Dissatisfaction with Medical and Surgical Residency Training Is Consistently Higher for Women than for Men

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INTRODUCTION

In an attempt to balance service and education, there is a renewed focus on trainee work experiences and job satisfaction. Overall measures of dissatisfaction likely disguise differences across defined subgroups, particularly men and women, known to experience job satisfaction and burnout differently across professions.¹ A previous study showed gender differences in satisfaction during surgical residency training.² The objective of this study was to determine gender differences in dissatisfaction with specific aspects of the institutional environment and with trainee wellbeing during both medical and surgical residency training using data from two clinical trials which investigated the effects of removing resident shift length limitations during residency training.^{3, 4}

METHODS

Sixty three internal medicine and 117 surgical residency programs were randomly assigned to be regulated by 2011 ACGME duty hour policies or by more flexible policies that did not specify shift length limits or mandated time-off intervals between shifts.^{3, 4} By design, parallel instruments were administered in both studies to all residents in enrolled programs at the end of each training year, including 8 identical questions eliciting resident satisfaction with their institutional environment (continuity of care, patient safety, work hours/scheduling, handoffs/transitions of care, education, and program's duty hour regulations), and satisfaction with their own wellbeing (time for rest and overall wellbeing) on a 5-point scale from "very dissatisfied" to "very satisfied."

We included only surveys that included responses identifying gender. We dichotomized satisfaction outcomes (very dissatisfied or dissatisfied vs neutral, satisfied, or very satisfied) for consistency with the previous published trials. We calculated odds ratios (OR) and associated 95% confidence intervals (CI) using a mixed effects logistic regression model with an intercept for clustering of respondents within program and an indicator for gender as the fixed effects covariate in the model and the respondent's dichotomized response as the outcome.

RESULTS

The response rate was 99.9% for medical and 99.3% for surgical residents. A total of 6271 surveys (96.8%) identified gender.

Women medical and surgical residents reported more dissatisfaction in all eight domains compared with men (Tables 1 and 2): continuity of care (7.2% vs 4.9%; OR 0.66, 95% CI 0.54–0.82), patient safety (5.0% vs 3.3%; OR 0.66, 95% CI 0.51–0.85), work hours and scheduling (17.8% vs 12.4%; OR 0.65, 95% CI 0.56–0.75), quality and ease of handoffs and transitions in care (9.4% vs 7.5%; OR 0.77, 95% CI 0.64–0.93), quality of resident education (13.2% vs 9.7%; OR 0.71, 95% CI 0.60–0.84), their program's duty hour regulation (8.8% vs 6.7%; OR 0.75, 95% CI 0.62–0.91), their time for rest (25.3% vs 19.2%; OR 0.70, 95% CI 0.62–0.79), and their overall wellbeing (22.0% vs 16.1%; OR 0.68, 95% CI 0.59–0.77).

DISCUSSION

In this national study of medical and surgical residents, women reported more dissatisfaction in all domains compared with

Table 1 Number of Women and Men either Dissatisfied or Very Dissatisfied

	Overall			Medicine			Surgery		
	Women (N= 2710)	Men (N= 3561)	P value	Women (N= 1199)	Men (N= 1305)	P value	Women (N= 1511)	Men (N= 2256)	P value
Continuity of care (7a)	196 (7.2)	173 (4.9)	<0.001	100 (8.3)	75 (5.8)	0.012	96 (6.4)	98 (4.3)	0.008
Patient safety (7b)	136 (5.0)	119 (3.3)	0.001	64 (5.3)	49 (3.8)	0.046	72 (4.8)	70 (3.1)	0.013
Work hours and scheduling (7d)	481 (17.8)	442 (12.4)	<0.001	222 (18.5)	173 (13.3)	<0.001	259 (17.1)	269 (11.9)	<0.001
Quality and ease of handoffs and transitions in care (7e)	255 (9.4)	267 (7.5)	0.005	86 (7.2)	76 (5.8)	0.183	169 (11.2)	191 (8.5)	0.007
Quality of overall resident education (7f)	358 (13.2)	347 (9.7)	<0.001	143 (11.9)	127 (9.7)	0.149	215 (14.2)	220 (9.8)	<0.001
Program's duty hour regulations (7i)	239 (8.8)	239 (6.7)	0.003	126 (10.5)	107 (8.2)	0.028	113 (7.5)	132 (5.9)	0.060
Time for rest (7g)	685 (25.3)	683 (19.2)	<0.001	329 (27.4)	258 (19.8)	<0.001	356 (23.6)	425 (18.8)	0.001
Overall wellbeing (7h)	595 (22.0)	573 (16.1)	<0.001	287 (23.9)	222 (17.0)	<0.001	308 (20.4)	351 (15.6)	<0.001

men. Results were consistent across medicine and surgery, and they were consistent across each of the domains measured.

