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Health Care Workplace Discrimination and Physician Turnover

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Abstract

Objective—To examine the association between physician race/ethnicity, workplace discrimination, and physician job turnover.

Methods—Cross-sectional, national survey conducted in 2006–2007 of practicing physicians [$n = 529$] randomly identified via the American Medical Association Masterfile and The National Medical Association membership roster. We assessed the relationships between career racial/ethnic discrimination at work and several career-related dependent variables, including 2 measures of physician turnover, career satisfaction, and contemplation of career change. We used standard frequency analyses, odds ratios and χ^2 statistics, and multivariate logistic regression modeling to evaluate these associations.

Results—Physicians who self-identified as nonmajority were significantly more likely to have left at least 1 job because of workplace discrimination (black, 29%; Asian, 24%; other race, 21%; Hispanic/Latino, 20%; white, 9%). In multivariate models, having experienced racial/ethnic discrimination at work was associated with high job turnover [adjusted odds ratio, 2.7; 95% CI, 1.4–4.9]. Among physicians who experienced work-place discrimination, only 45% of physicians were satisfied with their careers (vs 88% among those who had not experienced workplace discrimination, p value $< .01$), and 40% were contemplating a career change (vs 10% among those who had not experienced workplace discrimination, p value $< .001$).

Conclusion—Workplace discrimination is associated with physician job turnover, career dissatisfaction, and contemplation of career change. These findings underscore the importance of monitoring for workplace discrimination and responding when opportunities for intervention and retention still exist.

Keywords

health care careers; hospital/office administration; race/ethnicity

Prior national surveys indicate that physician experiences of workplace discrimination are common and consequential. Physician surveys have consistently found that the majority of racial/ethnic minority physicians state they experience racial/ethnic discrimination in the workplace.¹⁻³ Other studies have suggested that workplace discrimination may contribute to disparate career outcomes among racial/ethnic minority physicians such as lower rates of promotion and career satisfaction when compared with nonminority physician peers with similar productivity.⁴⁻⁷ Furthermore, research from non-health care fields has found significant associations between self-reported experiences of racial/ethnic discrimination at work and the likelihood of leaving that job, ie, job turnover.⁸⁻¹² However, this association has not been investigated in health care, and it is unknown whether physicians who experience racial/ethnic workplace discrimination are more likely than those who do not to leave a position or to consider leaving medicine altogether.

Investigating the role of racial/ethnic discrimination in physician job turnover may provide insights into consequences of workplace discrimination not yet explored in the literature. Physician job turnover is a particularly important career outcome to examine because it negatively affects the cost and quality of health care delivery.¹³⁻¹⁵ Physician job turnover is significantly associated with decreased patient satisfaction¹⁴ and lowered quality of preventive care.¹⁵ In addition, physician job turnover can be expensive for organizations in terms of recruitment costs,¹⁶ reduced morale, and increased workload among remaining healthcare providers.¹⁷ As the United States seeks to reduce health inequities through recruiting and retaining a diverse health care workforce, understanding the influence of workplace discrimination on physician job turnover is critical.

In this study, we primarily sought to explore the associations between physician experiences of racial/ethnic discrimination at work and physician job turnover. We conducted a national survey with a sample of racially/ethnically diverse practicing physicians. We assessed the relationship between physician self-reports of racial/ethnic workplace discrimination experienced over the physicians' entire career course and the number of job turnovers during their careers. Secondly, we asked physicians if they had ever left a job since completing medical school specifically because of any type of workplace discrimination, and we examined correlates of this experience. We also asked about career satisfaction, including whether the physician was contemplating a career change.

METHODS

Study Design and Sample

We surveyed a national sample of practicing physicians in the United States, excluding residents and fellows. We randomly identified 1500 physicians using the American Medical Association (AMA) Masterfile, a database including all physicians in the United States.¹⁸ Because we needed to ensure adequate representation of black physicians for our planned analyses and race/ethnicity data were not available for the AMA Masterfile, we also randomly selected 250 physicians from the National Medical Association (NMA) membership roster, which includes active and inactive members. (The NMA was established to represent physicians of African descent.¹⁹) The study was approved by the Yale School of Medicine Human Investigations Committee.

The final AMA Masterfile sampling frame included 884 eligible physicians. We excluded deceased physicians (n = 15) and physicians with incorrect or unverifiable contact information (n = 601). A total of 469 physicians returned completed surveys (response rate 53% or 469/884).²⁰ Physicians for whom we could not identify correct contact information and nonrespondents did not differ significantly from respondents regarding specialty, age, or geographic location.

