discussing indicators
population targeting
Program evaluation

**Validation of USA-Household Food Security Survey
Module-HFSSM of an adapted Brazilian version**

Development of EBIA (2003-2004)

In-depth assessment for face, content and external validity of HFSSM Brazilian version (EBIA):

- 1. Meeting with policy makers**
- 2. Regional Meetings (7) – expert professionals**
- 3. Community Focal Groups (11) – rural and urban**
- 4. Convenient population samples (9)**
- 5. Meetings for external follow up - Policy makers, academics, Brazilian Institute of Statistics, International organizations and NGO.**

MULTICENTER STUDY



STATE UNVESITY OF CAMPINAS

FERAL UNIVERSITY OF BRASILIA

FEDERAL UNIVERSITY OF PARAIBA

FEDERAL UNIVERSITY OF MATO GROSSO

NATIONAL RESEARCH INSTITUTE OF AMAZONAS

UNIVERSITY OF CONNECTICUT

STATE UNIVERSITY OF OHIO

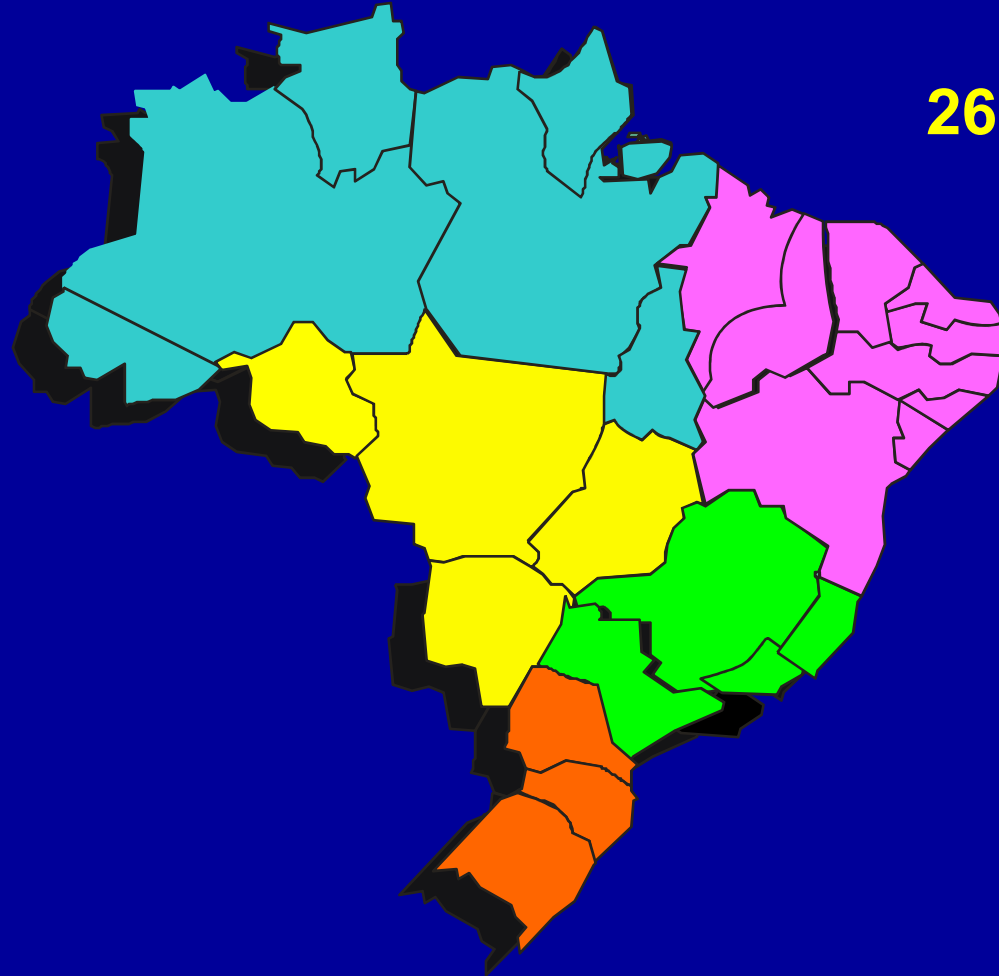
FUNDED BY:
MINISTRY OF SOCIAL DEVELOPMENT ,
MINISTRY OF HEALTH, FAPESP, OPS, UNESCO.

