

BACKGROUND AND AIMS

Based on self-reported data from the Health Behaviour in School-aged Children (HBSC) study, overweight and obesity in Estonia has increased from 4% to 11% among girls and from 8% to 17% among boys between 2002 and 2014 [1]. However, recent data from the National Dietary Survey 2014, where anthropometric measurements were performed, showed that the overweight and obesity were much more prevalent: 25% among 6-9 years old girls and boys, and 24% among 10-13 years old girls and 36% among boys [2].

The aims of joining the WHO Childhood Obesity Surveillance Initiative (COSI) were to measure trends in overweight and obesity in primary school children; to describe the evolution of the school environment in relation to those characteristics that can positively affect children's attitude towards healthy behaviours; to establish a national surveillance system based on the exploitation of the country's existing experience and capabilities; and to produce data, allowing the comparison with other European countries by adopting COSI's standards and main methodological features.

METHODS

Estonia joined COSI in 2015.

All first grade children (7-8 years old) from primary schools in the school year 2015/2016 were invited to participate in the study.

In order to guarantee intercountry comparability, the standardised child's and school's record forms with core questions were applied. In addition to body height and weight, waist and hip circumferences were measured. The anthropometric measurements were performed according to the prescribed techniques and instructions, using standardized, highly accurate and precise equipment: mobile flat scale SECA 878, Tanita HR 001 portable height measure, and ergonomic circumference measuring tape Seca 210. Body weight was recorded to the nearest 100 g, and the readings for height, waist and hip measurements were taken to the last complete millimetre.

The study protocol was approved by the Tallinn Medical Research Ethics Committee. All parents of participating children signed an informed consent.

The data collection was performed in April-May in 2016 by trained examiners and school nurses from Tallinn and Tartu School Health organisations under the supervision of the National Institute for Health Development.

In total, 381 schools out of 497 (77%) participated in the study. The main reasons for non-participation were refusal by the school (N=48, 41%), small (less than 10 pupils) and distant schools (N=34, 29%), the proposed time was unsuitable (N=11, 10%). The participation rate of children was 83% (12,805 pupils out of 15,457). About 4% (N=664) of the children missed the study because they were absent from school on the day of measurement, parents of 456 children (3%) did not give consent for participation, 23 children (0,1%) refused to participate themselves and the remaining ~10% were not included in the study because their schools did not participate.

RESULTS

The results presented are preliminary.

The distribution of participated children by age and sex is presented in **Table 1**.

According to the WHO criteria [3] there were about 23% overweight and obese children among 7- and 8-year-old girls, while the prevalence among boys was close to 30% among both ages, **Figure 1**. When considering International Obesity Task Force (IOTF) criteria [4], the prevalence of overweight and obese children reduced to 20% and the difference between sexes disappeared, **Figure 2**.

Table 1 Number of measured children belonging to the target age group (98.4% of all measured children)

	7 years	8 years
Boys	2 974	3 477
Girls	3 261	2 893
Total	6 235	6 370

Figure 1 Overweight and obesity among Estonian 7- and 8-year-old children by sex according to WHO criteria [3]

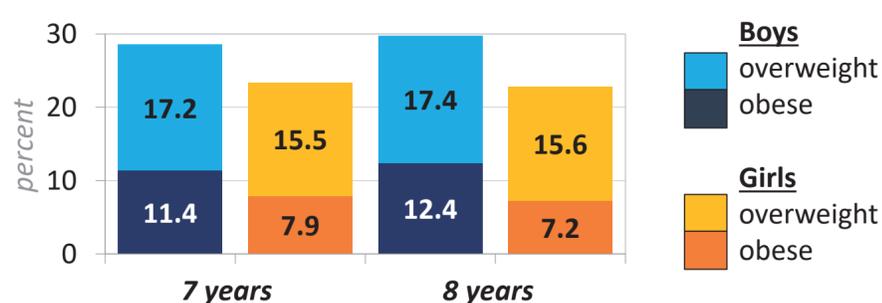
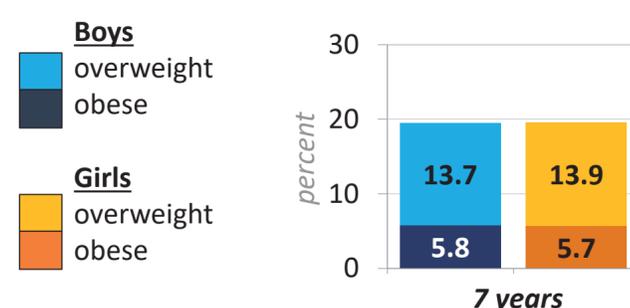


Figure 2 Overweight and obesity among Estonian 7- and 8-year-old children by sex according to IOTF criteria [4]



DISCUSSION AND CONCLUSIONS

The prevalence of overweight and obesity among Estonian children has notably increased during the recent years. About 1/3 of boys and 1/4 of girls in COSI were overweight or obese. These results are comparable with data obtained two years earlier from the National Dietary Survey [2], while the self-reported data based on the HBSC study [1] are markedly underestimated.

Further detailed analyses are needed to find associations with background factors such as children's physical activity and school environment.

REFERENCES

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