Twenty-seven physicians identified through the AMA Masterfile self-identified as black. An additional 60 physicians identified through the NMA membership roster completed the questionnaire; all self-identified as black. The NMA mailings were coordinated by an independent vendor, and we were unable to confirm participant mailing addresses. Therefore, we could not determine how many NMA member nonresponses could be attributed to inaccurate contact information. Comparing black respondents identified through the 2 registries, we did not find any statistically significant differences in demographic characteristics (ie, age, specialty, geographic location) or in the outcome measures of experienced discrimination or job turnover. We therefore combined the 2 samples for our analyses, resulting in a final sample of 529 physician respondents (469 recruited via the AMA Masterfile and 60 recruited via the NMA membership roster), of whom 87 self-identified as black. Including the NMA respondents and nonrespondents in response rate calculations yields an overall response rate of 46.6% (529/1134).

Data Collection and Variables

The survey, conducted between October 2006 and February 2007 in 3 mailing waves, included 35 items adapted from prior surveys and developed from hypotheses generated in previous qualitative work.^{1-3,5,21,22} Survey recipients received either a \$2 bill or entry into a gift certificate lottery to encourage participation. The questionnaire was pilot tested with 20 physicians in training prior to final revisions.

We defined *discrimination* on the questionnaire as the unfavorable or unfair treatment of a person or group of persons in comparison to others who are not members of that group, and used the terms *experienced discrimination* and *experiences of discrimination* here to refer specifically to self-reported perceived discrimination. To assess physicians' personal experience of racial/ethnic discrimination over their career, we used an item adapted from prior national physician surveys:^{2,3} "Since completing medical training, how often have you personally experienced discrimination because of your race or ethnicity at work?" Response options were never, rarely, usually, often, or very often. As outlined in the project protocol, we dichotomized responses for analysis to generate meaningful discrimination-related binary outcomes (0, never or rarely; 1, usually, often, or very often).²³

As defined by the Bureau of Labor Statistics,²⁴ *job turnover* is the "separation of an employee from an establishment (voluntary, involuntary, or other)". We included 2 items to assess job turnover adapted from prior surveys.^{25,26} First, we asked physicians to rate their level of agreement with the statement, "I have left a job, since completing medical training, because I was discriminated against there." We dichotomized response options for analysis (0, neutral, disagree, or strongly disagree; 1, agree or strongly agree).²³ Respondents who answered "agree" or "strongly agree" were characterized as having at least 1 job turnover because of any type of workplace discrimination. Second, we asked physicians, "How many times have you unexpectedly changed jobs since you completed medical training (excluding changes because of promotion or advancement opportunity)?" Response options included 0 to 2, 3 to 5, 6 to 8, and 10 or more times. Per our protocol, respondents who answered "at least 3 times" were defined as having high job turnover.

We also asked physicians about leaving the medical profession and career satisfaction. Physicians rated their level of agreement with the statements, "I am contemplating changing careers" and "I am satisfied with my career to date"; responses were dichotomized for analysis (0, neutral, disagree, or strongly disagree; 1, agree or strongly agree).

We measured several physician characteristics, including race (black, Asian, white, other) and Hispanic/Latino ethnicity. We categorized self-identified race/ethnicity for analysis as white (non-Hispanic white), black (non-Hispanic black), Hispanic/Latino (which included

individuals who self-identified as Hispanic/Latino regardless of race), Asian (non-Hispanic Asian), and other (non-Hispanic other race). Other measured personal characteristics included sex, nativity, age, religious affiliation, sexual orientation, and relationship status.

We also measured respondents' medical school location (US/Canada or international medical graduate), board certification status, and annual individual pretax income. Specialty categories included primary care specialties (including general internal medicine, general pediatrics, and family medicine), internal medicine subspecialties, pediatric subspecialties, general surgery, surgical subspecialties, obstetrics/gynecology or obstetrics/gynecology subspecialties, and other (including all specialties for which we received fewer than 10 respondents). Primary work site zip codes were categorized into 4 US geographic regions.

Data Analysis

We used standard frequency analyses to describe the proportions of physicians experiencing discrimination and high job turnover. Using odds ratios and χ^2 statistics, we estimated and tested the statistical significance of associations between our outcomes and physician characteristics. We used multivariate logistic regression to estimate adjusted associations. Multivariate models included independent variables that were significantly associated ($p < .05$) with the job turnover outcomes of “at least 1 job turnover because of discrimination” or “high job turnover” in unadjusted analyses. We tested for interactions between race/ethnicity and the other covariates in multivariate models, but none was significant ($p > .05$); therefore, interaction terms were dropped from the final models. We further tested for a modifying effect of gender in stratified analyses; gender did not significantly affect the association between race and job turnover outcomes within self-identified racial/ethnic subgroups. Therefore, we built 1 multivariate model to assess the adjusted associations between race and each job turnover outcome. We also tested colinearity for variables under consideration for inclusion in the regression models. It was decided a priori to include physician age and/or years in practice in both multivariate models. Physician age and years in practice were colinear (correlation coefficient, 0.6); age was included in the adjusted models. All analyses were conducted with SAS statistical software version 9.2 (SAS Institute Inc, Gary, North Carolina).

