Incidence of Resident Mistreatment in the Learning Environment Across Three Institutions

Maya M. Hammoud, MD, MBA,¹ Nital P. Appelbaum PhD,^{2,3} Paul M. Wallach, MD,⁴ Heather L. Burrows, MD, PhD,¹ Komal Kochhar, MBBS, MHA,⁴ Robin R. Hemphill, MD, MPH,² Michelle Daniel, MD, MHPE,¹ Michael J. Clery, MD, MPP,^{1,5} Sally A. Santen, MD, PhD²

¹ University of Michigan Medical School, Ann Arbor, MI.

² Virginia Commonwealth University School of Medicine, Richmond, VA.

³ Baylor College of Medicine, Houston, TX.

⁴ Indiana University School of Medicine, Indianapolis, IN.

⁵ Emory University, Atlanta, GA.

Short title: Reports of Mistreatment by Residents

Introduction: Mistreatment in the learning environment is associated with negative outcomes for trainees. While the Association of American Medical Colleges (AAMC) annual Graduation Questionnaire (GQ) has collected medical student reports of mistreatment for a decade, there is not a similar nationally benchmarked survey for residents. The objective of this study is to explore the prevalence of resident experiences with mistreatment.

Methods: Residents at three academic institutions were surveyed using questions similar to the GQ in 2018. Quantitative data were analyzed based on frequency and Mann-Whitney U tests to detect gender differences.

Results: Nine hundred ninety-six of 2682 residents (37.1%) responded to the survey. Thirty-nine percent of residents reported experiencing at least one incident of mistreatment. The highest reported incidents were public humiliation (23.7%) and subject to offensive sexist remarks/comments (16.0%). Female residents indicated experiencing significantly more incidents of: public embarrassment, public humiliation, offensive sexist remarks, lower evaluations based on gender, denied opportunities for training or rewards, and unwanted sexual advances. Faculty were the most frequent instigators of mistreatment (66.4%). Of trainees who reported experiencing mistreatment, less than one-quarter reported the behavior.

Conclusion: Mistreatment in the academic learning environment is a concern in residency programs. There is increased frequency among female residents.

Introduction

Mistreatment of trainees is common and has been an ongoing concern in medicine since Dr. Silver's article noting medical student mistreatment in 1982 (Silver 1982; Cook et al. 2014; Mavis et al. 2014). While professionalism is a core value and competency, unprofessional behavior includes lack of respect, use of profanity, sexual harassment, and discrimination (Swick 2000; Binder et al. 2015).

To better delineate the problem in the United States, the Association of American Medical Colleges (AAMC) clarified in 2011 that "mistreatment, either intentional or unintentional, occurs when behavior shows disrespect for the dignity of others and unreasonably interferes with the learning process: Examples of mistreatment include sexual harassment; discrimination or harassment based on race, religion, ethnicity, gender, or sexual orientation; humiliation, psychological or physical punishment and the use of grading and other forms of assessment in a punitive manner" (Association of American Medical Colleges 2018). To document the perceived frequency of mistreatment, the AAMC Graduation Questionnaire (GQ) has surveyed U.S. medical students about mistreatment since 1991. According to nationally aggregated responses to the 2018 GO, 42.1% of medical students indicated being mistreated, with the incidence of mistreatment varying by institution and year (Mavis et al. 2014; Association of American Medical Colleges 2018). Medical students identified faculty in the clinical setting and residents as the primary instigators of this mistreatment (Association of American Medical Colleges 2018). Less than onequarter of medical students reported incidents of mistreatment to an authority figure at their institutions; citing a belief that the incidents did not seem important enough to report, that they did not think anything would be done about it, or-more concerning-fear of reprisal as reasons for non-reporting (Association of American Medical Colleges 2018).

Many articles have been published about medical student mistreatment over the past decade, resulting in a better understanding of the scope of the problem in undergraduate medical education (UME) (Cook et al. 2014; Mavis et al. 2014). Such data provides insight into what is happening in the hidden curriculum of clinical practice (Buery-Joyner et al. 2019). Experiences of student mistreatment have been associated with negative outcomes such as burnout, decreased career satisfaction, and thoughts of dropping out of medicine (Sheehan et al. 1990; Cook et al. 2014). However, there is little in the way of monitoring or insight into the concurrent environment of mistreatment during residency training.

