



# Racial discrimination as a mediator between job control and health

John D. Meyer, MD MPH  
Dept. of Environmental and Occupational Health Sciences  
SUNY-Downstate School of Public Health, Brooklyn NY  
Dept of Preventive Medicine, Stony Brook University School of Medicine

## Background

Racial discrimination and work in a job with low decision authority and autonomy (job control) are both important determinants of health and chronic disease. Our previous work has consistently found lower job control in black subjects contrasted with whites.

The objective of this study was to determine whether job-related racial discrimination was responsible, at least in part, for this finding. As well, our goal was to assess whether individual-level discrimination, or conversely structural segregation into jobs, was the stronger determinant of the contrast in job control. Finally, we hypothesized more broadly that racial discrimination functions as a mediator on the pathway that extends from education through job control to health and health outcomes.

## Methods

Data were extracted from the two waves of the **Survey of Midlife in the United States** (MIDUS I and II) from 1995 and 2005.

Job Control scores were aggregated from the nine items in the Job Content Questionnaire (JCQ) given to subjects in 1995. Racial discrimination in work was measured by aggregating the response to questions on discrimination by race with those that indicated the source (here discrimination in hiring, and denial of a promotion at work) and number of times occurring. These were reduced to three categories: never, once and more than once. Educational attainment was taken from the 1995 survey and categorized as non-high school graduate, high school graduate, some college, and bachelors degree or greater. Self-rated health was taken from the 2005 survey.

Analyses were performed using a random-effects ANOVA model controlling for demographic variables and education. Path analyses in Mplus were performed to model the effects of job discrimination on job control in the 1995 survey and their association with subsequent self-reported health ten years later in the 2005 survey.

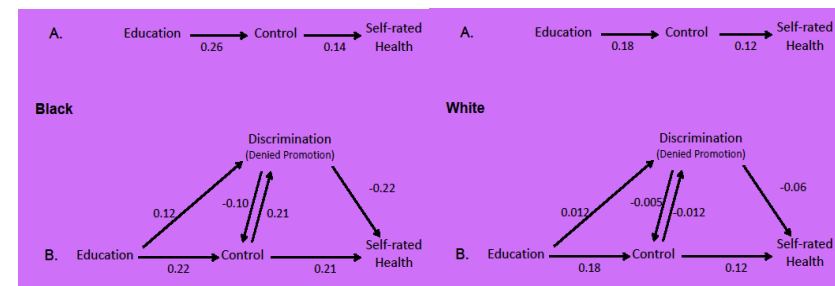
## Results

	Mean Control: White	Mean Control: Black	Difference	p	Variance coefficient (OR)	p for variance coefficient	Model fit (-2 LL)
Simple ANCOVA	32.98	30.34	<b>2.64</b>	<0.001	3.84	0.085	3839
With occupation as random effect	32.18	30.35	<b>1.83</b>	0.003	1.98	0.014	3809
With race and occupation interaction term	32.18	30.41	<b>1.77</b>	0.007	1.44	0.007	3806
With two discrimination measures as covariates	32.14	31.53	<b>0.61</b>	0.50	1.38	0.007	3555

## Conclusions

- Individual job-related racial discrimination is an important mediator in the assessment of job control.
- The effect appears to be independent of structural segregation into jobs in this dataset.
  - Interaction term between race and occupation was small
  - Magnitude of effect of individual-level discrimination was greater than job-race interaction

- Results suggest that educational attainment in blacks is not matched by equivalent gains in job autonomy and authority.
- Prolonged diminution of job control in blacks may play a role in 'weathering' and erosive effects of discrimination on health.



**Figure:** Path analysis models for effects of job control on self-rated health for Black (left) and White (right) subjects

A. Direct effects pathway from education through job control

B. Mediation by job discrimination variable (denied job promotion because of discrimination)

Overall mediation pathway significant in Blacks (RMSEA <0.001) but not Whites (RMSEA=0.11). In Blacks, discrimination was more likely in subjects with higher education and higher job control