RESULTS

Sample Characteristics

Responding physicians represented a wide range of demographic and professional characteristics (Table 1). The majority of respondents identified their race as white (59%). Black physicians (17%) were overrepresented in proportion to their prevalence in the US physician population (approximately 3%).²⁷ Also, Asian (15%) and Hispanic (6%) physicians were slightly over-represented in proportion to their prevalence in the US physician population compared with national statistics (approximately 6% and 3%, respectively).²⁷ The sex distribution of the respondents reflected the current practicing physician workforce distribution; 71% of respondents were male,²⁷ Almost half of the sample (46%) was aged 49 years or younger; 56% of respondents worked in private group or solo practice. Most respondents were born in the US and attended medical school in either the United States or Canada. In addition, respondents represented diverse religious affiliations and specialties.

Racial/Ethnic Career Discrimination and High Job Turnover

The majority of black physicians (71%) and other race physicians (63%) experienced racial/ethnic discrimination sometimes, often, or very often over their professional careers. Forty-

five percent of Asian physicians, 27% of Hispanic/Latino(a) physicians, and 7% of white physicians also reported racial/ethnic career discrimination.

In unadjusted analysis (Table 2), physicians who experienced racial/ethnic discrimination during their career were significantly more likely to demonstrate high job turnover (3 events) than those who did not experience racial/ethnic discrimination during their careers (unadjusted OR, 2.0; 95% CI, 1.3–3.1). Additionally, women were more likely than men to report high job turnover, as were older physicians and divorced/separated (compared with married) physicians. Physician race/ethnicity, nativity, specialty, and medical school location were not significantly associated with high job turnover ($p > .05$).

In multivariate analysis, having experienced racial/ethnic discrimination at any career point remained significantly associated with high job turnover (adjusted OR, 2.7; 95% CI 1.4–4.9), adjusted for physician race/ethnicity, sex, relationship status, and age (Table 2). Sex and age were also significantly correlated with high job turnover in the adjusted analysis.

Physician Job Turnover Attributed to Any Type of Workplace Discrimination

More than one-quarter of physicians who self-identified as black (29%) and approximately one-fifth of physicians who identified as Asian (24%), other race (21%), or Hispanic/Latino(a) (20%) reported at least 1 job turn-over that they attributed to workplace discrimination of any type since completing medical training (Table 3). A total of 29 physicians who identified as white (9%) also reported discrimination-related job turnover.

In unadjusted analysis, only physician race/ethnicity and sex were significantly associated with discrimination-related job turnover ($p < .05$). Physician age, sexual orientation, nativity, religious affiliation, specialty, medical school location, and board certification status were not significantly associated with job turnover because of any type of workplace discrimination. In multivariate analysis, the effects of race/ethnicity and sex remained statistically significant; physicians who self-identified as black (adjusted OR, 3.9; 95% CI, 2.1–7.5) and those who self-identified as Asian (adjusted OR, 2.9; 95% CI, 1.4–5.9) were significantly more likely than physicians who self-identified as white to report at least 1 job turnover because of discrimination. Female sex also remained significantly associated with discrimination-related job turnover (adjusted OR, 2.0; 95% CI, 1.1–3.4) (Table 3).

Physician Race/Ethnicity, Gender, and At Least 1 Job Turnover Because of Any Type of Workplace Discrimination

Among female physicians, almost 40% of physicians who identified as black reported at least 1 job turnover because of discrimination. When compared with the 16% of white female physicians who also reported job turnover because of discrimination, the odds were significantly higher for black female physicians (black female vs white female OR, 3.2; 95% CI, 1.2–8.3). Although the proportions of Asian, other race, and Hispanic/Latina female physicians reporting job turnover because of discrimination were higher than among white females, these differences were not statistically significant (Table 4).

Among male physicians, one-quarter of physicians who identified as black or Asian reported at least 1 job turnover because of discrimination. A total of 7% of white male physicians also reported job turnover because of discrimination. When compared with white male physicians, the odds were significantly higher for black and Asian male physicians (black or Asian male vs white male OR, 4.7; 95% CI, 2.0–11.0). Similar to the pattern among female physicians, more “other” race and Hispanic/Latino male physicians reported job turnover because of discrimination compared with white male physicians, but this was not statistically significant (Table 4).

