



Variability in student perceptions of mistreatment

Samantha Ellis¹, Joel Purkiss², Emily Abdoler³, Amanda Opaskar⁴,
Rajesh S Mangrulkar⁵, Joseph C Kolars⁵ and Sally A Santen^{6,7}

¹Department of Dermatology, University of California Davis Medical Center, California, USA

²Baylor College of Medicine, Houston, Texas, USA

³Division of Infectious Diseases, University of California San Francisco School of Medicine, California, USA

⁴University of Rochester Medical Center, Rochester, New York, USA

⁵Internal Medicine, University of Michigan Medical School, Michigan, USA

⁶Department of Emergency Medicine, University of Michigan Medical School, Michigan, USA

⁷Virginia University School of Medicine, Richmond, Virginia, USA

It is important
to understand
medical
student's
perceptions of
mistreatment

SUMMARY

Background: As medical schools strive to improve the learning environment, it is important to understand medical students' perceptions of mistreatment. The purpose of this study was to explore student interpretations of previously reported mistreatment incidents to better understand how they conceptualise the interactions.

Methods: Medical students were presented with case scenarios of previously reported instances of mistreatment and asked to indicate their agreement as to whether the scenarios demonstrated mistreatment, using a five-point Likert scale (1,

strongly disagree; 5, strongly agree).

Results: One hundred and twenty-seven third-year medical students gave feedback on 21 mistreatment cases. There was variability in the categorisation of the scenarios as mistreatment. The highest degree of consensus (96% agreement) was for a scenario in which a resident claimed a student made statements about a patient's status that the student did not make. There was also relative consensus on three additional scenarios: (1) a patient making disparaging remarks about a student's role in health care in relation to the student's ethnicity (88% agreement); (2) a resident asking a

student to run personal errands (86% agreement); and (3) a nurse calling a student an expletive in front of others (77% agreement). For the majority of the cases, there was no consensus amongst students as to whether mistreatment had occurred. Students self-identifying as minorities and students who had previously reported mistreatment were more likely to perceive mistreatment in the scenarios.

Conclusions: There is remarkable variability, and in many cases a lack of agreement, in medical student perceptions of mistreatment. This inconsistency needs to be considered in order to effectively address and mitigate the issue.

INTRODUCTION

Medical student mistreatment and suboptimal learning environments are a growing concern in medical education.^{1–3} Although the exact definition of student mistreatment is elusive, it is generally characterised as disrespectful and unprofessional behaviour towards students. This includes public humiliation, sexual harassment, threats or physical contact, offensive comments, and denied opportunities or lower grades predicated on gender, race, ethnicity or sexual orientation.¹

In order to address mistreatment, there needs to be a shared understanding of qualifying behaviours between students and faculty members. One gap in arriving at a shared understanding occurs when the diverse viewpoints of those involved leads to the inconsistent interpretation of what actually constitutes mistreatment. This lack of clarity can result in misunderstanding between constituents, the mischaracterisation of events, and the accentuation of emotional responses from those subjected to the problematic treatment.⁴ Furthermore, ambiguity about whether there was actual mistreatment leads to variability in reporting. A common reason for not reporting mistreatment is that students do not feel that the incident seemed important enough to report.^{1,5,6}

To address issues of mistreatment and to better understand students' perspectives at our institution, we sought to generate dialogue among medical students, faculty members, and the administration regarding how mistreatment was perceived and characterised. Moreover, we explored how students characterised mistreatment when the incident seemed subtle or ambiguous. Our goal was to inform existing efforts aimed at

responding to and reducing mistreatment, and to support change in the culture of the medical school.

METHODS

An audience-response survey was administered to medical students in 2011 as part of an initiative to improve the learning environment and to address mistreatment. To better understand students' views on mistreatment, we presented a series of 21 scenarios to 127 third-year medical students at a compulsory seminar. The scenarios were de-identified versions of instances of mistreatment previously discussed by other students; they were selected for this purpose by the associate dean of medical student education. Scenarios were modified for clarity, with input from student and faculty member leadership.

The senior associate dean for medical education and global initiatives presented the mistreatment scenarios to students at the seminar. For each scenario, students used an anonymous audience-response system to answer: 'If you were the student involved, would you label this as mistreatment?' (1, strongly disagree; 5, strongly agree). After students responded, each scenario was discussed before moving to the next, to better understand the students' views. Students also anonymously provided their demographic data, and indicated whether they had experienced mistreatment as medical students.

