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What does "occupation" represent as an indicator of socioeconomic status?: Exploring occupational prestige and health

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ABSTRACT

The association between socioeconomic status (SES) and health has been widely documented. However, the role of occupation in this association is not clear because occupation is less often used than income and education as an indicator of SES, especially in the United States. This may be caused by the ambiguity in what occupation represents: both health-enhancing resources (e.g., self-affirmation) and health-damaging hazards (e.g., job stress). SES has two aspects: resources and status. While income and education represent resources and imply status, occupational prestige is an explicit indicator of the social status afforded by one's occupation. Using data from the US General Social Survey in 2002 and 2006 ($n = 3151$), we examine whether occupational prestige has a significant association with self-rated health independent from other SES indicators (income, education), occupational categories (e.g., managerial, professional, technical, service), and previously established work-related health determinants (job strain, work place social support, job satisfaction). After all covariates were included in the multiple logistic regression model, higher occupational prestige was associated with lower odds of reporting poor/fair self-rated health. We discuss potential mechanisms through which occupational prestige may impact health. Our findings not only suggest multiple ways that occupation is associated with health, but also highlight the utility of occupational prestige as an SES indicator that explicitly represents social standing.
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Introduction

The impact of socioeconomic status (SES) on health has been an important topic for public health research in the last several decades (Adler & Rehkopf, 2008; Curtiss & Grahn, 1980; Kaplan & Keil, 1993; MacIntyre, 1997). By now it is well-established that those with higher SES have better health (Adler & Newman, 2002; Evans & Kantrowitz, 2002; Kivimäki et al., 2007; Lemelin et al., 2009). Various mechanisms linking SES and health have been proposed, such as material deprivation (Benach, Yasui, Borrell, Sáez, & Pasarin, 2001), a sense of personal control and mastery (Taylor & Seeman, 2006), stress (Dressler, Oths, & Gravlee, 2005), and the quality of healthcare (van Ryn & Burke, 2000). These mechanisms are not mutually exclusive and most likely work simultaneously.

SES is partly determined by individuals' occupation (MacIntyre, 1997), which reflects their educational level, provides income, and signals their social standing. However, the association between health and occupation is complex because occupation can be a source of both health-enhancing factors (e.g., self-affirmation) and harmful exposure (e.g., stress) (Adler & Newman, 2002). To explore the role of occupation as a determinant of health, we examine *occupational prestige*, an aspect of occupation that has been rarely discussed in scholarship on health. Occupational prestige represents the perception of a job's social status (MacKinnon & Langford, 1994). Unlike other SES measures (e.g., income, education), which represent individuals' material and human resources and only imply their social status, occupational prestige directly measures the social standing of the job and job holder (Nakao & Treas, 1994). Using US national data, we investigate whether occupational prestige explains self-rated health status beyond the effects of other SES measures and job-related health determinants.

Occupation as an SES indicator

Occupation has been used, mainly in European countries, as a marker of social stratification (Krieger, Williams, & Moss, 1997). Most notably, the British Registrar General's social schema, a five-level categorization system, was used in the Whitehall studies to show strong health gradients among British civil servants (Marmot

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et al., 1991). In contrast, researchers in the US have rarely used occupation as an SES indicator (Barbeau, Krieger, & Soobader, 2004; Braveman et al., 2005; MacDonald, Cohen, Baron, & Burchfiel, 2009). Some argue that occupation merely represents the education required for the job and earning potential (Nam & Boyd, 2004); thus, if information on income and education is available, occupation is not needed. However, some US studies have found occupational gradients in health beyond the effects of income and education (e.g.,Barbeau et al., 2004; Fujishiro et al., 2010).

A more common approach to occupation in the US is to link specific occupations to specific health conditions. For example, material handlers and car mechanics have a high likelihood of developing chronic obstructive pulmonary disease (COPD) (Hnizdo, Sullivan, Bang, & Wagner, 2002). The underlying assumption is that certain jobs expose individuals to specific health hazards. It is generally true that workers in hazardous jobs (e.g., construction workers, chemical plant workers) tend to have lower income and education levels, and therefore are classified lower in the socioeconomic hierarchy than those in less hazardous jobs (e.g., accountants, librarians). One could argue that high likelihood of occupational hazard exposure is part of low SES. This approach is useful in studying specific health conditions (e.g., COPD) with known causal factors (e.g., chemical fumes, dusts). However, to examine health and occupation as an SES indicator, researchers must consider occupation as more than simply a source of hazard exposure (Adler & Newman, 2002).

