



Physical activity, food and metabolic risk in children and adolescents

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INTRODUCTION AND OBJECTIVES

The incidence of obesity increases unstoppably in all populations and at all ages, and with it, the associated metabolic morbidity and mortality. The promotion of physical activity and a healthy diet are the fundamental elements to alleviate this situation.

The main objective of this study is to determine the relationship of physical activity and eating patterns with body composition, the degree of adiposity and certain metabolic risk factors.

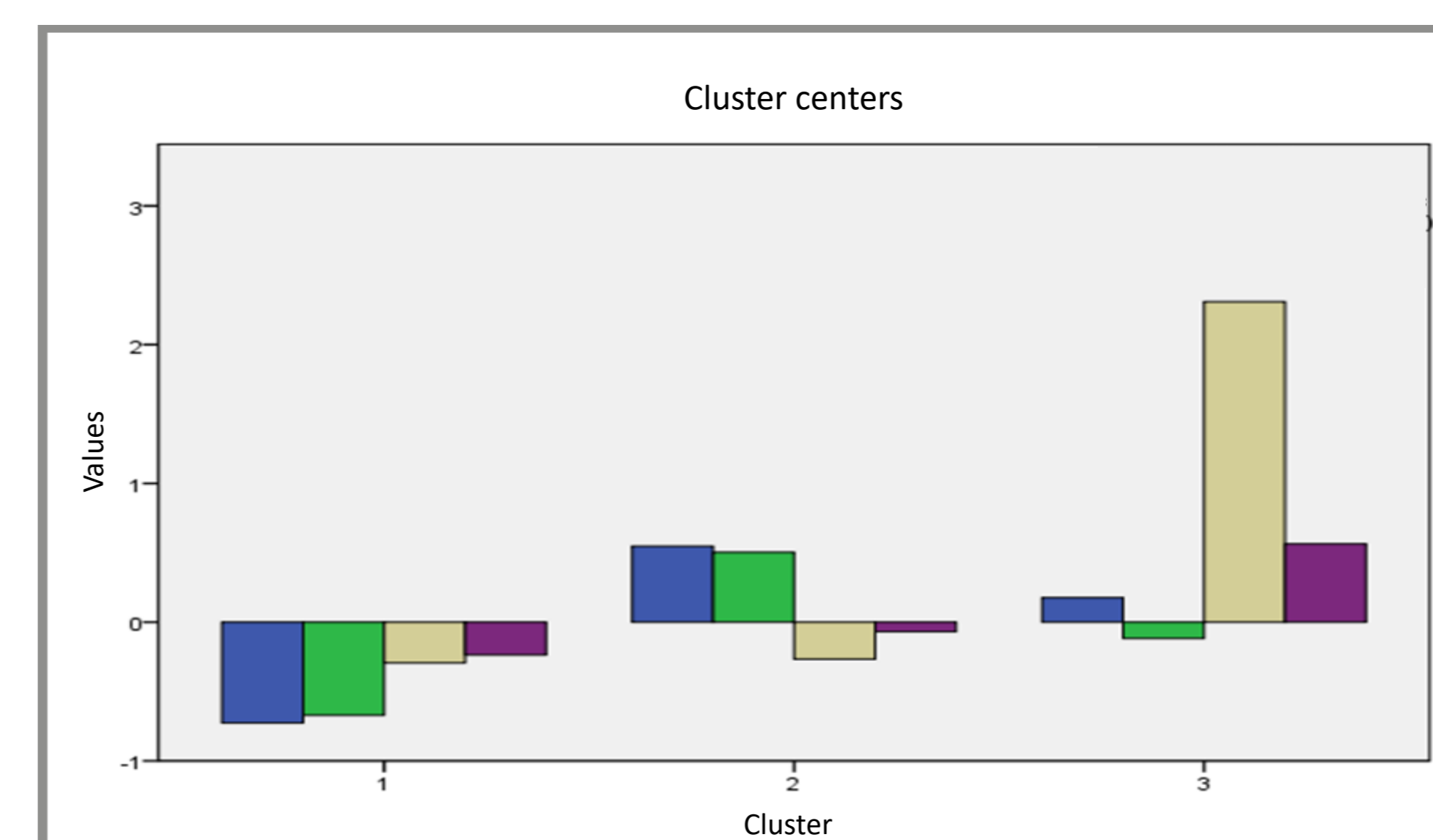
METHODS

- A Cross-sectional observational study.
- 813 patients between 6 and 14 years of age in follow-up in childhood endocrinology and / or nutrition in 4 third level Spanish hospitals.
- Evaluation of:
 - Feeding habits (food consumption frequency questionnaire)
 - Physical activity patterns (physical activity questionnaire, sedentary lifestyle and use of ICTs)
 - Body composition (BMI international standard Cole et al. 2012; DEXA - LUNARenCORER) and
 - Plasma lipids (triglycerides, total cholesterol and fractions).
- 3 conglomerates are established based on:
 - 2 variables of physical activity (moderate and intense)
 - 2 variables of food consumption (advised and advised against).
- The statistical analysis is carried out through the statistical package SPSS.

