

# Central obesity among European preschool children: The ToyBox-Study

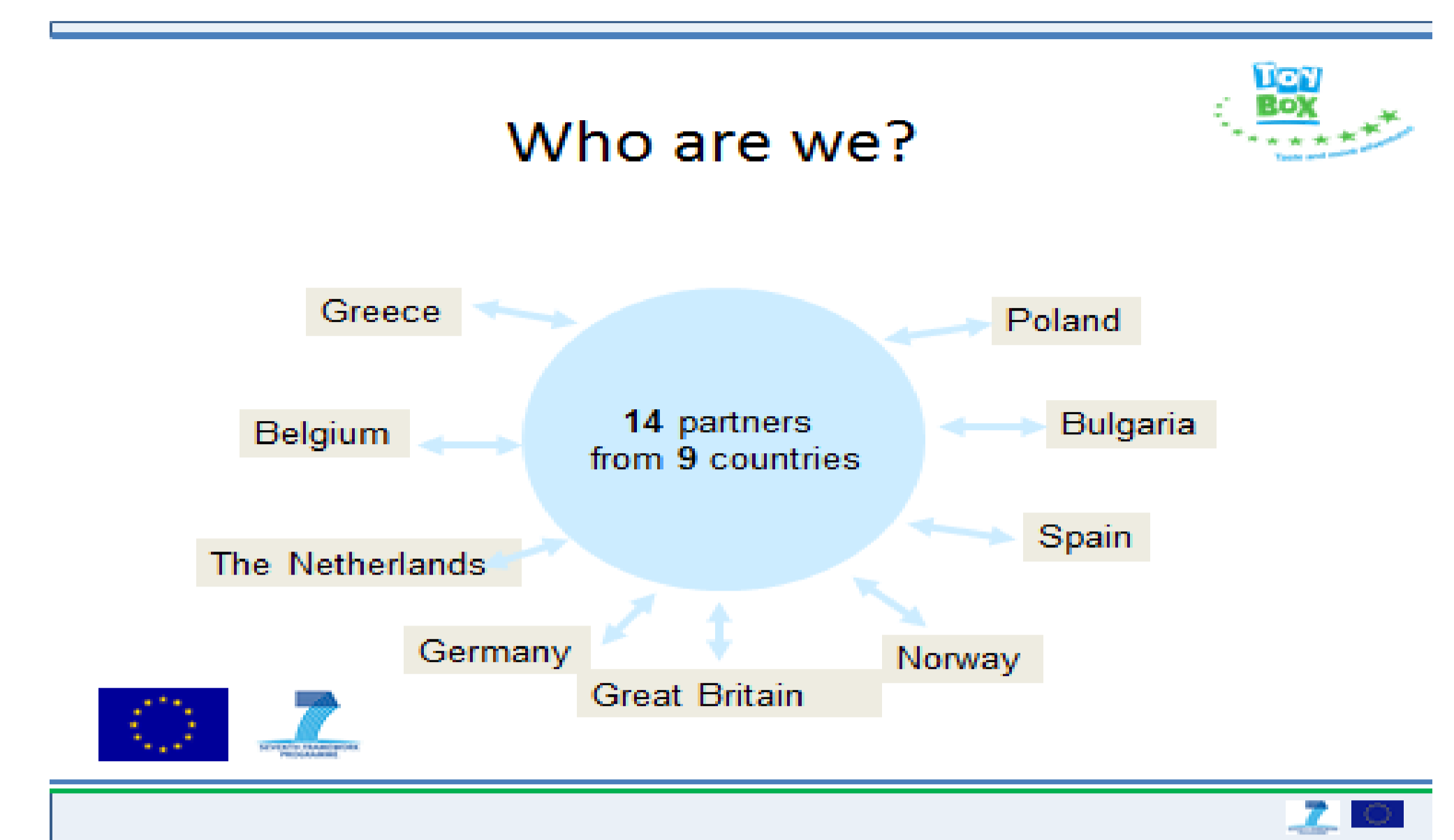
S. Galcheva<sup>1</sup>, M. Lateva<sup>1</sup>, V. Iotova<sup>1</sup>, O. Androutsos<sup>2</sup>, I. de Bourdeaudhuij<sup>3</sup>, G. Cardon<sup>3</sup>, P. Socha<sup>4</sup>, L. Moreno<sup>5</sup>, B. Koletzko<sup>6</sup>, Y. Mannios<sup>2</sup>, on behalf of the ToyBox Study Consortium