When occupation is included in health research as an SES indicator, the US Census categories (e.g., managerial, professional, clerical, service, blue-collar) are commonly used (Kaplan & Keil, 1993). Braveman et al. (2005) point out that the census categories are "not intended—and do not appear to be meaningful—as SES measures" (p. 2883). In fact, using the National Longitudinal Mortality Study data, Gregorio, Walsh, and Paturzo (1997) demonstrated that there was no linear trend in all-cause mortality risk across the Census occupational categories (e.g., the relative risk of mortality for managerial/professional occupations did not differ from farming occupations). Because it is unclear as to what occupational categories represent, researchers have difficulty understanding what mechanisms cause differences in health status among these categories.

Since occupational categories have ambiguous meanings as an SES indicator (Adler & Newman, 2002; Braveman et al., 2005), a more precise conceptualization of occupation is needed as we investigate the association between SES and health. We propose that *occupational prestige*, an innate component of occupation, reflects a unique aspect of SES not directly represented by occupational categories, income, or education. Specifically, we argue that occupational prestige explicitly represents the social status afforded by a particular occupation.

Occupational prestige as an indicator of the "status" aspect of SES

SES is an individual's position within the social structure, which determines his or her available resources (Lynch & Kaplan, 2000; Oakes & Rossi, 2003). Krieger et al. (1997) distinguish two aspects of SES: "(a) actual resources, and (b) status, meaning privilege- or rank-based characteristics" (p. 246). Actual resources are ones an individual already has, such as education, material wealth, and social support. Status, on the other hand, concerns potential availability of resources when needs arise. The higher the social status, the more access to potential resources. High status may be achieved through high income and education, but this status is only inferred but not explicitly measured. In contrast, occupational prestige is an explicit indicator of social status (Nakao & Treas, 1994).

Occupational prestige represents a collective, subjective consensus on occupational status (Xu & Leffler, 1992); that is, it indicates how members of a community collectively evaluate the social standing of a job. Occupational prestige is a measure of power, according to Donald Treiman, who observed a remarkable consistency in occupational prestige ranking across social contexts. To explain the consistency, Treiman (1976) reasons: "Since occupations are differentiated with respect to power, they will in turn be differentiated with respect to privilege and prestige" (p. 289). Being able to access and control resources is part of the definition of having power (Ibarra & Andrews, 1993). Thus, occupational prestige reflects the status aspect of SES, based on the differential distribution of power inherent in occupations, which then results in disparities in access to health-enhancing resources.

Occupational prestige and health

Holding a prestigious job may provide health benefits in various ways. First, high-prestige jobs may enhance the job holder's self-esteem (Faunce, 1989), which is associated with high job satisfaction (Judge & Bono, 2001). High self-esteem and job satisfaction are both health-promoting factors (Faragher, Cass, & Cooper, 2005; Mann, Hosman, Schaalma, & de Vries, 2004). In addition, high-prestige job holders may have more positive social interactions than low-prestige job holders (Matthews et al., 2000). Previous studies reported that prestige assessment reflects the raters' deference to the job (Wegener, 1992), positive social sentiments (e.g., moral worthiness, usefulness) associated with the job (MacKinnon & Langford, 1994), and the job's value to the society (Goyder, 2009). Because occupational prestige is how *others* see the job, the quality of social interaction the job holder experiences would be influenced by the prestige of the job. Large bodies of literature have documented that the quality of social interaction is an important determinant of health (e.g., Uchino, Cacioppo, & Kiecolt Glaser, 1996; Williams, Neighbors, & Jackson, 2003).

Despite these suggestive associations, the current literature provides few direct investigations of the association between occupational prestige and health. To the best of our knowledge, only two studies have examined occupational prestige, but their findings are not consistent. One study (von dem Knesebeck, Luschen, Cockerham, & Siegrist, 2003) did not find any association between occupational prestige and self-rated health. The prestige score was trichotomized in the study, which might have contributed to the null result. The Framingham Offspring Study (Eaker, Sullivan, Kelly-Hayes, D'Agostino, & Benjamin, 2004) found a significant association between occupational prestige and coronary heart disease only among men, but not among women.