Examining gender differences within racial/ethnic groups, only the difference in the proportion of reported job turnover because of discrimination between white female physicians and white male physicians was significant ($p > .05$). Across other racial/ethnic groups, more women than men reported job turnover because of discrimination except among Asian physicians. Although this finding was not significant, 17% of Asian women reported job turnover because of discrimination, compared with 25% of Asian men.

Contemplating Career Change and Career Satisfaction

Having left a job at some point in one's career due to discrimination of any type was significantly associated with lower career satisfaction currently and increased contemplation of leaving medicine altogether. Only 45% of physicians experiencing discrimination-related job turnover were satisfied with their career, compared with 88% of physicians who did not experience discrimination-related job turnover ($p < .01$). Furthermore, 40% of physicians who experienced discrimination-related job turnover were contemplating changing careers and leaving medicine altogether, compared with 10% of physicians who did not experience discrimination-related job turnover ($p < .001$).

DISCUSSION

Experiences of workplace discrimination are significantly associated with physician job turnover career dissatisfaction, and contemplation of career change. The strong association between racial/ethnic career discrimination and high physician job turnover was evident for both male and female physicians and across multiple work settings regardless of physician age or specialty. Importantly, racial/ethnic career discrimination, but not physician race/ethnicity, was significantly associated with high job turnover. Perhaps most striking, however, is that almost 25% of nonmajority physicians reported having left at least 1 job because of personally experienced workplace discrimination, and this experience was strongly correlated with career dissatisfaction and contemplating leaving medicine altogether. These findings suggest that the experience of workplace discrimination can have a substantial influence on career trajectories, potentially threatening retention of a diverse physician workforce in addition to compromising patient care.

These survey results have several important implications for sustaining physician workforce diversity and ultimately for supporting high-quality patient care. First, because physicians who leave their job because of discrimination are more likely to consider changing careers, their turnover poses a threat to the individual organization and potentially to the profession. While recruiting a diverse physician workforce is fundamental, retention is also critical. Our work suggests that ensuring a work-place climate free of discrimination is important for sustaining a diverse workforce. Second, because discrimination appears to play a key role in job turnover and career satisfaction, it likely plays a role in other differential career trajectories experienced by nonmajority physicians. Future research should do more than stratify career trajectories and satisfaction by race/ethnicity given this understanding of how workplace discrimination influences these outcomes. Finally, because physicians who experience discrimination may be at high risk for job turnover, we need to develop methods of monitoring and addressing physician experiences of work-place discrimination as early as possible when opportunities for intervention and retention still exist.

Some academic medical centers have recently begun to assess their institutional climate to identify factors that may be associated with faculty retention,^{28–30} and several strategies might be employed more broadly by health care organizations to support physician workforce diversity.³¹ Organizations can consider including regular monitoring and benchmarking of the institutional climate, physician experiences regarding discrimination, and job turnover as part of institutional development and strategic plans. Additional research

can focus on the development of comprehensive institutional climate measures that include measures of workplace discrimination as well as tool kits, guidelines, and other interventions to assist health care organizations with their retention efforts.

Although our study provides new evidence regarding workplace discrimination and physician job turnover and career satisfaction, there are some limitations to consider when interpreting these findings. The cross-sectional survey methodology yielded statistically significant associations, but it cannot demonstrate causality or directionality. In addition, we had insufficient numbers of all potential subgroup members to make definitive statements regarding observed differences, and future work can better explore other types of discrimination. Specifically, our findings suggest that female physicians of color may face a “double discrimination” within the workplace, and this hypothesis requires additional testing. We are also aware of the potential for response bias in this study, as physician respondents may answer questions in what they deem a socially acceptable way. We pilot tested the questionnaire to eliminate leading language or double-barreled questions. We also employed several techniques to minimize nonresponse bias, as physicians who chose to respond to the questionnaire may be more likely to have experienced discrimination; we included multiple mailing waves and participation incentives. Further, our response rates were consistent with recent national surveys of physicians on potentially emotionally charged topics,^{32–35} and respondents did not differ significantly from nonrespondents on observable characteristics, including geographic region, specialty, or age. We were also aware that identifying physicians via the NMA membership roster could potentially introduce sampling bias, but it was essential that we actively recruit a racially diverse sample to achieve our research aims. However, we did not find any differences in the reports of discrimination by physicians of African descent identified via the NMA and those identified via the AMA Masterfile, suggesting any sampling bias was minimal.

