

# Letters

## RESEARCH LETTER

### PHYSICIAN WORK ENVIRONMENT AND WELL-BEING

#### Perceived Discrimination Experienced by Physician Mothers and Desired Workplace Changes: A Cross-sectional Survey

Although a recent study showed that hospital mortality and readmission rates were lower for Medicare patients treated by female than male physicians,<sup>1</sup> women physicians are paid less,<sup>2</sup> are less likely to be promoted,<sup>3</sup> and, on average, spend



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8.5 more hours per week on household activities,<sup>4</sup> even after adjusting for age, experience, specialty, clinical revenue, and research productivity. One mechanism may be that in current work environments, childbearing

and child rearing may limit opportunities and advancement for women physicians. It is not known, however, how motherhood specifically affects perceived discrimination among women physicians.

**Methods** | Established in 2014, the Physician Moms Group is an online community with more than 60 000 physician members in the United States who self-identify as mothers (including adoptive or foster mothers).<sup>5</sup> The group is active with an average of 415 new posts, 7413 comments, and 24 829 “likes” daily. On June 17, 2016, we posted an online cross-sectional survey collecting demographic, physical, and reproductive health data and asking about perceived workplace discrimination and desired workplace changes. We assessed self-reported burnout using the Mini Z Burnout Survey.<sup>6</sup> To assess discrimination, we asked “Have you ever experienced discrimination based on the following?” Possible responses were race or ethnicity, gender, age, being an international medical graduate, sexual orientation or gender identity, pregnancy or maternity leave, breastfeeding, mental health problems, and physical disability. *Maternal discrimination* was defined as self-reported discrimination based on pregnancy, maternity leave, or breastfeeding. Participants were also asked “Have you ever experienced any of the following forms of discrimination at your workplace?” and were asked to identify 3 workplace changes that were most important. The **Figure** illustrates the distribution of all possible responses.

When the survey was first posted, 11 887 members viewed it. Two reminder posts on July 18, 2016, and July 30, 2016, had 9082 and 10 074 member views, respectively. Since 82.5% of respondents visit the forum daily, we estimate 16 059 unique views of at least 1 post. A total of 5782 physician mothers completed the survey and provided responses that could be analyzed (participation rate of 16.5%

based on 34 956 active users during the period, and 36.0% based on the estimated 16 059 unique views). We used logistic regression models to estimate odds ratios (ORs) and corresponding 95% confidence intervals (CIs), adjusting for age, race/ethnicity, specialty, and practice setting. The University of California, San Francisco institutional review board approved the study.

**Results** | Of 5782 total respondents, 4507 (77.9%) reported any type of discrimination. Specifically, 3833 (66.3%) reported gender discrimination, and 2070 (35.8%) reported maternal discrimination. Of those reporting maternal discrimination, 1854 (89.6%) reported discrimination based on pregnancy or maternity leave, and 1002 (48.4%) reported discrimination based on breastfeeding. Of the 4222 respondents who reported either gender or maternal discrimination, 1681 (39.8%) reported both; 2152 (51.0%) reported gender discrimination alone; and 389 (9.2%) reported maternal discrimination alone.

The **Table** summarizes the characteristics of total respondents and specifically those reporting maternal discrimination. Maternal discrimination was associated with higher self-reported burnout (45.9% burnout in those with maternal discrimination vs 33.9% burnout in those without; adjusted odds ratio, 1.74; 95% CI, 1.55-1.95;  $P < .001$ ).

