The effect of incarceration on adult BMI trajectories, U.S. 1981-2006

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Objective

This study builds upon prior work on the effects of incarceration on health by examining how incarceration affects body mass index during imprisonment and over the life course, and if these effects vary by race/ethnic-education subgroups.

Method

This study uses data from the National Longitudinal Survey of Youth, examining the effects of incarceration on body mass index (BMI) trajectories of adults ages 18-49.

Outcome: BMI based on self-reported height and weight.

Key independent variables: age, education, race/ethnicity, period effects, and incarceration indicators:

- 1. Currently incarcerated.
- 2. Never incarcerated, currently incarcerated, or released.
- 3. Ever incarcerated.
- 4. Number of times previously incarcerated.
- 5. Number of years of current incarceration spell.

Statistical method: BMI trajectories were analyzed over age using growth curve models stratified by sex.

Results

BMI increases steadily and begins to flatten in older ages (Fig 1). BMI scores have increased linearly by year.

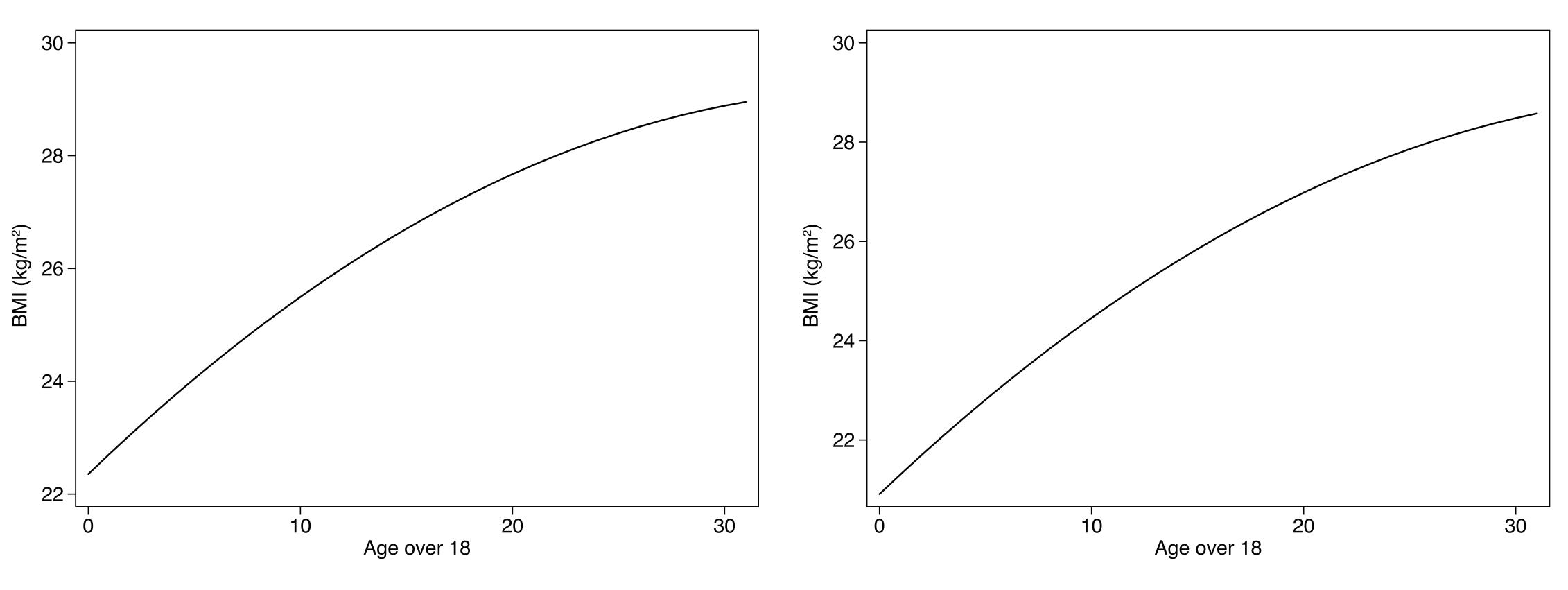


Fig 1: Unconstrained growth curves, (left) men (right) women.

