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**Parental cognitive dimensions
associated with preschool
children's eating habits:
an intervention study.**

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INTRODUCTION

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- Childhood excessive weight and obesity are a major public health concern from early childhood.
- Early childhood is an important period of development for developing healthy eating habits, that may be associated with an adequate present/ future BMI (Birch,2001).
- There is extensive evidence that children's food intake is shaped by early experiences, suggesting ways in which parenting practices may be promoting obesity (Birch & Ficher,1998; Patrick & Nicklas,2005).

➤ But what leads parents to endorse healthier or detrimental educational practices and routines needs further study.

· 1. Perception of children's weight:

➤ Parents of overweight or obese children often fail to correctly perceive their children as overweight (Carnell et al.,2005; Huang et al.,2007).

➤ Failing to recognize their children's excessive weight may impeach parents from implementing the best educational practices (Doolen et al.,2009; Maynard et al.,2003).

2. Concern

➤ Relation between the adequacy of mothers perception of their children's weight and the level of concern (Carnell,2005). Parental concern is be associated with parental practices (MacFarlane, Crawford & Worsley,2010) .

3. Attribution of Control

➤ Also, if parents do not consider their children's eating behavior at least partially controllable by them, they may relinquish some of their responsibility in this area.

Self-Efficacy

- Evidence linking Parental Self-Efficacy to parent competence and to parenting practices and behaviors (Jones & Prinz, 2005).
- Low parental self-efficacy related to the control of everyday behavior of young children may lead parents to abandon more consistent health practices and endorse permissive and inconsistent strategies (Adair et al., 2004).

OBJECTIVES

We designed 2 sequential studies that aim to contribute to the understanding of cognitive determinants of children's eating patterns, namely the role of :

- Parental Nutrition Knowledge
- Parental Perception of their Children's Weight
- Parental Concern with their Children's Weight
- Parental attribution of control over their children's food intake
- Parental self-Efficacy to control what their children eat

1st Study: Cross-sectional

CHILDREN

- 231 children (4-5 years old)
- 49,8% girls
- 6,1% with some chronic condition
- 5,6% born preterm

PARENTS

- 83,1% Mothers
- Years of study:
 - 31,6% elementary school
 - 43,2% - secondary school
 - 26% - university

. Assessment:

CHILDREN

- BMI
- Eating Habits – parent report of type and variety of foods, number of meals

PARENTS

- Nutritional knowledge:
General Nutrition Knowledge Questionnaire for Adults (Adapted from Parmenter & Wardle, 1999)
- 4 Cognitive Dimensions:
Subjective scales



PARENTAL COGNITIVE DIMENSIONS ASSESSED BY SUBJECTIVE SCALES:

Weight perception:

“Considering your child’s age and height, do you think that he/she is: underweight; normal weight; overweight?”

Concern about child’s weight

“I am concerned about my child’s weight”

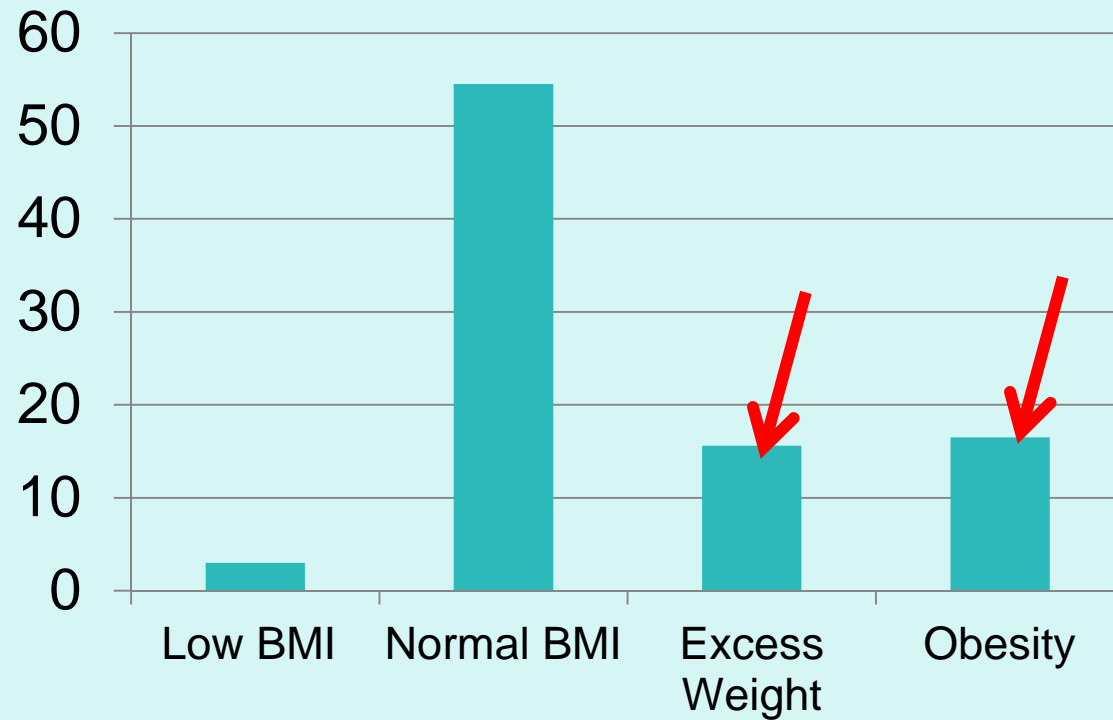
Perception of control (2 items):

“I can control what my child eats at home/ out of our home”

Self-Efficacy:

“Overall, I am able to make my child eat a healthy diet”