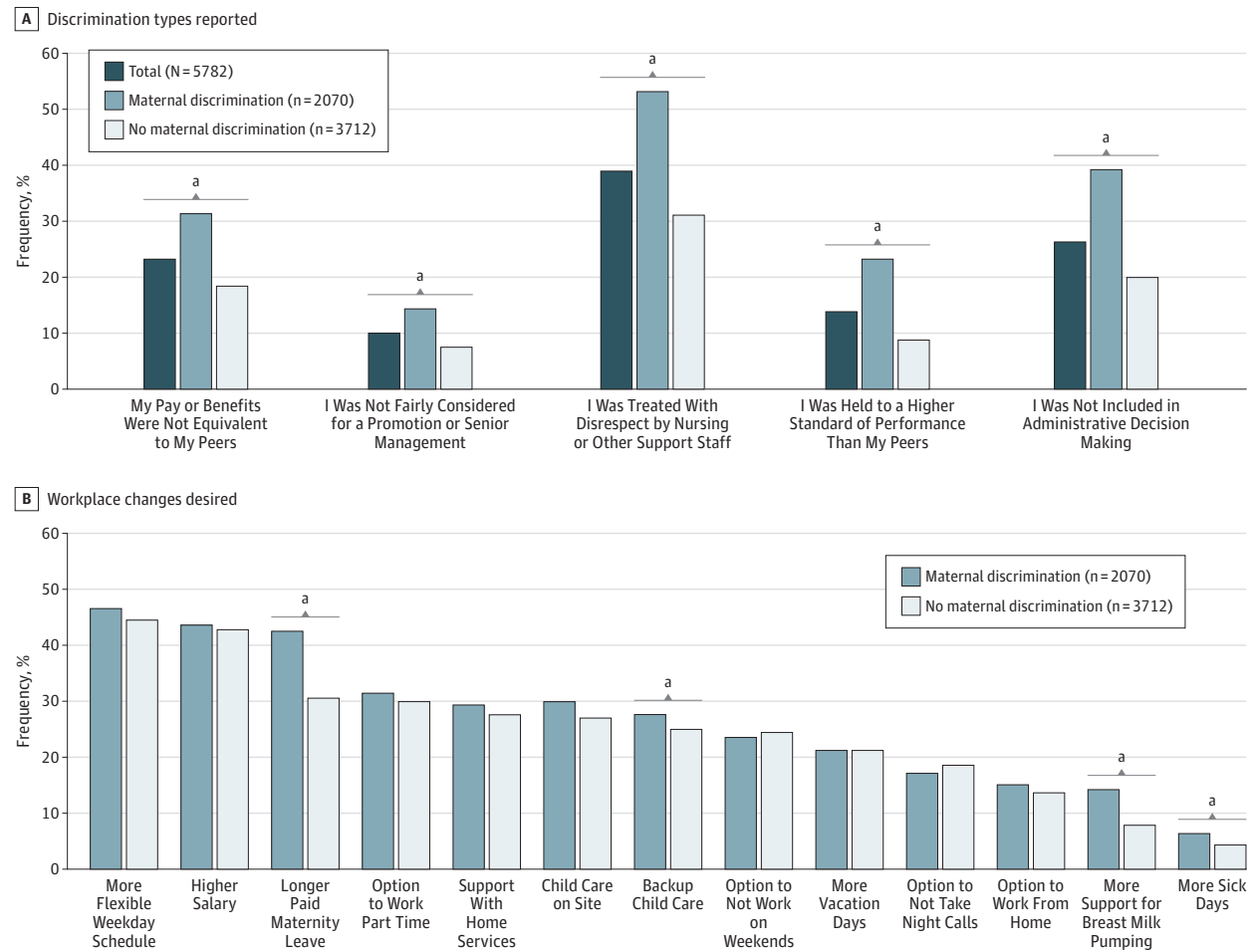
Overall, 38.8% of physicians experienced disrespectful treatment by nursing or other support staff ( $n = 2246$ ). Among the 2070 who reported maternal discrimination, the most common manifestations were disrespectful treatment by nursing or other support staff (52.9%;  $n = 1097$ ), not being included in administrative decision making (39.2%;  $n = 811$ ), and pay and benefits not equivalent to male peers (31.5%;  $n = 651$ ) (**Figure, A**).

Workplace changes that the respondents considered most important are illustrated in the **Figure, B**. As shown there, physicians who reported maternal discrimination were significantly more likely to value workplace changes related to longer paid maternity leave, backup child care, and support for breastfeeding than those who did not report maternal discrimination.

**Discussion** | In a large cross-sectional survey of physician mothers, we found that perceived discrimination is common, affecting 4 of 5 respondents, including about two-thirds of the respondents who reported discrimination based on gender and more than a third who reported maternal discrimination. The overlap of groups reporting gender and maternal discrimination was less than half, suggesting that they are somewhat different phenomena.

Important limitations of our study include survey design, the low response rate, and possible selection bias, if those who experience discrimination are more likely to participate in a support group.

Figure. Survey Responses



A, Survey question: "Have you ever experienced any of [the illustrated] forms of discrimination at your workplace? (Please select all that apply)."

B, Survey question: "Which of [the illustrated] workplace changes would be most important to you? Please select your top 3."

<sup>a</sup> P < .05 for maternal discrimination vs no maternal discrimination by the  $\chi^2$  test.

Despite substantial increases in the number of female physicians—the majority of whom are mothers—our findings suggest that gender-based discrimination remains common in medicine, and that discrimination specifically based on motherhood is an important reason. To promote gender equity and retain high-quality physicians, employers should implement policies that reduce maternal discrimination and support gender equity such as longer paid maternity leave, backup child care, lactation support, and increased schedule flexibility.

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**Concept and design:** Adesoye, Mangurian, Girgis, Choo, Linos.