<sup>1</sup>Varna Medical University, Bulgaria, <sup>2</sup>Harokopio University, Athens, Greece, <sup>3</sup>Ghent University, Belgium, <sup>4</sup>Children's Memorial Health Institute, Poland, <sup>5</sup>University of Zaragoza, Spain, <sup>6</sup>University of Munich, Germany

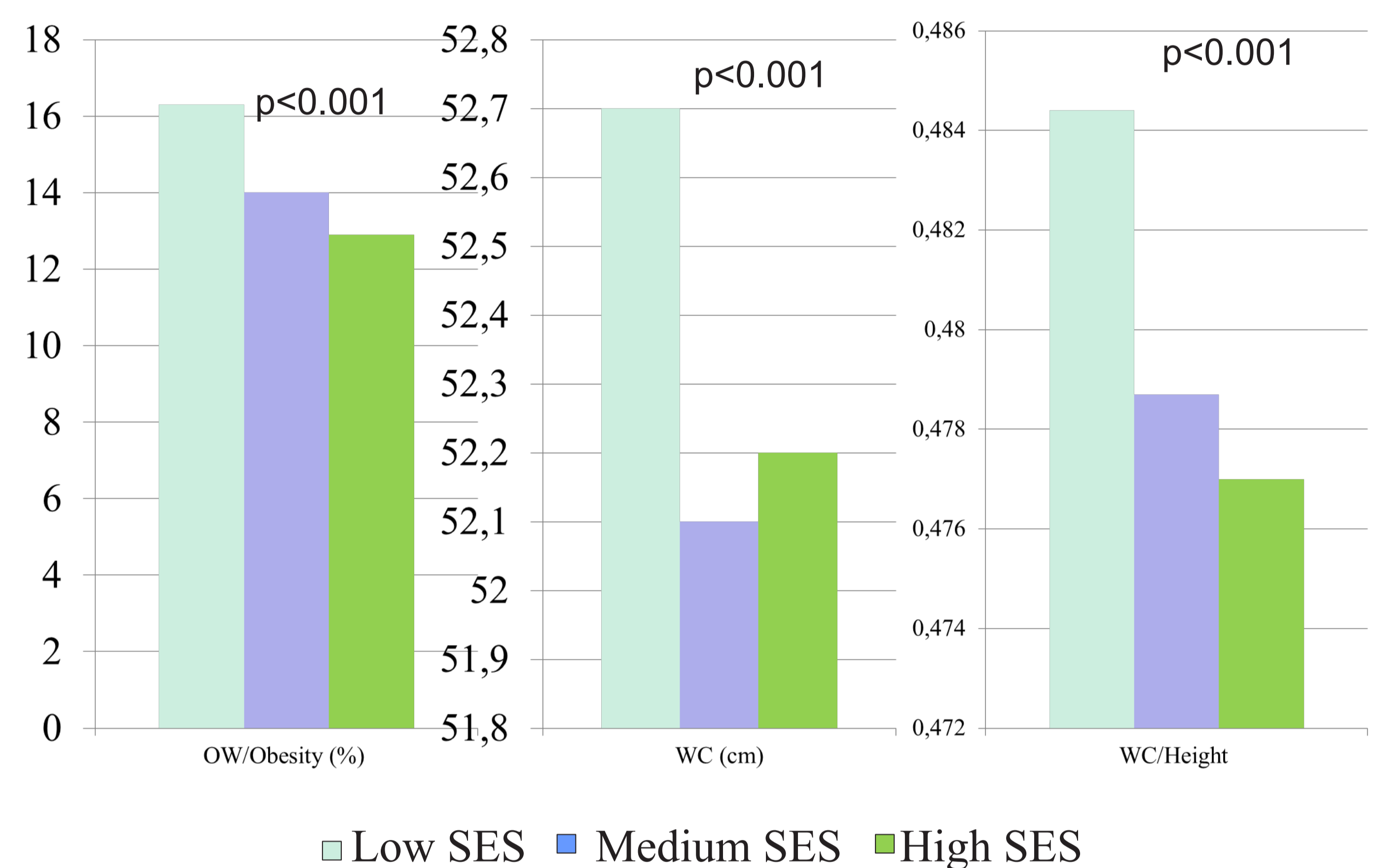
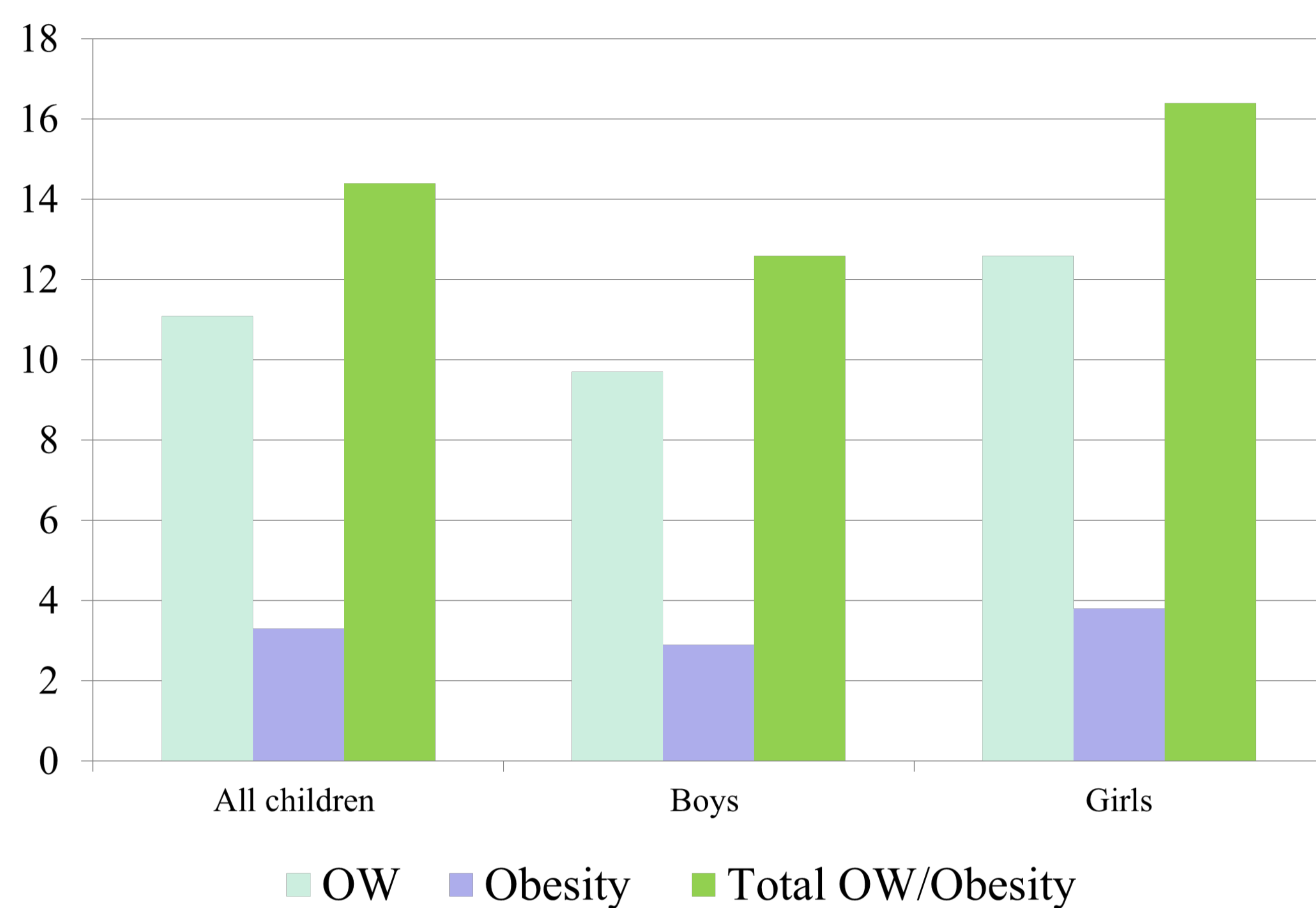
## OBJECTIVE