While mistreatment has not been studied methodically in graduate medical education (GME), concerns about the culture of the clinical learning environment have surfaced as sources of poor well-being for resident physicians (Jennings & Slavin 2015). Billings and colleagues found resident exposure to unprofessional behaviors (e.g., public humiliation; observation of disrespect toward patients, medical students, residents, and nurses) was associated with greater burnout and cynicism (Billings et al. 2011). Despite acknowledging that the current learning environment is suboptimal, there still seems to be a lag in cohesively approaching mistreatment as a complex condition of the environment that may result from a multitude of factors associated with demoralization in medical education (Slavin & Chibnall 2017).

While perceptions vary on what constitutes mistreatment behaviors (Gan & Snell 2014; S. Ellis et al. 2019), addressing the issue is critical to improve the learning environment. Gruppen and colleagues proposed a conceptual framework of the learning environment that includes a psychosocial dimension that encompasses the personal, the social, and the organizational levels (Gruppen et al. 2019). The learning environment incorporates how the individual engages with the environment, as well as the interactions and social relations amongst members. Importantly, the

organization component also influences through structure, hierarchy, culture and norms. Examining mistreatment through this lens provides insight as to how social relationships, including interactions perceived as mistreatment, occur within the social and organizational structure of the residency and health system (Gruppen et al. 2006). The Accreditation Council for Graduate Medical Education's (ACGME) Clinical Learning Environment Review (CLER) suggests that optimal learning environments allow for the reporting of mistreatment and unprofessional behaviors without fear of negative repercussion through psychological safety (Weiss et al. 2018). While such guidance is helpful, we still do not know how frequently residents experience incidents of mistreatment and by whom, or whether such incidents are reported to someone in a position of authority. Such baseline information is vital to start developing interventions for improvement across the medical education continuum.

A systematic review encompassing the international medical training learning environment found 63.4% of residents experienced harassment and discrimination in the workplace (Fnais et al. 2014). In another cross-sectional survey of residents, almost half of respondents identified as being subjected to bullying behavior (Johnson & Widnall 2018). A recent report of surgery resident mistreatment found high rates of mistreatment, but their definition included both provider and patient mistreatment (Hu et al. 2019). Despite expectations of professional behaviors, when residents experience mistreatment they may feel discord between the reality of the hidden curriculum they experience and expected professional behaviors (R.J. Ellis et al. 2019). As these behaviors become normalized during training, it is that much more difficult to improve the learning environment.

In 2018, a National Academies of Sciences, Engineering, and Medicine report raised the concern that sexual harassment is compromising the integrity of education and research, as well

as medicine (Johnson & Widnall 2018). Gender-based mistreatment is especially concerning for female trainees (Dzau & Johnson 2018). A meta-analysis found that at least 16 studies prior to 2011 showed that female trainees experience a higher prevalence of harassment—primarily sexual—and gender discrimination compared to males (Fnais et al. 2014). The study of surgical residents noted that 65% of the women reported gender discrimination and 20% reported sexual harassment by patients or providers (Hu et al. 2019). One medical school found that female medical students indicated experiencing greater sexual harassment compared to male students across time, despite efforts to eradicate mistreatment over 12 years (Fried et al. 2012). This type of mistreatment during UME can also vary by specialty. In one study, gender-based discrimination and sexual harassment in residency selection was found to be prevalent in obstetrics and gynecology for both males and females, while females experienced more discrimination and harassment in general surgery and neurology (Stratton et al. 2005).

While the GQ documents mistreatment for medical students, we do not have a similar assessment of these behaviors experienced by residents. The objective of this study was to determine the prevalence of various types of mistreatment by health care providers experienced by residents-across three academic institutions based on the behaviors documented in the GQ. Our study also aimed to detect gender differences in mistreatment experiences. We hypothesized that female residents experience mistreatment more frequently compared to male residents. Finally, a secondary analysis comparing prevalence of mistreatment for students and residents was performed.

Methods

Setting

Three large state academic medical centers in the United States (University of Michigan, University of Indiana, and Virginia Commonwealth University) collaborated to assess medical student and resident indicated frequency of mistreatment, instigators of mistreatment, reporting of behavior to the organization, and reasons for not reporting incidents. Each of the three sites obtained survey approval for residents from their respective institution's Institutional Review Board.

Procedures

The AAMC electronically administers the GQ annually to all graduating medical students that includes 16 behaviors encompassing mistreatment. We developed a resident survey to mirror the questions asked on the GQ for mistreatment during GME. We asked residents to rate how often (1=Never, 4=Frequently) they experienced 16 unique types of mistreatment. We included follow-up questions asking who instigated the mistreatment, whether residents reported incidents, and why they did not report incidents. Two of the sites also allowed respondents to provide general comments in an open response field. Researchers without clinical supervisory roles administered the surveys in the spring of 2018 to all residents in either paper or electronic format (QualtricsTM). Complete survey items are available in Appendix 1. The medical student GQ data for the three institutions was requested from the AAMC.

