

Distribution of obesity indices among European preschool children and associated risk factors: the ToyBox-study

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Childhood obesity :

- is a serious health problem, with increasing prevalence worldwide
- is related with an increased risk of adult morbidity and mortality
- begins early in life
- central adiposity increases the cardiometabolic risk to a higher degree compared to the general obesity indices.

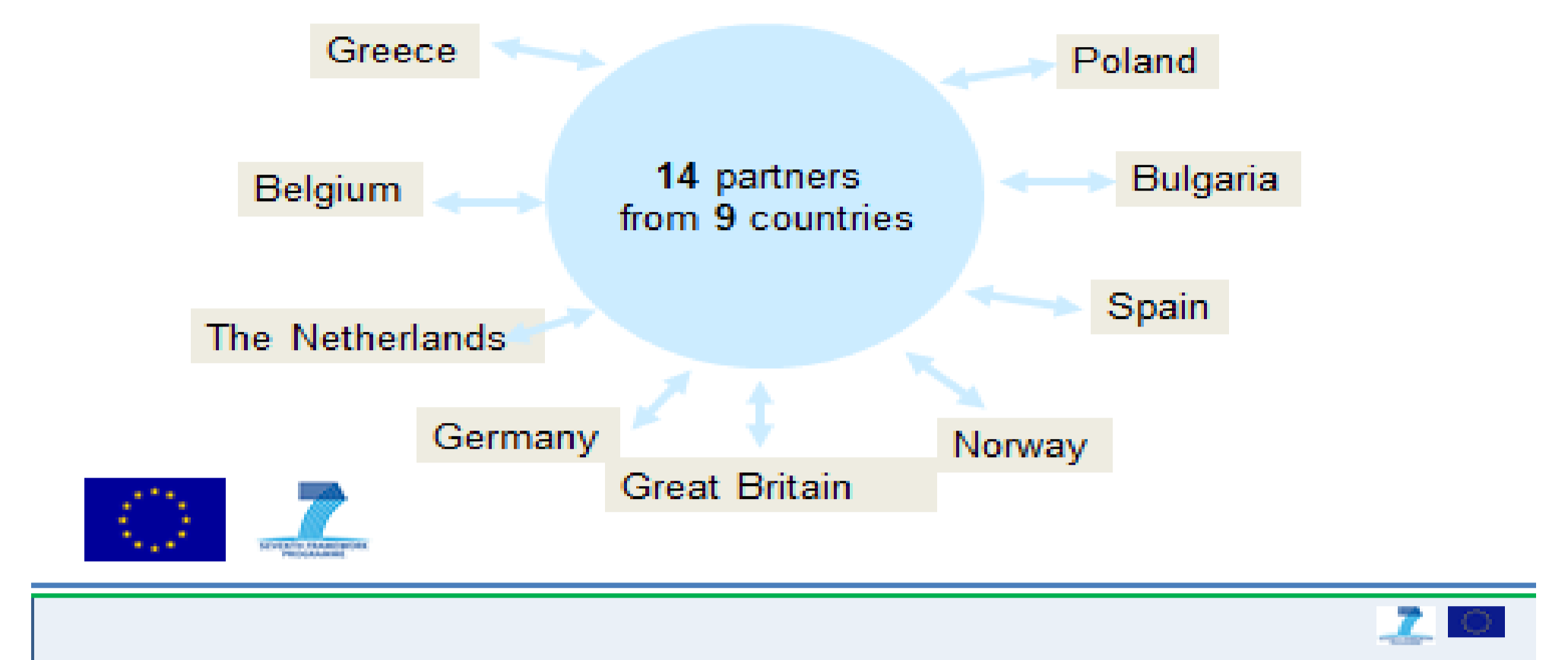
Participants

- Cross-sectional baseline study of **7576** children from six European countries - Belgium, Bulgaria, Germany, Greece, Poland and Spain
- Mean age **4,74±0,44** years, 51,9% boys.
- The prevalence of **overweight (OW) and obesity (OB)** was defined according to the IOTF BMI criteria (Cole et al., 2000).