EBIA Items

- 1) Worried that you would run out of food?
- 2) Ran out of food?
- 3) Ran out of money to have a healthy and varied diet?
- 4) Children consumed just a few kind of foods?
- 5) Unable to offer children a healthy and varied diet?
- 6) Children did not eat enough?
- 7) Adult ever reduced the size of meals or skip meals?
- 8) Ate less than what you thought you should?
- 9) Ever felt hungry but didn't eat?
- 10) Lost weight?
- 11) Adult ever went without eating for a whole day?
- 12) Reduced the size of meals of your children?
- 13) Children ever skipped a meal?
- 14) Children ever hungry but you just couldn't buy food?
- 15) Children ever go without food for a whole day?

Items refer to the last 3 months, From lower to higher frequency

Brazil 2009



Surface: 8,5 milhões km²

**26 State – One Fed. District
5.564 municipalities**

In 2008:

Population: 194 million

**Bellow BPL (<80US\$
PCM): 25,5% or 47 mi
people.**

**Bellow Extreme PL (<47
USD\$ PCM) 8,8% of the
population. 17 millions**

Public Policy Consequences

1. EBIA in National Representative Surveys:

National household Survey-PNAD2004

Demographic health Survey – PNDS2006

National household Survey-PNAD2009

2. As an indicator in the National Information System of Food Security (2006)- LOSAN2006