Analysis

We analyzed quantitative data through SPSS Version 25 based on frequency and conducted Mann-Whitney U and chi square tests to compare groups. Further, we analyzed the differences by gender. Responses were combined for all three sites and analyzed in aggregate due to the sensitivity of the content. We subjected qualitative data to content analysis by consensus of two authors.

Results

Of 2682 residents, 996 (37.1%) responded to the survey (Table 1). The frequency of residents' specialty is in Appendix Table.

Incidents of mistreatment. Thirty-nine percent (n=390) of residents and 44.5% (n=232) of medical students indicated experiencing at least one incident of mistreatment. The highest indicated behaviors were public humiliation (23.7%) and being subject to offensive sexist remarks/comments (16.0%) (Table 2).

Gender differences between resident experiences. The resident survey allowed group comparison testing by gender (Table 2). Female residents indicated significantly more incidents of public embarrassment (p=0.003), public humiliation (p=0.010), offensive sexist remarks (p<0.001), lower evaluations based on gender (p<0.001), denied opportunities for training or rewards (p<0.001), and unwanted sexual advances compared to male residents (p<0.001) (Table 2).

Instigators of mistreatment. Among those who indicated experiencing mistreatment, residents disclosed that clinical faculty were the top instigators of mistreatment, but residents, nurses, other institutional employees, administrators, and students also instigated incidents (Table 3).

Reporting behavior to the organization. Of the 390 residents who indicated that they experienced mistreatment, only 13.6% (n=53) reported the event(s) to someone at their organization. In comparison, 23.2% (n=54) of medical students reported incidents to their medical school (p=.005). The most common reasons given by residents for not reporting incidents included perceptions that the event was not important enough, that nothing would be done, fear of reprisal, resolving the issue themselves, and not knowing what to do (Table 3). In the 29 comments,

residents provided similar reasons for not reporting (Table 4).

Discussion

Residents, especially female residents, are experiencing significant rates of mistreatment in the learning environment. The most common instigators are clinical faculty; however, residents rarely report mistreatment to the organization.

The learning environment includes the organization and social interactions (Gruppen et al. 2006). Since all trainees engage in the same environment, it is not surprising that the prevalence and patterns were similar with students reporting slightly higher mistreatment. While all trainees are working with faculty, administrators, and inter-professional colleagues, the roles, responsibilities, and hierarchies for students and residents are different. Not surprisingly students experience more mistreatment instigated by residents whom they work closely with. Residents can influence students' quality of learning (Karani et al. 2014), contribute to educational neglect (Castillo-Angeles et al. 2017), and can be instigators of mistreatment.

In addition, residents also report resident on resident mistreatment. This is not surprising because residency programs also have their own hierarchical structure with senior residents who supervise and have to opportunity to disrespect and mistreat younger residents. Further, there may be tensions between programs where residents of one specialty may mistreat another. This disrespect to colleagues is concerning and needs to be addressed. While the GQ and other studies examine student mistreatment, based on our results, we recommend a similar systematic approach for monitoring so that mistreatment can be addressed.

In this and other studies, female residents appear to be disproportionately affected by mistreatment, particularly in regard to gender bias and humiliation (Larsson et al. 2003;

Musselman et al. 2005; Ulusoy et al. 2011; Stone et al. 2019). There are similar trends for female medical students(Caulfield et al. 2019). This problem needs to be urgently addressed. In the United States, residents are employees, thus, these findings raise concern for discriminatory work environments, which should be legally compelling for institutional action in addition to the clear moral imperative (Mayo Foundation for Medical Ed. and Research v. United States, 562 U.S. 44. 2010). To address gender issues, recommendations that may influence all forms of mistreatment include moving beyond legal compliance to address culture and climate; creating diverse, inclusive, and respectful environments; diffusing the hierarchical and dependent relationship between trainees and faculty; and striving for strong and diverse leadership (Johnson & Widnall 2018).

