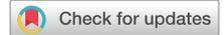


# To the point: undergraduate medical education learner mistreatment issues on the learning environment in the United States



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**T**he Graduate Questionnaire (GQ) is a survey that is administered by the American Association of Medical

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Received Dec. 19, 2018; revised March 8, 2019; accepted April 19, 2019.

The authors report no conflict of interest.

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0002-9378/\$36.00

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<https://doi.org/10.1016/j.ajog.2019.04.021>

This article, from the To the Point series prepared by the Association of Professors of Gynecology and Obstetrics Undergraduate Medical Education Committee, is an overview of issues to consider regarding learner mistreatment and its effects on the undergraduate medical education learning environment in the United States. National data from the American Association of Medical Colleges Graduate Questionnaire and local data regarding learner mistreatment provide evidence that the learning environment at most medical schools needs to be improved. The American Association of Medical Colleges' definition of learner mistreatment focuses on active mistreatment, but data on passive mistreatment also contribute to a negative learning environment. The lack of tolerance for active mistreatment issues such as public humiliation and sexual and racial harassment need to be made transparent through institutional and departmental policies. Additionally, reporting mechanisms at both levels need to be created and acted upon. Passive mistreatment issues such as unclear expectations and neglect can also be addressed at institutional and departmental levels through training modules and appropriate communication loops to address these concerns. To fully confront and solve this challenging issue regarding learner mistreatment at the undergraduate medical education level, solutions to need to be implemented for faculty, residents, and students in the institutional, departmental, and clerkship settings.

**Key words:** learning environment, learner mistreatment

Colleges (AAMC) to all graduating fourth-year medical students in the United States. It serves as a tool for medical schools to benchmark an array of metrics regarding the entire 4-year medical school experience against other medical schools as well as against one's own institution. These data are meant to be used to guide medical educators in our efforts to enhance the medical school experience.

In 1991, the AAMC introduced a set of questions regarding mistreatment in the medical school environment, and unfortunately, as these questions have been refined, the number of students who have reported learner mistreatment over the past 25 or more years has risen.<sup>1</sup> In the most recent GQ, 42% of respondents have experienced mistreatment.<sup>2</sup> Particularly distressing for our field is a 2015

study that disclosed 25% of students reported at least 1 episode of mistreatment during their obstetrics/gynecology clerkship.<sup>3</sup>

It seems that increased disrespect and communication breakdown is more likely to occur in high-stakes/high-stress clinical environments like obstetrics/gynecology.<sup>4,5</sup> As the nature of our specialty will not change, the manner in which we treat and behave toward our learners and each other does need to change if we are to improve the learner experience and increase interest in our specialty.

## What is mistreatment?

Medical student mistreatment was first described in 1982 by Henry Slater, who highlighted its similarities to child abuse,<sup>6</sup> but in all likelihood it has existed

as a hidden problem long before then. The definition of mistreatment has been refined and currently is defined by the AAMC as “an intentional or unintentional event that occurs when behavior shows disrespect for the dignity of others and unreasonably interferes with the learning process.”<sup>1</sup>

Specifically, the GQ queries students about 15 different examples of disrespect for the dignity of others such as whether students themselves have been threatened or actually physically harmed, required to perform personal services, subjected to sexist/racial/ethnic remarks or offensive remarks/names related to sexual orientation, experienced unwanted sexual advances, denied opportunities/rewards based on gender/race/ethnicity/sexual orientation, received lower evaluations based solely on gender/race/ethnicity/sexual orientation, asked to exchange sexual favors for grades, been subjected to negative or offensive behaviors based on personal beliefs or characteristics (see [Table 1](#)).