3. EBIA is used in local governmental researches

4. Academic use

Food Insecurity in Brazil

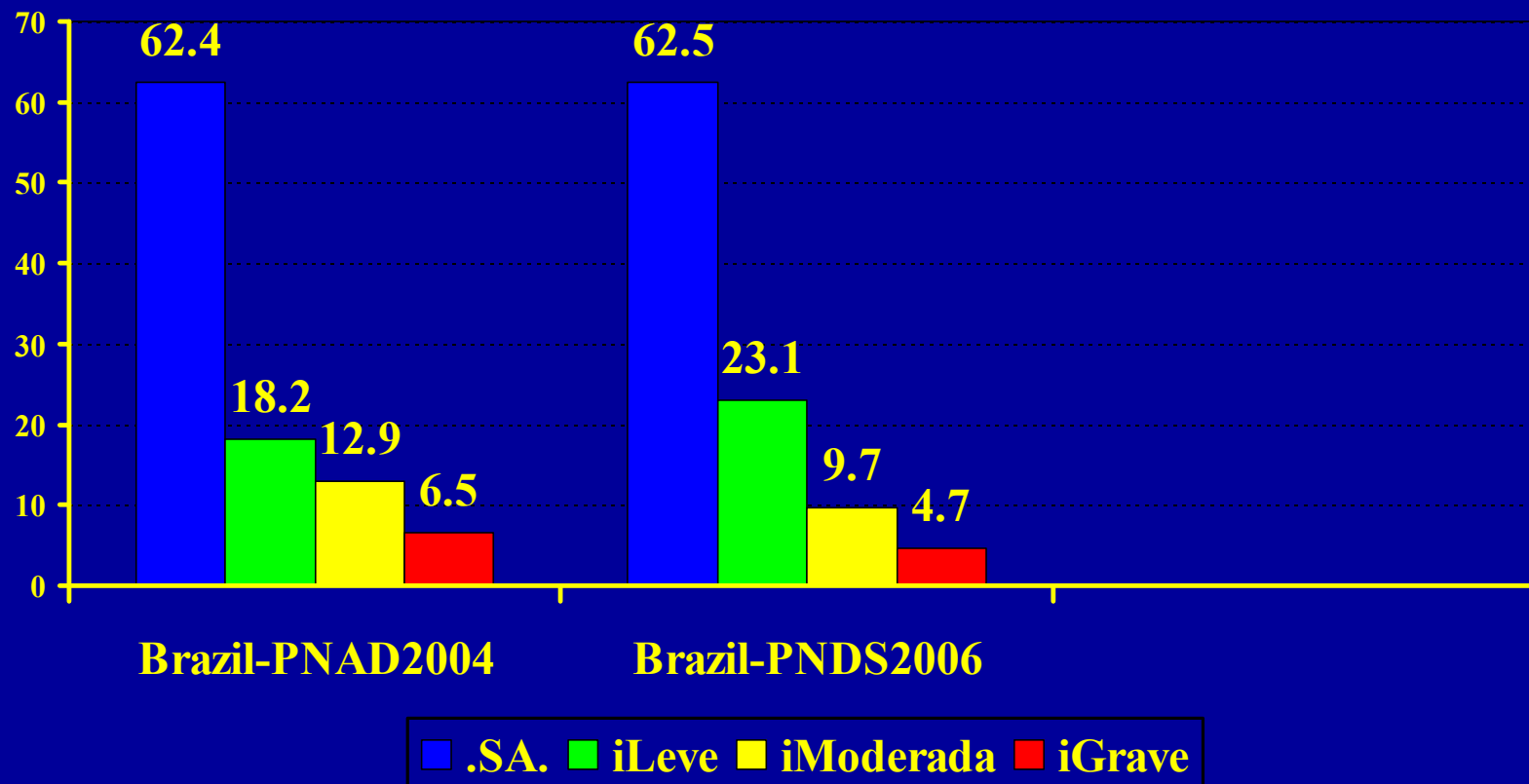
DHS 2006

- Household survey with women of fertile age (15 to 49 years old)
- Sample of 14.617 household with EBIA application (56.365 persons)

PNAD2004

- Sample of 112.716 household
- Analysed sample of 69.276 household with women in fertile age.

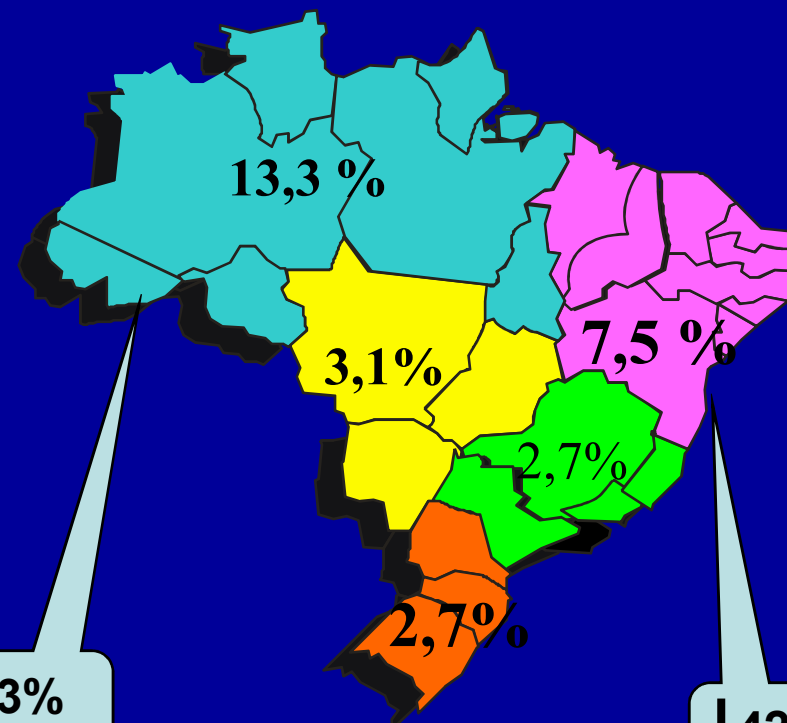
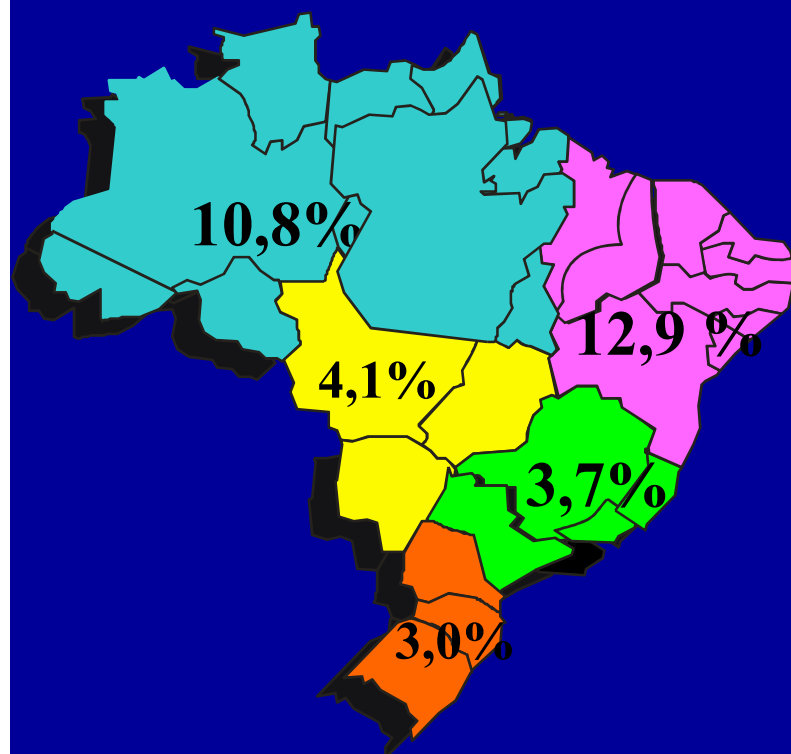
Prevalence of food security and food insecurity in women of fertile age households : Brazil PNAD 2004 e PNDS 2006.