One of the first steps to address mistreatment is to increase reporting. A slightly higher proportion of students are reporting mistreatment compared to residents, likely due to the focus on medical student mistreatment as an issue for accreditation (Mavis et al. 2014). However, residents and students are disclosing only a minority of perceived mistreatment events to authorities (Ross et al. 2018). If education leadership is not aware of the incidents, it is difficult to address them. For both residents in this study and from the GQ for students, the primary reason was that they did not feel the mistreatment was sufficiently important. The comments clarify this position for residents, indicating the perception that some embarrassment is expected as part of the learning process. In some cases, there was the belief that nothing would be done about the report, or worse, that there might be retribution. All of these reasons for non-reporting may lead to a lack of engagement by learners to improve the learning environment, which is troubling. Addressing these concerns is important. Another step is to address the culture. This is a much harder—yet critical—approach to solving the problem. Taking a close look at institutional cultures that permit or promote mistreatment is important, as is the identification of other root causes of this unprofessional behavior (Lucey et al. 2016; Ross et al. 2018). At times the hierarchical structure of training can contribute to both resident and student mistreatment. It is important to identify institutional processes that foster positive, respectful interactions so they can be amplified within the learning environment. Educational leaders and trainees must work together to create a diverse, inclusive, and respectful environment where these values are aligned with and embedded into the systems, structures, policies, and procedures of the institution (Johnson & Widnall 2018).

The few published descriptions of programs to decrease mistreatment are focused on medical students (Mazer et al. 2018). At the University of California Los Angeles School of Medicine, a 13-year multipronged program including workshops and increased reporting options resulted in no change in the frequency, severity, or type of mistreatment reported by medical students (Fried et al. 2012). Stanford implemented an institution-wide program that met with greater success called "Zero Tolerance," which included increased reporting options, tool kits with strategies to prevent mistreatment, and small group discussions. They were able to effectively increase student awareness of institutional policies and reporting of mistreatment (Smith-Coggins et al. 2017). Similarly, a program at the University of Michigan was able to increase medical students' reporting of mistreatment by addressing some of the root causes of barriers to reporting (Ross et al. 2018).

While these interventions address mistreatment of students and may extend to behaviors aimed at residents, more effort and a deeper understanding of the etiology of the problem is clearly needed. While UME has a strong focus on mistreatment and reporting, GME does not. The

11

approach to investigating and resolving mistreatment needs to be systemic, as interventions that target only medical students or residents are likely missing the full scope of the problem (Bynum & Lindeman 2016). This requires collaboration between UME, GME, and health system leadership to address the culture. Some institutions are hiring system-wide wellness officers (Making The Case For The Chief Wellness Officer In America's Health Systems). These individuals might also be tasked to address cultural issues related to resident and student well-being as well as address the cultural aspects that permit mistreatment, disrespect and unprofessional behavior.

There is much work to be done regarding mistreatment in the learning environment. We recommend a systematic method of collecting this data across residency programs. While the ACGME queries programs on the annual survey and during CLER visits, there is not a strong push to address this aspect of the residents' experiences. At one of our institutions, we are beginning to address mistreatment and the learning environment on a department level with meetings with departmental leadership (e.g., chairs, residency program directors) and residents. As part of this process, synergy between leadership in both medical education and the hospital system to explore solutions within each department is critical. Further, on an institutional level, there is coordinated monitoring through annual surveying of residents and clinical faculty on experiences within their departments (e.g., perceptions of support, psychological safety) and well-being (e.g., stress, positive/negative well-being).

There are some limitations to this study. The GQ was designed for the medical students, and although the resident populations share many characteristics, residents are employed and medical students are not. The differences in relation to the learning environment may affect survey responses. There were minor variations in survey methodology by site, which may have affected results. There were also low response rates and potential participation bias for Sites B and C, likely due to recruitment done solely through an optional electronic survey. Based on response rates, we did not compare mistreatment across specialties or years of training. In addition, due to the sensitivity of mistreatment we did not compare across institutions. There are likely differences in rates of mistreatment and the culture surrounding the learning environment by institution and specialty that warrants further investigation.

Future research on mistreatment should include tracking experiences throughout all stages of medical education to better understand the origins of mistreatment and how such behaviors have been sustained in medical education culture. Research on whether individuals who experience mistreatment do so across all stages of medical education, as well as whether individuals start to perpetuate mistreatment in the clinical learning environment based on modeling behaviors of clinical faculty, would further help identify solutions for improvement.

In conclusion, we can better understand the nature of the learning environment by evaluating the responses of all trainees, as we did in this study. The rates of mistreatment experienced by students and residents are unacceptably high and occur across the training spectrum, yet trainees are hesitant to report these behaviors. Further data collection is needed at the national level to monitor resident mistreatment, while at the local level, academic medical centers need to address the culture and improve mistreatment reporting processes.

Practice points

- Over a third of residents experienced mistreatment, yet less than a quarter reported the behavior.
- Female residents indicated experiencing significantly more incidents of mistreatment.
- Faculty were the most common instigators of mistreatment towards residents.

