The geographic distribution of obesity in the US and the potential regional differences in misreporting of obesity.

Objective: State-level estimates of obesity based on self-reported height and weight suggest a geographic pattern of greater obesity in the Southeastern US; however, the reliability of the ranking among these estimates assumes errors in self-reporting of height and weight are unrelated to geographic region. Design and Methods: Regional and state-level prevalence of obesity (body mass index ≥ 30 kg m⁻²) for non-Hispanic black and white participants aged 45 and over were estimated from multiple sources: self-reported from the behavioral risk factor surveillance system (BRFSS 2003-2006) (n = 677,425), self-reported and direct measures from the National Health and Nutrition Examination Study (NHANES 2003-2008) (n = 6,615 and 6,138, respectively), and direct measures from the REasons for Geographic and Racial Differences in Stroke (REGARDS 2003-2007) study (n = 30,239). Results: Data from BRFSS suggest that the highest prevalence of obesity is in the East South Central Census division; however, direct measures suggest higher prevalence in the West North Central and East North Central Census divisions. The regions relative ranking of obesity prevalence differs substantially between self-reported and directly measured height and weight. Conclusions: Geographic patterns in the prevalence of obesity based on self-reported height and weight may be misleading, and have implications for current policy proposals.

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