Discrimination Toward Physicians of Color: A Systematic Review

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Abstract: Purpose: To systematically review published research exploring workplace discrimination toward physicians of color with a focus on discrimination from patients.

Method: The authors searched PubMed, PsycInfo, CINAHL, Scopus, Academic Search Premier, and Web of Science from 1990 through 2017 and performed supplemental manual bibliographic searches. Eligible studies were in English and assessed workplace discrimination experienced by physicians of color practicing in the U.S. including physicians from ethnic/racial groups underrepresented in medicine, Asians, and international medical graduates. Two reviewers independently screened titles and abstracts, 3 reviewers read the full text of eligible studies, and 2 reviewers extracted data and appraised quality using Joanna Briggs Institute checklist for qualitative research or the AXIS tool for quality of cross-sectional studies.

Results: Of the 19 eligible studies, 6 conducted surveys and 13 analyzed data from interviews and/or focus groups; most were medium quality. All provided evidence to support the high prevalence of workplace discrimination experienced by physicians of color, particularly black physicians and women of color. Discrimination was associated with adverse effects on career, work environment, and health. In the few studies inquiring about patient interactions, discrimination was predominantly refusal of care. No study evaluated an intervention to reduce workplace discrimination experienced by physicians of color. Ethnic/racial groups were inconsistent across studies, and some samples included physicians in Canada, non-physician faculty, or trainees.

Conclusion: With physicians of color comprising a growing percentage of the U.S. physician workforce, healthcare organizations must examine and implement effective ways to ensure a healthy and supportive work environment.

Keywords: Workplace discrimination■Bias■Physician

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INTRODUCTION

Increasing the ethnic and racial diversity of the physician workforce has many benefits. A more diverse research team enhances productivity, creativity, and critical analysis[1–6]; teaching and mentorship practices are more innovative and inclusive when informed by diverse perspectives[7,8]; and greater ethnic and racial diversity in the physician workforce advances health equity.[9–12] Physicians of color comprise a growing proportion of the U.S. physician workforce in which approximately 48.5% identify as white, 12.5% as Asian, 4.2% as black or African American, 4.6% as Hispanic or Latino, 0.4% as American Indian or Alaskan Native, and 0.4% as other race (with 29.4% unknown).[13] Approximately 22.7% are international medical graduates (IMGs)[14] of whom the majority completed their medical education in countries without predominantly European heritage: 23% in India, 17% in the Caribbean, 6% in the Philippines, 6% in Pakistan, and 5% in Mexico.[14]

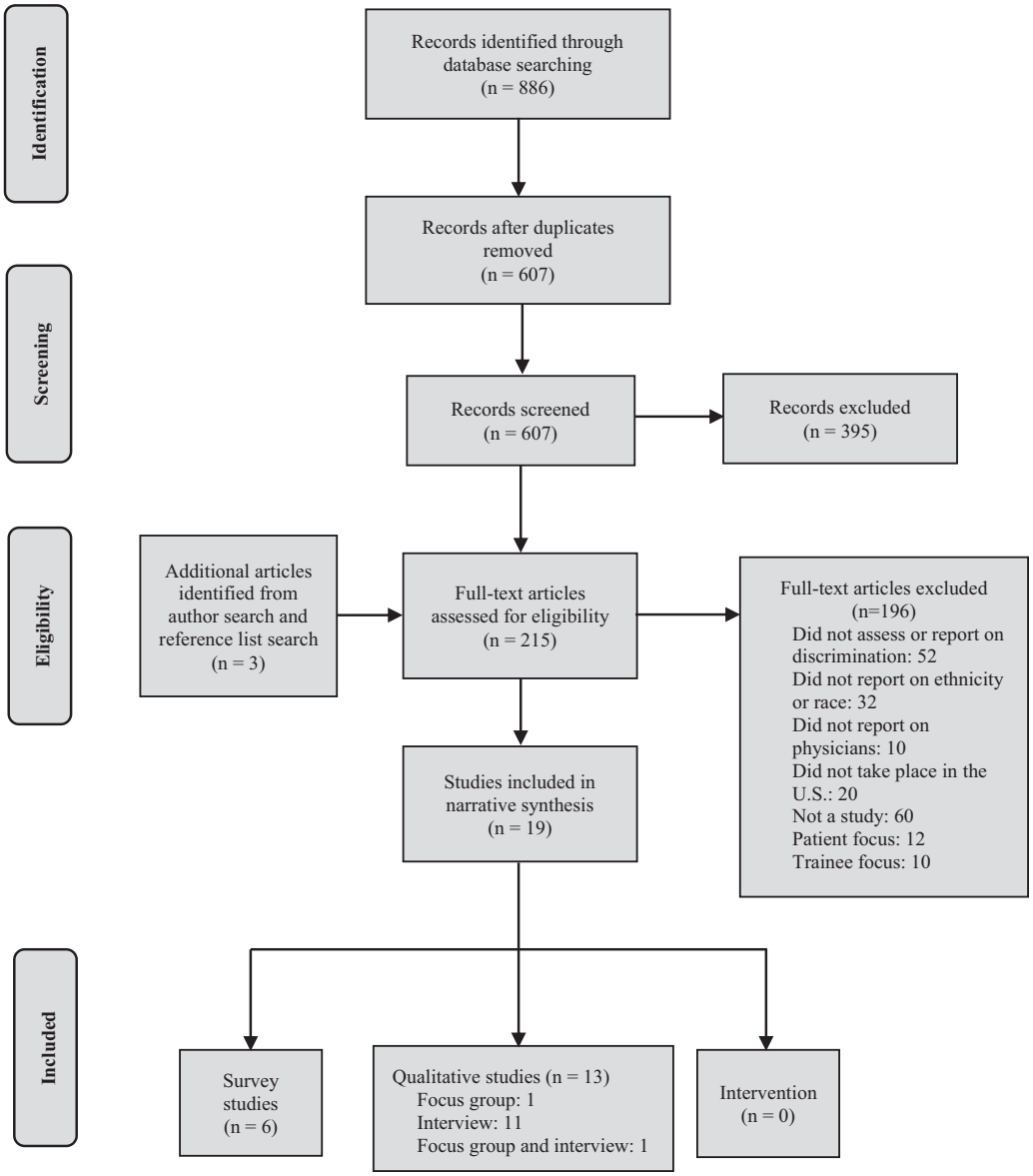
The National Academy of Medicine[15] states that "overt and unconscious bias" influences the relationship between clinician well-being, clinician-patient interactions, and patient well-being. Our goal was to identify and synthesize published research on workplace discrimination experienced by physicians of color practicing in the U.S., especially research on discrimination from patients[16–18] in light of the growing visibility of this occurrence.[16,19–24]