The recent statement of the AMA acknowledging a long history of discrimination and exclusion experienced by nonmajority physicians in the United States provides an important historical context for supporting diversity within health care organizations moving forward.³⁶ The results of this survey suggest that discrimination remains a problem for the medical profession, threatening our efforts at creating a physician workforce that reflects the diversity of the American people. Developing and retaining a diverse physician workforce will require active engagement of all physicians and health care organizations at every level of the health care system. The argument for action is strong at the organizational level, where every employee hired is an investment, and any unexpected job change is a missed opportunity to realize the return. This is especially true in the case of high-cost/high-value employees and contractors, such as physicians. At the macro level, recognizing the contribution of workplace discrimination to physician turnover is an important step toward creating health care environments that retain diverse health care providers and provide high-quality patient care.

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References

1. Coombs AA, King RK. Workplace discrimination: experiences of practicing physicians. *J Natl Med Assoc.* 2005; 97(4):467–477. [PubMed: 15868767]
2. Carble-Smith G, Frank E, Nickens HW, Elon L. Prevalences and correlates of ethnic harassment in the US Women Physicians' Health Study. *Acad Med.* 1999; 74(16):695–701. [PubMed: 10386100]
3. Peterson NB, Friedman RH, Ash AS, Franco S, Carr PL. Faculty self-reported experience with racial and ethnic discrimination in academic medicine. *J Gen Intern Med.* 2004; 19(3):259–265. [PubMed: 15009781]
4. Fang D, Moy E, Colburn L, Hurley J. Racial and ethnic disparities in faculty promotion in academic medicine. *JAMA.* 2000; 284(9):1085–2092. [PubMed: 10974686]
5. Nunez-Smith M, Curry LA, Berg D, Krumholz HM, Bradley EH. Healthcare workplace conversations on race and the perspectives of physicians of African descent. *J. Gen Intern Med.* 2008; 23(9):1471–1486. [PubMed: 18618190]
6. Palepu A, Carr P, Friedman RH, Amos H, Ash AS, Moskowitz MA. Minority faculty and academic rank medicine. *JAMA.* 1998; 230(9):767–771. [PubMed: 9729986]
7. Palepu A, Carr PL, Friedman RH, Ash AS, Moskowitz MA. Specialty choices, compensation, and career satisfaction of underrepresented minority faculty in academic medicine. *Acad J Med.* 2000; 75(2):157–160.
8. Alderfer, C.; Sims, A. Diversity in Organizations. In: Borman, WC.; Ingen, DR.; Klimoski, J.; Weiner, B., editors. *Handbook of Psychology, Industrial and Organizational Psychology.* New York, NY: Wiley; 2003. p. 595-614.
9. [Accessed July 22,2009] Expanding our understanding of the psychosocial work environment: a compendium of measures of discrimination, harassment, and work-family issues. National Institute for Occupational Safety and Health. 2007. <http://www.cdc.gov/niosh/docs/2008-104>.
10. US Equal Opportunity Commission. [Accessed July 22, 2009] Diversity in Low Firms. 2003. <http://www.eeoc.gov/stats/reports/diversitylaw/index.html>.
11. Hanisch K, Hulin C. Job attitudes and withdrawal: An examination of retirement and other voluntary withdrawal behaviors. *J Voc Behav.* 1990; 39:110–125.
12. Mays VM, Coleman LM, Jackson JS. Perceived race-based discrimination, employment status, and job stress in a national sample of black women: Implications for health outcomes. *J Occup Health Psychol.* 1996; 1(3):319–329. [PubMed: 9547054]
13. Buchbinder SB, Wilson W, Melick CF, Powe NR. Estimate of costs of primary care physician turnover. *Am J Manag Care.* 1999; 5(11):1431–1433. [PubMed: 10662416]
14. Misra-Hebert AD, Kay R, Staler JK. A review of physician turnover: rates, causes, and consequences. *Am J Med Qual.* 2004; 19(2):56–66. [PubMed: 15115276]
15. Plomondon ME, Magid DJ, Steiner JF, et al. Primary care provider turn-over and quality in managed care organizations. *Am J Manag Care.* 2007; 13(81):465–472. [PubMed: 17685827]
16. Waldman JD, Kelly F, Arora S, Smith HL. The shocking cost of turnover in health care. *Health Care Manage Rev.* 2004; 29(1):2–7. [PubMed: 14992479]
17. Physician Demographics evident in Turnover Rates: “Fit and Family” are Driving Force. 2007 <http://www.cejkasearch.com/Physician-Retention-Survey/2006RetentionSurvey/default.htm>.
18. AMA Physician Masterfile. <http://www.ama-assn.org/ama/pub/category/2673.html>.
19. National Medical Association. <http://www.nmanet.org>.
20. Harvard Business School. Defining the attributes and processes that enhance the effectiveness of workforce diversity initiatives in knowledge intensive firms. 2008 <http://www.hbs.edu/research/pdf/07-019.pdf>.
21. Burkard A, Boticki M, Madson M. Workplace Discrimination, Prejudice, and Diversity Measures: a review of instrumentation. *J Career Assessment.* 2002; 10(3):343–361.
22. Nunez-Smith M, Curry LA, Bigby J, Berg D, Krumholz HM, Bradley EH. Impact of race on the professional lives of physicians of African descent. *Ann Intern Med.* 2007; 146(1):45–51. [PubMed: 17200221]