Present study

In this study, we investigate occupational prestige by distinguishing it from other aspects of occupation (i.e., occupational categories, and job characteristics) and other SES indicators. Using US national survey data, we examine the following research question: to what extent is occupational prestige associated with self-rated health independent from other SES indicators (education, income), occupational categories, and previously identified job-related health determinants (job stress, workplace social support, and job satisfaction)?

Methods

Data

This study uses data of selected years (2002 and 2006) from the General Social Survey (GSS). The GSS is a nationally representative, repeated cross-sectional survey that has been fielded by the

National Opinion Research Center. From 1972 to 1994, data were collected every year; and since 1994, GSS has collected information biannually from sampled non-institutionalized Americans 18 years old and older. In collaboration with the National Institute for Occupational Safety and Health, the GSS in 2002 and 2006 added a module on the quality of Worklife (QWL). The purpose of the QWL module was to obtain data that would allow researchers to examine associations between work characteristics and various social attitudes. The QWL module was implemented if the respondent indicated that he/she worked outside the home.

Measures

Self-rated health

In this study, we examine self-rated health as our dependent variable. Self-rated health is measured by a GSS question asking if the respondent would rate his/her own health as excellent, very good, good, fair or poor. These responses were dichotomized (fair/poor = 1, otherwise 0). This variable has strong predictive validity for mortality and morbidity (DeSalvo, Bloser, Reynolds, He, & Muntner, 2006; Idler & Benyamini, 1997; Singh-Manouxet al., 2007).

Occupational prestige

We use the 1989 update of occupational prestige scores as our measure of occupational prestige. The details for generating the occupational prestige scores were described by Nakao and Treas (1994) as follows. The prestige score for each of 503 occupations in the 1980 Census classification was generated by a national sample of survey respondents (raters, $n = 1166$). The raters were asked to place occupation titles, each printed on a small card, on a nine-step ladder printed on cardboard, according to their assessment of each job's social standing. The bottom rung represented the lowest possible social standing (score = 1) and the top rung the highest (score = 9). Ratings were then averaged for each occupation across all raters in order to form the occupational prestige score. These scores were then assigned to the GSS participants according to their reported occupation. The score ranged from 16.8 for "miscellaneous food preparation (e.g., dishwashers)" to 86.1 for physicians.

Occupational categories

Based on the 1980 US Census Occupational Category, the respondents' reported occupation was grouped into nine categories: managerial and administrative (reference), professional specialty, technical, sales, administrative support, service, farming/forestry/fishing, precision production/craft/repair, and laborer.

Job strain

Job strain is a job characteristic defined as a combination of high levels of job demands and low levels of control over one's job (Karasek, 1979; Karasek et al., 1998). A large body of literature provides evidence for the link between high strain jobs and various adverse health outcomes (Belkić et al., 2000; Belkić, Landsbergis, Schnall, & Baker, 2004; de Lange, Taris, Kompier, Houtman, & Bongers, 2003; Eller et al., 2009; Everson-Rose & Lewis, 2005).

QWL included five items for job demands (e.g., "My job requires that I work very fast," "I have too much work to do everything well.") and six for job control (e.g., "I am given a lot of freedom to decide how to do my own work," "I have a lot of say about what happens on my job."). The Cronbach's alpha for the job demands scale was 0.54, and for the job control scale it was 0.82. We dichotomized the two scale scores at the median value and created a job strain quadrant: low strain jobs (low demand and high control), high strain jobs (high demand and low control), active jobs (low demand and high control), and passive jobs (high demand and low control) (Landsbergis, Schnall, Shchwartz, Pickering, & Warren, 1994).

Work place social support

Social support has been studied along with job strain as a third dimension of work that may alleviate the negative effect of job strain (de Lange et al., 2003; Johnson & Hall, 1988). While results for this stress-buffering effect have not been conclusive, many studies have documented the health benefits of social support (de Lange et al., 2003). Four items in QWL assessed workplace social support: supervisor being concerned about welfare of those under him/her, supervisor being helpful, coworkers taking personal interest, and coworkers being reliable (Cronbach's alpha = 0.82). The sum of these items was used in our analyses.