In addition, a separate question on whether students have experienced public humiliation is also posed. The most common forms of negative behavior reported in the 2018 GQ includes public humiliation (22%,  $n = 16,223$  respondents), being subject to offensive sexist remarks (16%), and being subjected to negative or offensive behaviors based on personal beliefs or personal characteristics other than gender, race/ethnicity, or sexual orientation (8%).<sup>2</sup>

The GQ data indicate that learner mistreatment is more prevalent in the clinical years of medical school. In 2018, 15% of all respondents who reported public humiliation issues identified clerkship faculty as the source of the humiliation, 10% involved residents and 4% identified nurses.<sup>2</sup> Several studies identify attending physicians, residents, and nurses as the primary individuals responsible for these behaviors.<sup>7,8</sup>

In a Canadian study, 22% of mistreatment incidents occurred in the surgery clerkship, while 13% occurred in the obstetrics/gynecology clerkship.<sup>9</sup> Many studies report higher

mistreatment rates, between 64% and 80%, when students are queried in the middle or at the end of third-year clinical experiences.<sup>6,10,11</sup> Thus, the overall incidence of mistreatment and incidence in the clinical setting may be underreported on the GQ because the GQ is a retrospective survey that asks students to recall events over 4 years of medical school.

Of note, students who answer that they had experienced mistreatment on the GQ write that they did not report the incident because the incident did not seem important enough or they did not think anything would be done about it or they feared reprisal.<sup>2</sup> It is possible students who did not report because of the unimportance of the incidence also did so because they have accepted mistreatment as part of the medical education culture or their idealistic views as new learners in the clinical environment have been tempered with maturity.

It is important to keep in mind that the student perception of mistreatment may be broader than we recognize or can measure. One study suggests that learner mistreatment spans a range from incident-based mistreatment, such as inappropriate racist or sexual comments or public humiliation of an individual, to environment-based mistreatment, such as inadequate supervision or being asked to perform tasks that do not have educational value.<sup>9</sup> Students describe the incident-based mistreatment as rare and as a blatant, single incident that is easily reportable. There is transparent faculty support to reduce this type of mistreatment.

Environment-based mistreatment is common, repeated, subtle, and difficult to report. This type of mistreatment is often dismissed by faculty because the level of adequate supervision for a particular medical task may not be clearly defined because each learner exhibits comfort levels and achieves competency of performing said task after varying levels of exposure.

Additionally, sometimes students do not recognize the value of performing some educational tasks when they are in the midst of the educational process.

Students find environment-based mistreatment to be more distressing than incident-based mistreatment because of lack of recourse. Incident-based mistreatment is often active in nature, while environment-based mistreatment is more passive.<sup>9</sup>

### What are the effects of a negative learning environment?

Regardless of how a student defines mistreatment, if they perceive mistreatment, it is certainly detrimental to the well-being of the individual and the profession.<sup>12</sup> Unhealthy learning environments prevent students from meeting educational objectives. Negative consequences of shame-based learning outweigh positive outcomes such as motivation to learn or learning skills to become more assertive.<sup>12</sup>

Studies have shown higher rates of loss of confidence, decreased work satisfaction, depression, substance abuse, and suicidal thoughts on students who feel mistreated.<sup>9</sup> A study, which tracked 125 students at Mt Sinai School of Medicine, showed unprofessional behavior by residents and attending physicians resulted in increased depression and stress symptoms in the medical students.<sup>13</sup> A 2014 study in academic medicine showed that recurrent mistreatment toward medical students is associated with higher burnout rates, emotional exhaustion, depersonalization of others, and a feeling of reduced personal accomplishment.<sup>6</sup>

Negative learning environments have been linked to poor role modeling, poor perception of the specialty, and decreased number of students interested in the specialty.<sup>10</sup> Sixty percent of students who reported feeling humiliated avoided the offending department and any involved party, and 16% considered quitting medicine.<sup>10</sup> This study also showed that negative experience with the training environment erodes a student's sense of altruism, empathy, and enthusiasm for the profession.<sup>10</sup> Consequently, our clinical learning environment may be undermining some of the basic characteristics that we hope to develop and nurture in patient-centered physicians.

### Why does mistreatment occur?

To make a difference in lowering the occurrence of learner mistreatment, we must understand what behavior learners are identifying as mistreatment. Unfortunately, public humiliation, physical harm, and gender/racial harassment occur too often in the clinical environment.<sup>3,14,15,16</sup> These are examples of active mistreatment or incident-based mistreatment that current GQ data attempt to capture.