MATERIALS AND METHODS

Data sources and searches

We electronically searched PubMed, PsycInfo, CINAHL, Scopus, Academic Search Premier, and Web of Science for studies published between 1990 and 2017. We chose 1990 as the initial date because enrollment of medical students from ethnic and racial minority groups underrepresented in medicine reached 10% in that year and it marked a time when the Association of American Medical Colleges (AAMC) redoubled efforts to increase medical student ethnic/racial diversity.[25] The search terms for each database were: (Bias OR prejudice OR perception OR discrimination OR "attitude toward" OR diversity) AND (faculty OR physician OR doctor) AND (Minority OR minorities OR ethnic OR race OR racial OR gender OR non-White) AND ("academic medicine" OR "medical school" OR "medical schools" OR "health profession") NOT (student OR patient). Results from all databases were exported and uploaded to the electronic reference manager software program, EndNote.[26] Duplicates were removed.

Figure 1. Results of literature search in PubMed, PsycInfo, CINAHL, Scopus, Academic Search Premier, and Web of Science.



The final list of studies was exported to Microsoft Excel. We manually examined and retrieved selected studies from the bibliographies of electronically identified studies and performed supplemental Google Scholar searches of the first author, reviewing any relevant studies published between 1990 and 2017. We defined physicians of color as physicians who identify as members of an ethnic or racial group underrepresented in the medical profession (URM) relative to their proportions in the U.S. population (black or African American, American Indian or Alaska Native, Native Hawaiian or Other Pacific Islander, or Hispanic/Latino)[27,28]; physicians of Asian descent; and physicians who trained in countries without predominantly European heritage. We followed the Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) guidelines (Figure 1).[29]

Study selection

We included studies written in English and conducted in the U.S. that collected data from practicing physicians on workplace discrimination based on ethnicity or race. We excluded studies of physicians-in-training (medical students, residents, or fellows), opinion pieces, commentaries, and editorials.

Data extraction and quality assessment

Two reviewers independently analyzed all titles and abstracts, eliminating those that did not meet the inclusion requirements. Three reviewers independently examined the full text of the remaining studies with the senior investigator adjudicating uncertainties. Two reviewers extracted data from the final set of studies assessing quality with either the Joanna Briggs Institute checklist for qualitative research or the AXIS tool for quality of cross-sectional studies.[30,31]

Data synthesis and analysis

The range of study designs, participant populations, analytical methods, and the absence of any intervention precluded a meta-analysis of quantitative findings or a meta-ethnography of qualitative studies.[32–34] We therefore conducted a narrative synthesis using tabulation and descriptive analysis to summarize findings and examine similarities and differences across studies, specifically probing for data on physicians' interactions with patients.[35] We contextualized survey results with data from qualitative studies and interpreted our overall findings in the context of the larger body of research on workplace discrimination.

RESULTS AND DISCUSSION

After removal of duplicates, our search retrieved 607 studies published between 1990 and 2017. We excluded 395 studies after reviewing titles and abstracts and conducted full-text reviews of the remaining 215 studies, excluding 196 for reasons outlined in Figure 1. Manual bibliographic and author searches identified an additional 3 studies. The final data set consisted of 19 studies that reported on ethnic or racial discrimination experienced by physicians of color who practice in the U.S.

Study characteristics

Of these 19 studies, 13 reported results from interviews[36–47] and/or focus groups,[43,48] with the remaining 6 containing results from surveys (Table 1).[49–54] In 3 cases, the same sample gave rise to two studies.[37,38,41,42,51,52] Eight studies (on 6 samples) examined the experiences of URM physicians.[39,41,42,45,46,48,51,52] Two studies (on 1 sample) exclusively examined IMG physicians,[37,38] and 2 studies reported results for IMGs as a subgroup.[53,54] Eight studies included white physicians but reported data separately,[43,44,47,49,51–54] 7 included only physicians of color,[36,39–42,45,46] and 3 combined data from white physicians with data from physicians of color.[37,38,48] Asians were grouped with whites as non-URM in 2 studies,[43,49] with URM in 2 studies,[40,45] and with Pacific Islanders and Hispanic Americans other than Mexican or Puerto Rican in 1 study.[50] Ten studies were limited to faculty in academic medicine[39,40,43–50] and 9 included physicians practicing in any setting.[36–38,41,42,51–54] Two studies were conducted at a single institution,[40,43] 6 studies on regional samples,[36–38,41,42,54] and 11 studies on national samples.[39,44–53] Three studies included only women,[39,44,53] and 4 studies focused on the experiences of a single ethnic or racial group: Indian, Native American, or of African descent.[36,39,41,42] Only 5 studies were of high quality.[36,38,39,42,46] The primary deficiencies of survey studies were the absence of sample size justification, data on non-responders, and mention of ethical approval.[31] The primary deficiencies of the interview and focus group studies were incomplete descriptions of participants or methods and no discussion of the researchers' backgrounds or their potential influence on the research.[55]