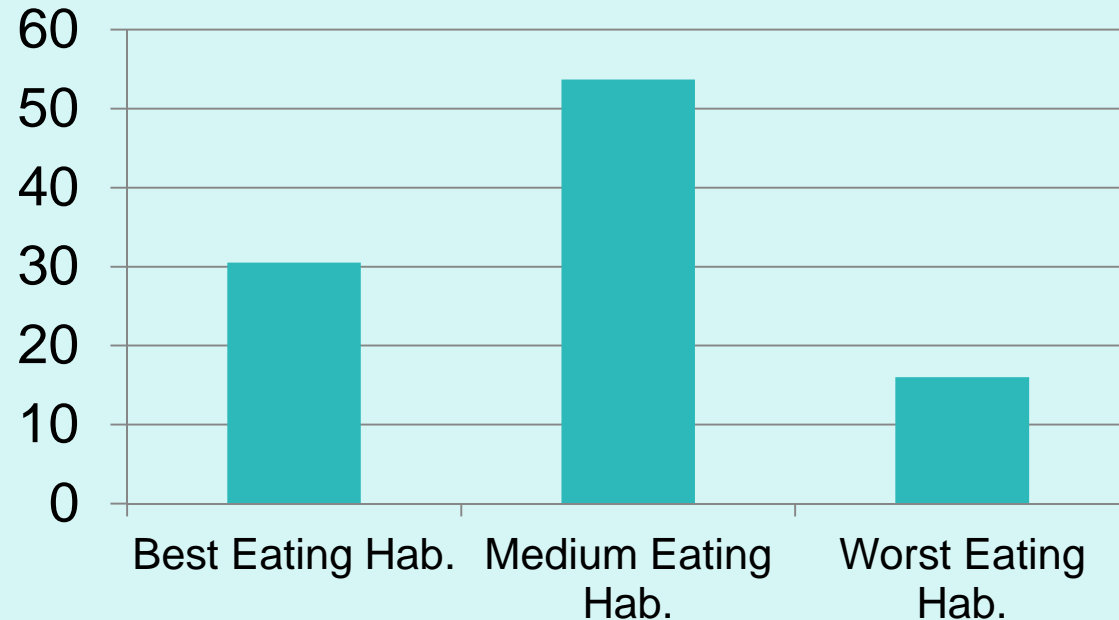
Children's BMI



32.1% of children within Excess Weight or Obesity (similar to other Portuguese data).

RESULTS

- **Children's Eating Habits (cluster analysis):**

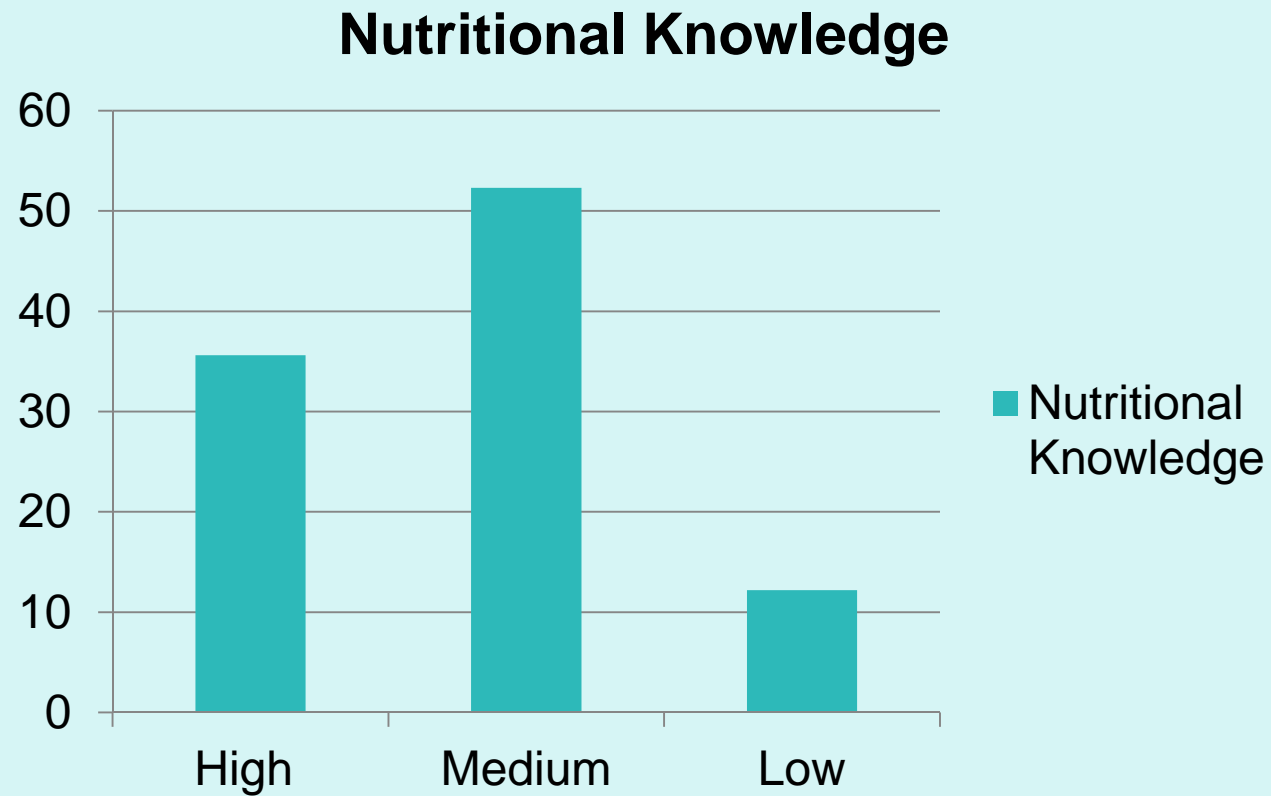


Inadequate intake of:

- **Salty and sweetened food outside main meals, sweet desserts and sodas (EXCESS);**
- **Whole cereals and fish (DEFICIT);**