The hierarchical nature of medical training is a set up for power differentials. This power can be used in positive or negative ways, and when systems “do not address the institutional forces and social pressures that lead to the misuse of power, [they] leave intact the structures that foster abuse.”<sup>17</sup> These intentional behaviors should be unacceptable but are too often tolerated as part of the culture of medical training.

Passive mistreatment such as denial of learning opportunities, failure to integrate, unclear expectations, neglect, being asked to perform noneducational tasks, and specialty-choice discrimination are environment-based mistreatment issues that may be a result of a number of issues, such as resident-attending burnout, or even perceived patient advocacy.<sup>15,18</sup> It is important to keep in mind that in obstetrics/gynecology, a male student may perceive a denied learning opportunity or failure to be integrated into a team when a patient refuses an exam.<sup>19</sup>

A similar situation may occur when a care provider limits student access to a patient because he or she believes they are protecting a patient from multiple exams. Seventy-one percent of nurses said they would protect patients from a student with whom they were not comfortable.<sup>20</sup> Because of the high-intensity environment in the operating room, students may not be instructed on their role, or not understand their role, and thus feel expectations regarding their behavior are unclear or that they are being neglected.

Particularly in today's learning environment in which medical school educators tout the importance of patient safety and competency-based education,

**TABLE 1**  
**Percentage of students who ever experienced the behavior<sup>2</sup>**

GQ item	National 2018, %
Publicly humiliated	22
Threatened with physical harm	1
Physically harmed	2
Required to perform personal services	6
Subjected to offensive sexist remarks	16
Denied opportunities/rewards based on gender	7
Received lower evaluations based solely on gender	6
Subjected to unwanted sexual advances	5
Asked to exchange sexual favors for grades	0
Denied opportunities/rewards based solely on race or ethnicity	3
Subjected to racially or ethnically offensive remarks	9
Received lower evaluations based solely on race or ethnicity	3
Denied opportunities for training or rewards based solely on sexual orientation	1
Subjected to offensive remarks/names related to sexual orientation	2
Received lower evaluations because of sexual orientation	1
Been subjected to negative or offensive behaviors based on your personal beliefs or personal characteristics other than your gender, race/ethnicity, or sexual orientation	8

*Pradhan. Undergraduate medical education learner mistreatment issues. Am J Obstet Gynecol 2019.*

learners are increasingly fearful of injuring the patient and whether they have permission to perform certain tasks. “More than 74% of students reported that they would have felt more comfortable if supplementary lectures or formal training outlining their role in the operating room had been provided.”<sup>16</sup> Multiple demands on faculty and trainee time and perceived lack of career and personal support may be at the root of what students perceive as negative attention.<sup>21</sup>

Finally, mistreatment based on specialty choice occurs most frequently on the surgery clerkship (36%), followed by the obstetrics/gynecology clerkship (25%).<sup>18</sup> Specialty choice discrimination refers to lost opportunities for learning or teaching because of a teacher's perception that the student is

disinterested in the clerkship specialty or that perhaps the student has not arrived prepared to learn. All of these types of mistreatment are not captured by the GQ but often contribute to a student's perception of a hostile learning environment, particularly in our field.

The clinical years are the first time medical students are exposed to the hierarchy of medicine and that alone can create a gray area. Interestingly, student vs resident vs fellow perception of the same negative learning environment scenarios decreases and tolerance or acceptance of these situations increases as they rise in the power hierarchy. In a study by Kulaylat et al,<sup>15</sup> 427 learners at varying levels (students, residents, fellows) were asked to review 3 clinical vignettes having to do with the following: (1) verbal abuse/public humiliation, specialty