Prevalence and types of discrimination

Survey results confirmed the high prevalence of discrimination toward physicians of color and qualitative studies were replete with personal anecdotes of subtle and overt discrimination. In studies that included different ethnic/racial groups, black physicians consistently encountered discrimination at higher rates than any other group. In surveys that disaggregated responses by ethnic/racial group, workplace discrimination was reported by 59–71% of blacks,[51–53] 20–27% of Hispanics/Latinos,[51–53] 31–50% of Asians,[50–53] 6–29% of whites,[50–53] and 35–63% of those who identified as other race.[51,52] Compared to U.S.-born physicians, Corbie-Smith et al. found twice as much discrimination reported by those born in other countries and 45% of IMGs reported discrimination in the past 12 months[53]; however, Nunez-Smith et al. found no difference in ethnic/racial discrimination or any type of discrimination reported by physicians born in or outside the U.S.[51] Two studies compared reports of ethnic/racial discrimination in different practice sites: Coombs and King found higher rates in academic settings (246/455, 54%) than in solo practice (128/455, 28.1%),[54] and Nunez-Smith et al. found rates of 16–42% across all practice settings with no significant difference.[51] Qualitative studies provided detailed examples of discrimination experienced by physicians of color and descriptions of feeling isolated, alone, invisible, and treated like an outsider.[37,40–48] Many shared examples of overtly prejudiced statements or conscious discriminatory acts stated outright by the offender to be race- or gender-based.[36–38,41–44,47,48] More frequent, however, were subtle practices of discrimination in the form of inadequate institutional support, exclusion from social networks, devaluation of research on minority health or health

Table 1. Study characteristics and findings.

	Surveys				
Study, Year	**Study details[a]**	**Findings[b]**	**Quality: deficiencies**	**Inquired about patient interaction**	**Patient interaction emerged on its own**
Coombs and King, 2005[54]	• 445 physicians from the Massachusetts Medical School and New England Medical Society's database: ◦ 57.7% white ◦ 12.9% black/African American (not Hispanic) ◦ 7.0% Hispanic ◦ 0.5% American Indian/Eskimo/Aleut ◦ 19.2% Asian/Pacific Islander ◦ 2.7% other ◦ 40.5% IMGs ◦ 46.4% women • Mailed survey of unknown length	24.0% response rate: • 13.9% of physicians of color encountered ethnic/racial discrimination compared to 9.4% of white physicians • 65.4% of physicians of color who reported ethnic/racial discrimination found no changes made compared 37.5% of white physicians • Ethnic/racial discrimination led to: ◦ Career obstacles ◦ Disrespectful/punitive actions ◦ Hiring obstacle ◦ Practice barriers • IMGs more likely than USMGs and women more likely than men to report discrimination • 11.3% reported an incident; 52% of these "not satisfied" with response	Low: • No sample size justification • Low response rate • No description of analyses • No ethical review noted	Asked, "How often do you feel discriminated against by the following groups?" with patients as a group: • 16% of respondents including whites reported frequent or occasional discrimination from patients ◦ 18.4% females ◦ 14.1% males	N/A

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Study, Year	Study details[a]	Findings[b]	Quality: deficiencies	Inquired about patient interaction	Patient interaction emerged on its own
		Surveys			
Corbie-Smith et al., 1999[53]	• 4501 female physicians from the AMA Physician Masterfile for the Women Physicians' Health Study (calculated from Table 1): ◦ 74.4% white non-Hispanic ◦ 2.9% black/African American ◦ 3.9% Hispanic/Latina ◦ 15.9% Asian American/Pacific Islander ◦ 2.8% other • 4-page mailed survey	58.5% response rate: • Experienced workplace "ethnic harassment": blacks 62%, Asians 31%, Hispanics 20%, whites 6% • Foreign-born physicians (IMG or USMG) reported twice as much harassment as U.S.-born physicians and more during training and practice than before or during medical school • Harassment was more prevalent among those wanting to change specialties but had no association with career satisfaction • If they relived their lives, foreign-born physicians who encountered harassment were less likely to want to become a physician	Low: • No sample size justification • No description of analyses • No ethical review noted	No	No
Nunez-Smith et al., 2009a[51]	• 529 physicians in U.S. and Canada, variety of practice settings • 20% academic • Random sample from AMA Master File and NMA Membership roster: ◦ 58.6% non-Hispanic white ◦ 16.4% non-Hispanic black ◦ 14.8% non-Hispanic Asian	46.6% response rate: • Experienced ethnic/racial discrimination during their career: blacks 71%, Asians 44%, other races 63%, Hispanics/Latinos 27%, whites 7% • All physicians of color reported that race influenced relationships with colleagues and were asked to take on responsibilities because of their ethnicity/race	Medium: • No sample size justification	Asked if patients have refused their care: percentage agreeing or strongly agreeing: • Non-Hispanic blacks 60% ($p < 0.001$) • Non-Hispanic whites 30%	N/A

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Surveys					
Study, Year	**Study details[a]**	**Findings[b]**	**Quality: deficiencies**	**Inquired about patient interaction**	**Patient interaction emerged on its own**
	◦ 5.7% Hispanic/Latino(a) ◦ 4.5% other ◦ 28.7% women • 35-item mailed survey	• All physicians of color except Hispanic/Latino felt under greater scrutiny • 44% of black vs. 67% of white physicians believed discrimination issues were discussed at work • Black physicians (56%) reported more difficulty finding a mentor • Of physicians who reported any type of workplace discrimination, 65% rated their health as fair/poor compared to 27% who rated it as excellent		• Non-Hispanic Asians 33% • Non-Hispanic other 42% • Hispanics/Latinos 17%	
Nunez-Smith et al., 2009b[52]	• Same sample and methods as Nunez-Smith et al., 2009a ◦ Analyzed for relationship between ethnic/racial workplace discrimination and job turnover	46.6% response rate: • Percentages of ethnic/racial discrimination reported in Nunez-Smith et al., 2009a • Discrimination correlated with high job turnover for Asians and blacks, but not Hispanics/Latinos • 20–30% of physicians of color reported at least one job turnover due to workplace discrimination	Medium: • No sample size justification	No	No