23. Jansen P, Roskam E. Latent triat models and dichotomization of graded responses. *Psychometika*. 1986; 51(1):69–91.
24. Bureau of Labor Statistics. [Accessed July 22, 2009] <http://www.bls.gov/bls/glossary.htm#7>.
25. Meyer J, Allen N. Links between work experiences and organizational commitment during the first year of employment: A longitudinal analysis. *J Occup Health Psychol*. 1988; 61:195–209.
26. Porter L, Steers R, Mowday R, Boulan P. Organizational commitment, job satisfaction, and turnover among psychiatric technicians. *J Appl Psychol*. 1974; 59:603–609.
27. Physician Characteristics and Distribution in the US, 2003 Edition. 2008 <http://www.ama-assn.org/ama/pub/about-ama/our-people/member-groups-sections/minority-affairs-consortium/physician-statistics/total-physicians-raceethnicity-2006.shlml>.
28. Faculty Job Satisfaction at U.S. Medical Schools. 2008 <http://www.aamc.org/members/msmr/facultysatisfaction.htm>.
29. Kanrad TR, Williams ES, Linzer M, et al. Measuring physician job satisfaction in a changing workplace and a challenging environment. SGIM Career Satisfaction Study Group. Society of General internal Medicine. *Med Care*. 1999; 37(11):1174–1182. [PubMed: 10549620]
30. Price EG, Gozu A, Kern DE, et al. The role of cultural diversity climate in recruitment, promotion, and retention of faculty in academic medicine. *J Gen Intern Med*. 2005; 20(7):545–571.
31. Smedley, BD.; Bulter, AS.; Bristow, LR., editors. Institute of Medicine. *In the Nation's Compelling Interest: Ensuring Diversity in the Healthcare Workforce*. Washington DC: National Academies Press; 2004.
32. Asch DA, Jedrziwski MK, Christakis NA. Response rates to mail surveys published in medical journals. *J Clin Epidemiol*. 1997; 50(10):1129–1136. [PubMed: 9368521]
33. Campbell EG, Gruen RL, Mcuntford J, Miller LG, Clear PD, Blumenthal D. A national survey of physician-industry relationships. *N Engl J Med*. 2007; 356(17):1742–1750.
34. Curlin FA, Lawrence RE, Chin MH, Lantos JD. Religion, conscience, and controversial clinical practices. *N Engl J Med*. 2007; 356(6):593–600. [PubMed: 17287479]
35. Gruen RL, Campbell EG, Blumenthal D. Public roles of US physicians: community participation, political involvement, and collective advocacy. *JAMA*. 2006; 296(20):2467–2475. [PubMed: 17119143]
36. Baker RB, Washington HA, Olakanmi O, et al. African American physicians and organized medicine, 1846–1968, origins of a racial divide. *JAMA*. 2003; 300(3):306–313. [PubMed: 18617633]

Table 1

Personal and Professional Characteristics of Participating Physicians (N = 529)

