physical activity inquiry, the connection between physical activity and food intake.

**Results** The overweight prevalence was 7.1% and that of obesity 12.2%. The overweight and obese children, as compared to the normal weight ones, eat, daily, sweets (57.7%, 62.1% vs. 12.3%), soft drinks (25.9%, 39.9% vs. 5.2%), fast-food (22.8%, 36.7% vs. 9.4%), meat products (54.6%, 76.1% vs. 43.8%), fruits (16.8%, 7.3% vs. 48.5%), vegetables (41.3%, 13.9% vs. 84.5%), cereals (31.1%, 24.7% vs. 49.8%), milk products (18.1%, 32.2% vs. 62.3%). 54.7% of the overweight children and 60.1% of the obese do not perform any physical activity in their spare time, as compared to the normal weight (29.8%). The food consumption while watching TV or playing on the computer was associated with overweight and obesity in children.

**Conclusions** Following the nutritional and physical activity investigation in the school children, I noticed an alimentary abuse, both quantitative and qualitative, associated with a physical activity decrease.

### 1445 THE GROWTH AND NUTRITIONAL STATUS AMONG SCHOOL CHILDREN IN NOVI SAD IN SCHOOL YEAR 2010/2011

**Aim** To examine physical growth and nutritional status of school children in Novi Sad, during the school year 2010/2011 and determine differences in relation to primary and secondary school children.

**Methods** On the medical examination of school children aged 7–14 (primary school) and 15–19 (secondary school) in Novi Sad we registered the total number of children: with normal weight (from –1.5SD to +1.5SD), obese (+1.5 to 3SD) and thin children (from –1.5SD to –3SD); of average height (from –1.5SD to 1.5SD), tall (1.5 to 3SD) and short (–2SD, –3SD) (nomogram provided by Vukovic).

**Results** From the total number of the enrolled pupils (n=40861) we have examined 37.25% (n=15222): there were 12783 (33.9%) of average height, 2325 (15.27%) tall pupils and low height pupils 114 (0.75%); 11990 (78.77%) of well-nourished, obese 2404 (15.79%) and underweight children 828 (5.44%). After comparing the data from primary and secondary schools, a statistically significant difference, considering a total number of tall, short, obese, and thin children was in favor of primary school children (p=0.01). There were more children with normal weight in secondary schools (p=0.05), and more obese children in primary schools (p=0.05).

**Conclusion** During 2010/2011, the assessment of growth and nutritional status results of school children were in favor of primary school children. There were more children with normal weight children in secondary schools, and more obese children in primary schools, but the differences were not significant.

### 1446 INFANT FEEDING CHOICES MAY HAVE GENDER EFFECT ON GROWTH DURING INFANCY

**Background and Aims** A retrospective analysis of healthy Japanese children was conducted to determine whether the growth pattern is altered by breast-feeding (BF) or formula-feeding (FF).

**Methods** The data of 204 elementary students, age 6 to 9 years were obtained from their parents by questionnaires. The BF and FF group were defined as those fed by only breast milk or formula at 4 months of age. Seventy-one children (31 boys, 40 girls) were in BF and 30 (19 boys, 11 girls) were in FF. The anthropometric data at birth, 1, 4, 7, 10, 18, 36 months-old and investigation time in BF was compared to those in FF.

**Result** No significant differences were observed in the anthropometric data between BF and FF girls. The BF boys mean body weight (BW) at 18 months was almost 1,000g lower than those in FF. The BW-SD score was significantly smaller from 4 to 18 months, and BMI was lower from 10 to 36 months in BF boys. However, both BWSD and BMI had no differences between BF and FF boys from 6 to 9 years. Multiple regression analyses showed that the birth weight, prepregnancy BW, and infant feeding choice were significant factors associated with BWSD, and feeding choice was the only significant factor associated with BMI at 18 and 36 months.

**Conclusion** Infant feeding choices may have gender effect on growth during infancy. When we evaluate infant growth, we should consider not only infant feeding choices, but also gender, birth weight and prepnegancy BW.

### 1447 WEIGHTING THE FACTORS ASSOCIATED WITH CHILDREN OBESITY: AN INTERNATIONAL PERSPECTIVE TOWARD AN UNIFIED MODEL

**Aim** To examine physical growth and nutritional status of school children in Novi Sad, during the school year 2010/2011 and determine differences in relation to primary and secondary school children.

**Methods** On the medical examination of school children aged 7–14 (primary school) and 15–19 (secondary school) in Novi Sad we registered the total number of children: with normal weight (from –1.5SD to +1.5SD), obese (+1.5 to 3SD) and thin children (from –1.5SD to –3SD); of average height (from –1.5SD to +1.5SD), tall (+2SD, +3SD) and short (–2SD, –3SD) (nomogram provided by Vukovic).

**Results** From the total number of the enrolled pupils (n=40861) we have examined 37.25% (n=15222): there were 12783 (33.9%) of average height, 2325 (15.27%) tall pupils and low height pupils 114 (0.75%); 11990 (78.77%) of well-nourished, obese 2404 (15.79%) and underweight children 828 (5.44%). After comparing the data from primary and secondary schools, a statistically significant difference, considering a total number of tall, short, obese, and thin children was in favor of primary school children (p=0.01). There were more children with normal weight in secondary schools (p=0.05), and more obese children in primary schools (p=0.05).

**Conclusion** During 2010/2011, the assessment of growth and nutritional status results of school children were in favor of primary school children. There were more children with normal weight children in secondary schools, and more obese children in primary schools, but the differences were not significant.

### 1448 EARLY FORMULA FEEDING PRACTICES AND THEIR POTENTIAL CONTRIBUTION TO LATER OBESITY RISK

**Background and Aims** Early feeding practices, including early introduction to solid foods and overfeeding, are known risk factors for childhood obesity. This study aimed to assess maternal formula feeding practices and infant formula feeding patterns, factors that are known to potentially contribute to later obesity risk.

**Methods** This Irish prospective observational study involved the recruitment and follow-up of 450 eligible mother-infant pairs to 6 weeks postpartum. Data related to formula milk consumption patterns, formula type/brand changing, additions of solids to bottle