To evaluate the distribution of WC measures among preschool children aged 3.5-5.5 years from six European countries.

- Waist circumference (WC):
- reflects the fat distribution and the degree of central adiposity in children
- is specifically associated with cardiovascular risk factors
- is useful as a component of metabolic syndrome definition in children

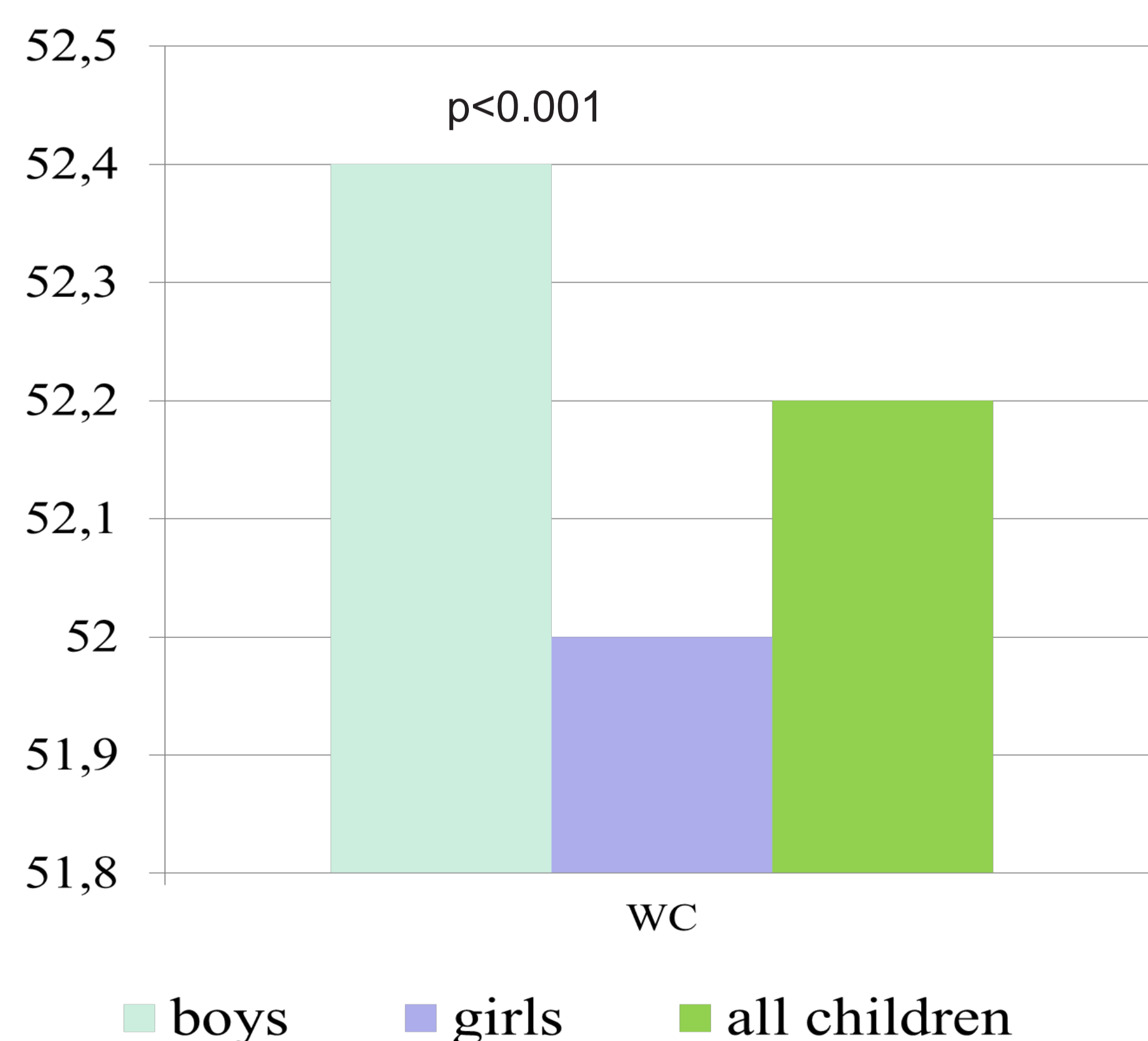


## Prevalence of overweight/obesity (%) according to demographic and SES data



## Participants

- Cross-sectional baseline study of **7527** pre-school children from six European countries - Belgium, Bulgaria, Germany, Greece, Poland and Spain ([www.toybox-study.eu](http://www.toybox-study.eu))
- Mean age **4.74±0.44** years, 52.0% boys.
- The prevalence of **overweight (OW) and obesity (OB)** was defined according to the IOTF BMI criteria (Cole et al., 2000).

