OBESITY AND OBESITY-RELATED BEHAVIORS AMONG RURAL AND URBAN ADULTS IN THE UNITED STATES

Tushar Trivedi, Sonya J. Jones, Jihong Liu, Amy Brock Martin, Anwar T. Merchant, Janice C. Probst

1Department of Epidemiology and Biostatistics, University of South Carolina, Columbia, SC, USA
2South Carolina Rural Health Research Center, University of South Carolina, Columbia, SC, USA
3Department of Health Services Policy and Management, University of South Carolina, Columbia, SC, USA
4Department of Health Promotion, Education and Behavior, University of South Carolina, Columbia, SC, USA
5Center for Research in Nutrition and Health Disparities, University of South Carolina, Columbia, SC, USA

*Presenting Author Email: trivedi@email.sc.edu

Abstract (limited to 350 words)

PURPOSE: Previous studies have reported higher prevalence of obesity among rural Americans. However, it is not clear whether obesity-related behaviors can explain the higher level of obesity among rural adults. The purpose of this study was to examine the differences in obesity-related behaviors across rural-urban adult populations in the United States.

METHODS: Data came from the 1999-2006 National Health and Nutrition Examination Survey, restricting to 14,039 participants aged 20 years or more. Height and weight was measured and individuals with body mass index (BMI) ≥ 30 were categorized as obese. Physical activity recommendations were used to define participants’ physical activity (PA) levels: no leisure-time PA, less than, meeting, and exceeding the recommended levels. Sedentary behaviors were measured by hours sitting and watching TV or videos or using a computer (outside of work). Dietary intake was assessed by one-day, 24-hour dietary recall. Residence was measured at the Census tract level using the Rural-Urban Commuting Area Codes. Multiple logistic regression models were used to examine urban-rural differences after adjusting for socio-demographic, health, dietary and lifestyle factors.

RESULTS: The prevalence of obesity was higher in rural than urban residents (35.6 percent versus 30.4 percent, P < 0.01), among both men (37.7 percent versus 32.5 percent, P < 0.01) and women (33.4 percent versus 28.2 percent, P < 0.01). Compared to urban adults, more rural adults reported no leisure-time PA (38.8 percent versus 31.8 percent, P < 0.01) and fewer rural adults meeting or exceeding physical activity recommendations (41.5 percent versus 47.2 percent, P < 0.01). Rural adults had lower intake of fiber and fruits and higher intake of sweetened beverages. After adjustments, the odds of being obese among rural residents were 1.19 times higher than that among urban residents (95 percent confidence interval, 1.06-1.34). In the adjusted model, lower physical activity, higher screen time, low fruit consumption, high meat intake, and skipping breakfast were associated with increased odds of obesity.

CONCLUSION: Rural residence was associated with higher prevalence of obesity, physical inactivity, and poorer diet among adults in the United States. Effective programs are needed to help rural residents to reduce high risks for obesity and unhealthy lifestyles.