These results are congruent with previous data from surgical residency.^{2, 5} A university-wide survey at a non-medical research university suggests that perceived institutional leadership and mentoring may influence gender differences in job satisfaction.⁶ In addition, male and female faculty members identified different factors that contributed to their job satisfaction. Although all faculty members rated the availability of academic resources and research-supportive workloads as important drivers for job satisfaction, women also rated positive interactions with their immediate colleagues as critical to their job satisfaction. These types of studies suggest that there are important organizational factors such as mentoring and leadership

opportunities as well as differences in professional identity that may explain the observed gender differences in job satisfaction. It may be that certain opportunities are not as readily available to or different for women (such as certain types of mentorship, sponsorship, or leadership positions) but also that women weight the same factors differently when considering their overall satisfaction with their work. We did not assess these and other potential individual factors (such as expectations outside of the work environment, family stressors, and the absence or presence of other support) that may drive gender differences.

Although the factors mediating gender difference in satisfaction with medical training are unknown, these results reveal that we must attend to these differences even as we aim to improve satisfaction for all.

Table 2 Differences in Dissatisfaction between Women and Men

	OR* overall	Effect size	OR [†] (95% CI) in medicine	Effect size ^{††}	OR [†] (95% CI) in surgery	Effect size ^{††}
Continuity of care (7a)	0.66 (0.54–0.82)	–0.18	0.67 (0.49–0.92)	–0.15	0.67 (0.50–0.90)	–0.19
Patient safety (7b)	0.66 (0.51–0.85)	–0.21	0.68 (0.46–0.99)	–0.17	0.65 (0.46–0.91)	–0.23
Work hours and scheduling (7d)	0.65 (0.56–0.75)	–0.21	0.66 (0.53–0.82)	–0.17	0.65 (0.54–0.79)	–0.23
Quality and ease of handoffs and transitions in care (7e)	0.77 (0.64–0.93)	–0.15	0.80 (0.58–1.11)	–0.11	0.74 (0.59–0.92)	–0.19
Quality of overall resident education (7f)	0.71 (0.60–0.84)	–0.17	0.82 (0.63–1.07)	–0.10	0.65 (0.53–0.80)	–0.22
Program's duty hour regulations (7i)	0.75 (0.62–0.91)	–0.18	0.73 (0.55–0.97)	–0.15	0.78 (0.59–1.01)	–0.19
Time for rest (7g)	0.70 (0.62–0.79)	–0.21	0.63 (0.52–0.77)	–0.19	0.76 (0.64–0.89)	–0.21
Overall wellbeing (7h)	0.68 (0.59–0.77)	–0.23	0.63 (0.52–0.78)	–0.21	0.72 (0.60–0.85)	–0.23

*The odds ratio and associated 95% CI were obtained from a mixed effects logistic regression model with an intercept (1 random term for clustering of respondents within program), and an indicator for gender (1 = men; 0 = women) as the fixed effects covariate in the model and the respondent's dichotomized response as the outcome

[†]The odds ratio and associated 95% CI were obtained from a mixed effects logistic regression model with an intercept (1 random term for clustering of respondents within program), an indicator for gender (1 = men; 0 = women), an indicator for department (1 = surgery; 0 = medicine), an interaction term between gender and department, and an indicator for arm (1 = flex; 0 = standard) as the fixed effects covariates in the model and the respondent's dichotomized response as the outcome

^{††}The odds ratio in the surgery department was obtained using the lincom command in STATA

^{†††}The effect size was calculated as the difference in means between men and women (men – women) divided by a weighted standard deviation

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Compliance with Ethical Standards:

Conflict of Interest: The authors declare that they do not have a conflict of interest.

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