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Study, Year	Study details[a]	Findings[b]	Quality: deficiencies	Inquired about patient interaction	Patient interaction emerged on its own
		Surveys			
		• Only ethnicity/race and sex were significantly associated with discrimination-related job turnover (not age, sexual orientation, nativity, religion, specialty, medical school location, or board certification status) • Leaving a job due to discrimination was associated with lower career satisfaction and increased consideration of leaving medicine			
Peterson et al., 2004[50]	• 1979 full-time physician faculty at 24 medical schools, random sample from the AAMC Faculty Roster: ◦ 82% non-Hispanic white ◦ 8% black ◦ 7% Asian ◦ 1% Mexican American ◦ 1% Puerto Rican ◦ 0.3% Native American or Alaskan Native ◦ 1% other Hispanic ◦ 26% foreign-born ◦ 40% women • 177-question mailed survey ◦ About 10% of survey items relating to race-based discrimination	60.0% response rate: • 63% URM faculty (vs. 50% Asian and 29% white) experienced "racial/ethnic bias in the academic environment" • 54% URM faculty (vs. 36% Asian and 8% white) experienced "racial/ethnic bias in professional advancement" • 48% URM faculty (vs. 26% Asian and 7% white) experienced "racial/ethnic discrimination by a superior or colleague" • Having a primary language other than English was associated with experiences of ethnic/racial bias • Faculty who experienced ethnic/racial discrimination had lower career	Medium: • No sample size justification • No comparison of responders and non-responders	No	No

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Study, Year	Study details[a]	Findings[b]	Quality: deficiencies	Inquired about patient interaction	Patient interaction emerged on its own
	Surveys				
		satisfaction scores and were less likely to feel welcome at their institution			
Pololi et al., 2013[49]	• 2381 faculty at 26 US medical schools ◦ From all four geographic regions, public and private, 1 HBCU ◦ 23% URM: black or African American, Hispanic/Latino, American Indian or Alaska Native, or Native Hawaiian or other Pacific Islander ◦ 53% women • Electronic survey sent to a sample of faculty	52.0% response rate: • 22% of URM faculty reported experiencing ethnic/racial discrimination from a colleague or superior vs. 6% of non-URM faculty (white and Asian)	Medium: • No sample size justification • No comparison of responders and non-responders	No	No

Study, Year	Study details[a]	Findings[b]	Quality	Inquired about patient interaction	Patient interaction emerged on its own
	Focus Group or Focus Group and Interview				
Flores et al., 2016[48]	• 8 senior investigators at the Academic Pediatric Association's 2015 Research in Academic Pediatrics Initiative on Diversity (RAPID) fall conference • Demographics not provided but from text it is clear that at least some are URM faculty	• Participants had experienced episodes of ethnic/racial discrimination in academic medicine including a patient requesting a doctor of a different ethnicity/race and feelings of isolation • Perceptions of little progress over time	Low: • Transcribed text of a focus group • No analyses • Participants not well described	No	• In response to a general request to describe experiences with discrimination, one participant described a situation where a mother of a patient said, "I don't want to be treated by a Mexican doctor."

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Focus Group or Focus Group and Interview					
Study, Year	**Study details[a]**	**Findings[b]**	**Quality**	**Inquired about patient interaction**	**Patient interaction emerged on its own**
	• Transcript of a Hot Topic Session discussion on faculty and career-development issues ◦ Topics chosen by 10 junior URM investigators at RAPID	• Recommendations by participants to junior URM faculty: ◦ Find social support to deal with effects of discrimination ◦ Recognize that you belong ◦ Take advantage of opportunities to spark change			
Price et al., 2005[43]	• 17 physicians at Johns Hopkins University School of Medicine in one of three focus groups (mixed ethnic/race, URM, and white/Asian) • 12 additional physicians via one-on-one interviews • Of 29 participants: ◦ 38% white ◦ 45% black ◦ 7% Asian ◦ 34% Hispanic ◦ 34% foreign-born • In-person focus groups • In-person interviews • 9-item demographic survey	• Reasons for underrepresentation of URM in academic medicine ◦ Absence of role models and mentors ◦ Lack of prior opportunities ◦ Poor recruitment efforts due to prejudice and/or lack of leaders' commitment to diversity • Importance of workplace climate ◦ Limited networking opportunities ◦ Being invisible without a white coat ◦ Double disadvantage for female URMs	Medium: • No discussion of researchers' influence on research • Description of qualitative methods lacked detail	No	No

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Focus Group or Focus Group and Interview					
Study, Year	**Study details[a]**	**Findings[b]**	**Quality**	**Inquired about patient interaction**	**Patient interaction emerged on its own**
		◦ Buffering effects of a good mentor • How bias creates a negative diversity climate ◦ Bias in recruitment efforts ◦ Disparities in promotion processes ◦ Competence is questioned by colleagues/ need to justify credentials ◦ URM faculty lack support from leadership			