Job satisfaction

One item, "All in all, how satisfied would you say you are with your job?", assessed job satisfaction. The responses ranged from "very satisfied (=4)" to "not at all satisfied (=1)." Single-item measures are generally not desirable, but for an overall sense of job satisfaction, this single-item has been shown as reliable as multi-item scales (Wanous, Reichers, & Hudy, 1997).

Other SES indicators

Besides occupational prestige and occupational categories, we included two other individual-level SES indicators: household income (log transformed) and educational attainment (less than high school, high school, associate degree, bachelor's degree, and graduate degree).

Data analysis

A total of 3406 respondents were current workers in 2002 and 2006 and were asked to complete the QWL module. Among the study variables, household income had the highest rate of missing data (7.8%). Because missingness on income variables are associated with other SES indicators, listwise deletion can result in biased estimates (Schenker et al., 2006). Therefore we used the impute command in STATA 10 to impute values of logged income based on age, gender, race, education, employment status, year, and size of respondents' workplace (Klugman & Xu, 2008; Schnittker, 2005). Besides the household income variable, workplace social support and job strain variable had some missing data (missing rate = 2.3%, 5.4%, respectively). Because we did not have theoretical basis for imputing these values from any of the available GSS data, those who did not provide the data on workplace social support and job strain were excluded from the analysis. Those who had missing data on other variables (i.e., age, race/ethnicity, marital status, self-rated health, job satisfaction, and occupational prestige; all <1.0%) were also excluded from the analysis, leaving a sample of 3151 (93% of the current workers in GSS 2002 and 2006).

We fit a series of logistic regression models to estimate the odds ratio (OR) of reporting fair/poor health associated with occupational prestige. Model 1 included occupational prestige and other SES indicators (i.e., household income, education) to examine if occupational prestige has an effect independent from income and education levels. In Model 2, we added occupational categories as commonly done in studies that used occupational categories as an SES indicator (Barbeau et al., 2004; Gregorio et al., 1997). Finally, Model 3 included job characteristics that previous studies have established as health determinants: workplace social support (Johnson & Hall, 1988), job strain (de Lange et al., 2003), and job satisfaction (Faragher et al., 2005). All models were adjusted for the year of survey administration (2002 or 2006), age, sex, race/ethnicity, foreign- or US-born,

geographic region, marital status, and part- and full-time employment status.

While gender and race/ethnicity are not equally distributed in the labor force (Bureau of Labor Statistics, 2002), in our data there was no indication of interaction effects between occupational prestige and gender (OR = 1.00, 95%CL: 0.99, 1.02) or race/ethnicity (OR = 1.00, 95%CL: 0.98, 1.02 for whites; OR = 1.01, 95%CL: 0.99, 1.02 for Hispanics; OR = 0.98, 95%CL: 0.94, 1.03 for Asians;) on self-rated health. Therefore, the analysis was conducted without stratification by gender or race/ethnicity. All analysis was performed on STATA 10.

Results

Table 1 summarizes the sample characteristics. Overall, 12% reported having fair or poor health. The respondents had an average age of 41 years (range from 18 to 88 years). Slightly over a half were women (52%). About three quarters of the respondents were whites, and 15% African American. These proportions are similar to the white-African American ratio in the general working population. However, Hispanics were underrepresented in our sample (5%) compared to the general working population (12%, Bureau of Labor Statistics, 2002). All nine occupational categories were represented in the sample.

Because both occupational prestige scores and occupational categories were derived from Census occupational titles, we first investigated the relationship between the two. The mean and standard deviation for occupational prestige score for each group are presented in Table 2. Professional occupations had the highest mean score (63.4), followed by technicians (54.2) and managerial occupations (53.7). The lowest mean scores were for farming (31.1) and laborers (31.3). The differences among these mean scores were statistically significant ($F = 698.11$, df = 8, $p < 0.001$). The highest and lowest prestige scores within each occupational category (Table 2) showed extensive overlap across occupational categories.

Next we examined bivariate associations between self-rated health (fair/poor) and each of the SES indicators. Respondents with higher levels of education and income were less likely to report fair/poor health than those with lower education and income levels. However, the association between occupational category and fair/poor health was not as linear as education and income. Managerial occupations had a similar proportion of fair/poor health (10.9%) with sales (10.8%) and precision production (12.7%) occupations. The mean occupational prestige score was significantly lower for those who reported fair/poor health ($t = 5.85$, $p < 0.001$).