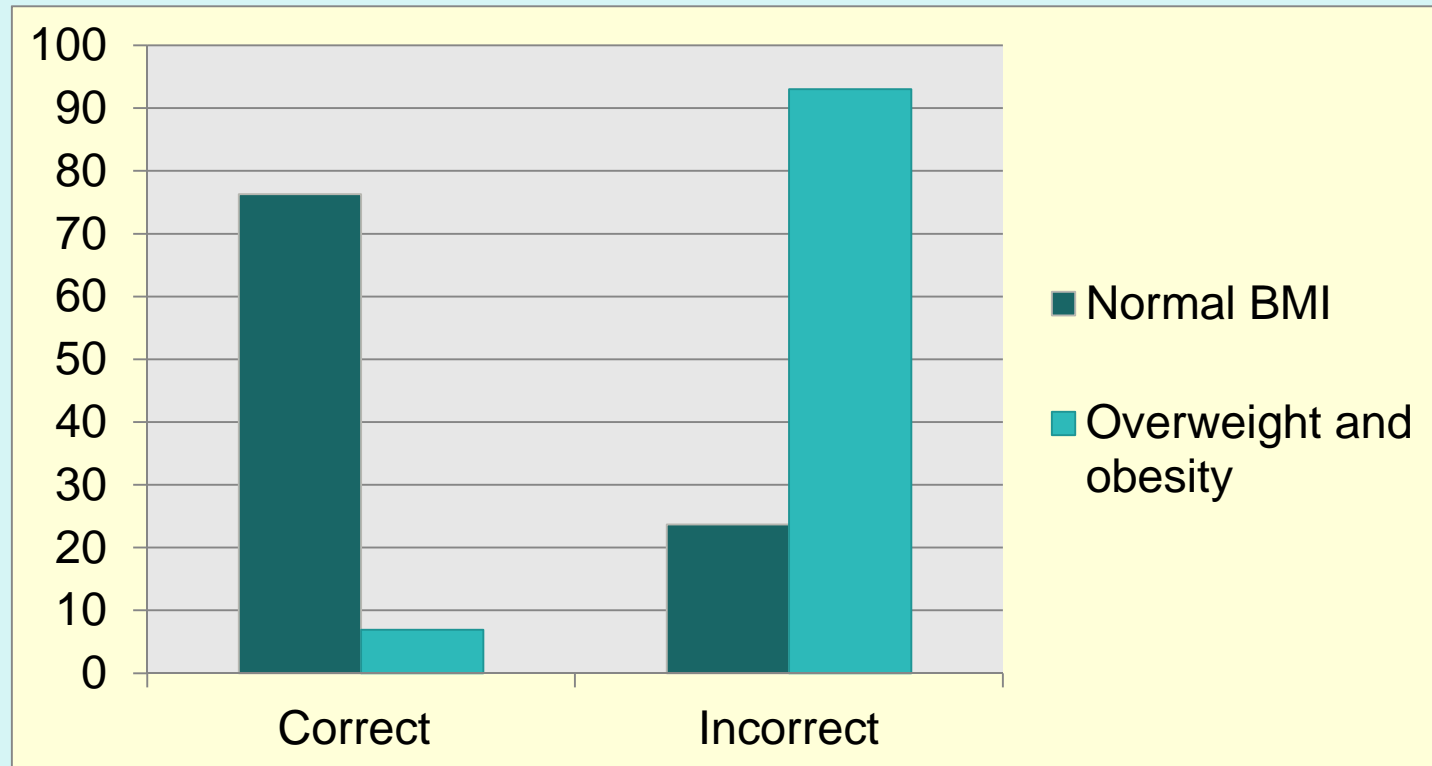
RESULTS

- **Parents' Nutritional knowledge (Cluster analysis):**



RESULTS

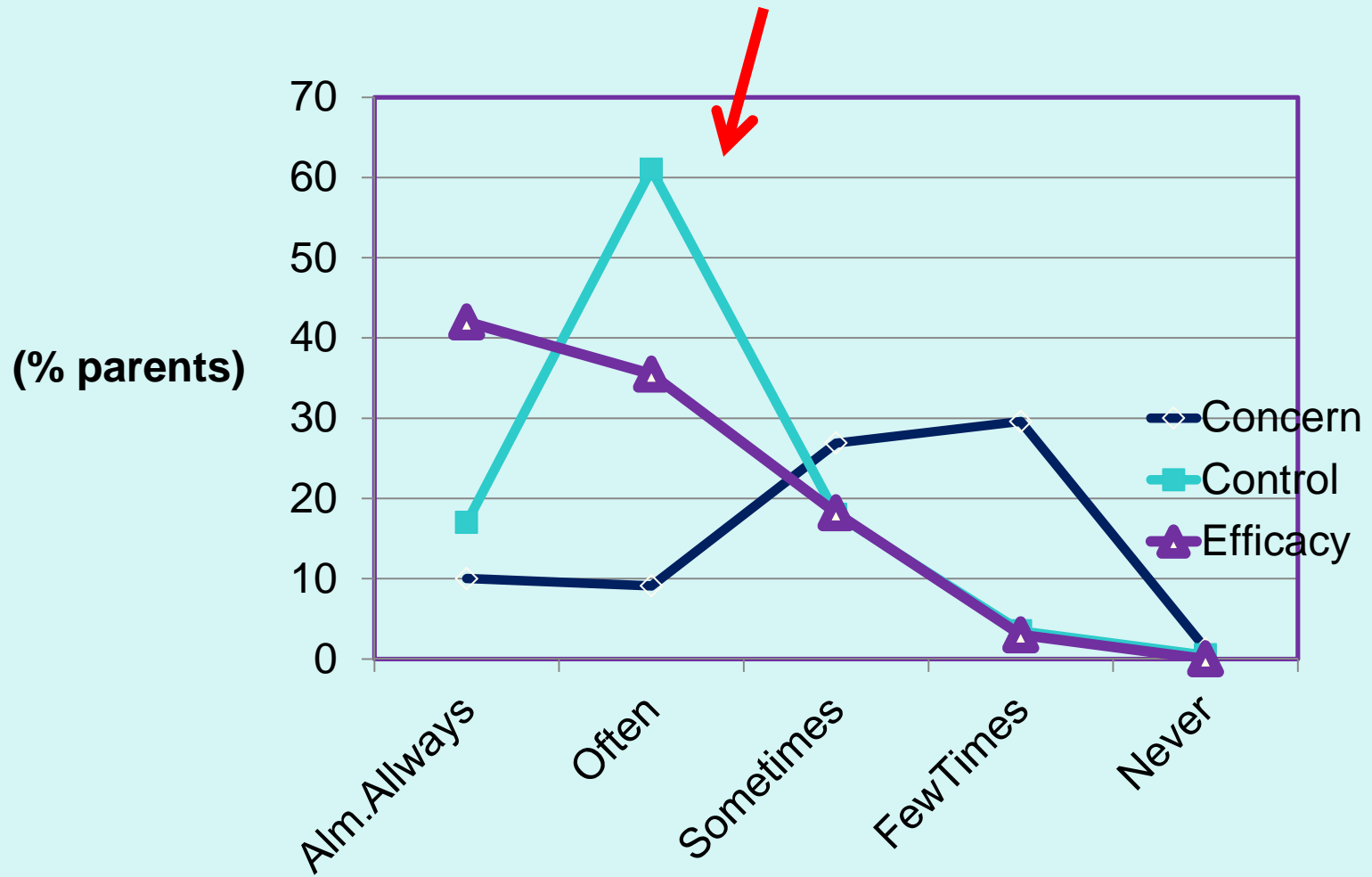
- **Parents Perception of children's BMI**



