Obesity Transition and Inequalities by Sociodemographic Factors in Korean Adults, 1998–2018

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Objectives: To investigate the obesity transition and inequalities by socio-demographic factors in Korea, we examined the nationwide overall and abdominal obesity trends and its association with sociodemographic factors in Korean adults (aged 19–79 years) in 1998–2018.

Methods: In the Korea National Health and Nutrition Examination Survey 1998–2018 (n = 85,262), we estimated the age-standardized prevalence of overall (body mass index [BMI)$\geq$25kg/m^2) and abdominal obesity (waist circumference [WC]$\geq$90 cm) in men and $\geq$85cm in women) in each sociodemographic subgroup. Weight, height, and WC were measured by medical staff. Logistic regression was performed to estimate odds ratios (ORs) and 95% confidence intervals (CIs) for the associations between obesity prevalence and sociodemographic factors after mutual adjustment for all sociodemographic factors under study. All analyses accounted for a complex survey design.

Results: During the study period, the prevalence of overall and abdominal obesity increased in men (24.8% to 42.4%; 20.1% to 32.1%; respectively) but only a small change was observed in women (26.5% to 26.0%; 22.7% to 20.9%; respectively). When stratified by sociodemographic groups, obesity prevalence similarly increased in all groups of men but, in women, the trends varied across groups. In women, income (2016–2018: OR = 0.66, 95% CI = 0.56–0.78 overall obesity; OR = 0.60, 95% CI = 0.51–0.71 abdominal obesity) and education (OR = 0.62, 95% CI = 0.54–0.72 overall obesity; OR = 0.58, 95% CI = 0.50–0.68 abdominal obesity) were inversely associated with obesity prevalence, and the gaps between the groups became wider and solidified since 2007.

Conclusions: This is the largest and the most recent study including the entire survey phases of the KNHANES data (I-VII). Our data suggest that the inequalities in obesity prevalence by sex (men higher than women) and by socioeconomic status (women in lower-socioeconomic group higher than women in higher-socioeconomic group) have increased over time. These findings indicate that targeted, customized preventive strategies are needed to prevent further increase in obesity and related disease burdens in Korea.

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