TABLE 2

**Solutions to addressing learner mistreatment**

Institutional solutions	Clerkship-specific solutions
Develop institute-wide learning environment and mistreatment policy	Implement discussion guides to train faculty, residents, and students regarding definitions of positive learning environments and mistreatment
Increase awareness and disseminate learning environment and mistreatment policy to faculty and students	Use clerkship surveys and professionalism forms, and share feedback with educators on a regular basis
Articulate a transparent and confidential mechanism for reporting mistreatment	Identify champions of the learning environment who serve as unbiased counselors for students
Investigate and address every report of active mistreatment	Address issues with involved educators
Develop grievance committee with appropriate membership including student representation	Close loop with those who reported incidents
Utilize the options available to respond to mistreatment such as education, counseling, and discipline	

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discrimination, and performing noneducational tasks, (2) withholding/denying learning opportunities, (3) neglect, and (4) gender/racial insensitivity.

Students reported much higher levels of inappropriate behavior in each scenario as compared with residents/fellows, while perceptions of level of mistreatment in each scenario between residents and fellows were concordant. Certainly, active mistreatment issues should not be tolerated at any level, and passive mistreatment issues should be explored, discussed, and avoided at all stages of clinical training.

### What are the solutions (see Table 2)?

Institutional-level solutions to prevent active and passive mistreatment are necessary to send the message that leadership values a positive learning environment. Developing an institution-wide learning environment policy to understand, prevent, and report mistreatment is the first step toward addressing this issue.<sup>22</sup>

Institutions must investigate every report of active mistreatment and address them appropriately, consistent with their policies and procedures, when adverse behaviors are found. Institutions have a host of options available to them

to respond to mistreatment including, but not limited to education, counseling, discipline up to and including termination of employment. In some cases referral to the institution's Title IX (federal law prohibiting discrimination on basis of sex) officer is warranted.

A transparent and confidential mechanism for reporting mistreatment must be articulated.<sup>23</sup> It is important when we create mechanisms for reporting that students do not fear reprisal because this will result in underreporting.<sup>21</sup> The policy should provide for safety for students and also for faculty against false accusations. Increasing awareness among faculty and students regarding the existence of a mistreatment policy is critical and starts with broad dissemination of the policy.

National trends reflect that students used to be unaware of what do in the event of mistreatment; however, awareness of mistreatment policies has increased over time.<sup>21</sup> The Yale School of Medicine has instituted a Power Day for third-year medical students and advanced practice nursing students to promote open dialogue, reward interprofessional collaboration, and reward positive role modeling by residents and faculty.<sup>17</sup> Many institutions have

developed committees to review reporting of mistreatment, and inclusion of students on these committees is important for the sake of the student perspective. These students can also serve as ombudsmen regarding the learner mistreatment issue and report back to the student body. Institutional-level fixes are key because mistreatment can occur both intra- and interprofessionally.

Clerkship-level interventions ought to focus on developing a shared mental model about what constitutes a positive learning environment and passive learner mistreatment. Focused interventions tailored toward faculty, residents, and students may be an effective way to tackle this pervasive challenge in the world of medical education.

Many of these solutions come out of the surgical literature, but it is logical that they would be applicable in obstetrics/gynecology because we are a surgical specialty. Rich and colleagues<sup>24</sup> have developed and implemented 3 open-access modules and discussion guides that can be used to train faculty, residents, and students with the purpose of aligning definitions of positive learning environments and mistreatment. These modules have been well received, and the authors report that users appreciate the nuances of mistreatment that have been captured in the videos and discussion rather than a focus on the obvious examples of what may occur in negative learning environments.

In a study at Penn State University, 145 incoming resident trainees were provided with paper-based clinical vignettes and accompanying facilitated discussion pertaining to 6 domains of mistreatment. Residents may arrive with discordant definitions of mistreatment, and this intervention showed that it is possible to decrease variability in the perception and definition of mistreatment.<sup>25</sup>

Lau et al<sup>26</sup> presented 164 students on the surgery clerkship a video and discussion-based program with the purpose of managing student expectations of the clerkship, creating a shared and personal definition of mistreatment, and empowering students with tools to

address mistreatment. Promising results showed decreasing mistreatment reports after initiation of the program, with 14 mistreatment reports before the intervention and 9 in the first year and 4 in the second year after the program.<sup>26</sup> Because mistreatment is an issue that is pervasive at all levels of the medical education continuum, solutions to address this must also be implemented at multiple levels.