Severe Food Insecure Prevalence according to Brazil macro regions and year. Brazil, PNAD2004 e PNDS 2006

• PNAD2004

PNDS2006

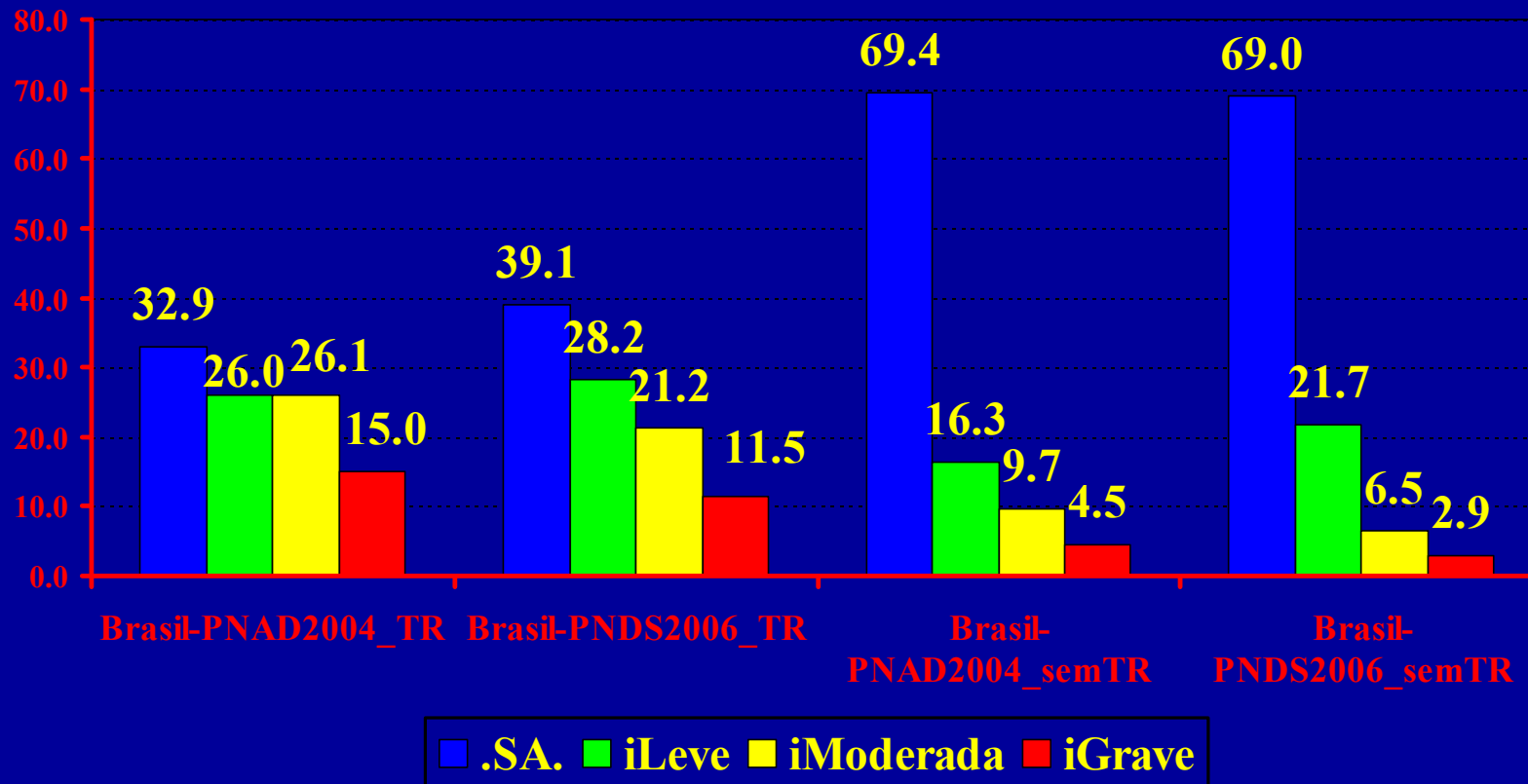


↑ 23%

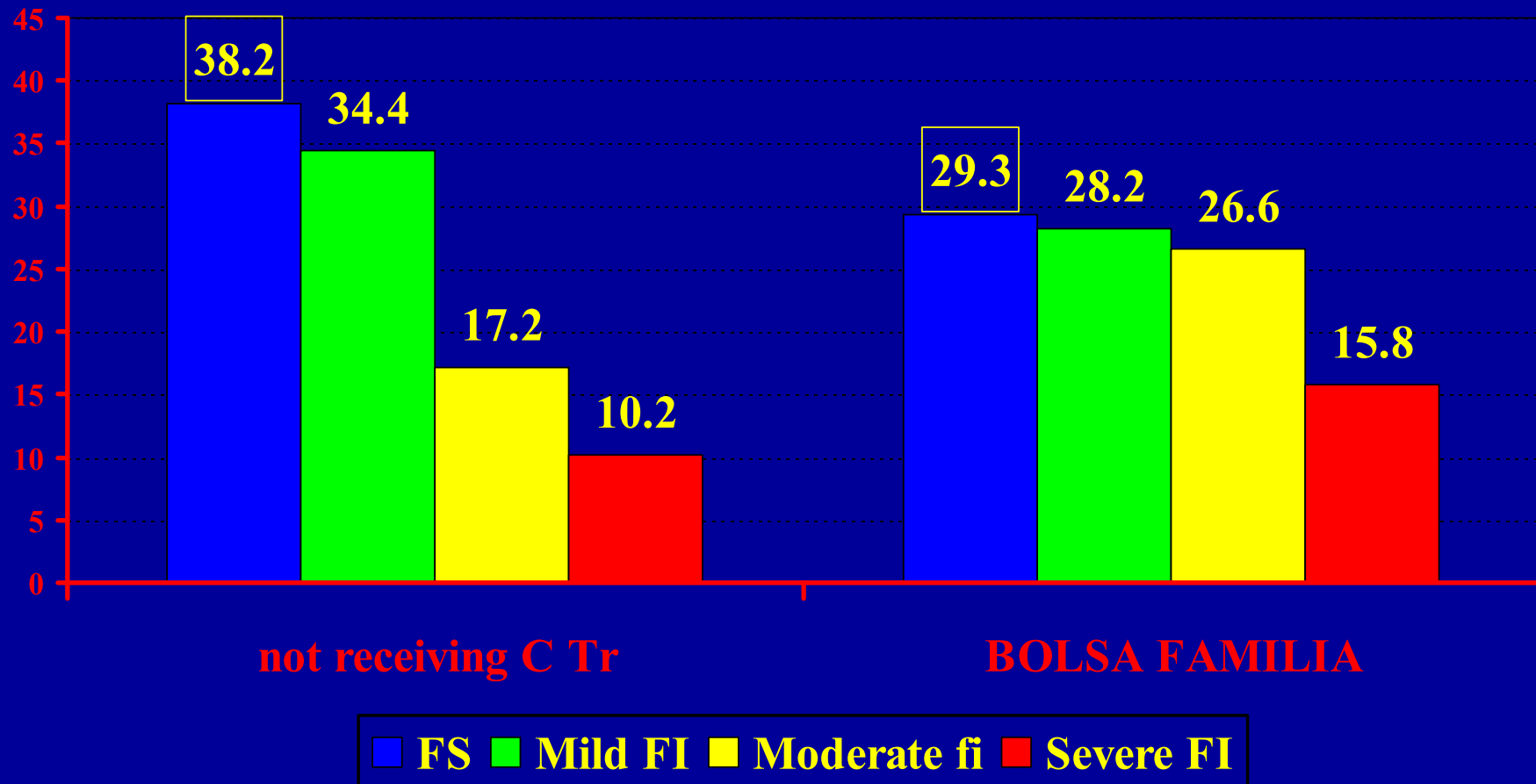
↓ 42%

- Food Insecurity Associated Factors ($p < 0,005$) were either in 2004 or in 2006 (Multiple Regression Analysis).
- Family income
- Place of Residence (R/U)
- Region of Residence
- Woman as head of household
- Head of Household Age and schooling
- Number of residents
- Sanitation
- Cash transference program participation

- Brazil Food Security and Food insecurity Prevalence in age fertile woman households, according to cash transference program participation : Brazil PNAD 2004 e PND 2006.



Differences in Prevalence of FS/FI among those receiving Cash Transfer (n=1873) and not receiving (n=1708) in social class D+E - Brazil-PNDS 2006.