13

Notes on Contributors

M. M. Hammoud is associate chair for education, clerkship director and professor, Obstetrics and Gynecology, University of Michigan Medical School, Ann Arbor, MI.

N. P. Appelbaum was assistant professor, office of assessment, evaluation and scholarship, Virginia Commonwealth University School of Medicine at the time of writing, and is now assistant professor, Baylor College of Medicine, Houston, TX.

P. Wallach is executive associate dean for educational affairs and institutional improvement and professor of medicine, Indiana University School of Medicine, Indianapolis, IN.

H. Burrows is associate chair for education, residency program director and associate professor, Pediatrics, University of Michigan Medical School, Ann Arbor, MI.

K. Kochhar is director for research in medical education and assistant research professor family medicine, Indiana University School Medicine, Indianapolis, IN

R. Hemphill is chief quality and safety officer and associate dean for quality and safety, Virginia Commonwealth University School of Medicine, Richmond, VA.

M. Daniel, is assistant dean for curriculum and associate professor, Emergency Medicine and Learning Health Sciences, University of Michigan Medical School, Ann Arbor, MI. ORCID: http://orcid.org/0000-0001-8961-7119

M. J. Clery is assistant professor of emergency medicine, Emory University, Atlanta, GA. Previously, resident, Emergency Medicine, University of Michigan Medical School.

S.A. Santen is senior associate dean, assessment, evaluation and scholarship and professor, Emergency Medicine, Virginia Commonwealth University School of Medicine, Richmond, VA. ORCID: <u>http://orcid.org/0000-0002-8327-8002</u>

Disclosures

Contributors: MMH, NPA, SAS, PW, RRH as the principal investigators, designed the research, data collection tool, and collected the data. KK and MJC assisted in collection of the data. NPA collected, analyzed, and interpreted the data. NPA, HB, MD, SAS wrote portions of the first draft of the paper. All authors contributed to the critical revision of the paper and approved the final manuscript for publication.

Acknowledgments: The researchers are grateful to the students and residents who completed surveys and Meagan Rawls for data management.

Funding/Support: None

Other disclosures: All three institutions have received funding from Accelerating Change in Medical Education from the American Medical Association that is unrelated to this study. MJC completed this work during his residency.

Ethical approval: Approved exempt by the Institutional Review Boards of Sites A, B, and C respectively.

Disclaimer: Site A's data collection for this study was part of a larger learning environment study that is also looking at well-being and patient and provider mistreatment.

Previous presentations:

ePoster: Surgical Education Meeting, April 2019, Chicago, IL.

Poster: Group on Women in Medicine and Science Reception, sub-meeting of AAMC Research in Medical Education, November 2018, Austin, TX.

References

Association of American Medical Colleges. 2018. Medical School Graduation Questionnaire 2018 All Schools Summary Report.

Billings ME, Lazarus ME, Wenrich M, Curtis JR, Engelberg RA. 2011. The Effect of the Hidden Curriculum on Resident Burnout and Cynicism. J Grad Med Educ. 3(4):503–510.

Binder R, Friedli A, Fuentes-Afflick E. 2015. Preventing and Managing Unprofessionalism in Medical School Faculties: Acad Med. 90(4):442–446.

Buery-Joyner SD, Ryan MS, Santen SA, Borda A, Webb T, Cheifetz C. 2019. Beyond mistreatment: Learner neglect in the clinical teaching environment. Med Teach. 41(8):949–955.

Bynum WE, Lindeman B. 2016. Caught in the Middle: A Resident Perspective on Influences From the Learning Environment That Perpetuate Mistreatment. Acad Med J Assoc Am Med Coll. 91(3):301–304.

Castillo-Angeles M, Watkins AA, Acosta D, Frydman JL, Flier L, Garces-Descovich A, Cahalane MJ, Gangadharan SP, Atkins KM, Kent TS. 2017. Mistreatment and the learning environment for medical students on general surgery clerkship rotations: What do key stakeholders think? Am J Surg. 213(2):307–312.

Caulfield M, Litsch T, Trainer M. 2019. AAMC Update: AAMC Student Surveys. Presented at AAMC Southern and Central Group on Student Affairs.

Cook AF, Arora VM, Rasinski KA, Curlin FA, Yoon JD. 2014. The Prevalence of Medical Student Mistreatment and Its Association With Burnout. Acad Med. 89(5):749–754.

Dzau VJ, Johnson PA. 2018. Ending Sexual Harassment in Academic Medicine. N Engl J Med. 379(17):1589–1591.