Personal Characteristic	N ^a (%)	Professional Characteristic	N ^a (%) or Mean ± SD
Race/ethnicity		Medical school location	
Non-Hispanic white	310 (58.6)	United States or Canada	430 (81.6)
Non-Hispanic black	87 (16.4)	Specialty	
Non-Hispanic Asian	74 (14.8)	Primary care specialties	182 (34.5)
Non-Hispanic other	24 (4.5)	Surgical subspecialties	71 (13.5)
Hispanic/Latino	30 (5.7)	Internal medicine subspecialties	64 (12.1)
Sex		Ob/gyn or ob/gyn subspecialties	36 (6.8)
Male	346 (71.3)	General surgery	15 (2.8)
Nativity		Pediatric subspecialties	10 (1.9)
US born	401 (76.4)	Other	150 (28.4)
Self-rated health		Years in practice	18.9 ±13.5
Excellent	227 (43.4)	Setting	
Very good	216 (41.3)	Private group practice	174 (33.5)
Good	62 (11.9)	Solo practice	115 (22.2)
Fair/poor	18 (3.4)	Hospital-based practice	78 (15.0)
Age		Academic	74 (14.3)
40	105 (20.0)	Group/staff model HMO	21 (4.1)
41–49	137 (26.1)	Community health center	17 (3.3)
50–59	169 (32.2)	Hospitalist	14 (2.7)
60–69	81 (15.4)	Other	26 (4.9)
70	33 (6.3)	Years at current setting	12.5 ±10.7
Religious affiliation		Hours worked per week	49.6 ±16.3
Protestantism	183 (35.1)	Board certification	
Catholicism	116 (22.2)	Yes	437 (80.3)
No affiliation	88 (16.9)	Income (< US \$200000)	199 (40.8)
Judaism	55 (10.5)	Total educational debt (< US \$50000)	373 (71.4)
Hinduism	22 (4.2)	Region of the United States	
Islam	16 (3.1)	Northeast	128 (24.7)
Other	42 (8.1)	Midwest	114 (22.0)
Sexual orientation		South	166 (32.1)
Heterosexual	494 (95.0)	West	110 (21.2)
Relationship status			
Married/living as married	427 (81.0)		

Abbreviation: HMO, health maintenance organization.

^aNumbers may not sum to total n due to missing data.

Table 2Correlates of High Job Turnover(3 Events)^a

Physician Characteristic	High Job Turnover n/N ^b (%)	Unadjusted OR (95% CI)	Adjusted OR (95% CI)
Race/ethnicity			
Non-Hispanic white	72/306 (23.5)	Reference	Reference
Non-Hispanic black	22/86 (25.6)	1.12 (0.6–1.9]	0.57 (0.3–1.2)
Non-Hispanic Asian	14/74 (18.9)	0.76 (0.4–1.4)	0.59 (0.3–1.3)
Non-Hispanic other	6/24 (25.0)	1.08 (0.4–2.8)	1.26 (0.4–3.9]
Hispanic/Latino	8/30 (26.7)	1.18 (0.5–2.8)	1.14 (0.4–3.0)
Racial/ethnic discrimination over career course			
No	72/371 (19.4)	Reference	Reference
Yes	47/143 (32.9)	2.03 (1.3–3.1)	2.45 (1.3–4.5)
Sex			
Male	69/340 (20.3)	Reference	Reference
Female	41/139 (29.5)	1.60 (1.1–2.6)	2.16 (1.3–3.7)
Nativity			
US born	90/396 (22.7)	Reference	-
Non-US born	32/124 (25.8)	1.18 (0.7–1.9)	
Relationship status			
Married/living as married	93/424 (21.9)	Reference	Reference
Single, never married	6/42 (14.3)	0.59 (0.2–1.5)	0.74 (0.3–2.0)
Divorced/separated	20/46 (43.5]	2.74 (1.5–5.1)	1.90 (0.9–4.0)
Widowed	3/7 (42.9)	2.67 (0.6–12.1)	0.80 (0.1–5.0)
Age			
40	11/105 (10.5)	Reference	Reference
41–49	25/136 (18.4)	1.93 (0.9–4.1)	1.98 (0.9–4.5)
50–59	49/167 (29.3)	3.55 (1.7–7.2)	4.42 (2.0–9.7)
60–69	23/80 (28.8)	3.45 (1.6–7.6)	3.79 (1.5–9.4)
70	14/32 (43.8)	6.65 (2.6–17.0)	10.77 (3.7–31.6)
Specialty			
Primary care specialties	47/178 (26.4)	Reference	-
Surgical subspecialties	12/71 (16.9)	0.57 (0.3–1.1)	
Internal medicine subspecialties	11/61 (18.0)	0.61 (0.3–1.3)	
Ob/gyn or ob/gyn subspecialties	6/36 (16.7)	0.56 (0.2–1.4)	
General surgery	3/15 (20.0)	0.69 (0.2–2.6)	
Pediatric subspecialties	2/10 (20.0)	0.69 (0.1–3.4)	
Other	41/148 (27.7)	1.07 (0.6–1.7)	
Medical school location			
United States or Canada	98/417 (23.5)	Reference	-
Outside the United States or Canada	24/101 (23.8)	1.02 (0.6–1.7)	

Abbreviation: CI, confidence interval.

^aHigh job turnover = 3 job changes not due to promotion or advancement opportunity.

