

overweight and 14% obese students in the city and 24% overweight and 10% obese students in the suburbs (p 0.406). Statistically significant differences were only found in the prevalence of obesity between students who have lunch at school and those who go home to have lunch (10% vs. 18%).

**Conclusion:** There was a high prevalence of overweight/obese students, which is in line with recent published results. The higher prevalence of obesity among students who have lunch at home, shows the need for a greater intervention at the family level. These results made possible a better awareness concerning the role the school can play to foster a supportive environment that promotes healthier living and eating habits.

**Keywords:** childhood obesity, eating habits.

## P06

### CHILDREN'S DIETARY PATTERNS IN ASSOCIATION WITH SOFT DRINK AVAILABILITY, FAMILY MEALS AND PARENTAL DIETARY PATTERNS: RESULTS FROM THE I.FAMILY STUDY

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**Aim:** To examine the association between children's and parental dietary patterns (DP) and if soft drink availability

during meals and shared family meals influence this association.

**Methods:** We included 1662 child–mother and 789 child–father dyads from the European IDEFICS/I.Family cohort. The energy and food intakes of 6- to 16-years-old children and their parents were assessed using repeated 24-hour dietary recalls. DPs were derived using cluster analysis separately for children and parents. The associations between children's and parental DPs and if the number of shared meals and soft drink availability influence these associations were investigated using mixed effects logistic regression models.

**Results:** Cluster analysis revealed three DPs comparable in children and parents: 'Sweet & Fat', 'Refined Cereals' and 'Animal Products'. Children were more likely to be allocated to the 'Sweet & Fat' DP if their fathers or mothers were allocated to the same DP. This was also true for the remaining DPs. Eating together strengthened these associations in child–father dyads. Furthermore, children were more likely to be allocated to the 'Sweet & Fat' DP if mother or father was also allocated to the 'Sweet & Fat' DP and if soft drinks were available (OR 2.78; 95% CI 1.80; 4.28 and OR 4.26; 95% CI 2.16; 8.41, respectively).

**Conclusion:** In prevention and intervention of childhood obesity, parents should be considered as gatekeepers for the home food availability and as role models for children's eating behavior.

## P07

### EMOTION REGULATION AND EATING BEHAVIOR IN OBESE ADOLESCENTS

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**Aim:** In this study we investigated (mal)adaptive emotion regulation strategies in obese adolescents in relation to (disturbed) eating behavior in comparison with adolescents without overweight.

**Methods:** Twenty-two adolescents (12 girls; age (mean±SD) 14.0 ± 1.1 years) with obesity (BMI 31.2 ± 4.3 kg/m<sup>2</sup>) completed the FEEL-KJ and Dutch Eating Behaviour Questionnaire (DEBQ). The results were compared with those obtained in 22 lean controls (11 girls; age 14.5 ± 1.6 years; BMI 19.1 ± 2.4 kg/m<sup>2</sup>). In the obese group the relationship between FEEL-KJ subscale and DEBQ scale was evaluated.

**Results:** Median (range) external eating was higher in the obese than in the lean subjects (2.8 (1.0–3.7) vs 1.9 (1.0–3.4); p < 0.001). Emotional eating was comparable (2.0 (1.0–3.7) vs 2.4 (1.3–3.9)). No differences in the FEEL-KJ subscales and total scales were observed between obese and lean subjects. In the obese group external eating was positively related to expression (r = 0.46; p = 0.03) and

the total adaptive score ( $r = 0.44$ ;  $p = 0.04$ ). Emotional eating was inversely related to aggressive actions ( $r = -0.54$ ;  $p = 0.01$ ).

Conclusion: The external eating behavior in obese adolescents is related to the expression of emotions. Less aggressive actions are seen in obese adolescents with emotional eating. Further studies are needed to evaluate the relationship between emotion regulation and eating behavior in obese adolescents.

Keywords: Adolescents, eating, emotion, obesity.

## P08

### SCHOOL FOR HEALTH – FOR CHILDREN, PARENTS AND TEACHERS: A NEW STRATEGIC APPROACH IN THE FIGHT AGAINST CHILDHOOD OBESITY IN BULGARIA

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Introduction: Bulgaria is the fifth country for childhood obesity among 53 member countries in Europe. The childhood obesity in Bulgaria is growing, due to bad nutritional habits and the lack of physical activity.

Aim: The Bulgarian association for the study of obesity and related diseases started the development of a new strategy to prevent obesity and its complications in children, the so-called “School for health – for children, parents and teacher”.

Methods: Every year we organize “School for health – for children, parents and teachers” which promotes a healthy lifestyle, incl. increased physical activity and good nutrition habits. Children from 6 to 12 years old together with their parents and teachers spend one week in Albena resort, on the Black sea coast. They follow a 5-time healthy menu based on the national recommendations for a healthy and balanced diet for these age groups. Furthermore, they play a variety of games and make physical activities every day. Health-care professionals in the field of nutrition and obesity give lectures with a specific focus on the healthy lifestyle in children and adults.

Results: More than 400 children and adults are participating since 2013. The compliance rate is very high. Parents and children implement a balanced nutrition and tend to be physically more active.

Conclusion: The prevention of childhood obesity has to start in early age with different approaches for children, parents and teachers. “School for health – for children, parents and teachers” is the first initiative of this kind in Bulgaria.

Keywords: prevention of childhood obesity, balanced nutrition, physical activity, lectures.

## P09

### EVALUATION OF EFFECTIVENESS OF A NEW SENSORY-BASED LABORATORY APPROACH TO ENHANCE HEALTHY FOOD CHOICES IN CHILDREN. A CASE-CONTROL STUDY

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Aim: A case-control study to test the efficacy of an innovative pedagogic approach (using a 5-sense lab) aimed to improve pupils’ nutritional choices through the stimulation of a more conscious knowledge of foods.

Methods: The educational programme Educat<sup>®</sup> was used in 3 third-year classes of a primary school (age: 8.2–9.0 years), with 3 more same-grade classes used as control group (total recruitment: 119 children). Fourteen theoretical/practical lessons were given to each “case” class during 5 months, with children tested with a food choice questionnaire at t0, after 2 (t1) months, and after 5 (t2) months. A “healthy total score” was determined for all “healthy choice” answers (vegetables, fruits, fish) and confronted across time and groups using the ANOVA analysis.

Results: 72/119 valid questionnaires: 39 (54.2%, 17M+22F) from the intervention group, 33 (45.8%, 13M+20F) from the control group. Mean total score (intervention vs. control) was:  $41.1 \pm 2.0$  vs.  $41.9 \pm 2.2$  at t0,  $43.6 \pm 2.1$  vs.  $43.8 \pm 2.3$  at t1,  $45.9 \pm 2.0$  vs.  $42.6 \pm 2.2$  at t2. Difference t0:t2 was statistically significant ( $p = 0.035$ ), thus stressing the importance of the time effect ( $p = 0.009$ ) and of the interaction time – treatment.

Conclusions: The pedagogic approach via method Educat<sup>®</sup> was successful in prompting healthy food choices after 5 months of training.

Keywords: healthy food, food choice, primary school, eating habits.