Ellis RJ, Hewitt DB, Hu Y-Y, Johnson JK, Merkow RP, Yang AD, Potts JRI, Hoyt DB, Buyske J, Bilimoria KY. 2019. An Empirical National Assessment of the Learning Environment and Factors Associated With Program Culture. Ann Surg. 270(4):585.

Ellis S, Purkiss J, Abdoler E, Opaskar A, Mangrulkar RS, Kolars JC, Santen SA. 2019. Variability in student perceptions of mistreatment. Clin Teach. 16(2):142–146.

Fnais N, Soobiah C, Chen MH, Lillie E, Perrier L, Tashkhandi M, Straus SE, Mamdani M, Al-Omran M, Tricco AC. 2014. Harassment and discrimination in medical training: a systematic review and meta-analysis. Acad Med J Assoc Am Med Coll. 89(5):817–827.

Fried JM, Vermillion M, Parker NH, Uijtdehaage S. 2012. Eradicating medical student mistreatment: a longitudinal study of one institution's efforts. Acad Med. 87(9):1191–8.

Gan R, Snell L. 2014. When the Learning Environment Is Suboptimal: Exploring Medical Students' Perceptions of "Mistreatment." Acad Med. 89(4):608–617.

Gruppen LD, Irby DM, Durning SJ, Maggio LA. 2019. Conceptualizing Learning Environments in the Health Professions. Acad Med. 94(7):969–974.

Gruppen LD, Simpson D, Searle NS, Robins L, Irby DM, Mullan PB. 2006. Educational Fellowship Programs: Common Themes and Overarching Issues. Acad Med. 81(11):990–994.

Hu Y-Y, Ellis RJ, Hewitt DB, Yang AD, Cheung EO, Moskowitz JT, Potts JR, Buyske J, Hoyt DB, Nasca TJ, Bilimoria KY. 2019. Discrimination, Abuse, Harassment, and Burnout in Surgical Residency Training. N Engl J Med. 381(18):1741–1752.

Jennings ML, Slavin SJ. 2015. Resident Wellness Matters: Optimizing Resident Education and Wellness Through the Learning Environment. Acad Med. 90(9):1246–1250.

Johnson PA, Widnall SE. 2018. Sexual Harassment of Women: Climate, Culture, and Consequences in Academic Sciences, Engineering, and Medicine [Internet]. [place unknown]; [accessed 2019 May 7]. https://www.nap.edu/catalog/24994/sexual-harassment-of-womenclimate-culture-and-consequences-in-academic

Karani R, Fromme HB, Cayea D, Muller D, Schwartz A, Harris IB. 2014. How Medical Students Learn From Residents in the Workplace: A Qualitative Study. Acad Med. 89(3):490–496.

Larsson C, Hensing G, Allebeck P. 2003. Sexual and gender-related harassment in medical education and research training: results from a Swedish survey. Med Educ. 37(1):39–50.

Lucey C, Levinson W, Ginsburg S. 2016. Medical Student Mistreatment. JAMA. 316(21):2263–2264.

Making The Case For The Chief Wellness Officer In America's Health Systems. [accessed 2019 Jul 10]. https://www.healthaffairs.org/do/10.1377/hblog20181025.308059/full/

Mavis B, Sousa A, Lipscomb W, Rappley MD. 2014. Learning About Medical Student Mistreatment From Responses to the Medical School Graduation Questionnaire. [Miscellaneous Article]. Acad Med. 89(5):705–711.

Mayo Foundation for Medical Ed. and Research v. United States, 562 U.S. 44 (2010). Justia Law [Internet]. [accessed 2019 Jul 10]. https://supreme.justia.com/cases/federal/us/562/44/

Mazer LM, Bereknyei Merrell S, Hasty BN, Stave C, Lau JN. 2018. Assessment of Programs Aimed to Decrease or Prevent Mistreatment of Medical Trainees. JAMA Netw Open [Internet]. [accessed 2019 Jul 10] 1(3). https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6324298/

Musselman LJ, MacRae HM, Reznick RK, Lingard LA. 2005. 'You learn better under the gun': intimidation and harassment in surgical education. Med Educ. 39(9):926–934.

Ross PT, Abdoler E, Flygt L, Mangrulkar RS, Santen SA. 2018. Using a Modified A3 Lean Framework to Identify Ways to Increase Students' Reporting of Mistreatment Behaviors: Acad Med. 93(4):606–611.