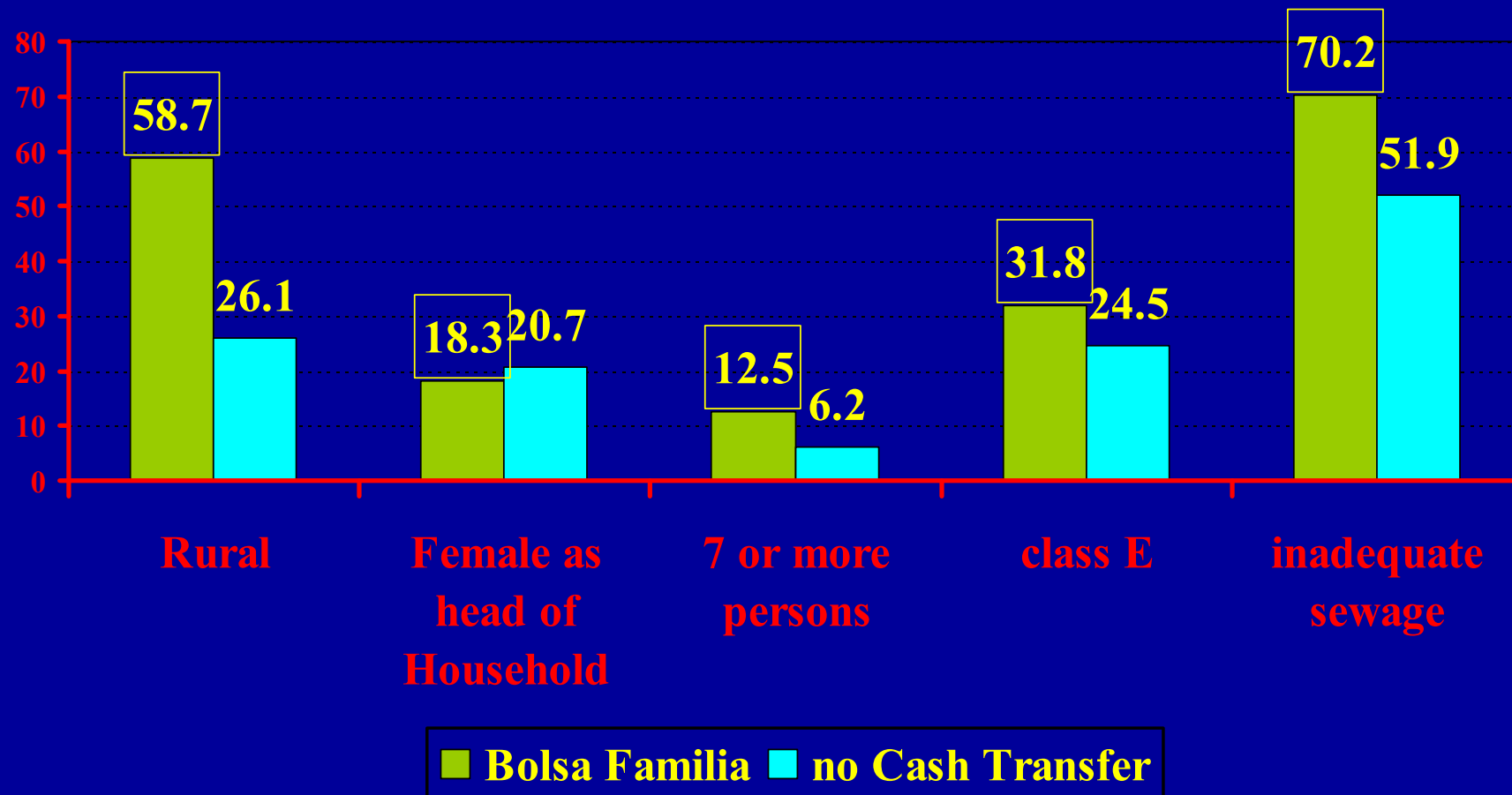


Households with Women (15-49 years old) - Children under 18 years old


TWO HYPOTHESIS

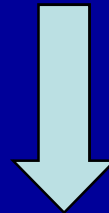
- **1. The Bolsa familia was targeting the most vulnerable people**
- **2. There is a response bias increasing food insecurity among people who receive cash transference**

Difference in social vulnerability among those receiving (n=1641) and not receiving Cash Transference (n=1708) – Social Class D+E - Brazil-PNDS 2006.



