

Socioeconomic Disparities in the Prevalence of Obesity in Adults with Diabetes in Israel

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Abstract : Background: Obesity is both a risk factor and common comorbidity of diabetes. Obesity impedes the achievement of glycemic control, and enhances damage caused by hyperglycemia to blood vessels; thus it increases diabetes-related complications. This study assessed the prevalence of obesity and morbid obesity among Israeli adults with diabetes, and estimated disparities associated with sex and socioeconomic position (SEP). Methods: A cross-sectional study was conducted in the setting of the Israeli National Program for Quality Indicators in Community Healthcare. Data on all the Israeli population is retrieved from electronic medical records of the four health maintenance organizations (HMOs). The study population included all Israeli patients with diabetes aged 20-64 with documented body mass index (BMI) in 2016 (N=180,451). Diabetes was defined as the existence of one or more of the following criteria: (a) Plasma glucose level >200 mg% in at least two tests conducted at least one month apart in the previous year; (b) HbA1c>6.5% at least once in the previous year (c) at least three prescriptions of diabetes medications were dispensed during the previous year. Two measures were included: the prevalence of obesity (defined as last BMI \geq 30 kg/m² and <35 kg/m²) and the prevalence of morbid obesity (defined as last BMI \geq 35 kg/m²) in individuals aged 20-64 with diabetes. The cut-off value for morbid obesity was set in accordance with the eligibility criteria for bariatric surgery in diabetics. Data were collected by the HMOs and aggregated by age, sex and SEP. SEP was based on statistical areas ranking by the Israeli Central Bureau of Statistics and divided into 4 categories, ranking from 1 (lowest) to 4 (highest). Results: BMI documentation among adults with diabetes was 84.9% in 2016. The prevalence of obesity in the study population was 30.5%. Although the overall rate was similar in both sexes (30.8% in females, 30.3% in males), SEP disparities were stronger in females (32.7% in SEP level 1 vs. 27.7% in SEP level 4; 18.1% relative difference) compared to males (30.6% in SEP level 1 vs. 29.3% in SEP level 4; 4.4% relative difference). The overall prevalence of morbid obesity in this population was 20.8% in 2016. The rate among females was almost double compared to the rate in males (28.1% and 14.6%, respectively). In both sexes, the prevalence of morbid obesity was strongly associated with lower SEP. However, in females, disparities between SEP levels were much stronger (34.3% in SEP level 1 vs. 18.7% in SEP level 4; 83.4% relative difference) compared to SEP-disparities in males (15.7% in SEP level 1 vs. 12.3% in SEP level 4; 27.6% relative difference). Conclusions: The overall prevalence of BMI \geq 30 kg/m² among adults with diabetes in Israel exceeds 50%; and the prevalence of morbid obesity suggests that 20% meet the BMI-criteria for bariatric surgery. Prevalence rates show major SEP- and sex-disparities; especially strong SEP disparities in morbid obesity among females. These findings highlight the need for greater consideration of different population groups when implementing interventions.

Keywords : diabetes, health disparities, health policy, obesity, socio-economic position

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