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Table. Characteristics of the Survey Respondents

Characteristic	Respondents, No. (%)		OR (CI) for Experiencing Maternal Discrimination <sup>b</sup>	P Value
	Total (N = 5782)	Experienced Maternal Discrimination <sup>a</sup> (n = 2070)		
<b>Age, y</b>				
≤30	197 (3.4)	95 (48.2)	1.37 (1.01-1.85)	.04
31-35	1696 (29.3)	684 (40.3)	1 [Reference]	NA
36-40	2253 (39.0)	834 (37)	0.88 (0.77-1.00)	.05
41-45	1053 (18.2)	314 (29.8)	0.63 (0.54-0.75)	<.001
≥46	583 (10.1)	143 (24.5)	0.47 (0.38-0.59)	<.001
<b>Race/ethnicity<sup>c</sup></b>				
Non-Hispanic white	4000 (69.2)	1485 (37.1)	1 [Reference]	NA
Non-Hispanic black	211 (3.6)	64 (30.3)	0.77 (0.57-1.04)	.09
Asian	792 (13.7)	248 (31.3)	0.77 (0.65-0.91)	.002
Hispanic	440 (7.6)	150 (34.1)	0.91 (0.74-1.12)	.39
Other	266 (4.6)	91 (34.2)	0.87 (0.67-1.14)	.31
<b>Marital status</b>				
Not currently married, never married, or divorced	315 (5.4)	94 (29.8)	1 [Reference]	NA
Married	5457 (94.4)	1976 (36.2)	1.11 (0.86-1.44)	.43
<b>Children, No.</b>				
0	71 (1.2)	14 (19.7)	0.46 (0.25-0.83)	.01
1	1724 (29.8)	591 (34.3)	1 [Reference]	NA
2	2663 (46.1)	929 (34.9)	1.24 (1.09-1.43)	.002
3	1035 (17.9)	409 (39.5)	1.64 (1.38-1.95)	<.001
>3	273 (4.7)	123 (45.1)	2.30 (1.75-3.03)	<.001
<b>At least 1 child &lt;6 y</b>				
No	1273 (22.0)	318 (25)	1 [Reference]	<.001
Yes	4345 (75.1)	1702 (39.2)	1.58 (1.31-1.91)	
<b>Currently pregnant or given birth in past year</b>				
No	4066 (70.3)	1381 (34)	1 [Reference]	.73
Yes	1672 (28.9)	677 (40.5)	1.09 (0.96-1.24)	
<b>Trainee, resident, or fellow</b>				
No	5244 (90.8)	1804 (34.4)	1 [Reference]	<.001
Yes	534 (9.2)	266 (49.8)	1.52 (1.23-1.87)	
<b>Medical specialty</b>				
Anesthesia	187 (3.2)	88 (47.1)	1.92 (1.32-2.80)	<.001
Dermatology	103 (1.8)	39 (37.9)	1.32 (0.83-2.11)	.24
Emergency medicine	516 (8.9)	214 (41.5)	1.54 (1.16-2.06)	.003
Family medicine	950 (16.4)	335 (35.3)	1.15 (0.87-1.52)	.32
Internal medicine	1291 (22.3)	462 (35.8)	1.23 (0.95-1.60)	.12
Neurology	139 (2.4)	55 (39.6)	1.36 (0.91-2.03)	.14
Obstetrics-gynecology	709 (12.3)	244 (34.4)	1.22 (0.91-1.65)	.19
Ophthalmology	96 (1.7)	42 (43.8)	1.85 (1.14-3.00)	.01
Pathology	95 (1.6)	36 (37.9)	1.27 (0.78-2.07)	.34
Pediatrics	1166 (20.2)	372 (31.9)	0.98 (0.75-1.27)	.86
Psychiatry	314 (5.4)	103 (32.8)	1.02 (0.72-1.44)	.92
Radiology	109 (1.9)	41 (37.6)	1.43 (0.90-2.29)	.13
Surgery	278 (4.8)	117 (42.1)	1.57 (1.11-2.22)	.01
Other	61 (1.1)	18 (29.5)	0.84 (0.46-1.54)	.58

(continued)

Table. Characteristics of the Survey Respondents (continued)

Characteristic	Respondents, No. (%)		OR (CI) for Experiencing Maternal Discrimination <sup>b</sup>	P Value
	Total (N = 5782)	Experienced Maternal Discrimination <sup>a</sup> (n = 2070)		
Practice setting				
Private practice	2143 (37.1)	699 (32.6)	1 [Reference]	NA
Academic	1957 (33.8)	770 (39.3)	1.27 (1.11-1.45)	<.001
Public hospital	444 (7.7)	145 (32.7)	0.96 (0.77-1.20)	.71
HMO	266 (4.6)	87 (32.7)	1.05 (0.79-1.38)	.75
VA	103 (1.8)	27 (26.2)	0.75 (0.48-1.19)	.23
Military	105 (1.8)	35 (33.3)	0.95 (0.62-1.45)	.81
Not currently working	113 (2.0)	48 (42.5)	1.71 (1.16-2.53)	.01

Abbreviations: HMO, health maintenance organization; NA, not applicable; OR, odds ratio; VA, Veterans Affairs institution.

<sup>a</sup> Missing data were not shown.

<sup>b</sup> Adjusted for age, race/ethnicity, medical specialty, and practice type.

<sup>c</sup> The odds of discrimination of any type were significantly higher among non-Hispanic blacks overall (OR, 4.3; 95% CI, 2.49-7.26 for all types of discrimination;  $P < .001$ ).

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