Interview					
Study, Year	**Study details[a]**	**Findings[b]**	**Quality**	**Inquired about patient interaction**	**Patient interaction emerged on its own**
Bhatt, 2013[36]	• 101 physicians of Indian descent practicing in the Southwest U.S. ◦ 50 first generation ◦ 51 second generation (did not specify IMG status) ◦ 7 non-Indian senior faculty administrators ◦ 43 women • 121 in-depth, semi-structured interviews	• Frequent experiences of bias against women: ◦ Were asked about family during recruitment ◦ More severely reprimanded for mistakes ◦ Steered away from more competitive specialties ◦ Faced greater challenges for promotion than men and white women ◦ Shamed for motherhood • Descriptions of intersectionality of biases for being Indian, a woman, and an IMG	High	Physicians of Indian descent asked if they had been discriminated against by patients because of ethnicity/ race: • 65% of first-generation physicians said yes • 57% of second-generation physicians said yes	N/A

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Study, Year	Study details[a]	Findings[b]	Interview Quality	Interview Inquired about patient interaction	Interview Patient interaction emerged on its own
	◦ 13 participants were re-interviewed	• Ethnic discrimination frequent for both first- and second-generation Indian physicians • IMG bias varied by country of training and type of accent			
Carr et al., 2007[45]	• 18 interviews with "minority faculty members" from 12 institutions (public and private institutions, all four geographic regions) ◦ Participant demographics not provided ◦ 50% women • In-depth, semi-structured interviews conducted over-the-phone	• Frequent experiences of ethnic/racial discrimination described • Academic medicine perceived as a "battle" • Recommended responses to discrimination: ◦ Remain calm and not reactive ◦ Have knowledge and information relevant to a given situation ◦ Be deliberate and thoughtful in your response ◦ Confronting bias may do more harm than good	Medium: • Description of qualitative methods lacked detail • Participants not well described	No	No
Chen et al., 2010[38]	• 25 non-US-born IMGs practicing in New York, New Jersey, or Connecticut from countries classified as developing by the World Health Organization ◦ 24% from Sub-Saharan Africa	• Faced discrimination at all levels of workplace interactions • Encountered professional limitations in location of practice, specialty choices, and opportunities for advancement • Experienced challenges in	High	Asked how "professional relationships" including with patients are affected by IMG status: • Different physician-patient dynamics in U.S. vs. home country • Felt good about respect from patients, medical	N/A

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Study, Year	Study details[a]	Findings[b]	Interview Quality	Interview Inquired about patient interaction	Interview Patient interaction emerged on its own
	◦ 32% from South Asia ◦ 20% from East Asia ◦ 8% from Latin America ◦ 16% from Middle East ◦ 44% women • In-person, in-depth interviews • Anonymous demographic survey • Grounded theory	transitioning to the culture and practice of medicine in the US • Noted unique skills they can bring to the practice of U.S. medicine		experience from home country, and being able to relate to marginalized patients	
Chen et al., 2011[37]	• Same sample and methods as Chen et al., 2010 ◦ Analyzed responses about what residency programs could have done to ease transition	• Faced two learning curves: as immigrants and residents • Encountered insensitivity and isolation in the workplace • Migration has personal and global costs • IMGs have specific needs to complete residency related to immigration status and visa requirements	Medium-high: • No mention of IRB	Same question as Chen et al., 2010: • Restrictions in clinical practice sites and difficulty in learning U.S. medical practice noted	N/A
Elliott et al., 2010[39]	• 6 Native American women faculty: ◦ 4 different states	• Native American values were central to success	High	No	• Several physicians described how rewarding it

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Study, Year	Study details[a]	Findings[b]	Interview Quality	Interview Inquired about patient interaction	Interview Patient interaction emerged on its own
	◦ 5 different tribes • In-person, semi-structured interviews	• Experienced mistrust from patients • Found that the definition of success changed over time • Mentoring and interpersonal connections fostered success			is to work with a Native American community • One participant described mistrust from patients in their community
Hassouneh et al., 2014[46]	• 29 self-identified faculty of color employed at a national sample of predominantly white medical schools ◦ 66% African American ◦ 17% Latino ◦ 3% Native American ◦ 14% Asian American ◦ 14% immigrants (IMG or USMG) ◦ 52% female • In-person or over-the-phone interviews • Second interviews with selected participants	• Reported invalidation of the sense of self ◦ Credentials viewed through the lens of race ◦ Clinical judgment ignored • Treated as outsiders; had to work harder, experienced invalidation; "minority tax" • Received unequal treatment compared to white colleagues: ◦ Less protected time and access to resources ◦ Held to higher performance standards ◦ Demeaned in multiple small ways ◦ Succeeded through strategic engagement and disengagement and living one's values	High	No	• Two physicians of color shared their ability to connect with diverse patient population

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			Interview		
Study, Year	**Study details[a]**	**Findings[b]**	**Quality**	**Inquired about patient interaction**	**Patient interaction emerged on its own**
	• Grounded theory	• Faculty of color found their influence through ◦ A sense of satisfaction in their ability to mentor trainees of color and improve cultural awareness for majority trainees ◦ Connecting with patients of color ◦ Diversity work and other forms of service			
Mahoney et al., 2008[40]	• 36 UCSF minority faculty physicians ◦ 47% African American ◦ 45% Latino ◦ 8% Asian American ◦ 56% women • One-on-one interviews	• Expressed commitment to diversity-related activities, sometimes with pressure from the institution • Diversity not seen as an institutional priority • Experiences with overt and subtle discrimination ◦ Serious consequences for career path, research success, and faculty retention ◦ Need to navigate the "old boys network" ◦ Confronting bias is often not well received and drains personal energy • Discussed need for and lack of effective mentors	Medium-high: • No discussion of researchers' influence on research	No	No
Nunez-Smith et al., 2007[42]	• 25 physicians of African descent practicing in the New England area	• Awareness of race permeates the experiences of physicians	High	No	• Two participants shared negative patient interactions involving refusal of care.