Finally, we conducted the multivariate analysis of the relationship between occupational prestige and self-rated health. Table 3 presents odds ratios (ORs) from logistic regression of self-rated health (fair/poor = 1, excellent/very good/good = 0) on occupational prestige, SES measures, occupational categories, and occupational health determinants. The OR for occupational prestige was estimated for a 10-point increase. All three models controlled for the year of survey administration, age (continuous), sex, race/ethnicity, marital status, nativity, geographic location, and part- or full-time employment.

Model 1 included occupational prestige and two other SES measures: household income and education. While higher income and education levels were significantly associated with lower likelihood of reporting poor/fair self-rated health, occupational prestige was also significantly associated with the reporting of fair/poor health (OR = 0.89, 95% CI: 0.80–0.98). In Model 2 where we added occupational categories, occupational prestige remained significant (OR = 0.80, 95% CI: 0.69–0.92). When job strain and workplace social support were added to the model (Model 3), these job characteristics also had significant associations with self-rated health in the expected direction: high strain, lower support, and lower job satisfaction was associated with higher odds of reporting poor/fair health. However, occupational prestige still had a statistically significant association with self-rated health (OR = 0.82, 95% CI: 0.71, 0.95). That is, after controlling for all covariates, a 10-point increase in the occupational prestige score was associated with an 18% decrease in the odds of reporting fair/poor health. To illustrate this difference, we calculated the predicted probability of reporting fair/poor health for several pairs of occupations within the same occupational category (Fig. 1). In general, the higher the occupational prestige score is, the lower the predicted probability of reporting

Table 1
Characteristics of the study sample: Quality of Worklife Module in General Social Survey, 2002 and 2006, $n = 3153$.

Characteristic	Frequency	(%)
Self-reported health, poor/fair	383	(12.2)
Occupational prestige, mean (SD)	45.27	(14.0)
Age, mean (SD)	41.36	(12.8)
Male	1521	(48.3)
Married	1523	(48.3)
Race		
White	2407	(76.4)
Black	464	(14.7)
Hispanic	147	(4.7)
Other	133	(4.2)
Foreign-born	279	(8.9)
Educational attainment		
< High school	253	(8.0)
High school	1644	(52.2)
Associate	317	(10.1)
Bachelor	623	(19.8)
Graduate	314	(10.0)
Part-time employed (vs. full-time)	522	(16.6)
Household income[a]		
< $10K	322	(10.2)
$10K–$14999	300	(9.5)
$15K–$19999	283	(9.0)
$20K–$24999	331	(10.5)
$25K–$34999	720	(22.9)
$35K–$44999	371	(11.8)
$45K–$54999	261	(8.3)
> = $55K	563	(17.9)
Geographic region		
South	1181	(37.5)
North East	541	(17.2)
North Central	792	(25.2)
West	637	(20.2)
Occupation categories		
Managerial	485	(15.4)
Professional	581	(18.4)
Technical	135	(4.3)
Sales	334	(10.6)
Administrative support	410	(13.0)
Service	464	(14.7)
Farming/forestry/fishing	50	(1.6)
Precision production, craft, repair	324	(10.3)
Laborer	368	(11.7)
Job strain		
Low strain	719	(22.8)
Active	457	(14.5)
Passive	1234	(39.2)
High strain	741	(23.5)
Workplace social support, mean (SD)	3.3	(0.63)
Job satisfaction, mean (SD	3.3	(0.74)

[a] For those whose data were missing (7.8%), values were imputed using the impute command in STATA 10 based on age, gender, race, education, employment status, year, and size of respondents' workplace.

Table 2
Descriptive statistics for occupational prestige score by occupational category: Quality of Worklife Module in General Social Survey, 2002 and 2006, $n = 3151$.