Overall, 51.3% of parents have have an incorrect perception of BMI:

RESULTS

- **Parents Cognitive dimensions**



RESULTS

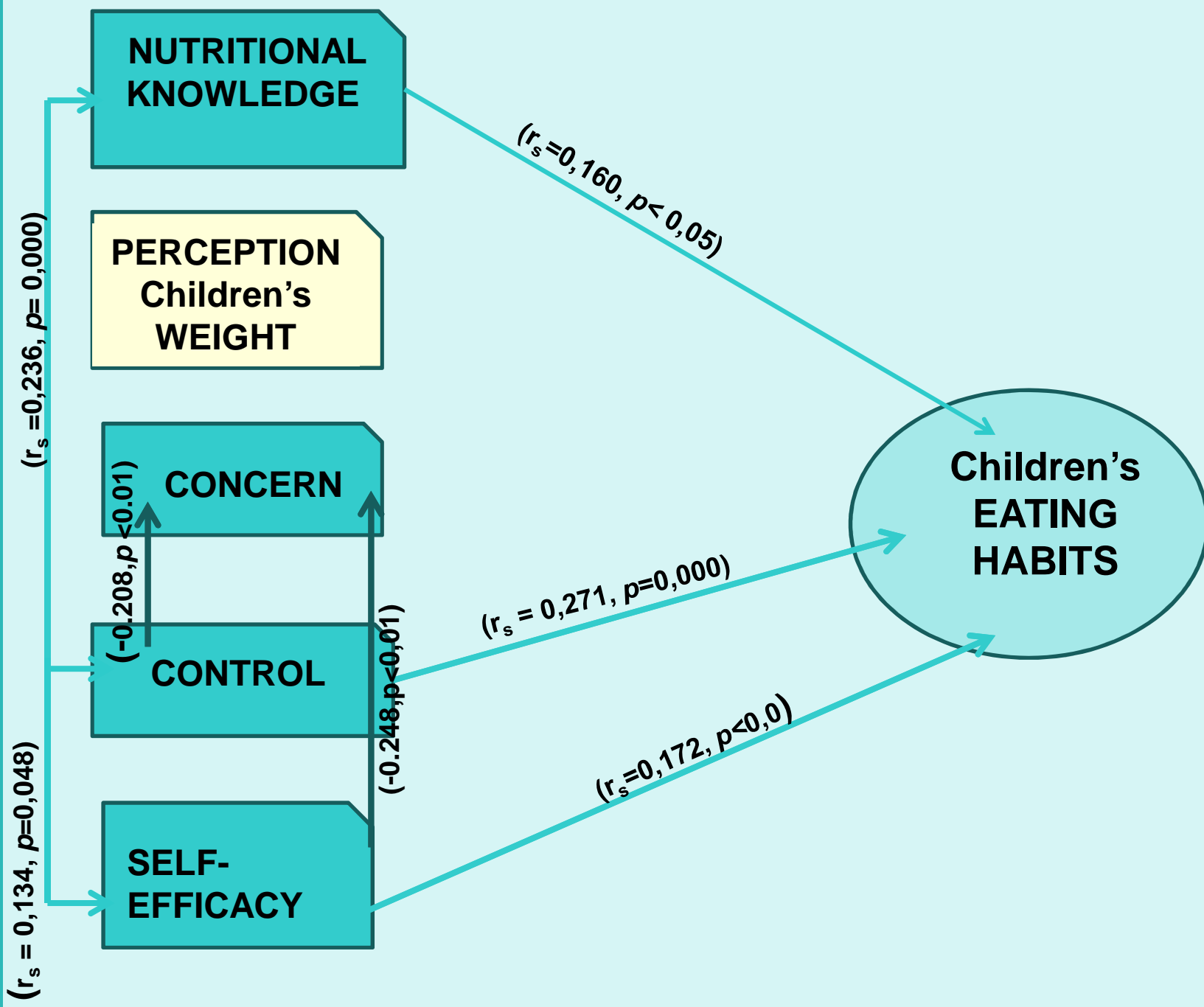
➤ **BMI:**

No association between BMI and Eating Habits ($\chi^2= 7,999$; $p=0,238$), which confirms previous studies

BUT, tendency for normal weight children to have better Eating Habits.