The anonymous responses were initially collected as part of an initiative to inform our institution's approach to mistreatment and the learning environment. Secondary analysis was performed later for the purposes of this report. The study was reviewed by the Institutional Review Board and was determined to be 'not regulated', as the data came from previously

collected anonymous responses collected for the purposes of programme evaluation and improvement.

We used a few approaches to quantify students' opinions about the scenarios. First, for each scenario, we tabulated the cumulative percentage of students who responded with either 'agree' or 'strongly agree', and then labelled that scenario as mistreatment or not. Next, we tabulated the average Likert response (1, strongly disagree; 5, strongly agree) for each scenario. Finally, we tabulated the 21-scenario average rating provided by each student, to generate an aggregated measure for how each student responds to mistreatment scenarios overall. We interpreted a higher cumulative percentage of 'agree' and 'strongly agree' responses, and higher mean responses on the five-point scale, as an indication of greater student agreement that the given scenarios represented mistreatment. Comparisons between group means were examined for statistical significance using independent-samples Student's *t*-tests. Statistical analyses were performed using SPSS statistics for windows 19.0 (IBM).

RESULTS

Respondents were 51% women, and 38% self-reported minority ('By virtue of your upbringing, race, religion, ethnicity, sexual identity, etc., do you feel more often that you identify more with the majority or minority?'). Nearly half (49%) reported that they had been mistreated as a medical student.

We found that although students agreed about some aspects of mistreatment, they also expressed diverging opinions, and there was not complete agreement on any of the scenarios (Table 1). There were seven scenarios that the majority of

We explored how students characterised mistreatment when the incident seemed subtle or ambiguous

Although students agreed about some aspects of mistreatment, they also expressed diverging opinions

Table 1. Selected student assessment mistreatment scenarios

If you were the student involved, would you label this as mistreatment? (1, strongly disagree; 5, strongly agree)	Mean	Agree + strongly agree	Neutral	Disagree + strongly disagree
An attending physician is surprised to discover a patient's hyperkalemia results. When the resident was asked to explain how this could have been overlooked, the resident replied 'I was told by my M3 (third-year medical student) that it was normal' when in fact the M3 had not been asked, nor had reported to the senior resident that the potassium was normal.	4.73	96%	1%	3%
A student is asked by their senior resident to pick up the resident's dry cleaning.	4.37	86%	8%	6%
In the clinic, a patient states to student 'why I should allow you to experiment on me?' The patient, looking at the student's name tag, then asks a 'what kind of last name is _____?' and makes a disparaging racial remark.	4.24	88%	4%	8%
A student is referred to as 'a [expletive]' by a nurse who is speaking with a clerk.	3.93	77%	10%	13%
An M4 (fourth-year medical student) notices that their senior resident seems to 'like' some students more than others. Specifically, the resident seems to be more spontaneous, nurturing and attentive to the needs of some. In contrast, the M4 feels that the senior resident comes across to as 'cold', inattentive and at times dismissive to them personally.	3.80	69%	21%	11%
On an unusually busy hospital service, an M3 is expected to work 36 consecutive hours. The resident explains 'sometimes we all have to work harder for the good of the team; we all do it and we don't complain'.	3.73	65%	17%	19%
Several residents on a surgical team engage in homophobic 'jokes'. The M3 is concerned that these comments were in fact directed at the student.	3.58	56%	22%	22%
The student contacts the clerkship 6 weeks before the start of the rotation with a request to have the call schedule adjusted to go to a wedding. When the student finds that s/he is on call, the student sternly reminds the coordinator of the request that was placed weeks in advance. She says, 'Sorry, I couldn't make it happen. Welcome to being a doctor'.	3.26	45%	26%	29%
Remainder of scenarios had <40% agreement of mistreatment (scenarios edited for length). The average was calculated by assigning 1 = strongly disagree, 2 = disagree, etc., and then calculating the mean.				

The above scenarios have been abbreviated for publication purposes.

students agreed constituted mistreatment. These included: (1) a resident claiming a student made statements about a patient's status that the student

did not actually make (96% agreement); (2) a student picking up a resident's dry cleaning (85%); (3) a disparaging racial remark made by a patient (88%);

(4) a nurse calling a student an 'expletive' (77%); (5) a senior resident demonstrating favouritism to students (69%); (6) working 36 hours continuously

(56%); and (7) a faculty member making homophobic comments (59%). Of the 21 scenarios, the average number that students identified as mistreatment through an 'agree' or 'strongly agree' response was 6.8 (SD 3.5). Approximately 10% of students identified more than half of the scenarios as mistreatment. In contrast, some students rarely perceived mistreatment in the scenarios presented.