Creating mechanisms to communicate data in all directions is key to successfully addressing this challenging issue. Clerkship surveys, professionalism forms, and the identification of champions of the learning environment who serve as unbiased counselors for students can all serve as venues for student reporting.<sup>21</sup>

Learners must trust the confidentiality of the reporting systems, and the reporting systems should be built to demonstrate to learners that the systems function in a way to protect the level of confidentiality and anonymity as deemed appropriate by the learner. For example, an on-line reporting system for reporting mistreatment should leave it at the learners' discretion whether they choose to report their names or when they would like the complaint to be evaluated (ie, immediately or after student clerkship grades have been entered).

Learners should understand that administrators have much more ability to evaluate the complaint, address the issue, and provide feedback to all involved parties when the reporting is not anonymous. It is important that as data is collected regarding validated mistreatment incidents or professionalism issues at the institutional and clerkships levels, it must be shared with educators so behavior modification can occur. Actions taken on all validated mistreatment reports can be reported back to students at interval class-wide meetings. Although challenging, it is not only critical to provide avenues to report mistreatment incidents, address issues with involved educators, but also to close the loop with those who reported incidents so they know their concerns have been addressed.<sup>21</sup>

## Conclusion

Active learner mistreatment, such as incidents of public humiliation, and sexual and racial harassment as well as passive mistreatment issues, such as unclear expectations and neglect, are examples of significant problems in our clinical learning environment. All types of mistreatment need to be addressed with interventions directed to each group if we are to truly create positive learning environments.

Several interventions have been implemented to date to focus on changing the student perception of mistreatment. However, we need to approach the process from a holistic perspective and focus more energy on creating no-tolerance policies on active mistreatment and developing programs on how to educate faculty and residents on preventing passive mistreatment.

Institutional policies and clerkship-level programs need to be implemented at every health care institution because the resident who received no education regarding mistreatment at his or her training institution is still a problem when he or she arrive as an attending physician at an institution that is actively working to address the learning environment. How will we know we have fixed this issue in obstetrics/gynecology?

Clerkship factors associated with greater postclerkship interest include higher satisfaction with resident professional behavior and students' sense of inclusion in the clinical team.<sup>27</sup> The number of students choosing obstetrics/gynecology as a specialty choice may be a soft marker that demonstrates student engagement and satisfaction with a clerkship.

Continuous monitoring of clerkship evaluations and improvement in clerkship-specific questions on the GQ should be used as the ultimate gauge of whether our efforts to eradicate all types of mistreatment are successful. ■

## REFERENCES

1. Mavis B, Sousa A, Lipscomb W, Rappley MD. Learning about medical student mistreatment from responses to the medical school graduation questionnaire. *Acad Med* 2014;89:705.

2. Association of American Medical Colleges. Medical School Graduation Questionnaire (GQ). Available at: <https://www.aamc.org/data/gq>. Accessed November 25, 2018.

3. Baecher-Lind LE, Chang K, Blanco MA. The learning environment in the obstetrics and gynecology clerkship: an exploratory study of students' perceptions before and after the clerkship. *Med Educ Online* 2015;20:1-4.

4. Brown R, Dunn S, Byrnes K, et al. Doctors' stress response and poor communication performance in simulated bad-news consultations. *Acad Med* 2009;84:1595-602.

5. Sexton JB, Thomas EJ, Helmreich RL. Error, stress, and teamwork in medicine and aviation: cross-sectional surveys. *BMJ* 2000;320:745-9.

6. Cook AF, Arora VM, Rasinski KA, et al. The prevalence of medical student mistreatment and its association with burnout. *Acad Med* 2014;89:749-54.