RESULTS

- We observed a negative correlation between moderate activity ($p < 0.0001$), and vigorous activity and percentage of total fat ($p = 0.003$).
- The percentage of lean mass increases significantly with the practice of physical activity ($p < 0.0001$).
- Overweight children are those who have a better compliance with the recommendations of the disadvised foods ($p = 0.001$).

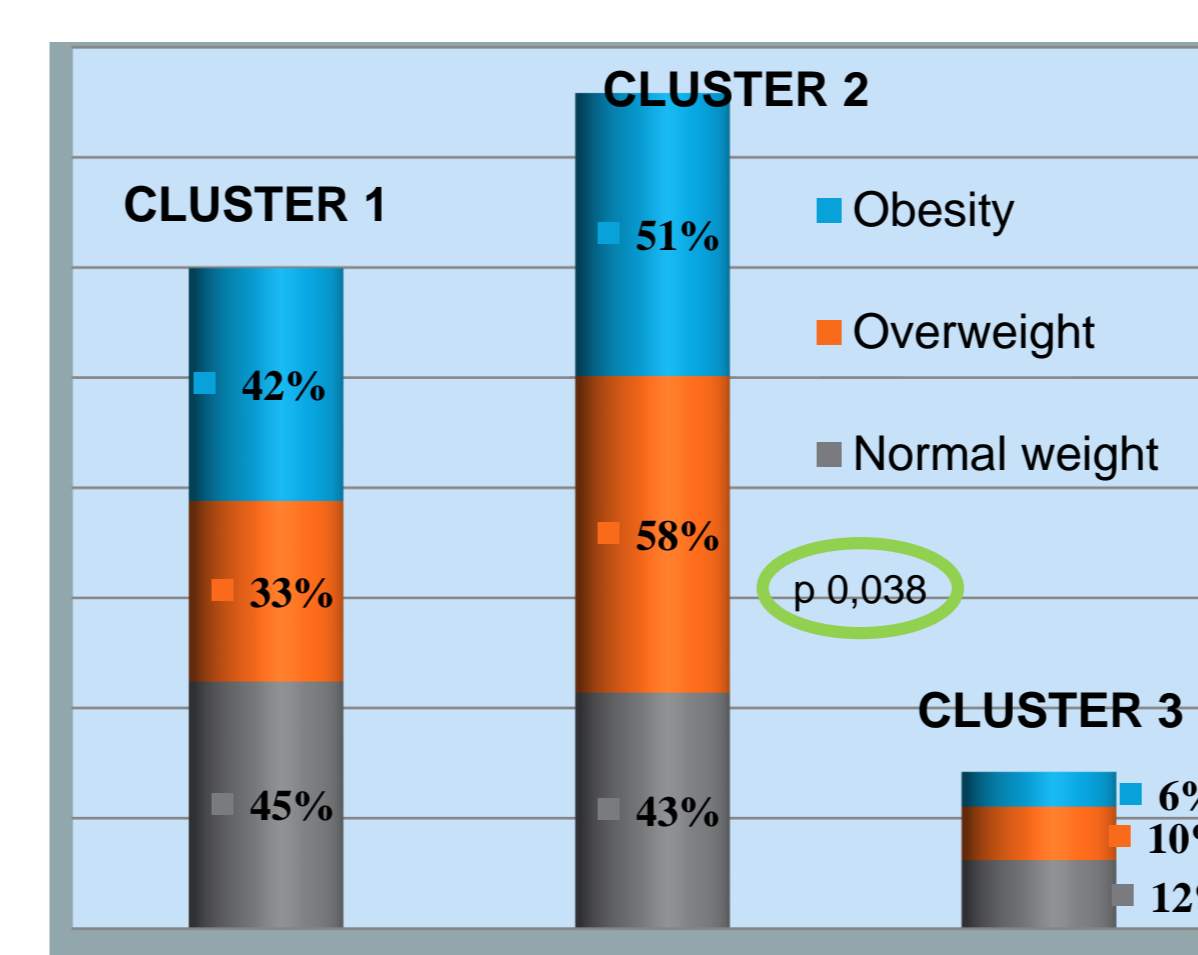
Cluster characteristics



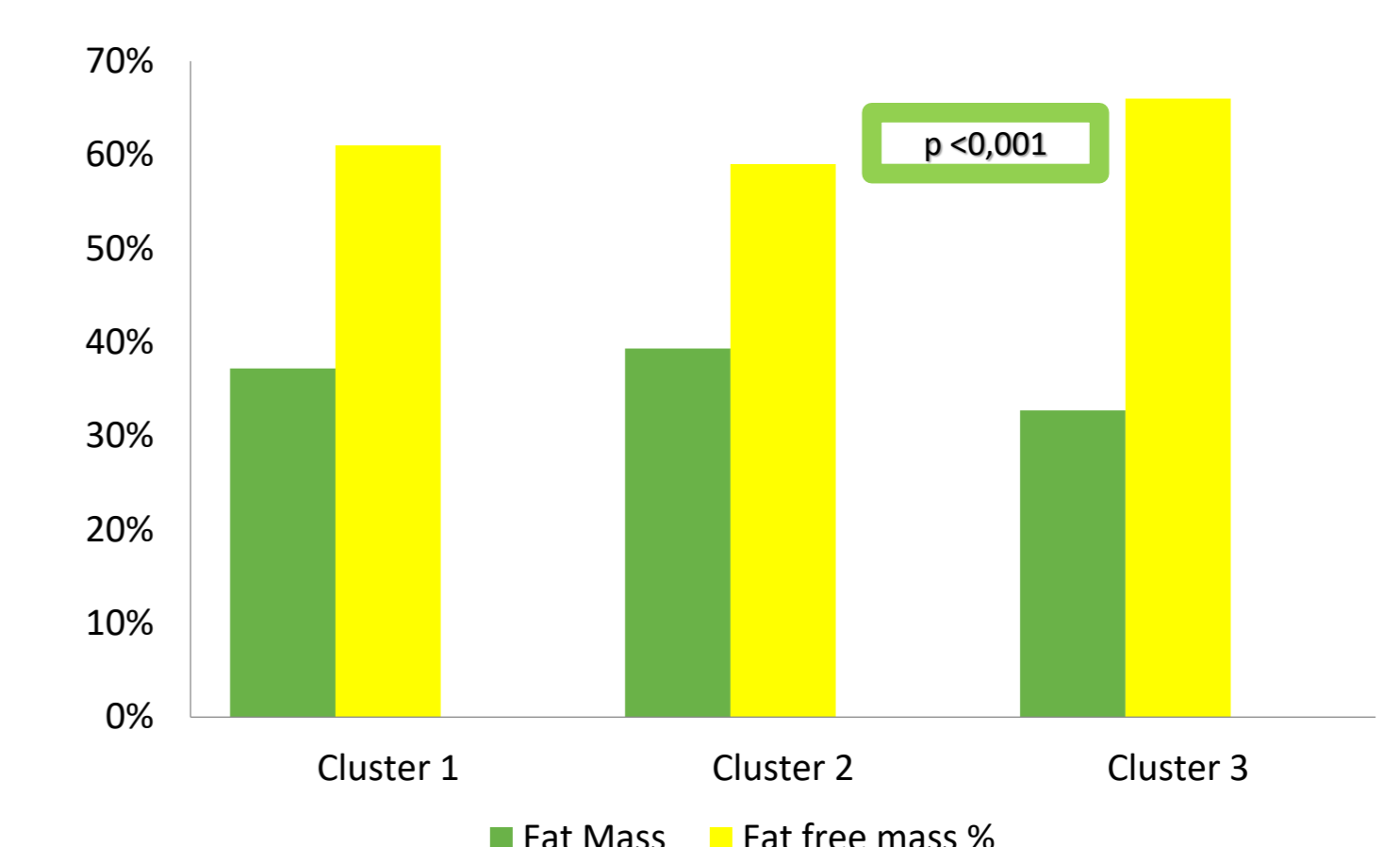
- Patients are grouped into three clusters

Body Composition and clusters

- BMI



Fat mass and Fat free mass



- The children in cluster 3 presented significantly higher levels of HDL cholesterol ($p = 0.028$).
- Insulin and HOMA-IR index are also lower in cluster 3, although they do not show significant differences.

CONCLUSIONS

- The combination of frequent physical activity and healthy diet is related to a lower degree of adiposity and an increase in HDLc levels, which causes a decrease in metabolic risk.

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The authors declares that there is no conflict of interest regarding the preparation of this poster