We computed students' average ratings across the 21 scenarios (Tables 1 and S1). When comparing results from the 21-scenario average and the individual items by respondent characteristics, we found no statistically significant differences by gender. Students self-identifying as minorities were more likely to perceive mistreatment in the scenarios, having a significantly higher mean score on the 21-scenario average (Student's *t*-test, $p = 0.022$). Students who reported a prior experience of personal mistreatment were also more likely to perceive mistreatment in the scenarios, having a significantly higher mean response for 13 of the individual scenarios (ranging from $p < 0.001$ to $p = 0.022$), and for the 21-scenario overall average ($p < 0.001$).

DISCUSSION

There is remarkable variability, and in many cases a lack of agreement, in medical student perceptions of mistreatment. These differing opinions provide insight as to what influences the perception of mistreatment.

The scenarios that were perceived to be mistreatment by a majority of students fell into three identifiable categories: faculty member or resident abuse of power; name-calling; and inappropriate comments regarding student gender or race. Thematically, what they share was

flagrant disrespect or an attack directed at the student. When an inherent feature of the student, such as gender or race, was referenced, it may be that the act was perceived more blatantly as mistreatment because it falls into a pre-defined category of sexual harassment or racial discrimination. These trends of gender and ethnic insensitivity or incivility have been demonstrated in other studies;^{1,2,7} however, if the way in which a remark was delivered was disparaging (without specific racial or gender reference), such as in front of a large group or with a condescending tone, the incident was more open to interpretation.

These sensitivities or insensitivities towards acts of mistreatment suggest that students had different thresholds for labelling the same behaviour, based on their own background and personal experiences. Several studies have demonstrated that racial minority students are significantly more often the subject of mistreatment.^{8,9} Perhaps students self-identifying as a minority perceived mistreatment on a more frequent basis because they have experienced other acts of misconduct outside of medical school, and therefore were more aware of, or sensitive to, transgressions within a learning environment. It is also important to keep in mind the vulnerability of students, because of the power differential between the students and faculty members or residents.¹⁰ Those who feel more vulnerable may interpret more situations as mistreatment, whether they are minorities or those who feel that they have been mistreated in the past. Regardless, our analysis demonstrates that some students are more likely to perceive the scenarios as mistreatment, compared with others.

Our study has several limitations. First, it reflects the opinions of one class of students at a single

medical school, which limits the generalisability. Additionally, scenarios were discussed one-by-one, and therefore the students' views of mistreatment may have been influenced by the discussion, and by the scoring for subsequent scenarios. Finally, the level of variability in responses indicates that perceptions of mistreatment are quite individualised. In future studies, collecting more personal details about participants may help to clarify why certain individuals, or groups, characterise mistreatment.

Although professionalism is a required competency for medical students, residents and practising doctors,¹¹ doctors do not always behave according to those values. Unprofessional behaviour by faculty members has included lack of respect, use of profanity, non-cooperation with the team, sexual harassment and discrimination.¹² Similarly, the General Medical Council is greatly concerned about 'bullying and undermining behaviours' in medical education.¹³ It is important that all members of the learning environment have a clear understanding that mistreatment behaviours cannot be tolerated. The scenarios in our study helped us to recognise that there is no universal definition for all students about what constitutes mistreatment. Yet there are clear cases of unprofessional activity, such as the misuse of power, threatening physical harm, or acting on racial, gender, or homophobic biases, that should not be tolerated.

In response to the findings of this and other related initiatives at our institution, we have responded with a multi-faceted approach. This included the faculty member and student partnered creation of the Student Learning Environment Task Force. This task force is student-led and serves as a liaison between the student body and administration, to voice student concerns regarding the learning

Those who feel more vulnerable may interpret more situations as mistreatment

Establishing clear systems to target mistreatment will allow for the creation of appropriate interventions

environment and to improve procedures for students to report mistreatment.⁵ Although we have not significantly improved the rates of mistreatment (responses of the Association of American Medical Colleges graduation questionnaire), through dialogue about mistreatment, and with multiple approaches to mistreatment reporting, we have been able to improve our reporting of mistreatment, which allows us to address incidents more actively.^{5,14}

There are clearly ambiguities in what constitutes mistreatment, requiring further clarification and dialogue. As educators we are responsible for the learning environment. Critical next steps in addressing mistreatment will need to focus on further elucidating the ambiguous or subtle acts of disrespect, in order to become more mindful of how these acts are perceived. It is important to empower students to engage in conversations with curriculum leadership to help understand and address behaviours. Establishing clear systems to target mistreatment will allow for the creation of appropriate interventions.