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		Interview			
Study, Year	**Study details[a]**	**Findings[b]**	**Quality**	**Inquired about patient interaction**	**Patient interaction emerged on its own**
	◦ 24% foreign-born ◦ 56% women • Racially concordant, in-person, in-depth interviews	of African descent in the workplace • Race-related experiences influence interpersonal interactions and institutional climate • Responses to racism or discrimination in the workplace varied depending on circumstances and included ignoring episodes, educating colleagues, and confronting bias • Described silence and lack of allies on race-related issues • Race-related experiences and responses to them lead to racial fatigue with personal and professional consequences			• One participant shared positive patient experiences describing how "nurturing" and "powerful" it is to care for black patients.
Nunez-Smith et al., 2008[41]	• Same sample and methods as Nunez-Smith 2007 ◦ Analyzed for perspectives on race-related dialogue in healthcare settings	• Race-related healthcare experiences prior to medical training shaped participants' perspective of healthcare organizations and professional identity • Protecting URM patients from healthcare discrimination was a top priority • Perceived differences between their interpretation of potentially offensive	Medium-high • Description of qualitative methods lacked detail	No	• A participant brought up patients' level of comfort interacting with a black physician: "Many of our colleagues aren't comfortable working with people from different backgrounds, be it patients or colleagues…"

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Study, Year	Study details[a]	Findings[b]	Interview Quality	Interview Inquired about patient interaction	Interview Patient interaction emerged on its own
		race-related work experiences and their non-minority colleagues • Felt discomfort voicing race-related concerns with more reliance on external than internal support systems for race-related issues			
Pololi et al., 2010[47]	• 96 faculty from 5 US medical schools ◦ 17% African American/black ◦ 4% Hispanic/Latino ◦ 84% MD/MBBS ◦ 55% women • In-person or over-the-phone semi-structured interviews	• Described exclusion by majority faculty from collaborations due to difficulties in cross-cultural communication and feelings of isolation and invisibility • Lacking mentors, role models, and social capital • Felt devalued for professional or research interests, the burden of representing one's race, and the financial hardship of giving back by being in academic medicine ◦ Being asked to provide service and committee work to promote diversity ◦ Facing the dilemma of wanting to care for people of color while also advancing professionally and serving as a role model • Additional themes of the	Medium • No discussion of researchers' influence on research	No	• A participant shared their desire to provide care to patients and give back to their community

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Study, Year	Study details[a]	Findings[b]	Interview: Quality	Interview: Inquired about patient interaction	Interview: Patient interaction emerged on its own
		importance of leaders in diversity efforts and the slow pace of change			
Pololi and Jones, 2010[44]	• Same sample and methods as Pololi et al., 2010 • Secondary analyses reported in this article included 17 faculty ◦ 71% MDs ◦ 29% PhDs ◦ 71% white ◦ 29% URM ◦ 100% women	• Double disadvantage of gender and race ◦ Feeling isolated and alone ◦ No commonality of experiences with colleagues ◦ No support or individuals with similar experiences to talk to or reflect on experiences at an institution	Medium-high: • No discussion of researchers' influence on research	No	No

N/A, not applicable; IMG, International Medical Graduate; USMG, United States Medical Graduate; AMA, American Medical Association; NMA, National Medical Association; POCs, Physicians of Color; URM, Underrepresented ethnic/racial group in medicine relative to percentage in the U.S. population (black or African American, Hispanic/Latino, American Indian or Alaska Native, or Native Hawaiian/other Pacific Islander)

[a]The Study details column gives ethnicity/race information as described in each study.

[b]The Findings column makes some assumptions for brevity and consistency: black refers to non-Hispanic black or African American; Hispanic/Latino is not limited to individuals with Mexican and Puerto Rican Heritage; Asian refers to the predominant group in a category.

disparities, and a lack of institutional commitment to advancing diversity.[40,43,44,46,47] Physicians of color described facing greater scrutiny, being held to higher standards, having their competence questioned, needing to justify their credentials,[43,45–47,50–52] and being mistaken for maintenance, housekeeping, or food service workers in the workplace.[42,47] Examples of effective mentors were given, but participants also reported a relative lack of mentors, role models, and social capital at their institution.[40–43,45–47] Some found themselves being pressured into diversity-related roles, serving as "window dressing," and being "used by the institution" as the token minority.[40–42,46,48] Poor recruitment and promotion practices also contributed to experiences of discrimination by faculty of color.[36,40,43,45–48,50] In spite of frequent and persistent experiences with race-based discrimination, participants described the silence of others in their institution around race generally and around their experiences of discrimination specifically, in conjunction with an inability to raise the issue themselves for fear of repercussions.[42,44,45,49,54] These fears may be justified as Coombs and King, the only study to ask about reporting episodes of discrimination and the institutional response, found of the 50 respondents who made a formal complaint of discrimination, 50% reported no change and almost 20% reported worsening of the situation.[54] Among physicians of color, 62.5% (105/168) were more likely to report no change in their situation when they filed a complaint about discrimination compared to 37.5% (109/277) of white physicians.[54]

Four studies identified language or accent as a source of discrimination for physicians of color.[36,43,47,50] In their survey of medical school faculty, Peterson et al. found that those with a primary language other than English had almost twice the odds of experiencing ethnic/racial bias than those whose primary language was English.[50] In qualitative studies, 1 URM male physician shared how he has had his medical decisions questioned because of his accent,[43] and a white physician shared his own prejudice against others with certain language patterns.[47] IMGs reported encountering limitations in location of practice, choice of specialty, and opportunities for advancement[38] and indicated that the discrimination they faced varied depending on where they are from, with European countries and Canada being more respected than other locations.[36,42]