7. Baldwin DC, Daugherty SR, Eckenfels EJ. Student perceptions of mistreatment and harassment during medical school. A survey of ten United States Schools. *West J Med* 1991;155:140-5.

8. Kassbaum DG, Cutler ER. On the culture of student abuse in medical schools. *Acad Med* 1998;73:1149-58.

9. Gan R, Snell L. When the learning environment is suboptimal: exploring medical students' perceptions of "mistreatment." *Acad Med* 2014;89:608-17.

10. Fried JM, Vermillion MP, Neil H, Uijtdehaage S. Eradicating medical student mistreatment: a longitudinal study of one institution's efforts. *Acad Med* 2012;87:1191-8.

11. Frank E, Carrerra JS, Stratton T, Bickel J, Nora LM. Experiences of belittlement and harassment and their correlates among medical students in the United States. *BMJ* 2006;333:682.

12. Wilkinson TJ, Gill DJ, Fitzjohn J, et al. The impact on students of adverse experiences during medical school. *Med Teach* 2006;28:129-35.

13. Haglund ME, van der Rot M, Cooper NS, et al. Resilience in the third year of medical school: a prospective study of the associations between stressful events occurring during clinical rotations and student well-being. *Acad Med* 2009;84:258-68.

14. Castillo-Angeles M, Watkins AA, Acosta D, Frydman JL, et al. Mistreatment and the learning environment for medical students on general surgery clerkship rotations: what do key stakeholders think? *Am J Surg* 2016;213:307-12.

15. Kulaylat AN, Qin D, Sun SX, et al. Perceptions of mistreatment among trainees vary at different stages of clinical training. *BMC Med Educ* 2017;17:14.

16. Stone JP, Charette JH, McPhalen DF, et al. Under the knife: medical student perceptions of intimidation and mistreatment. *J Surg Educ* 2015;72:749-53.

17. Angoff NR, Duncan L, Roxas N. Power day: addressing the use and abuse of power in

medical training. *J Bioeth Inquiry* 2016;13:203–13.

**18.** Oser TK, Haidet P, Lewis PR, Mauger DT, Gingrich DL, Leong SL. Frequency and negative impact of medical student mistreatment based on specialty choice: a longitudinal study. *Acad Med* 2017;89:755–61.

**19.** Craig L, Buery-Joyner S, Bliss S, et al. To the point: gender differences in the obstetrics and gynecology clerkship. *Am J Obstet Gynecol* 2018;219:430–5.

**20.** Capstick V, Harley D. Labor and delivery nurses: a survey of attitudes toward third-year medical students and their education. *Am J Obstet Gynecol* 2004;191:1828–33.

**21.** Fleit HB, Iuli RJ, Fischel JE, et al. A model of influences on the clinical learning environment: the case for change at one US medical school. *BMC Med Educ* 2017;17:63.

**22.** Fnais N, Soobiah C, Chen MH, et al. Harassment and discrimination in medical training: a systematic review and meta-analysis. *Acad Med* 2014;89:817–27.

**23.** Leisy HB, Ahmad M. Altering workplace attitudes for resident education (A.W.A.R.E.): discovering solutions for medical resident bullying through literature review. *BMC Med Educ* 2016;16:127.

**24.** Rich A, Ackerman S, Patel C, et al. Creating a positive learning environment: educational film and discussion guide. *MedEd Portal*. Available

at: <https://www.mededportal.org/publication/10131>. Accessed November 25, 2018.

**25.** Kulaylat AN, Qin D, Sun SX, et al. Aligning perceptions of mistreatment among incoming medical trainees. *J Surg Res* 2017;208:151–6.

**26.** Lau JN, Mazer LM, Liebert CA, Bereknyi Merrell S, Lin DT, Harris I. A mixed-methods analysis of a novel mistreatment program for the surgery core clerkship. *Acad Med* 2017;92:1028–34.

**27.** Chang JC, Odrobina MR, McIntyre-Seltman K. Residents as role models: the effect of the obstetrics and gynecology clerkship on medical students' career interest. *J Grad Med Educ* 2010;2:341–5.