

Dietary patterns and their determinants in a sample of 6 to 12 year old Swiss children

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Background

Diet is a crucial determinant of health. Since individual food items are eaten in combination, the assessment of eating patterns (as an alternative to the single food approach) is important to realistically evaluate a person's diet. Equally important is the investigation of the determinants of such patterns, which can suggest targets for future interventions.

Method

We used Principal Component Analysis (PCA) to reduce data into patterns based upon inter-correlations between dietary items, in a sample of children ages 6–12 in Switzerland (n = 607) who enrolled in the FAN project (Family, physical Activity and Nutrition) and completed a 7-day food diary in 2010. These data were used to calculate the daily consumption for eight food groups. Participants received a score for each derived pattern. From these, a set of dummy variables were created synthesizing whether a participant belongs to the highest percentile of a particular pattern. We then investigate the association between belonging to the highest quintile of a pattern and a set of socio-demographic variables using both cross-tabulations and multivariate logistic regressions.

Results

PCA reveals four dietary patterns: the first characterized by a high consumption of fruits and vegetables; the second characterized by high intake of meat and sweets, salty snacks and sugary drinks; the third characterized by high consumption of dairy and farinaceous and the fourth characterized by a high intake of fish and a low intake of eggs. Preliminary results show that being female is associated with belonging to the highest quintile of the fruits and vegetables dietary pattern (Chi² = 14,598, p = 0,000) and that the coefficient of gender remains statistically significant in the logistic model (exp(β) = 2,128, p = 0,001).

Conclusions

Female are more than twice as likely as male to belong to the highest quintile of the healthiest dietary patterns, characterized by high intake of fruit and vegetables.

Key message

- Boys should be targeted in interventions aiming at increasing the consumption of fruits and vegetables among children