Sleep and weight status at 4 years in the INMA Asturias cohort

Isolina Riaño-Galán1,2; Ana Cristina Rodríguez-Delhi1; Ana Fernández-Somoano2,3; Adonina Tardon2,3

1 San Agustín Hospital, Pediatría, Avilés, Spain, 2 CIBERESP and 3 Oviedo University, Preventive Medicine, Oviedo, Spain.

**INTRODUCTION**

Epidemiologic studies have documented that sleep duration is associated with obesity risk in children.

**OBJECTIVES**

1) To investigate sleep duration of four-year-old children (hour/day)
2) To evaluate the association of sleep patterns with weight status at 4 years

**METHODS**

393 children from the INMA birth cohort of Asturias (Spain).
We analysed sleep duration (hour/day) during the night and afternoon nap, reported by their parents, and BMI was calculated.
Children were categorized as normal weight, overweight (OW) or obese (OB) according to the IOTF (Cole et al, 2000). Definition of “short sleep” for children is usually <10 h. Statistical analyses were conducted.

**RESULTS**

20.3 % children had OW or OB at 4 years

![Figure 1](image1.png)

![Figure 2](image2.png)

There are not association between BMI at 4 years and sleep duration (hour/day) during the night (figure 1) nor including afternoon nap (figure 2).

![Table](table.png)

The risk of OW or OB according sleep duration is: (OR crude 1.16; 95%CI: 0.92-1.46).

After adjusting by gender, social maternal class, educative maternal level, physical activity, frequency of fruit and vegetable intake adjusted by calories and total calories intake neither is there statistical significance (OR adjusted 1.12; 95%CI 0.89-1.40).

**CONCLUSIONS**

- Our children slept a mean of 10:25 hours per day.
- No association between sleep duration and weight status in 4-year-old children were found.
- Children included in other studies were older and slept fewer hours.

Disclosure statement: The authors haven’t got any conflict of interest related to this presentation.