Food intake, diet quality and behavioral problems in children: results from the GINI-plus/LISA-plus studies.

BACKGROUND/AIMS: To assess the association between food intake and diet quality and behavioral problems at the 10-year follow-up of the two population-based birth cohorts of the studies German Infant Nutritional Intervention and 'Influences of lifestyle-related factors on the immune system and the development of allergies in childhood'.

METHODS: Cross-sectional data on food intake over the past year were collected by a parent-reported food frequency questionnaire. Diet quality was based on reference values of food amounts of the optimized mixed diet. Behavioral problems were assessed by a parent-reported Strengths and Difficulties Questionnaire. Relationships between food category intake, diet quality and behavior problems were examined using multivariable regression modeling adjusted for gender, sociodemographic characteristics, body mass index, physical exercise, television viewing/PC use and total energy intake. A total of 3,361 children with complete data were analyzed.

RESULTS: Children with increased intake of confectionery had increased odds of having emotional symptoms (adjusted odds ratio (OR(adj)) 1.19, 95% confidence interval (CI) 1.08-1.32) compared to children with low intake. A higher diet quality score was associated with
lower likelihood of emotional symptoms (OR(adj) 0.89, 95% CI 0.80-0.98). The unadjusted significant relationship between diet quality and hyperactivity/inattention was attenuated by adjusting for several confounders to an OR(adj) of 0.92 (95% CI 0.82-1.03). CONCLUSIONS: Increased consumption of high-sugar products and lower diet quality are associated with a higher likelihood of emotional symptoms in children.

Stichworte: Inattention; Behavior problems; Diet; Epidemiology; Depression; Attention deficit hyperactivity disorder; Psychopathology; Mental health; Child psychiatry; Nutrition; Hyperactivity

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