Children's Hospital of Philadelphia PolicyLab

Disparities in Body Mass Index Trajectories From Adolescence to Early Adulthood for Sexual Minority Women

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PURPOSE: We aimed to estimate group-based trajectories of body mass index (BMI) in a longitudinal cohort of young women and determine the association between sexual identity and BMI trajectory group, adjusting for obesity risk factors.

METHODS: We analyzed data from females in waves I–IV of the National Longitudinal Study of Adolescent to Adult Health. Sexual identity was categorized as heterosexual, mostly heterosexual, bisexual, or lesbian (homosexual/mostly homosexual). We conducted group-based trajectory modeling of BMI with a censored normal distribution and a cubic relationship with age to identify three BMI trajectory groups. Multinomial logit regressions predicted the risk of trajectory membership associated with sexual identity, adjusting for background characteristics.

RESULTS: At wave I, the mean (n = 7,801) age was 15.9 years (95% confidence interval: 15.6–16.1). Subjects were 16.3% African-American; and 80.0% heterosexual, 15.9% mostly heterosexual, 2.5% bisexual, and 1.7% lesbian. Group-based trajectory modeling identified three BMI trajectory groups characterized as (1) minimal obesity (62.2%), (2) developing obesity (29.9%), and (3) progressive obesity (8.0%). In multinomial logit regressions adjusted for age, race, parental obesity and education, sexual abuse, household income, screen time, depressive symptoms, and rural residence, lesbian women had a nearly two-fold higher relative risk of being in the developing obesity trajectory group (relative risk ratio = 1.91, 95% confidence interval: 1.10–3.32) relative to the minimal obesity group, compared with heterosexual women.

CONCLUSIONS: Lesbian women were at increased risk of membership in the developing obesity trajectory group compared with heterosexual women. Adjusting for obesity risk factors had minimal impact on the point estimates for this association.

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