Also, Parental Concern is not associated with child's BMI.

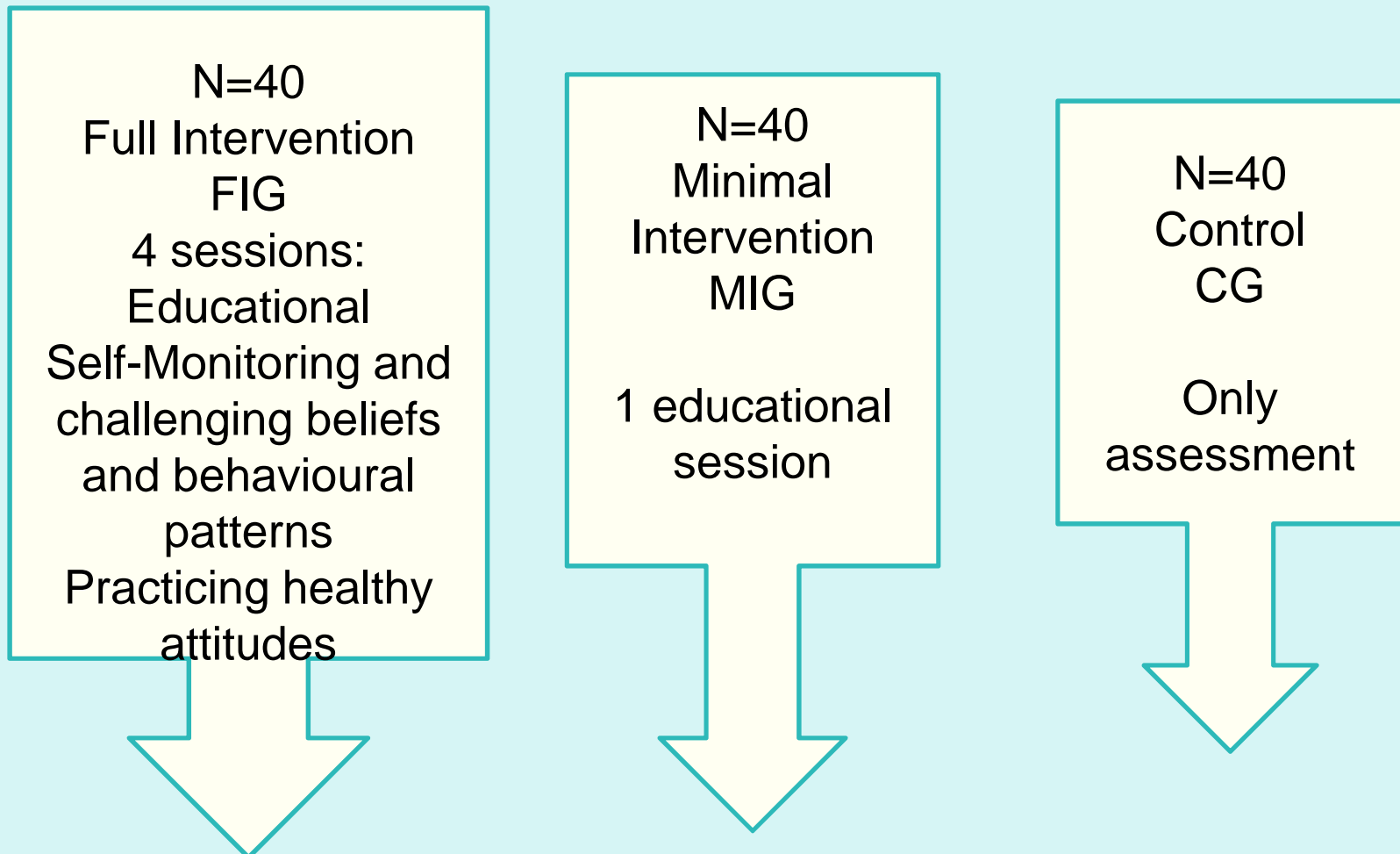
RESULTS: COGNITIVE DIMENSIONS



2nd Study: Longitudinal

- Assess the efficacy of two Brief Parent Interventions to promote healthy eating habits in preschool children;
- Explore how these cognitive dimensions change over time;
- Identify mediators or moderators of change.
- Sessions were conducted in the school, after working hours and with the presence of the preschool teachers.

METHODOLOGY



N=40
Full Intervention
FIG
4 sessions:
Educational
Self-Monitoring and
challenging beliefs
and behavioural
patterns
Practicing healthy
attitudes

