DETERMINANTS OF VALIDITY OF SELF-REPORTED BMI IN AUSTRIAN ADULTS

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Background and aim: Self-reported data on body weight and height are conflicting in adults. Therefore the aim of this study was to evaluate the validity of self-reported weight and height and to examine associated socio-demographic determinants.

Methods: Data of 473 Austrian adults (> 18 years) were collected standardised in a public outpatient in a city in southern Austria. We compared self-reported and anthropometric data on weight and height by different socio-demographic characteristics.

Results: Based on self-reported data on BMI the prevalence of overweight (BMI: 25 – 29.9 kg/m²) was overestimated, while those for obesity (BMI: > 30 kg/m²) was underestimated ($p < 0,001$). Anthropometric measurements revealed an overweight prevalence of 37,2% and an obesity prevalence of 12,5%. A multiple linear regression analysis was performed and demonstrated that age was the only significant predictor that was associated with the difference between measured and reported BMI ($p < 0.001$). The difference in the two oldest age groups increased significantly (age group 46 – 55 years: B = -0.39 kg/m², p = 0.026; age group 56 years and older: B = -0.70 kg/m², $p < 0.001$). Bland-Altmann plots also showed that the agreement between reported and measured BMI was lower in older study participants (mean difference: -0.60 kg/m², 95 % CI - 2.64 kg/m² - 1.44 kg/m²).

Conclusions: Data on self-reported weight and height are a valid method for BMI estimates of overweight and obesity in epidemiological studies for younger adults. But they are limited for adults aged 46 years and older. Analyses based on self-reported data should therefore be adjusted for the age-dependency of the validity.