In conclusion, in many instances of behaviour that is potentially mistreatment, there is variability in medical student perceptions. Engaging in dialogue with students and faculty members to help understand and address mistreatment is essential in strategies aimed at optimising the medical school learning environment.

REFERENCES

1. Mavis B. Measuring mistreatment: honing questions about abuse on the Association of American Medical Colleges Graduation Questionnaire. *J Ethics* 2014;**16**(3):196–199.
2. Gan R, Snell L. When the Learning Environment Is Suboptimal: Exploring Medical Students' Perceptions of "Mistreatment". *Acad Med* 2014;**89**(4):608–617.
3. Cook AF, Arora VM, Rasinski KA, Curlin FA, Yoon JD. The prevalence of medical student mistreatment and its association with burnout. *Acad Med* 2014;**89**(5):749–754.
4. Wilkinson TJ, Gill DJ, Fitzjohn J, Palmer CL, Mulder RT. The impact on students of adverse experiences during medical school. *Med Teach* 2006;**28**(2):129–135.
5. Ross PT, Abdoler E, Flygt L, Mangrulkar RS, Santen SA. Using a Modified A3 Lean Framework to Improve Underreporting of Mistreatment Behaviors. *Acad Med* 2017. <https://doi.org/10.1097/acm.0000000000002033>
6. Mavis B, Sousa A, Lipscomb W, Rappley M. Learning about medical student mistreatment from responses to the Medical School Graduation Questionnaire. *Acad Med* 2014;**89**(5):705–711.
7. Ogden PE, Wu EH, Elnicki MD, et al. Do attending physicians, nurses, residents, and medical students agree on what constitutes medical student abuse? *Acad Med* 2005;**80**(10):S80–S83.
8. Frank E, Carrera JS, Stratton T, Bickel J, Nora LM. Experiences of belittlement and harassment and their correlates among medical students in the United States: longitudinal survey. *Brit Med J* 2006;**333**(7570):682–684.
9. Richardson DA, Becker M, Frank RR, Sokol RJ. Assessing medical students' perceptions of mistreatment in their second and third years. *Acad Med* 1997;**72**(8):728–730.
10. Dent GA. Anonymous surveys to address mistreatment in medical education. *J Ethics* 2014;**16**(3):200–203.
11. Swick MH. Toward a normative definition of professionalism. *Acad Med* 2000;**75**(6):612–6.
12. Binder R, Friedli A, Fuentes-Afflick E. Preventing and Managing Unprofessionalism in Medical School Faculties. *Acad Med* 2015;**90**(4):442–446.
13. General Medical Council. Building a supportive environment: a review to tackle undermining and bullying in medical education and training. Available at <https://www.gmc-uk.org>. Accessed on 12 January 2018.
14. House J, Griffith M, Kappy M, Holman M, Santen SA. Tracking student mistreatment data to improve the Emergency Medicine clerkship learning environment. *West J Emerg Med* 2018;**19**(1):18–22.

SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section at the end of the article.

Table S1. M3 Student Assessment of Mistreatment Scenarios, Ranked by Agreement that the Scenario Represents Mistreatment.

Corresponding author's contact details: Sally A Santen, MD, PhD, Assistant Dean for Educational Research & Quality Improvement, Professor, Department of Emergency Medicine and Learning Health Sciences, University of Michigan Medical School, 6121 Taubman Health Sciences Library, 1135 Catherine Street, Ann Arbor, MI 48109-5726, USA. E-mail: ssanten@umich.edu

Funding: None.

Conflict of interest: None.

Acknowledgement: The authors would like to thank Paula Ross for her critical review of this paper.

Ethical approval: The study was reviewed by the University of Michigan Medical School Institutional Review Board and was determined to be 'not regulated' because the data came from previously collected, anonymous audience response-system responses.

doi: 10.1111/tct.12790