Sheehan K, Sheehan DV, White K, Leibowitz A, Baldwin DC, Jr. 1990. A pilot study of medical student "abuse": Student perceptions of mistreatment and misconduct in medical school. JAMA. 263(4):533–537.

Silver HK. 1982. Medical Students and Medical School. JAMA. 247(3):309-310.

Slavin SJ, Chibnall JT. 2017. Mistreatment of medical students in the third year may not be the problem. Med Teach. 39(8):891–893.

Smith-Coggins R, Prober CG, Wakefield K, Farias R. 2017. Zero Tolerance: Implementation and Evaluation of the Stanford Medical Student Mistreatment Prevention Program. Acad Psychiatry. 41(2):195–199.

Stone L, Phillips C, Douglas KA. 2019. Sexual assault and harassment of doctors, by doctors: a qualitative study. Med Educ. 53(8):833–843.

Stratton TD, McLaughlin MA, Witte FM, Fosson SE, Nora LM. 2005. Does Students' Exposure to Gender Discrimination and Sexual Harassment in Medical School Affect Specialty Choice and Residency Program Selection? [Report]. Acad Med. 80(4):400–408.

Swick M. 2000. Toward a normative definition of professionalism. Acad Med. 75:612-616.

Ulusoy H, Swigart V, Erdemir F. 2011. Think globally, act locally: understanding sexual harassment from a cross-cultural perspective. Med Educ. 45(6):603–612.

Weiss KB, Co JPT, Bagian JP. 2018. Challenges and Opportunities in the 6 Focus Areas: CLER National Report of Findings 2018. J Grad Med Educ. 10(4s):25–48.

Characteristic	Resident Survey (n=996)
Institution	
Site A	299 (69.9)
Site B	328 (29.4)
Site C	369 (32.3)
Gender	
Male	490 (49.2)
Female	427 (42.9)
Unknown	79 (7.9)
Race	
Asian	125 (12.6)
Black or African American	29 (2.9)
Hispanic or Latino	29 (2.9)
Native Hawaiian or Pacific Islander	1 (0.1)
White	662 (66.5)
Other	59 (5.9)
Unknown	91 (9.1)
American Indian or Alaska Native	N/A

Table 1. Response Rates and Demographics in a 2018 study of Mistreatment in Residents

Data presented as n (%)

Incident Type	Male Residents (n=490)	Female Residents (n=427)	All Residents (n=996)
Been publicly humiliated	95 (19.4)	114 ^a (26.7)	236 (23.7)
Been subjected to offensive sexist remarks/names	30 (6.1)	118 ^a (27.7)	159 (16.0)
Been subjected to negative or offensive behavior(s) based on your personal beliefs or personal characteristics other than your gender, race/ethnicity, or sexual orientation	26 (5.3)	35 (8.2)	70 (7.1)
Been subjected to racially or ethnically offensive remarks/names	30 (6.1)	28 (6.6)	64 (6.4)
Received lower grades/evaluations solely because of gender rather than performance	13 (2.7)	44 ^a (10.4)	63 (6.4)
Been denied opportunities for training or rewards based on gender	12 (2.5)	39 ^a (9.1)	58 (5.8)
Been subjected to unwanted sexual advances	7 (1.4)	39 ^a (9.2)	53 (5.3)
Been denied opportunities for training or rewards based on race or ethnicity	12 (2.5)	10 (2.4)	27 (2.7)
Received lower grades/evaluations solely because of race or ethnicity rather than performance	8 (1.6)	8 (1.9)	22 (2.2)
Been required to perform personal services (e.g., shopping, babysitting)	10 (2.0)	9 (2.1)	23 (2.3)
Been threatened with physical harm	11 (2.2)	7 (1.6)	20 (2.0)
Been subjected to offensive remarks/names related to sexual orientation	9 (1.9)	4 (0.9)	17 (1.7)
Been physically harmed (e.g., hit, slapped, kicked)	6 (1.2)	9 (2.1)	16 (1.6)
Been denied opportunities for training or rewards based on sexual orientation	5 (1.0)	1 (0.2)	8 (0.8)
Received lower evaluations or grades solely because of sexual orientation rather than performance	4 (0.8)	1 (0.2)	7 (0.7)
Been asked to exchange sexual favors for grades or other rewards	1 (0.2)	0 (0.0)	2 (0.2)

Table 2. Incidents of Mistreatment Occurring at Least Once for Residents

Data presented as n (%) Note: Column percentages may not equal 100% due to categories that allow multiple responses. ^aDifference in gender responses, $p \le 0.01$

Table 3. Comparison of Incidents of Mistreatment Occurring at Least Once for Residents and Medical Students