N=40
Minimal
Intervention
MIG
1 educational
session

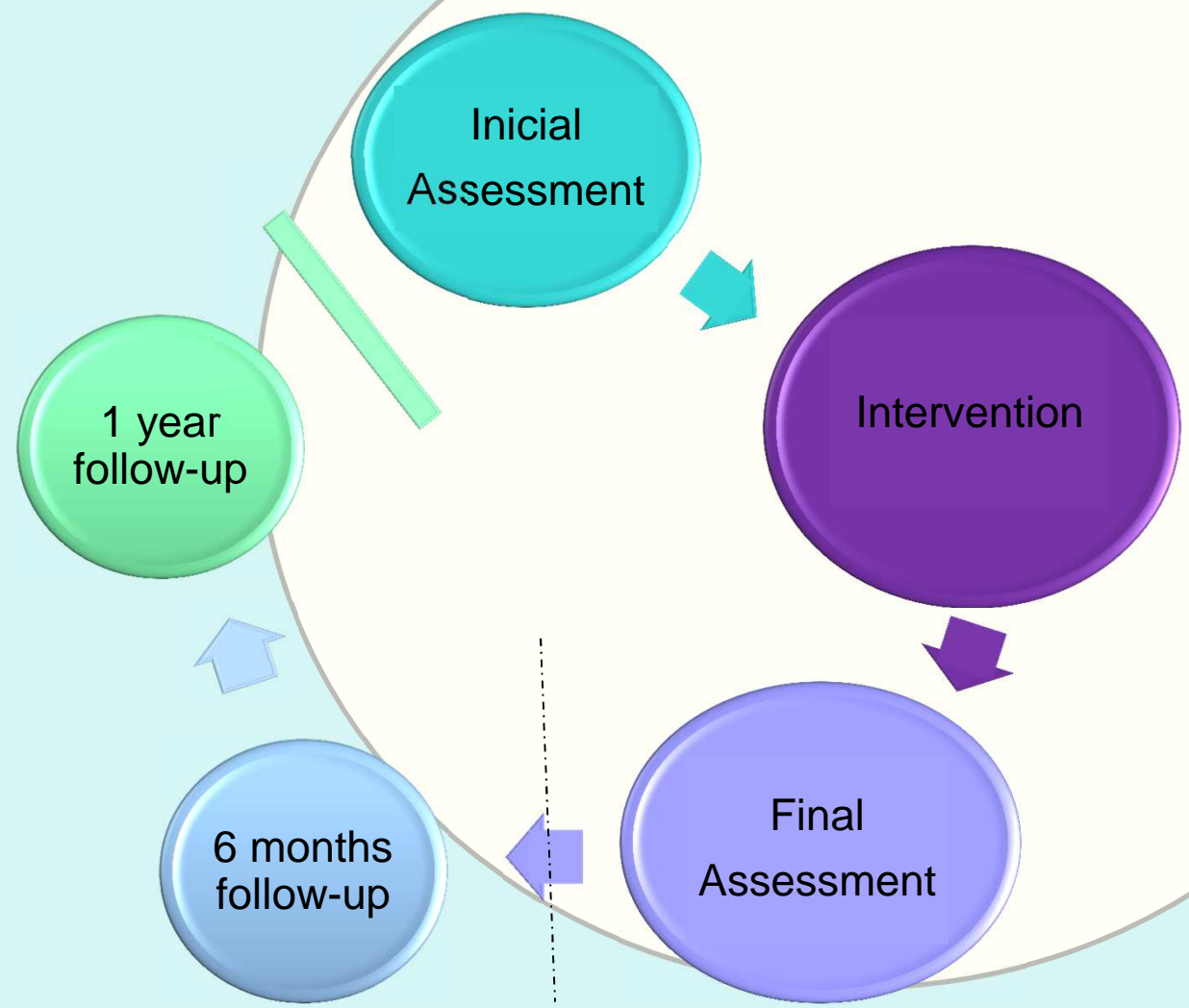
N=40
Control
CG
Only
assessment

BMI, Eating Habits, Parental Nutritional Knowledge, Perception of weight, concern, control and self- efficacy

The 3 groups did not differ in all these variables in the pre-test

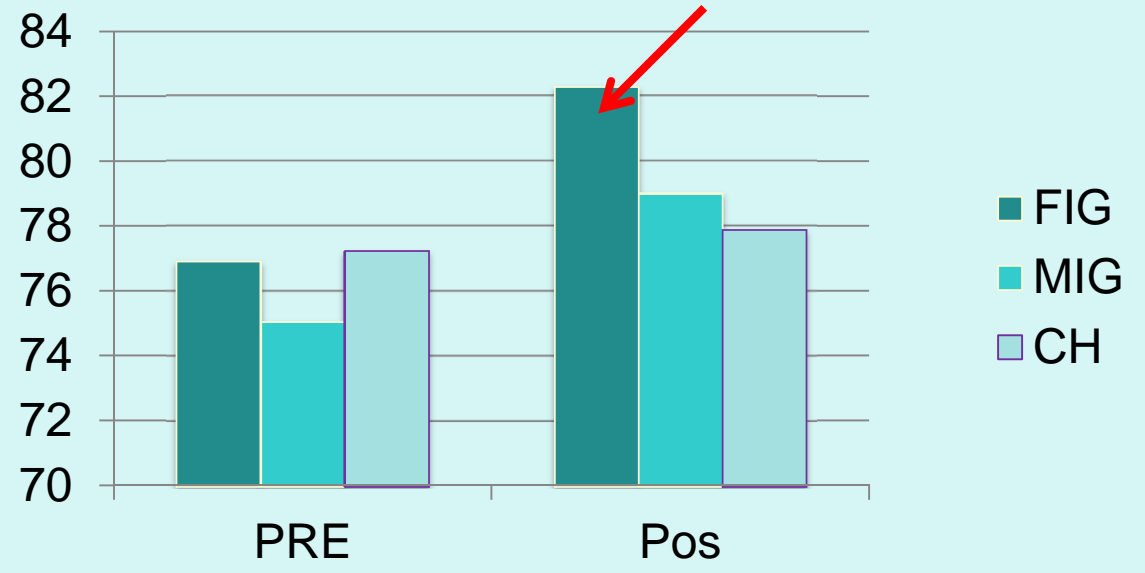
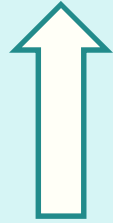
Methodological Design