Occupational category	mean	(SD)	Highest prestige in the category (prestige score)	Lowest prestige in the category (prestige score)
Managerial	53.7	(7.0)	Managers in medicine and health (69.2)	Managers of properties and real estate (38.5)
Professional	63.4	(9.6)	Physicians (86.1)	Artists, performers (35.6)
Technical	54.2	(9.3)	Clinical laboratory technicians (68.4)	Biological technicians (32.4)
Sales	39.0	(8.7)	Securities and financial services sales (52.8)	News vendors (19.4)
Administrative support	39.7	(6.9)	Supervisors of financial records processing (54.0)	Messengers (22.3)
Service	35.2	(11.3)	Supervisors of police and detectives (61.8)	Miscellaneous food preparation (16.8)
Farming/forestry/fishing	31.1	(8.0)	Farm managers (49.5)	Animal caretakers (21.2)
Precision production, craft, repair	42.4	(6.9)	Dental lab and medical appliance technicians (55.9)	Small engine repairer (25.9)
Laborer	31.3	(5.6)	Operating engineers (54.5)	Vehicle washers, equipment cleaners (19.4)

fair/poor health; this relationship is observed even within the same occupational category. For example, in the service occupation, a daycare aide's occupational prestige score is 35.8, and a hotel room cleaner's is 20.1. Their respected predicted probability of reporting fair/poor health is 0.09 and 0.12.

Discussion

A major finding of our study is that higher occupational prestige was significantly associated with better self-rated health when we controlled for other commonly used SES indicators (income and education), occupational categories, and job-related health determinants (workplace social support, job strain, and job satisfaction). Occupational categories, when used in epidemiologic studies, are traditionally considered as an SES indicator. In our study, we did see some occupational gradient in self-rated health in the bivariate analysis (as shown in Table 3). However, once specific aspects of the job were accounted for (i.e., occupational prestige, job strain, workplace social support, job satisfaction), the occupational gradient disappeared (Table 4). The only exception was that sales and service workers had a significantly *lower* likelihood of reporting poor/fair health than managers, suggesting that these occupations may have some health-protective benefit unaddressed in this study. We have no means to investigate this further with the available data. However, our finding suggests that by accounting for specific aspects of jobs, occupational categories can more clearly serve as a proxy for occupational exposure.

Table 3
Bivariate association between self-rated health and each of the SES indicators: Quality of Worklife Module in General Social Survey, 2002 and 2006, $n = 3151$.

SES indicator	Frequency of reporting Fair/Poor Health			
	n	(%)	χ^2 statistic	p
Educational Level			53.54	<0.001
< High School	61	(24.1)		
High School	214	(13.0)		
Associate	37	(11.7)		
Bachelor	46	(7.4)		
Graduate	25	(8.0)		
Household income			75.10	<0.001
< $10K	61	(18.9)		
$10K–$14999	71	(23.7)		
$15K–$19999	41	(14.5)		
$20K–$24999	41	(12.4)		
$25K–$34999	74	(10.3)		
$35K–$44999	27	(7.3)		
$45K–$54999	23	(8.8)		
> = $55K	45	(8.0)		
Occupation Categories			17.53	0.025
Managerial	53	(10.9)		
Professional	53	(9.1)		
Technical	12	(8.9)		
Sales	36	(10.8)		
Administrative support	55	(13.4)		
Service	63	(13.6)		
Farming/forestry/fishing	9	(18.0)		
Precision production, craft, repair	41	(12.7)		
Laborer	61	(16.6)		
Occupational prestige score				
Self-rated health.	Mean	SD	t-statistic	p
Excellent/Very good/Good	45.81	13.98	5.85	<0.001
Fair/Poor	41.37	13.50		

Our analysis found that occupational prestige captures a unique aspect of the job that is associated with health but not represented by income, education, occupational categories, or other well-established work-related health determinants. Occupational prestige can facilitate health in several possible ways. First, occupational prestige may impact how individuals feel about themselves. Prestigious job holders may enjoy a high level of self-esteem (Twenge & Campbell, 2002), engendered by positive appraisals from others (Faunce, 1989; Gecas & Schwalbe, 1983). While the data did not allow us to directly test the mediating effect of self-esteem between occupational prestige and health, our model did include job satisfaction. As Judge and Bono (2001) demonstrated in their meta-analysis, self-esteem and job satisfaction have a strong positive correlation. Our results, however, suggested that job satisfaction is not a likely mediator. Future studies should explore self-esteem and other possible psychological benefits that occupational prestige may generate.