OBJECTIVE

To evaluate the distribution of the anthropometric obesity indices among preschool children aged 3.5-5.5 years, from six European countries, and to examine their associations with certain obesity-related risk factors.

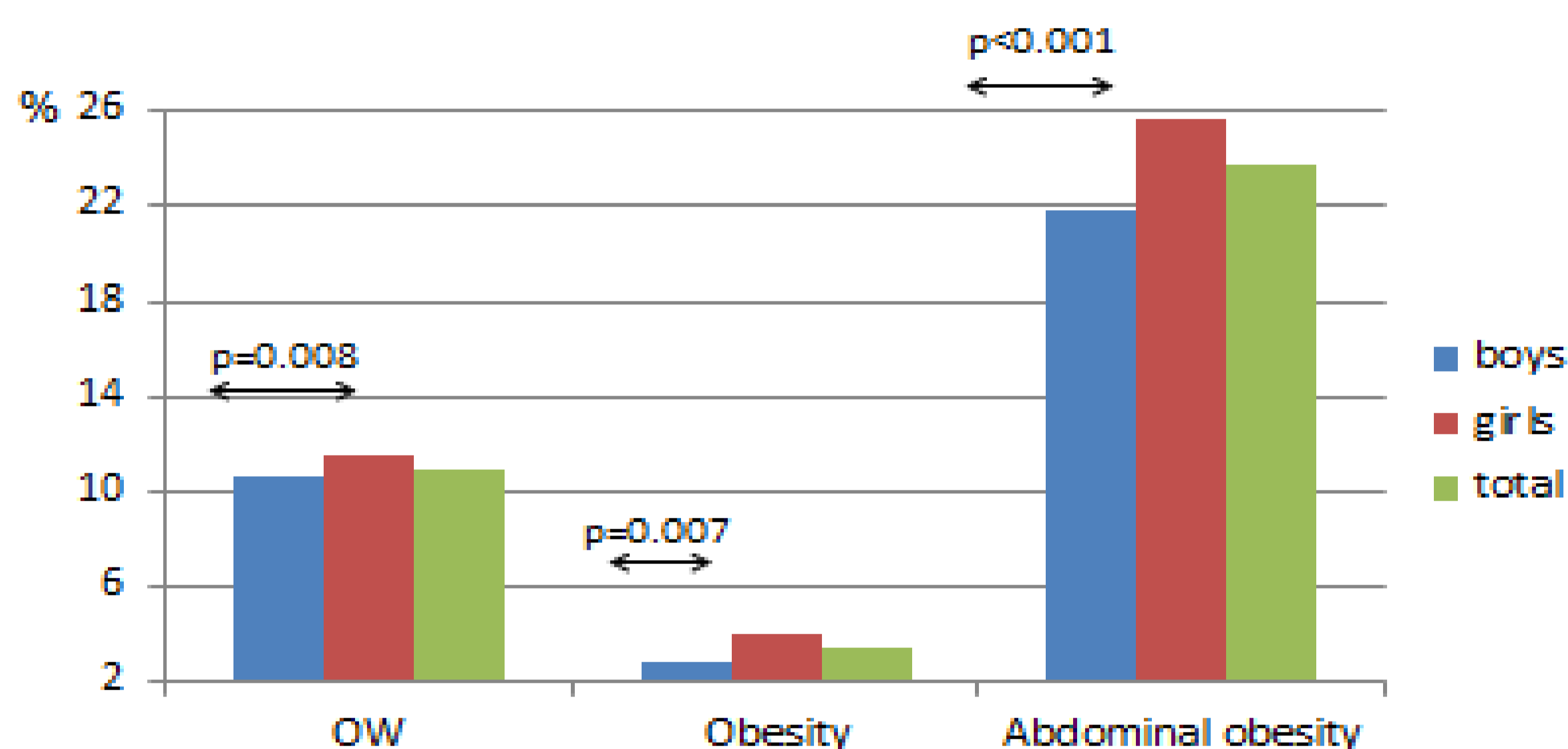
Who are we?