Interactions with patients

Only 1 of the 6 survey studies specifically asked about discrimination from patients. In that study of 529 physicians, significantly more black (60%) than any other ethnic/racial group agreed or strongly agreed that "patients have refused my care."[51] A second survey study included patients among possible sources of discrimination and found 18.4% of female (38/206) and 14.1% of male (44/239) physicians reported such discrimination frequently or occasionally, but the results were not broken down by ethnic/racial group in a sample of 445 physicians where 57.7% of respondents were white.[54] No qualitative study of URM physicians specifically asked about interactions with patients. The 3 qualitative studies that did inquire about patient interactions did not include URM physicians.[36–38] One of these studies interviewed physicians of Indian descent and found that 65% of 50 first-generation and 57% of 30 second-generation physicians reported discrimination from patients.[36] The other 2 studies reported on the same sample of IMG physicians.[37,38] In these, Chen and colleagues asked about the impact of being an IMG on "professional relationships" including patients.[37,38] Interviewees noted that they had to adjust to different physician-patient dynamics in the U.S. compared to the country in which they trained but felt accepted by their patients as "a good doctor,"[38] often able to empathize with patients from marginalized groups, and able to bring important skills from their medical experiences in other countries.[37] Statements about patient interactions emerged in an additional 6 qualitative studies.[39,41,42,44,46,48] In addition to statements about patients' refusal of care and mistrust,[39,41,42,48] several physicians of color reflected on positive aspects of their ethnic/racial identity in patient interactions in feeling they were giving back to their community and able to connect with or advocate for patients from marginalized groups.[39,42,46]

Intersecting identities

The intersection of gender-based and ethnic/racial-based discrimination was documented in both survey and qualitative studies with women of color experiencing what Bhatt referred to as "gendered racism."[36] Nunez-Smith et al. found significantly more black female (11/29, 37.9%) than white female (12/74, 16.2%) or black male (12/48, 25.0%) physicians reported at least 1 job turnover as a result of discrimination.[52] Coombs and King found female physicians were significantly more likely than male physicians to have experienced at least one form of discrimination in the past 12 months (98/191, 51.3% vs. 79/254, 31.2%) but did not report data for physicians of color separately.[54] Although lacking a male comparison group, in a sample of over 4000 female physicians, Corbie-Smith et al. found that 62% of women who identified as black (78/125), 36% as other race (44/121), 31% as Asian (211/681), and 20% as Hispanic (34/169) reported discrimination compared to 6% of white women (192/3192).[53] Qualitative studies provide personal

examples of experiences as a "double minority" as a physician of color and a female physician and how it resulted in increased feelings of isolation.[43,44,46,47] Physicians of Indian descent discussed the double bind of gender and race, as well as the triple bind of gender, race, and being first-generation.[36]

Impact of discrimination

Seven of the 19 studies (4 qualitative and 3 survey) reported on the impact of workplace discrimination.[42,43,47,48,50,52,53] In 2 surveys, employment-related effects included greater likelihood of changing specialty, wishing they had not chosen medicine, job turnover, or leaving medicine.[51,53] Discrimination was also associated with negative effects on career advancement, lower career satisfaction, and feeling unwelcome at an institution in qualitative studies.[36,37,41–44,46–48] Four studies described the cumulative burden imposed by discrimination on physicians of color,[42,43,46,48] which Hassouneh et al. referred to as a "minority tax"[46] and Nunez-Smith et al. defined as "racial fatigue."[42] Nunez-Smith et al. was the only study to examine the association of experiencing workplace discrimination with self-rated health. In their national sample of 529 practicing physicians, of the 18 who rated their health as fair/poor 12 (65%) had experienced discrimination, and of the 227 who rated their heath as excellent 62 (27%) reported discrimination of any type.[51]

Importance of organizational support and workplace climate

Multiple physicians of color in 9 of the 13 qualitative studies reported on the importance of having both personal and organizational support to buffer the negative impact of discrimination.[37,39–41,43,45–48] Physicians of color described the importance of family members and friends outside the institution as important sources of support,[42,45] and because of concern about discussing workplace discrimination at their own institution they also described the need to seek support from physicians or colleagues elsewhere.[41,42,48] In terms of organizational support, Nunez-Smith et al. found that compared to their white colleagues physicians of color were less comfortable reporting discrimination at their institution, less comfortable discussing ethnicity/race at work, and did not feel that issues of discrimination were discussed at work[51]; and Peterson et al. found that faculty who experienced ethnic/racial discrimination were less likely to "feel welcomed" at their institution.[50] In interviews with "minority faculty" that included African Americans, Asians/Pacific Islanders, and Hispanics/Latinos at University of California San Francisco, there was a feeling that increasing diversity was not an institutional priority.[40] In interview studies exploring the experiences of physicians of African descent, some participants shared the need to leave an institution due to lack of organizational support[41] related to ethnicity and race and the negative affect this lack of support had on workplace climate.[42] According to one URM faculty member in an interview study by Pololi et al., the culture of academic medicine with its focus on the individual can contribute to the perception of a negative and unsupportive workplace climate for Latino and American Indian faculty who may come from cultures centered around family and community.[47] In a study of faculty at Johns Hopkins University School of Medicine conducted by Price et al., participants shared how ethnic/racial bias contributes to a negative "diversity climate" in a number of ways.[43] Four studies identified mentors as sources of support,[37,39,40,43] with 7 studies finding that physicians of color sometimes find social support from selected colleagues and other physicians of color in their workplace, but often needed to find such support outside their institution.[37,40–43,45,48]

Discussion

This systematic review confirms that physicians of color practicing in the U.S. frequently experience overt and subtle workplace discrimination from leadership, colleagues, and patients. Experiencing discrimination is associated with negative career outcomes and creates an unwelcoming work environment with a culture of silence around experiences of discrimination; pressure to take on diversity-related tasks; and feelings of isolation, fatigue, hurt, and invisibility.

