



Variation by Institution in Sexual Harassment Experiences Among US Medical Interns

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Introduction

Sexual harassment is experienced by 20% to 25% of US women resident physicians.^{1,2} Most studies of sexual harassment are single center or single specialty, limiting the understanding of variation across institutions and specialties.^{3,4} The purpose of this cross-sectional study was to investigate possible institutional variation in experiences of sexual harassment among US medical interns.

Methods

The cross-sectional study followed the **STROBE** reporting guideline and was approved by the University of Michigan Institutional Review Board. Participants provided electronic informed consent.

We analyzed data from June 2016 to June 2017 in the Intern Health Study, an ongoing National Institutes of Health–funded repeated cohort study of postgraduate year 1 residents (interns) and the Association of American Medical Colleges (AAMC). Participants completed the shortened Sexual Experiences Questionnaire (SEQ-S)⁵ at the end of their intern year (eMethods 1 in **Supplement 1**). Sexual harassment was defined as endorsing at least 1 sexual harassment item of the SEQ-S. Surveys were linked with AAMC data to obtain institution characteristics. Institutions with fewer than 50 respondents and respondents who identified as nonbinary were excluded from the primary analysis due to small sample size.

Self-reported demographic characteristics are presented as counts (percentages) or medians (IQR). We used a 2-level hierarchical logistic regression model to assess institutional variation in intern experiences of any form of sexual harassment (primary outcome) across institutions, adjusting for age, self-reported race and ethnicity (associated with increased rates of discrimination and sexual harassment), and sex. We quantified the variation in the probability of self-reporting sexual

+ Supplemental content

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Table. Demographic Characteristics of Interns by Self-Reported Experiences of Sexual Harassment

Characteristic	Participant group ^a	
	Experienced sexual harassment (n = 1311)	Did not experience sexual harassment (n = 746)
Age, median (IQR)	27 (26-28)	27 (26-28)
Sex		
Women	821 (77.2)	243 (22.8)
Men	490 (50.9)	473 (49.1)
Race and ethnicity		
Arab or Middle Eastern	18 (58.1)	13 (41.9)
Asian	252 (62.5)	151 (37.5)
URIM ^b	92 (62.2)	56 (37.8)
White	813 (65.2)	434 (34.8)
Multiracial	121 (68.0)	57 (32.0)
Other or unknown ^c	15 (75.0)	5 (25.0)

Abbreviation: URIM, underrepresented in medicine.

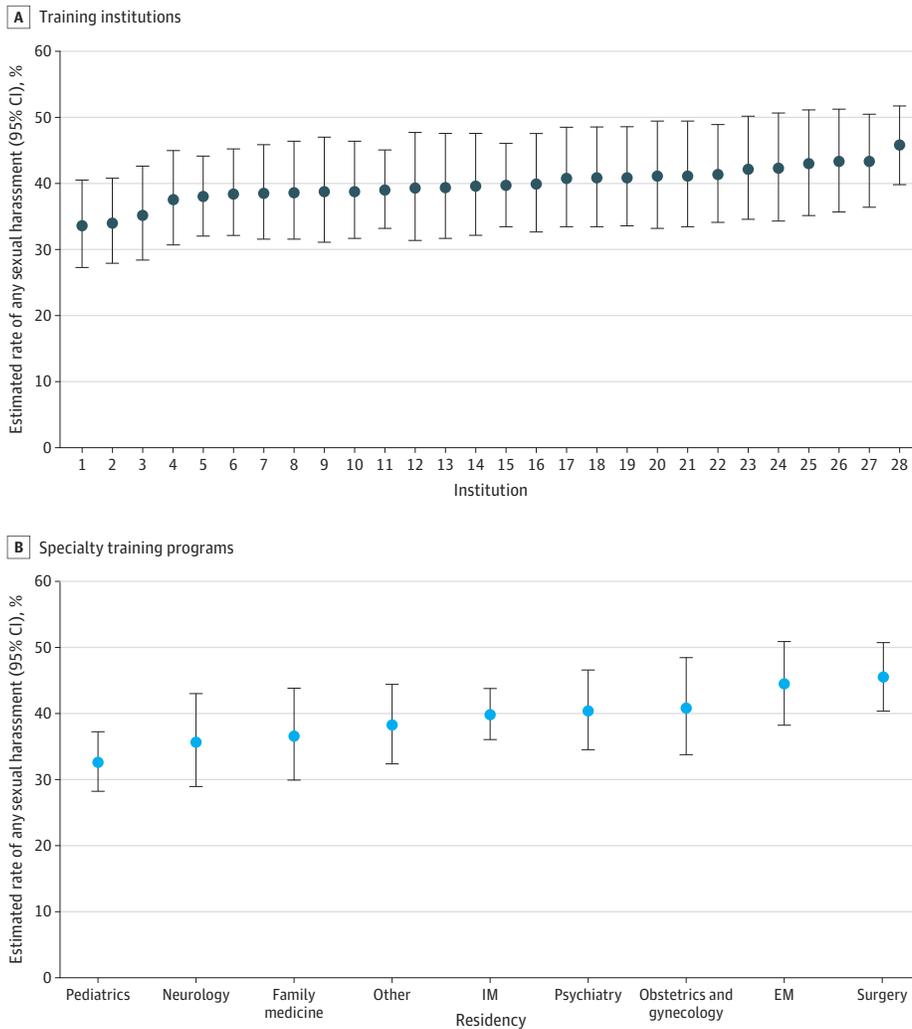
^a Unless otherwise indicated, data are expressed as No. (row %) of participants.