Cash transferer impact

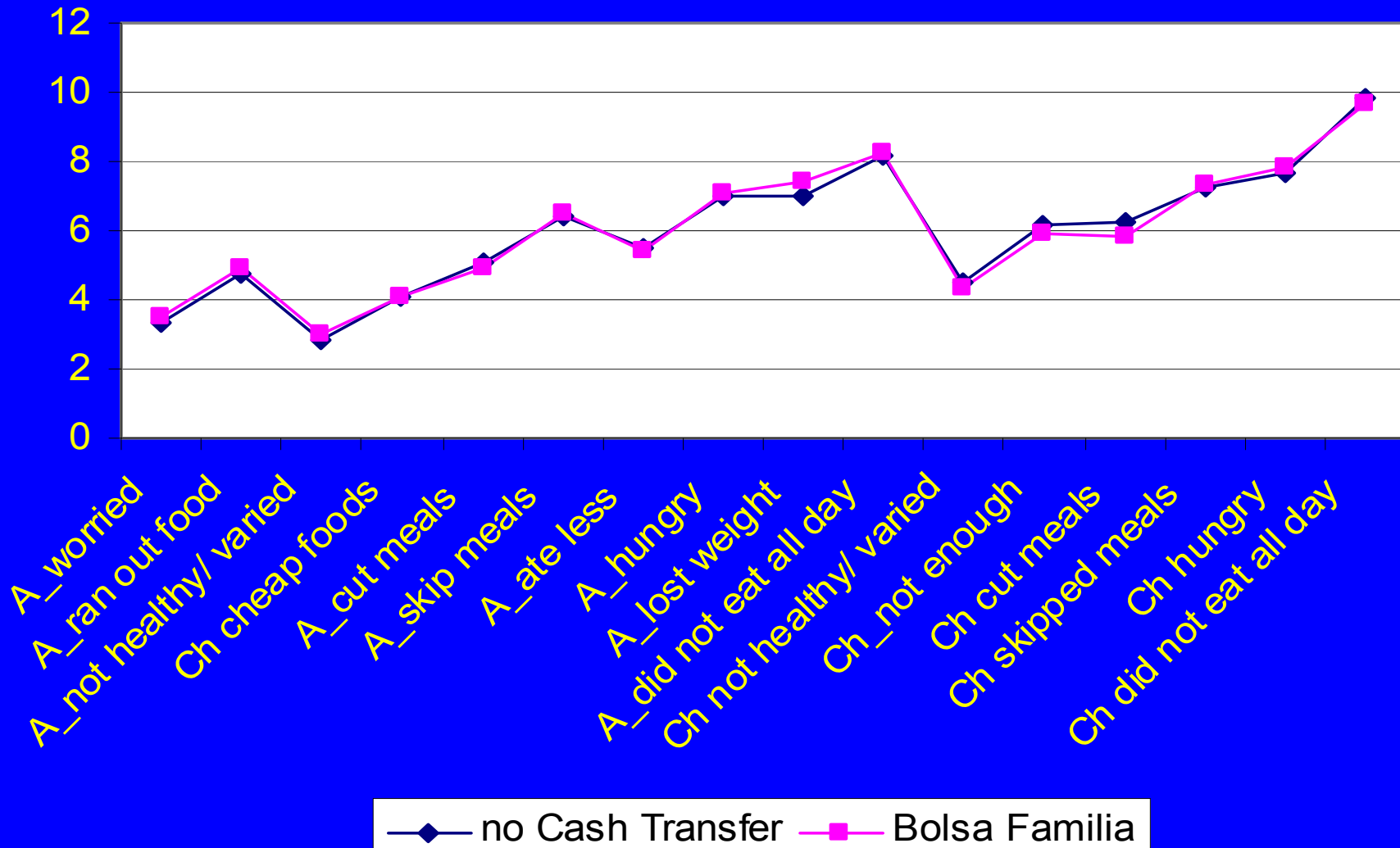
- Analysis of PNAD2004 data has shown
- R\$ 10 of CT  Increase 8% FS chance
- CT mean in 2004 was R\$ 63



Increased chance de FS in 50%

- SEGALL-CORRÊA, A.M., MARIN-LEÓN, L., PEREZ-ESCAMILLA, R., HELITO H., PACHECO, L.M.S., SOUZA, R.P. A transferência de renda no Brasil e a insegurança alimentar; PNAD 2004. Revist.Nutr.da PUCCAMP. , v.21, p.39 - 51, 2008.

Differences in item severity estimates - DIF CONTRAST by Cash Transfer condition of the household. DHS Brazil, 2006



Conclusion 1

- Although the observed FI reduction, Brazil still has considerable number of people without the right to adequate food.
- Factors associated with Food insecurity are the same considering 2004 and 2006 data.
- Results of 2004 and 2006 surveys show that the social programs target the most vulnerable people.

Conclusion 2

- **The use of EBIA has shown it is a cost-effective and valid tool for:**
 - **Identify vulnerable population**
 - **To Follow the country recent trends and to evaluate activities aimed to face FI**
- **EBIA has been considered an useful tool for Brazilian police makers**