Although examples of overt discrimination were plentiful, many of the experiences fall in the realm of microaggressions.[56,57] The daily workplace experiences of microaggressions and incivility in interpersonal interactions, inequities in promotion, and biases in performance review for nonwhite employees are well documented.[56,58,59] As with physicians, these experiences are associated with greater job dissatisfaction and intention to leave,[60,61] and as in the study by Nunez-Smith et al.,[51] perceived discrimination in the workplace has been associated with adverse health outcomes.[61–64]

There was almost no attempt to collect data on patient interactions despite the centrality of patient care in physicians' lives. The lack of curiosity regarding experiences of physicians of color with discrimination from patients may reflect underlying assumptions that these physicians care solely or predominantly for patients of color which have their roots in U.S. history. In 1910, recommendations from the Flexner report set the stage for comprehensive reform of medical education in the U.S. and Canada.[65]

This report explicitly stated that the practice of black physicians "will be limited to his own race…" Unfortunately, contemporary arguments for increasing the ethnic and racial diversity of the physician workforce continue to focus narrowly on benefits to ethnic/racial minority and underserved populations.[10,66] While inarguably important for health equity,[10,66–69] this singular focus reinforces Flexner's original circumscribed patient practice for physicians of color (at least for black physicians), diminishes or ignores the broader scope of benefits of a diverse physician workforce, and may underlie the failure to examine race-based discrimination from patients toward physicians of color in the research we reviewed.[10]

Asian physicians are sometimes grouped with white physicians because their percentage in the U.S. physician workforce exceeds their percentage of the overall U.S. population. Such grouping does Asians a disservice because Asian physicians experienced more discrimination than white physicians[51] and had negative employment outcomes similar to URM physicians.[52]

One of the reasons patient discrimination toward physicians of color is increasingly visible if not more common[23,24,70–74] may be the 2010 Affordable Care Act's edict to tie healthcare organization payment to patient satisfaction through the Hospital Consumer Assessment of Health Care Providers and Systems scores. Emboldened as consumers, patients may feel entitled to express personal biases toward physicians of color[73–75]; and focused on the bottom line, healthcare organizations may tolerate such discriminatory behaviors.[24] In a national survey of over 800 physicians, WebMD found that 60% of respondents had received offensive remarks from patients about some personal characteristic and almost half had a patient request a different physician.[16,74] Healthcare systems have faced no legal challenges for failing to protect physicians from patients' discriminatory remarks or refusal of care based on some personal characteristic (gender, ethnicity, race, religion, weight).[24]

Although the American Medical Association's code of ethics states that physicians can "terminate the patient-physician relationship with a patient who uses derogatory language or acts in a prejudicial manner,"[76] physicians would likely be penalized in patient satisfaction scores for doing so. Physicians have little legal protection from discrimination by patients. The Civil Rights Act of 1964 protects patients from discriminatory practices in the provision of healthcare services but does not protect physicians of color from discrimination by patients. Title II of this Act outlaws discrimination in public accommodations but does not name hospitals or clinics as public accommodations. Title VII protects employees from discrimination, but physicians are not generally employed by the hospital or clinic in which they practice. If healthcare organizations tie physician reimbursement to patient satisfaction scores and physicians of color systematically receive lower scores from their white patients than their comparable nonwhite patients,[75] there might be grounds for legal action under Title VI of the Civil Rights Act which prohibits discrimination in activities and programs that receive federal funding.[77]

Healthcare organizations must develop policies and practices that support their increasingly diverse physician workforce from discrimination from all sources, including patients. The only study in this review to survey experiences with reporting an incident of discrimination suggests that current policies may be ineffective and potentially harmful, but the authors provided no specific examples of the type of harm incurred by those who reported experiencing discrimination.[54] Over half of physicians in this study who reported an incident of discrimination were unsatisfied with the organization's response.[54] Nevertheless, the importance of organizational support and a supportive workplace climate described by some physicians of color in buffering the negative effects of discrimination is confirmed by other research. For example, Miner at al. confirmed in 2 studies that the negative employment and health outcomes of workplace incivility were buffered by organizational support defined as a belief that the organization values their contributions and cares about their well-being.[61] A longitudinal study by Sheridan et al. of science and medicine faculty suggests that fostering such a positive workplace climate would have many benefits within academic medicine.[78] They found that all faculty, including faculty of color, who experienced a more positive department climate published more papers and received more grants.[79] O'Brien et al. similarly found that faculty in science and engineering who experienced discrimination had lower academic productivity over time[62] and that supervisor support mitigated the negative impact of discrimination. We have previously shown that improving department climate had positive long-term effects on hiring and retention.[80–82]

Limitations

Our search strategy excluded grey literature research and studies published before 1990. Our criteria were limited to practicing physicians of color in the U.S., but 2 studies included physicians from Canada,[51,52] 3 included non-MD faculty,[44,45,49] 2 did not indicate IMGs' country of origin,[43,46] and 1 included physicians-in-training.[36] Ethnic and racial grouping was inconsistent across some studies, particularly for Asians. None of the cohort studies were longitudinal so the directionality of the association between experiencing discrimination, health, and some employment outcomes cannot be ascertained.

IMPLICATIONS

Our review suggests multiple directions for future research beginning with an assessment of healthcare organizations' current policies to protect physicians of color from discrimination with data on their effectiveness. Also needed is exploration of legal recourse for physicians of color if healthcare organizations tie their pay to patient satisfaction scores and if this systematically results in lower pay for physicians of color than their white counterparts. The existence of daily workplace indignities experienced by physicians of color needs no further evidence. It is time to develop interventions informed by existing research and test their effectiveness on reducing workplace discrimination towards physicians of color from leaders, colleagues, and patients; enhancing perceptions of workplace climate; and improving employment outcomes. As stated by the National Academy of Medicine, reducing the negative impact of cultural stereotypes in physician-patient interactions will benefit both the patient and the physician.[15]

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CONFLICT OF INTEREST

None.

OTHER DISCLOSURES

None reported.

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Not applicable.

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None.

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None.

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