Incident Type	Residents (n=996)	Medical Students (n=551)
Any mistreatment	390 (39%)	232 (44.5%)
Been publicly embarrassed	437 (43.9)	251 (48.1)
Been publicly humiliated	236 (23.7)	127 (24.4)
Been subjected to offensive sexist remarks/names	159 (16.0)	79 (15.2)
Been subjected to negative or offensive behavior(s) based on your personal beliefs or personal characteristics other than your gender, race/ethnicity, or sexual orientation	70 (7.1)	47 (9.0)
Been subjected to racially or ethnically offensive remarks/names	64 (6.4)	35 (6.7)
Received lower grades/evaluations solely because of gender rather than performance	63 (6.4)	49 (9.4)
Been denied opportunities for training or rewards based on gender	58 (5.8)	47 (9.0)
Been subjected to unwanted sexual advances	53 (5.3)	27 (5.2)
Been denied opportunities for training or rewards based on race or ethnicity	27 (2.7)	24 (4.7)
Received lower grades/evaluations solely because of race or ethnicity rather than performance	22 (2.2)	22 (4.2)
Been required to perform personal services (e.g., shopping, babysitting)	23 (2.3)	29 (5.5)
Been threatened with physical harm	20 (2.0)	5 (0.9)
Been subjected to offensive remarks/names related to sexual orientation	17 (1.7)	9 (1.7)
Been physically harmed (e.g., hit, slapped, kicked)	16 (1.6)	5 (1.0)
Been denied opportunities for training or rewards based on sexual orientation	8 (0.8)	3 (0.6)
Received lower evaluations or grades solely because of sexual orientation rather than performance	7 (0.7)	5 (1.0)
Been asked to exchange sexual favors for grades or other rewards	2 (0.2)	0 (0.0)
Instigator ^a		
Faculty (clinical setting for students)	229 (58.7)	154 (66.4)
Intern/resident	109 (27.9)	118 (50.9)
Nurses	103 (26.4)	52 (22.4)
Other institutional employees	40 (10.2)	32 (13.8)
Administrator	21 (5.4)	12 (5.2)
Student	7 (1.8)	29 (12.5)
Pre-clerkship faculty	N/A	17 (7.3)
Clerkship faculty in the classroom	N/A	18 (7.8)
Reported Behavior	53 (13.6)	54 (23.2)
Reasons for not Reporting		
Incident was not important enough	182 (46.7)	108 (46.6)
Nothing would be done about it	123 (31.5)	76 (32.8)
Fear of reprisal	94 (24.1)	43 (18.5)
Resolved the issue themselves	65 (16.7)	25 (10.8)
Not knowing what to do	33 (8.5)	11 (4.7)

Data presented as n (%). Note: Column percentages may not equal 100% due to categories that allow multiple responses. By GQ definition mistreatment excludes publicly embarrassed.

^aData requested through AAMC Data Warehouse GQ, last updated 9/6/2018; filename "2018 GQ mistreatment data VCU.xlsx" last updated 1/18/2019; "2018 GQ mistreatment data UMichigan.xlsx" last updated 1/17/2019; "2018 GQ mistreatment data Indiana.xlsx" last updated 1/22/2019.

Table 4. Selected Comments and Themes for Not Reporting Mistreatment Amongst Residents at Sites B and C in a 2018 Study on Mistreatment

Did not view as mistreatment

I can tolerate it and it's not as bad as we make it seem.

Part of training. I made a mistake and was reprimanded for it

Took as learning opportunity

I used it as an opportunity to reflect on how I could improve as a resident.

My embarrassment was instructive. I am better now because of it.

Told to not report

I was told to keep my mouth shut about it because it would make things more difficult when I went back to [deidentifed] for my [deidentifed] rotations.

Unprofessionalism known/ nothing would be done about it

Faculty member already well known for this behavior, overall good teaching qualities of this faculty member outweigh bad.

It's well known that the person who humiliated me treats residents & new attendings this way.

Fear of being viewed negatively

Afraid PD [program director] would minimize my concerns and I would be seen as a complainer

Fear of changing staffs perception of me and other nurses not wanting to work with me in the future

I needed a good working relationship with the faculty. I thought patient care would suffer if I did anything. Attendings sometimes say "MD means make decisions" and won't answer my questions as an intern. I feared that would happen if I [reported].

Uncomfortable reporting

Felt uncomfortable reporting.

Not comfortable making a big deal about it.

Voiced concern directly

I personally told them their comments were offensive.

Mostly try to address things with the person directly or else try not to let it bother me.