Second, individuals with prestigious jobs may have increased opportunities for receiving various types of social support through their network. Van Der Gaag and Snijders (2005) reported that, independent from income and education, occupational prestige was associated with the number of people an individual knows

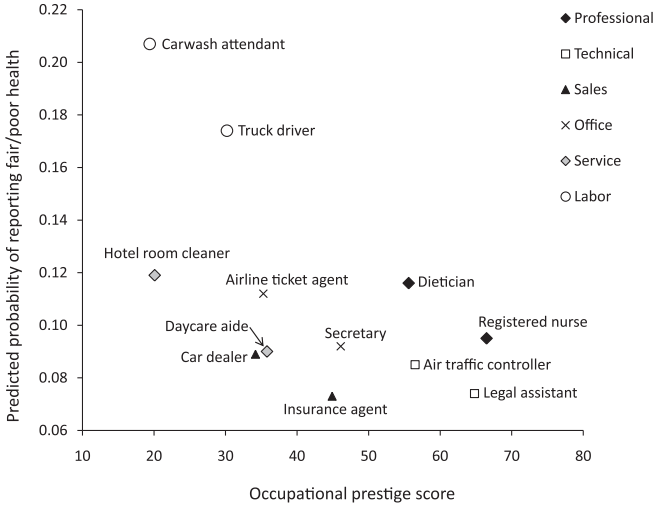

Fig. 1. Predicted probability of reporting fair/poor health by occupational prestige score for selected occupations by occupational category.[a,b]
[a]The same legend indicates that the two occupations belong to the same occupational category.
[b]The predicted probability was calculated based on Model 3 in Table 4.

Table 4
Odds ratios (OR) associated with reporting poor or fair self-rated health for occupational prestige scores, other SES indicators, occupational category, and job characteristics[a]: Quality of Worklife Module in General Social Survey, 2002 and 2006, $n = 3151$.

	Model 1		Model 2		Model 3	
Independent variable	OR	95% CI	OR	95% CI	OR	95% CI
Occupational prestige[b]	0.89*	[0.80,0.98]	0.80**	[0.69,0.92]	0.82**	[0.71,0.95]
SES indicators						
Education (ref. < high school)						
High school	0.55***	[0.39,0.76]	0.54***	[0.39,0.76]	0.54***	[0.38,0.77]
Associate	0.57*	[0.36,0.92]	0.57*	[0.35,0.93]	0.59*	[0.36,0.96]
Bachelor	0.39***	[0.25,0.63]	0.38***	[0.24,0.61]	0.38***	[0.23,0.61]
Graduate level	0.47**	[0.27,0.83]	0.42**	[0.23,0.77]	0.44**	[0.24,0.80]
Family Income (log)	0.68***	[0.59,0.78]	0.67***	[0.58,0.78]	0.69***	[0.59,0.80]
Occupational Category (ref. managerial)						
Professional			1.06	[0.69,1.65]	1.02	[0.65,1.60]
Technical			0.77	[0.39,1.50]	0.74	[0.38,1.47]
Sales			0.55*	[0.33,0.91]	0.50**	[0.30,0.84]
Administrative support			0.73	[0.46,1.14]	0.66	[0.41,1.05]
Service			0.55*	[0.34,0.90]	0.52*	[0.32,0.86]
Farming/forestry/fishing			0.70	[0.29,1.66]	0.83	[0.34,2.01]
Precision production, craft, repair			0.72	[0.44,1.18]	0.67	[0.40,1.11]
Laborer			0.72	[0.43,1.20]	0.61	[0.36,1.04]
Job Characteristics						
Job strain (ref. low strain)						
Passive					1.28	[0.90,1.83]
Active					1.17	[0.74,1.84]
High Strain					1.80**	[1.22,2.65]
Workplace social support					0.89	[0.73,1.08]
Job satisfaction					0.67***	[0.57,0.79]

Model fit indices	Model 1	Model 2	Model 3
Pseudo R^2	0.047	0.051	0.082
AIC	2261.61	2268.41	2206.22
BIC	2382.72	2437.96	2406.06
Log likelihood	−1110.81	−1106.21	−1070.11

*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.
[a] All models were adjusted for the year of survey administration, sex, race/ethnicity, marital status, place of birth, geographic region, and part-/full-time employment.
[b] The unit of analysis was 10 points.

who have desirable resources (e.g., someone who is active in a political party, who owns a vacation home abroad) and the strength of these social ties (i.e., knowing them as family members, friends, or acquaintances). Their results showed that the more prestigious job one has, the wider and stronger the job holder's ties to people with social resources, and thus the more potential help available in time of need.