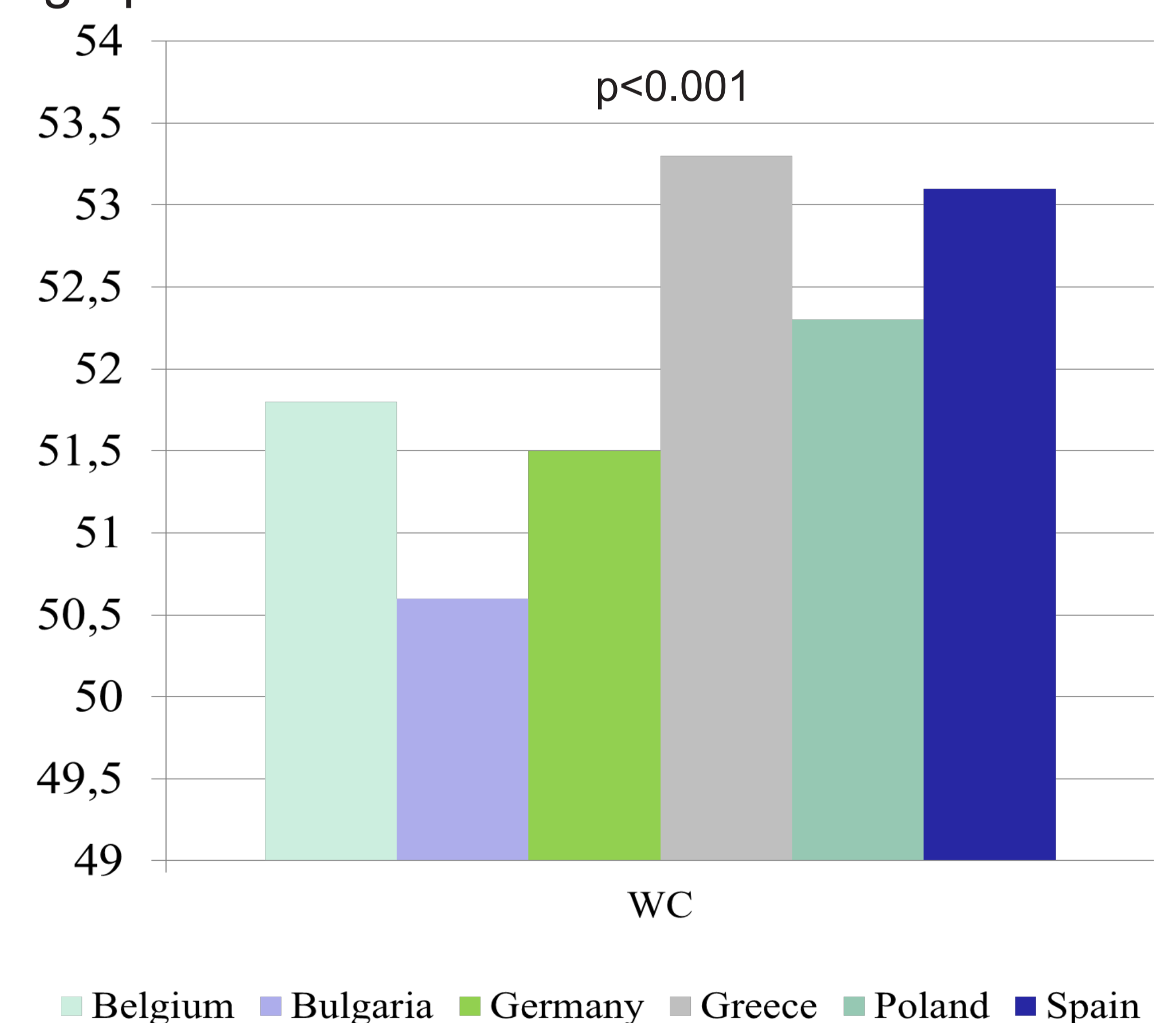


- Abdominal obesity with WHtR above 0.5 was found in 23.6 % (21.7 % boys vs. 25.7% girls, p<0.001).

- The 90<sup>th</sup> percentile value for WC was higher in girls compared to boys (57.4 vs. 57.1 cm).

## Methods

- **Body weight, height and waist circumference (WC)** were measured using standard procedures and medical equipment. BMI and waist-to-height ratio (WHtR) were calculated (Obes rev, S3, 2014).
- The prevalence of **abdominal obesity (AO)** – defined as WHtR values >0.5
- A **standardized questionnaire** was used to collect information on SES and demographic data.



## CONCLUSION

The ToyBox study adds data to our knowledge on abdominal obesity among preschoolers in Europe, highlighting the need to identify new strategies to decrease it.

Disclosure statement: No conflict of interest

Contact details: [sonya\\_galcheva@mail.bg](mailto:sonya_galcheva@mail.bg)