^b Includes interns who self-identified as American Indian or Alaska Native, Black or African American, Hispanic, or Native Hawaiian or Other Pacific Islander.

^c Other was self-reported by the intern; unknown indicates no race or ethnicity was reported by the intern.

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Figure. Caterpillar Plots of Variation in Experiences of Sexual Harassment Across Training Institutions and Specialty Programs



harassment across institutions using the intraclass correlation coefficient (ICC) and the median odds ratio (MOR), which were calculated from the final model using the method of Merlo.⁶ A sensitivity analysis was performed using similar methods to assess variation in sexual harassment among specialty training programs (eMethods 2 in Supplement 1). Analyses were performed from March 13 to October 23, 2023, using Stata, version 15.1 (StataCorp LLC) with significance set at 2-sided $P < .05$.

Results

Of the 6134 interns from 360 institutions who initiated the survey, 2027 from 28 institutions were included in the analysis (963 men [47.5%] and 1064 women [52.5%]; median age, 27 [IQR, 26-28]); they were predominantly Asian (403 [19.9%]), White (1247 [61.5%]), or multiracial (178 [8.8%]) (Table). Sexual harassment was experienced by 1311 interns (64.7%), including 821 women (77.2%) and 490 men (50.9%).

After adjusting for respondent characteristics, there was significant variation between institutions in the prevalence of sexual harassment (ICC, 0.01 [95% CI, 0.003-0.05]) with an absolute difference of 12.2% between institutions for low and high prevalence. The MOR was 1.20 (95% CI, 1.09-1.45), meaning for 2 interns with the same characteristics, the intern at the institution

with a higher prevalence of sexual harassment would have 20% greater odds of experiencing sexual harassment (**Figure**). There was also significant variation in sexual harassment among the 9 training specialties in the fully adjusted model (ICC, 0.01 [95% CI, 0.003-0.05]) with an MOR of 1.22 (95% CI, 1.10-1.52) (Figure).

Discussion

Among a US national cohort of interns, over half experienced sexual harassment. Although harassment was prevalent across programs, institutional and specialty training variations in interns' sexual harassment experiences exist, thereby providing additional evidence that residency programs and institutions play an important role in combating this widespread problem.

This study builds on prior work limited to surgical trainees noting variation in program-level rates of sexual harassment.^{1,4} Limitations include the binary definition of sex, lack of generalizability outside of the US, and potential responder bias. Further work is necessary to understand cultural or policy differences that influence the rates of sexual harassment within institutions and specialties. This data could inform interventions and facilitate the sharing of best practices, ultimately reducing the unacceptably high frequency of sexual harassment experienced by resident physicians.

ARTICLE INFORMATION

Accepted for Publication: October 26, 2023.

Published: December 26, 2023. doi:10.1001/jamanetworkopen.2023.49129

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Author Contributions: Dr Viglianti had full access to all of the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis.

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Drafting of the manuscript: Viglianti, Meeks.

Critical review of the manuscript for important intellectual content: All authors.

Statistical analysis: Viglianti.

Obtained funding: Sen.

Administrative, technical, or material support: Meeks.

Supervision: Sen.

Conflict of Interest Disclosures: Dr Viglianti reported receiving grant funding from the National Heart, Lung, and Blood Institute (NHLBI) during the conduct of the study. Dr Oliverio reported receiving grant funding from the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) of the National Institutes of Health (NIH) during the conduct of the study. No other disclosures were reported.

Funding/Support: This study was supported by grant K23 HL157364 from the NHLBI of the NIH (Dr Viglianti), grant K23 DK123413 from the NIDDK of the NIH (Dr Oliverio), grant R01 MH101459 from the National Institute of Mental Health of the NIH (Dr Sen), and T32 fellowship 5T32HL110952-09 (Dr Pereira-Lima).

Role of the Funder/Sponsor: The funders had no role in the design and conduct of the study; collection, management, analysis, and interpretation of the data; preparation, review, or approval of the manuscript; and decision to submit the manuscript for publication.

Meeting Presentation: Preliminary results of this paper were presented at the Annual Meeting of the American Thoracic Society; May 22, 2023; Washington, DC.

Data Sharing Statement: See [Supplement 2](#).

Additional Contributions: We thank Kathleen T. Lee, MPH, at the University of Michigan Department of Internal Medicine Division of Pulmonary and Critical Care Medicine for her assistance in the analysis. This work was compensated by grant K23 HL157364 from the NHLBI.

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SUPPLEMENT 1.

eMethods 1. Intern Health Study and Survey Questions

eMethods 2. Detailed Statistical Approach

eReference

SUPPLEMENT 2.

Data Sharing Statement