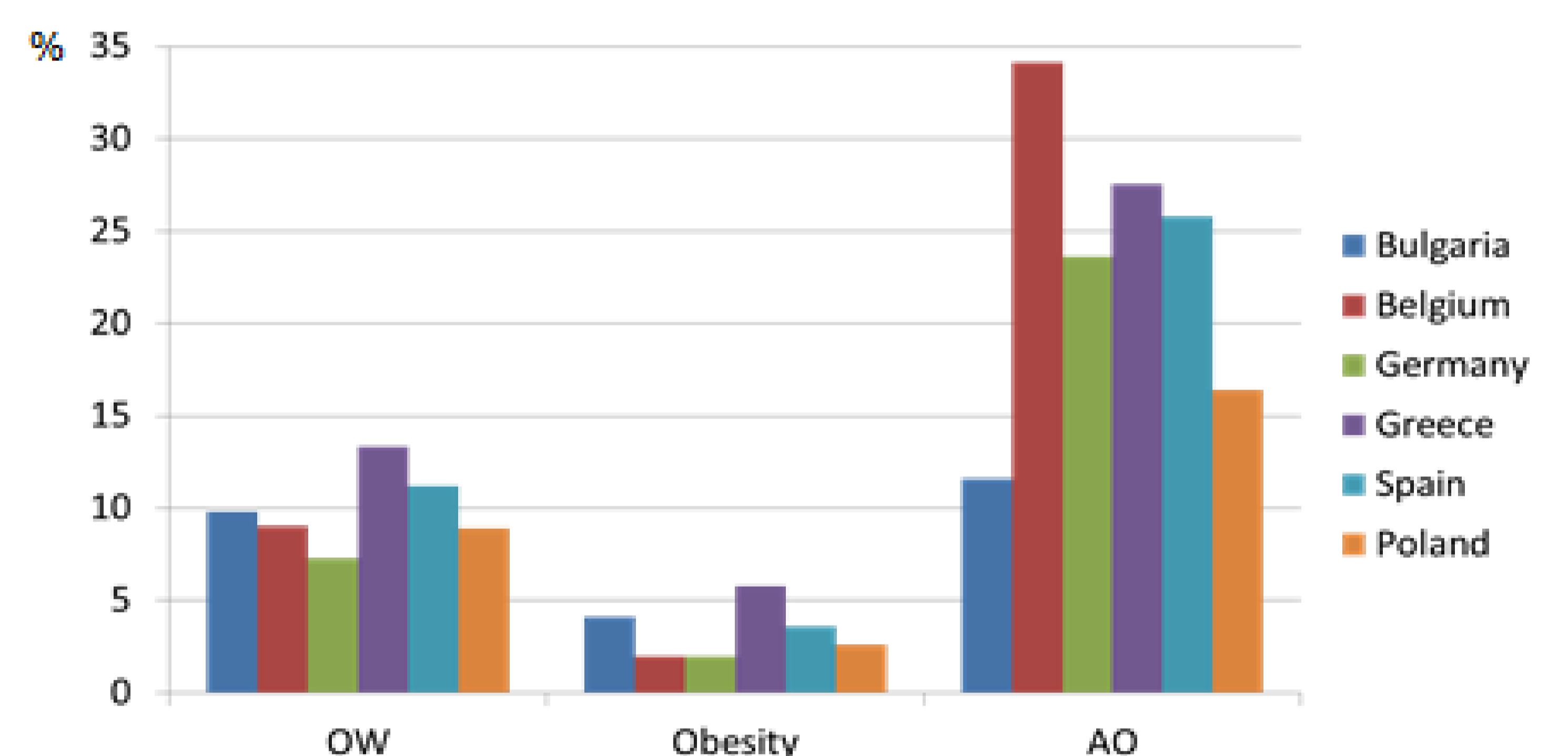
Methods

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

Prevalence of overweight, total and abdominal obesity



Weight status according to the nationality of the participants



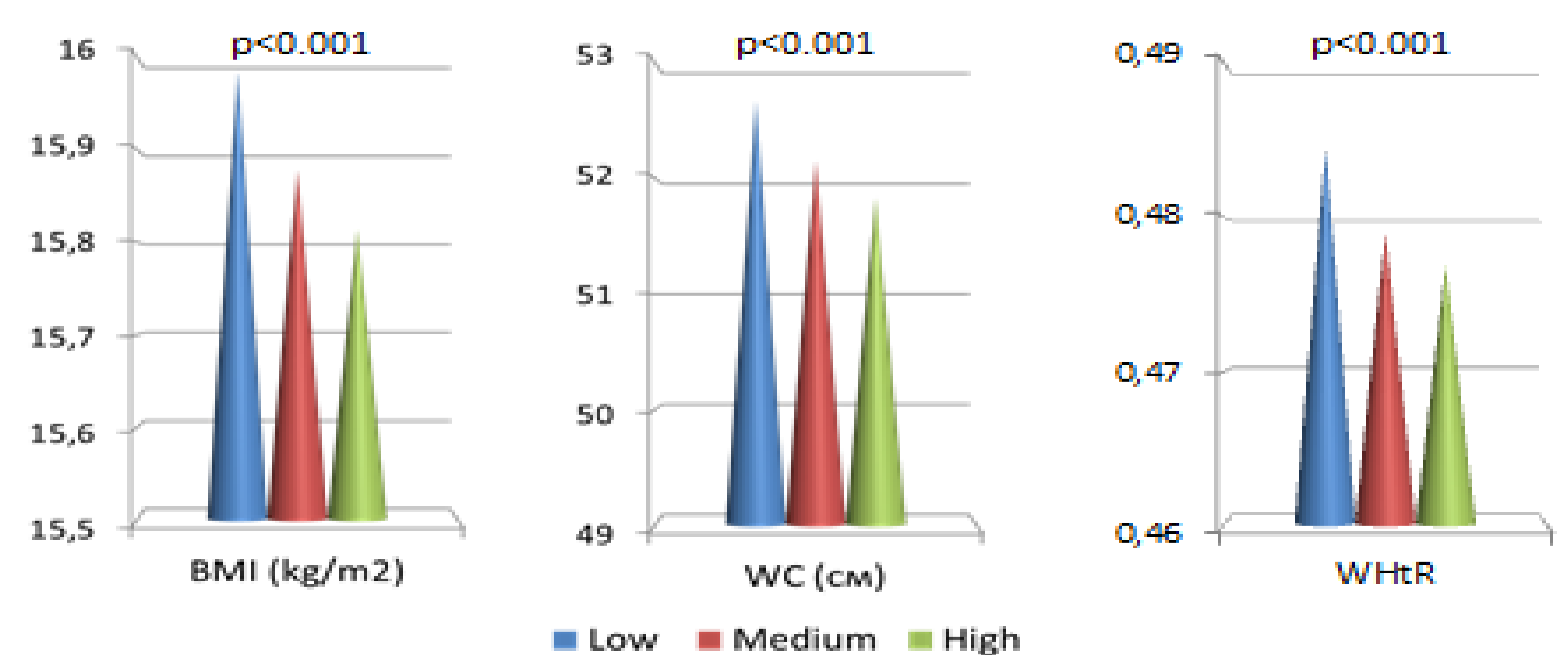
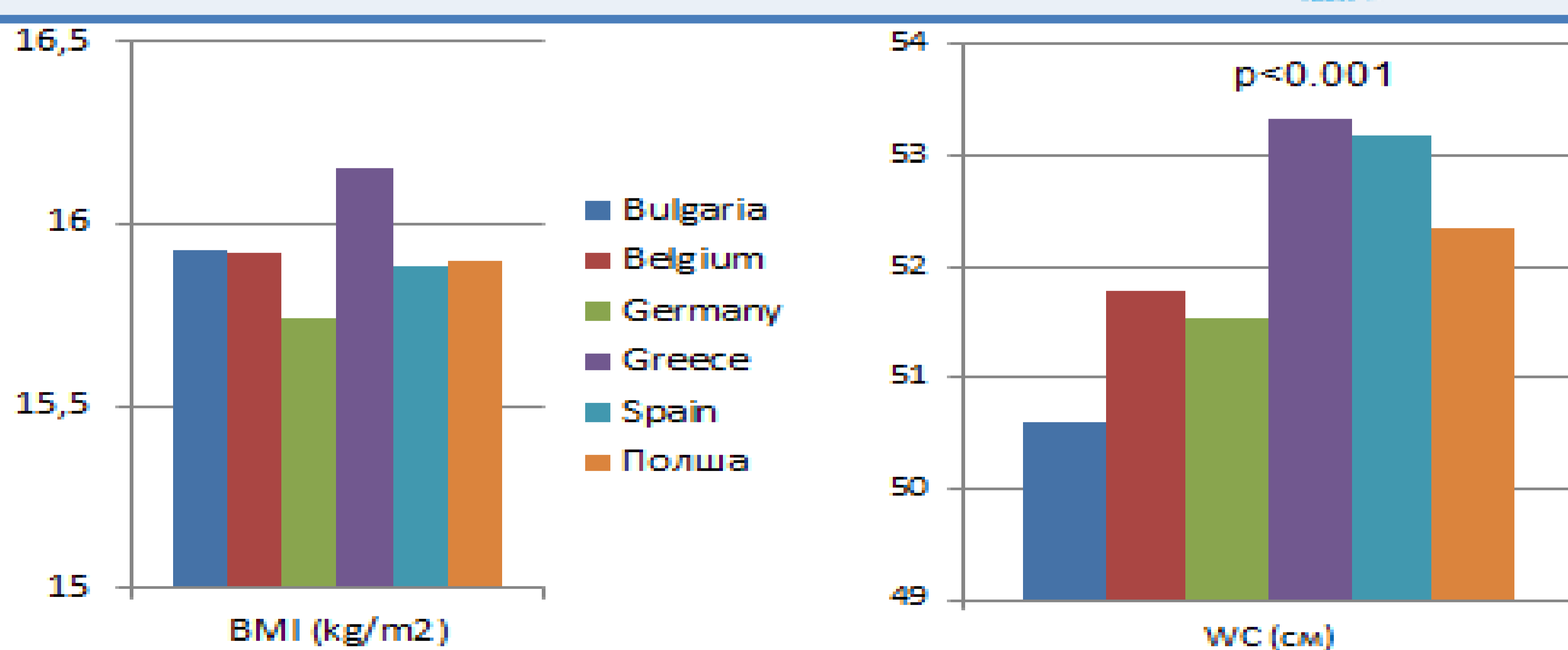
❖ Anthropometric indices correlated significantly with:

- the pre-gestational maternal weight ($r_{\text{BMI}}=0.215$, $r_{\text{WC}}=0.221$, $r_{\text{WHtR}}=0.147$, $p<0.01$)
- maternal BMI ($r_{\text{BMI}}=0.217$, $r_{\text{WC}}=0.176$, $r_{\text{WHtR}}=0.153$, $p<0.01$)
- the birthweight of the children ($r_{\text{BMI}}=0.139$, $r_{\text{WC}}=0.147$, $p<0.05$).

❖ In the group of obese children we found:

- significantly higher parental BMI and pre-gestational maternal weight ($p<0.001$)
- significantly higher maternal weight gain during pregnancy ($p=0.048$)

Weight status according to the SES of children



CONCLUSION

- The estimated obesity prevalence among preschoolers in Europe is of concern highlighting the need to identify cost-effective strategies to decrease it. [<sonya_galcheva@mail.bg>](mailto:sonya_galcheva@mail.bg)