RESULTS



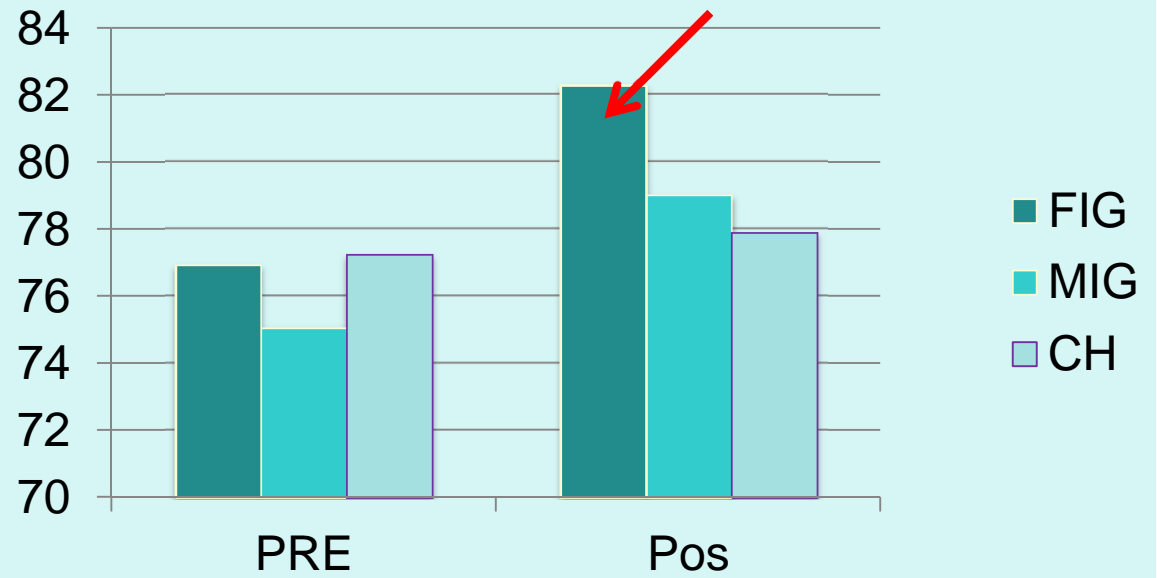
PRELIMINARY RESULTS

EATING HABITS

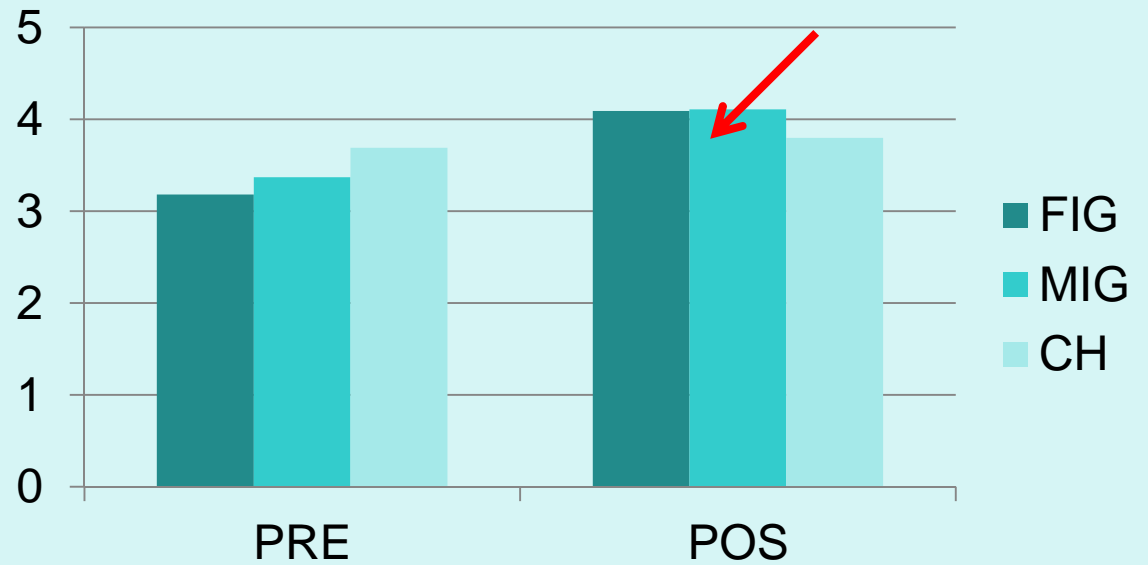


PRELIMINARY RESULTS

EATING HABITS

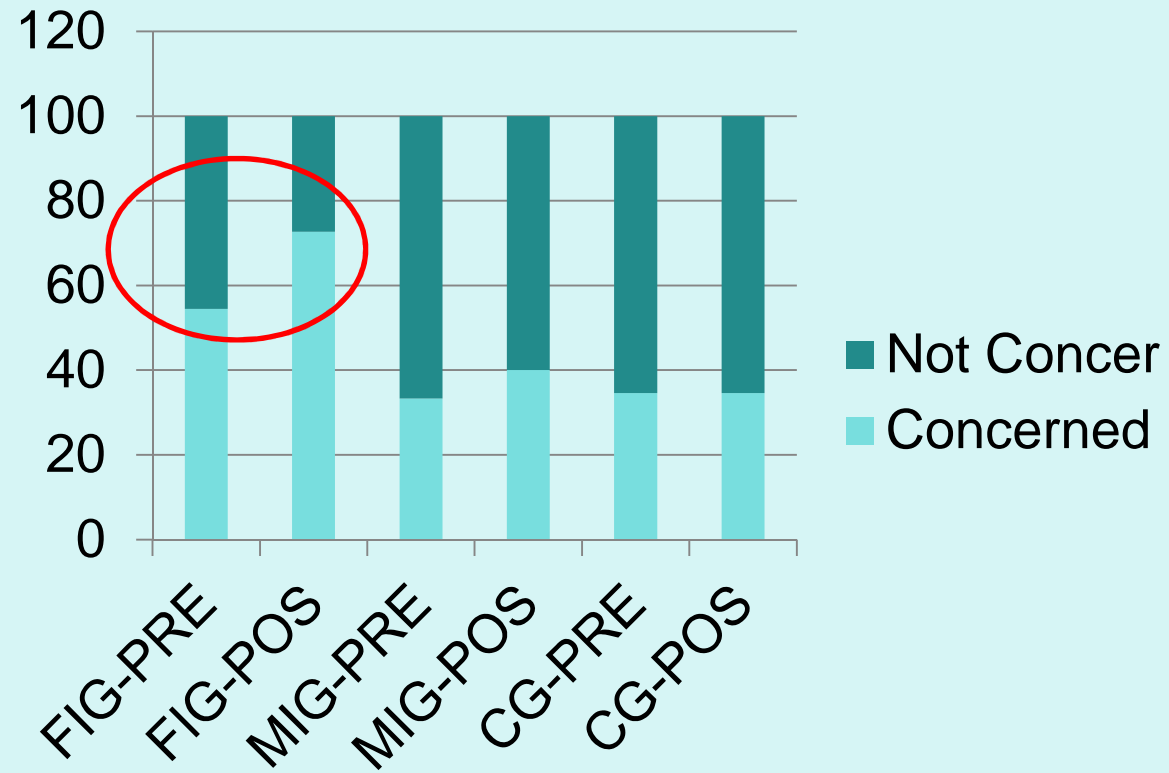


NUTRITIONAL KNOWLEDGE



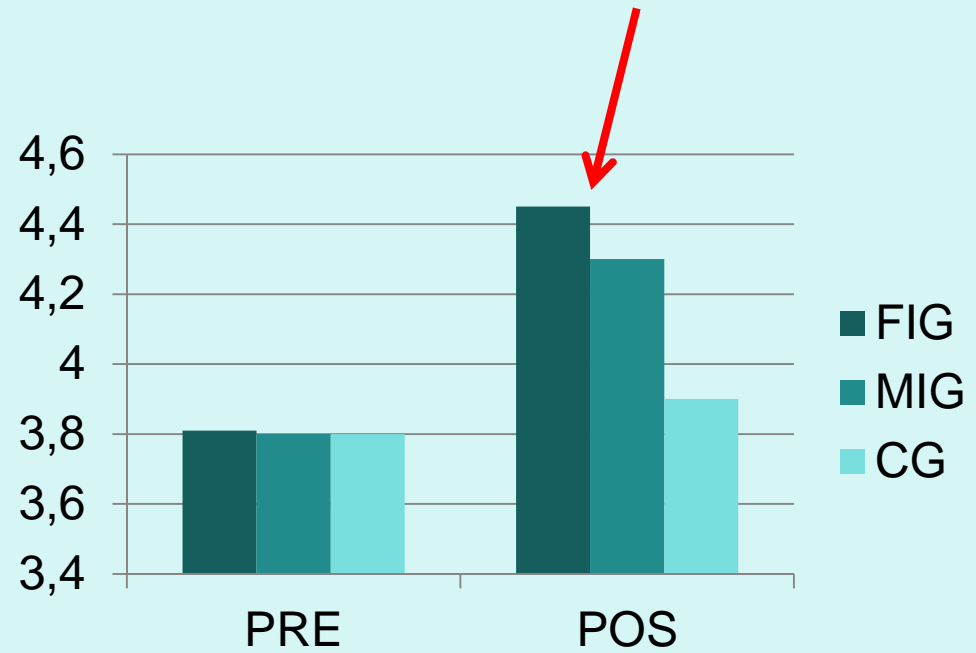
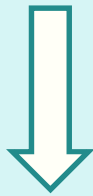
PRELIMINARY RESULTS

CONCERNED/NOT CONCERNED

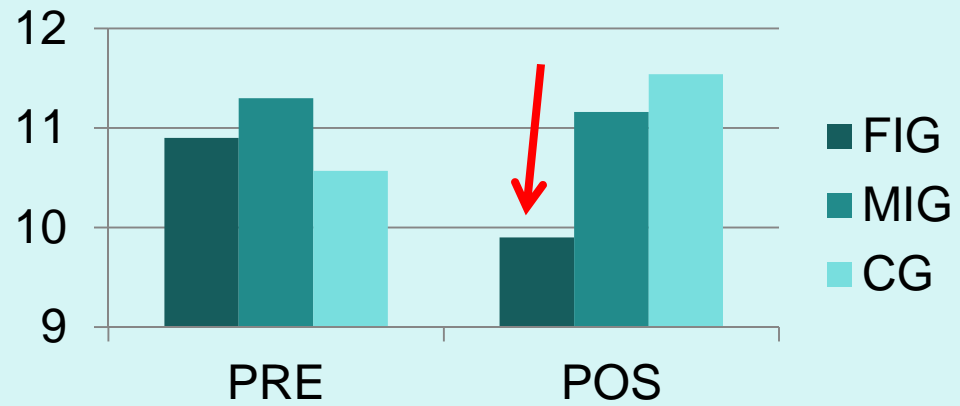
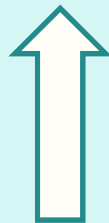


PRELIMINARY RESULTS

CONTROL



EFFICACY



Higher values correspond to lower evaluation

CONCLUSIONS

Preliminary results reinforce the need to consider different parental dimensions that can be addressed and affected by health education programs.

Parental Nutritional knowledge, Perception of Control and Self-efficacy show some association with children's Eating Habits.

Both the 1 session nutritional education and the 4 session psycho-education groups evidenced a moderate tendency to improve Eating Habits. Parents tend to increase Concern and Self-efficacy and decrease Perception of Control.

CONCLUSIONS

Nevertheless we found important adherence problems, especially to the self-monitoring exercises, both in parents of normal weight children and in parents of obese children.

More studies are needed to understand how these cognitions can be changed in effective intervention packages.