^bNumbers may not sum to total due to missing data.

Table 3Correlates of Reported Job Turnover Due to Discrimination^a

Characteristic	n/N ^b (%)	Unadjusted OR (95% CI)	Adjusted OR (95% CI)
Race/ethnicity			
Non-Hispanic white	29/309 (9.4)	Reference	Reference
Non-Hispanic black	25/85 (29.4)	4.02 (2.2–7.4)	3.94 (2.1–7.5)
Non-Hispanic Asian	17/72 (23.6)	2.98 (1.5–5.8)	2.90 (1.4–5.9)
Non-Hispanic other	5/24 (20.8)	5.54 (0.9–7.3)	2.21 (0.7–7.2)
Hispanic/Latino	6/30 (20.0)	2.41 (0.9–6.4)	2.57 (0.95–7.0)
Sex			
Male	44/344 (12.8)	Reference	Reference
Female	30/137 (21.9)	1.91 (1.1–3.2)	1.96 (1.1–3.4)
Sexual orientation			
Heterosexual	76/489 (15.5)	Reference	-
Bisexual/homosexual	4/26 (15.4)	0.99 (0.3–2.9)	
Nativity			
US born	56/397 (14.1)	Reference	-
Non-US born	26/123 (21.1)	1.63 (0.97–2.7)	
Age			
40	16/102 (15.7)	Reference	Reference
41–49	17/136 (12.5)	0.77 (0.4–1.6)	0.86 (0.39–1.90)
50–59	31/168 (18.5)	1.22 (0.6–2.4)	1.40 (0.68–2.88)
60–69	15/81 (18.5)	1.22 (0.6–2.6)	1.81 (0.78–4.17)
70	3/33 (9.1)	0.54 (0.1–2.0)	0.97 (0.25–3.81)
Religious affiliation			
Protestantism	26/181 (14.4)	Reference	-
Catholicism	19/115 (16.51)	1.18 (0.6–2.2)	
No affiliation	15/87 (17.2)	1.24 (0.6–2.5)	
Judaism	5/55 (9.1)	0.6 (0.2–1.6)	
Hinduism	5/22 (22.7)	1.75 (0.6–5.2)	
Islam	4/16 (25.0)	1.9 (0.6–6.6)	
Other	8/41 (19.5)	1.44 (0.6–3.5)	
Specialty			
Primary care specialties	32/179 (17.9)	Reference	-
Surgical subspecialties	11/69 (15.9)	0.87 (0.4–1.8)	
Internal medicine subspecialties	7/64 (10.9)	0.56 (0.2–1.4)	
Ob/gyn or ob/gyn subspecialties	3/35 (8.6)	0.43 (0.1–1.5)	
General surgery	3/15 (20.0)	1.2 (0.3–4.3)	
Pediatric subspecialties	1/10 (10.0)	0.51 (0.1–4.2)	
Other	25/148 (16.9)	0.93 (0.5–1.7)	
Medical school location			
United States or Canada	61/415 (14.7)	Reference	-

Characteristic	n/N ^b (%)	Unadjusted OR (95% CI)	Adjusted OR (95% CI)
Outside the United States or Canada	20/5 04 (19.2)	1.38 (0.8–2.4)	
Board certification			
Yes	66/431 (15.1)	Reference	-
No	16/88 (18.2)	1.23 (0.7–2.2)	

Abbreviation: CI, confidence interval.

^aAt least 1 voluntary or involuntary separation from a job since completion of medical training because of discrimination.

^bNumbers may not sum to total due to missing data.

Table 4At Least 1 Job Turnover as a Result of Discrimination by Physician Race/Ethnicity and Gender^a

	Women	Men	<i>P</i> Value
	n/N (%)	n/N (%)	
Non-Hispanic white (N = 310)	12/74 (16.2)	14/211 (6.6)	.014
Non-Hispanic black (N = 87)	11/29 (37.9) ^b	12/43 (25.0) ^c	.235
Non-Hispanic Asian (N = 74)	3/18 (16.7)	12/48 (25.0) ^c	.480
Non-Hispanic other (N = 24)	2/7 (28.6)	2/15 (13.3) ^b	.412
Hispanic/Latino (N = 30)	2/9 (22.2)	4/21 (19.1)	.849
Overall <i>p</i>	.163	<.001	

^aThe fourth column represent the male-female comparison within each racial/ethnic category. The seventh row represents the racial comparison by gender; non-Hispanic white women and non-Hispanic white men as referent groups.

^b*p* < .05

^c*p* < .001 for pairwise comparisons with Non-Hispanic whites.