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Title: Occupational demography and health status: Is job segregation bad for your health?

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Introduction

In this study, I investigate the role of occupational demographic composition on self-reported physical and mental health status among employed adults in the United States. Although racial-ethnic job segregation has been studied as a predictor of economic outcomes (i.e. wages), it has only recently been linked to health outcomes. Recent studies have found that individuals who work in occupations with greater concentrations of black and Latino workers face an increased risk of work injury (Berdahl 2008, Berdahl and McQuillan 2008) and public health researchers have questioned whether occupational ghettos place minority workers at risk for worse health (Murray 2003).

Racial-ethnic disparities in health status for minorities are well documented (IOM 2002, DHHS 1999), but the role of job exposure is relatively unexplored using nationally representative data. Racial-ethnic health disparities may reflect exposure to hazardous work environments that are associated with poor health status. This analysis explores these themes and highlights the role of racial-ethnic occupational segregation, occupational skill levels, occupational physical demands and environmental exposures in understanding demographic health disparities. I draw on theories of occupational context (Grodsky & Pager 2001) and occupational racial-ethnic and gender inequality (England et al 1994, Huffman & Cohen 2004) to understand why occupational segregation levels influence the health of minority and white workers.

Data and Sample

Data on individuals' self-reported physical and mental health status and individual characteristics come from the Medical Expenditure Panel Surveys (MEPS), sponsored by the Agency for Healthcare Research and Quality. MEPS is a series of surveys based on clustered and stratified samples of households that provide nationally representative estimates of healthcare use, expenditures, and insurance coverage for the U.S. non-institutionalized population (Cohen, Monheit & Beauregard 1996). The survey also contains a rich set of data on social and demographic characteristics of that population, including detailed occupation categories.

Data on occupational characteristics come from the United States 2000 Census Public Use Microdata 1 percent sample (Ruggles et al 2004) and the Occupational Information Network (O*Net) version 14.0 (Boese et al 2001) Demographic characteristics of occupations are constructed using national aggregates at the Census 2000 detailed occupation level. Occupational work environment characteristics are constructed from the O*Net at the 2000 Census level. These occupation characteristics are merged to individual MEPS respondents by attaching variables matched to detailed Census 2000 occupation codes for current jobs.

Preliminary Findings

I include preliminary findings from two sets of logistic regression models predicting 1) the odds of poor self-rated physical health and 2) the odds of poor self-rated mental health among currently employed adults. These preliminary models provide evidence that occupation-level demographic variables are significant predictors of both health outcomes, although the patterns of associations are unique for each outcome.

The coefficients in Table 1 indicate that individuals who work in occupations with greater concentrations of black workers have an elevated risk of poor health. This effect remains when controlling for individual race-ethnicity and a set of key demographic variables at both the individual and occupational level. Each percentage point increase in the overall percent of black workers in occupations is associated with a 1.9% increase in the odds of reporting fair or poor physical health. In the model controlling for occupational characteristics (model 4) the individual level racial-ethnic disparities are not statistically significant.

The coefficients in Table 2 show different patterns. Although the percentage of black and Asian workers in occupations is significantly associated with elevated risk of reporting fair/poor mental health, in the final model only the percentage of Asian workers in an occupation is associated with poor mental health. Individual level racial-ethnic disparities are not initially significant but become evident after controls are included in Model 4. Physically demanding occupations are protective for self-rated mental health.

Future Analysis

I plan to extend this analysis in 2 ways. First, I will estimate models with interactions for individual race-ethnicity and occupational race-ethnicity to determine whether individual race-ethnicity moderates the associations between occupational segregation measures and health outcomes. Second, I will conduct hierarchical generalized logistic regression models (HGLM) using HLM 6.08 to further explore the role of occupational and individual characteristics (Raudenbush & Bryk 2002).

Table 1: Logistic regression predicting the odds of reporting fair or poor physical health, employed adults 2002

	Model 1		Model 2		Model 3		Model 4	
	OR	se	Or	se	OR	se	OR	se
<i>Occupational characteristics</i>								
% Black workers in occupation	1.029***	0.006	1.025**	0.007			1.019*	0.007
% Asian workers in occupation	1.004	0.011	1.011	0.011			1.012	0.011
% Latino workers in occupation	1.01**	0.003	1.005	0.004			0.999	0.004
% Female workers in occupation			1.000	0.002			0.998	0.002
% workers with college degree			.991**	0.003			0.996	0.003
Physical demands			0.944	0.149			0.935	0.159
Environmental exposures			1.003	0.124			0.972	0.125
<i>Individual characteristics</i>								
Black (white=reference category)					1.450***	0.154	1.143	0.137
Asian					1.247	0.270	1.223	0.279
Latino					1.495***	0.153	1.025	0.108
Female							1.195	0.115
Age (years)							1.027*	0.013
Married							1.044	0.084
Income (poor/near poor=reference category)								
Low income							.842	0.129
Moderate income							.617***	0.076
High income							.526***	0.070
Education (less than HS=reference category)								
High School graduate							.640***	0.065
College graduate							.473***	0.072
Professional graduate							.470***	0.094

Exponentiated coefficients; standard errors second column.

*p<.05, ** p<.01, *** p<.001

Table 2: Logistic regression predicting the odds of reporting fair or poor mental health, employed adults 2002

	Model 1		Model 2		Model 3		Model 4	
	OR	se	OR	se	OR	se	OR	se
<i>Occupational characteristics</i>								
% Black workers in occupation	1.038***	0.009	1.025*	0.010			1.019	0.010
% Asian workers in occupation	1.028*	0.013	1.038**	0.013			1.044**	0.014
% Latino workers in occupation	1.006	0.004	1.000	0.006			0.992	0.006
% Female workers in occupation			1.003	0.002			1.00	0.002
% workers with college degree			.983***	0.005			0.991	0.005
Physical demands			0.702	0.159			0.543*	0.137
Environmental exposures			1.215	0.204			1.335	0.222
<i>Individual characteristics</i>								
Black (white=reference category)					1.036	0.157	0.659*	0.118
Asian					0.982	0.309	0.932	0.288
Latino					0.992	0.136	0.648*	0.100
Female							1.310	0.195
Age (years)							1.017	0.023
Married							.645***	0.072
Income (poor/near poor=reference category)								
Low income							.626**	0.106
Moderate income							.368***	0.062
High income							.266***	0.047
Education (less than HS=reference category)								
High School graduate							.640**	0.088
College graduate							.472**	0.113
Professional graduate							.331**	0.115

Exponentiated coefficients; standard errors second column.

*p<.05, ** p<.01, *** p<.001

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