Dietary patterns are associated with attention-deficit/hyperactivity disorder (ADHD) symptoms among preschoolers in mainland China.


doi: 10.1038/s41430-018-0131-0.

Abstract

BACKGROUND/OBJECTIVES:
To identify the major dietary patterns among preschoolers and assess the relation of major dietary patterns to attention-deficit/hyperactivity disorder (ADHD).

SUBJECTS/METHODS:
A cross-sectional survey was conducted comprising a large sample of 14,912 children aged 3-6 years old in Ma'anshan city of Anhui Province in China. A semi-quantitative food frequency questionnaire and the 10-item Chinese version of the Conners' abbreviated symptom questionnaire were administered to assess usual dietary intakes and ADHD. Social-demographic information was also collected. Major dietary patterns were identified by principal components analysis. Logistic regression was employed to explore the association of dietary patterns with ADHD.

RESULTS:
Five dietary patterns were identified explaining 47.96% of the total diet variation. The "processed" dietary component was the principal pattern that explained the higher percentage of variability, 24.69%. After controlling for potential confounders, preschoolers in the top quintile of the "processed" (odds ratio (OR) = 1.56, 95% confidence interval (CI): 1.31-1.86) and "snack" (OR = 1.76, 95% CI = 1.49-2.07) dietary pattern score had greater odds for having ADHD symptoms compared with those in the lowest quintile. Lowest scores on the "vegetarian" were associated with significantly a higher likelihood of indications of ADHD symptoms (OR = 0.67, 95% CI = 0.56-0.79).

CONCLUSIONS:
This study showed that preschoolers tend to choose unhealthy dietary pattern in Ma'anshan, China. "Processed" and "snack" dietary patterns were significantly and positively correlated with ADHD symptoms, while "vegetarian" dietary patterns were negatively correlated with ADHD symptoms.