For men, Hispanics and blacks show a greater rate of increase through adulthood than whites. Those with more than a high school diploma have a lower BMI. For women, Hispanics and blacks show a greater rate of increase through adulthood than whites. Those with more than a high school diploma show a greater rate of increase through adulthood.

For men, incarceration increases BMI (Fig 2), particularly for black men. The increase is similar across most education groups, except for a decrease in the effect of incarceration for those with more than a high school diploma.

For women, incarceration increases BMI over the lifespan but affects race/ethnic groups similarly (Fig 2). There is also a decrease in the effect of incarceration on BMI for those with more than a high school diploma who were incarcerated.

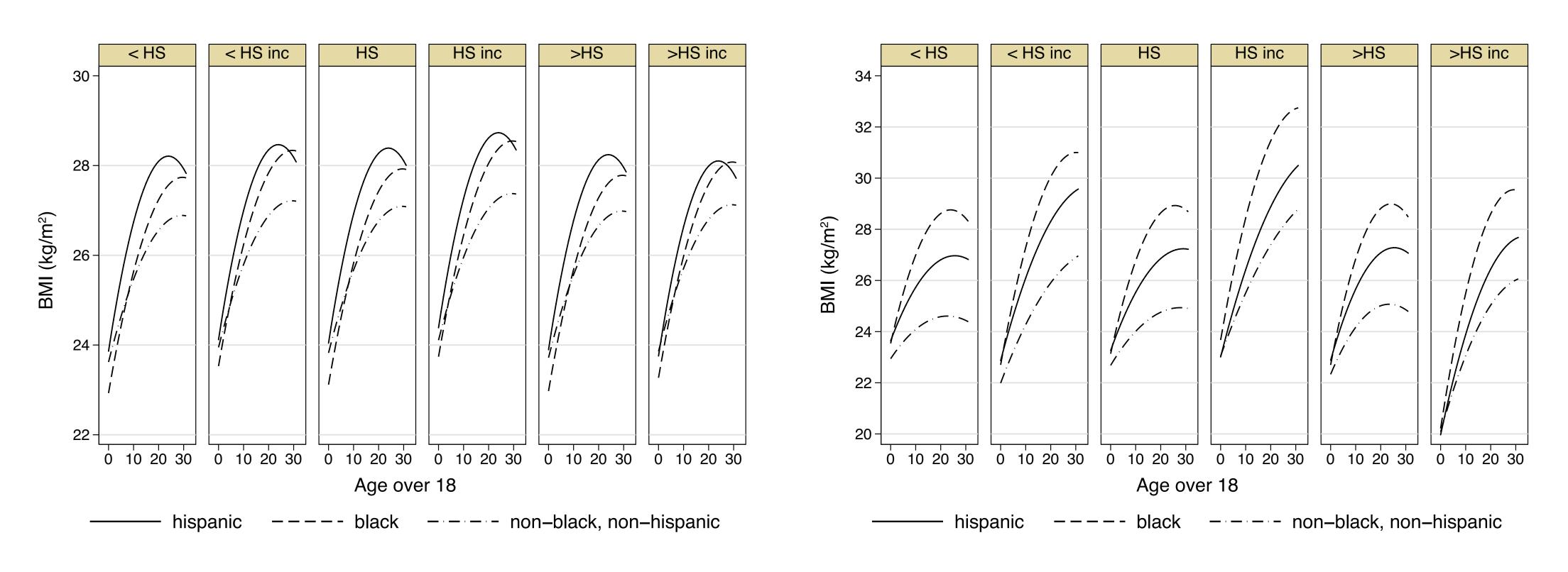


Fig 2: Incarceration growth curves, (left) men (right) women. Summary Incarceration affects adult BMI trajectors, both during incarceration and with cumulative exposure, and these effects vary for some race/ethnic-education groups while imprisoned. Given that these groups are most commonly imprisoned, incarceration may help structure obesity disparities and disadvantage over the life course.

For both men and women, each previous incarceration spell increases BMI for all race/ethnic-education groups.