Third, individuals with prestigious jobs may receive more subtle benefit than actual help. Inter-subjective evaluation of social positions, such as occupational prestige, is based on shared beliefs and social norms (Zhou, 2005), and social norms influence one's day-to-day experience. Such experience, in turn, has a significant impact on one's health. For example, "micro-aggressions" (e.g., being ignored, not receiving service. being treated rudely, and having one's opinions ignored) were significantly associated with depression and anxiety (Sellers & Shelton, 2003). Also, a sizable body of literature documents that everyday experiences of discrimination (e.g., being treated with less courtesy than others, people acting as if you are not smart) have negative health impacts (Williams et al., 2003). While these studies investigate race-based experiences, such mistreatment can also occur on the basis of occupation. Matthews et al. (2000) found that among university employees, low-prestige job holders (e.g., data entry clerks, secretaries) were more likely to report negative social interactions than high-prestige job holders (e.g., managers, professional staff). Negative social interactions, repeated daily, have harmful impacts on health.

These potential pathways must be directly tested in future studies in order to understand the mechanism through which occupational prestige impacts health. Do prestigious job holders have higher self-esteem than those in low-prestige jobs? Do they receive more social support? Do they experience more positive day-to-day social interactions? Understanding these pathways will help identify strategies to enhance health and well-being among those in low-prestige jobs. Another important line of inquiry is to assess the impact of occupational prestige on specific health outcomes. For example, the well-established occupational gradient in coronary heart disease is commonly interpreted as a reflection of job control (Marmot, Bosma, Hemingway, Brunner, & Stansfeld, 1997). However, our finding suggests that part of the occupational gradient may be attributable to occupational prestige. Further investigations may demonstrate the usefulness of occupational prestige in explaining inequalities in specific health conditions by occupational status.

The findings from this study should be interpreted with several limitations in mind. Although this study used data from a US national sample of adults, the sample consisted of only English speakers, and it underrepresented Hispanics. The results may not be applicable to those with limited English skills and/or of Hispanic origin. In addition, because racial/ethnic minorities accounted for only a small proportion of the sample, we were not able to address potential racial/ethnic differences in the association between occupational prestige and health. It is plausible that racial/ethnic minority individuals in highly prestigious jobs may not receive the same benefit of occupational prestige as their white colleagues. Moderating effects of race/ethnicity in the relationship between occupational prestige and health should be explored in future studies. Similarly, future studies should investigate how gender

plays a role in the health benefit of occupational prestige. Krieger et al. (1997) caution concerning the potentially different applicability of occupational prestige to women and men. Although in our study no indication of interaction between gender and occupational prestige was observed, it is possible that men in a typically women's job (e.g., nurse) and women in a typically men's job (e.g., auto mechanic) may not benefit from the prestige of the jobs.

The GSS data we used included somewhat dated occupational codes (the 1980 Census codes) and accompanying occupational prestige scores obtained in 1989 (Nakao & Treas, 1994). They may not accurately portray the full range of occupations today, and the prestige assessment for some jobs may have changed over time (Goyder, 2009). Another data limitation is the lack of information on specific occupational hazard exposure, which is a common situation when a population sample is used. Because our interest in this study was to examine general health status and occupational prestige, not accounting for specific occupational hazard seems acceptable. However, future studies focusing on specific health conditions should include relevant hazard exposure data in the analysis. All our study variables were self-reported, and thus are subject to various response biases. Also the job demands scale had a low internal consistency (Cronbach's alpha = 0.54). As sensitivity analyses, we ran the same models using factor scores and individual item scores. All analyses showed essentially the same results (available upon request). Finally, the cross-sectional design did not allow us to draw causal conclusions on the significant association. It is possible that unhealthy people ended up in low-prestige occupations.

Conclusion

When occupation is considered in research on SES and health, its meaning is often ambiguous because occupation can reflect both health-enhancing resources and health-damaging exposures. This study contributes to the literature by demonstrating the significant association of occupational prestige with health. We propose that occupational prestige captures a unique aspect of SES by explicitly reflecting social standing afforded by one's occupation. Higher occupational prestige was significantly associated with better self-rated health even after controlling for other SES indicators and job characteristics. This suggests that research on SES and health should expand its scope to include occupational prestige.

Disclaimer

The findings and conclusions in this report are those of the authors and do not necessarily represent the views of the National Institute for Occupational Safety and Health.

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