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Relationship between medical student perceptions of mistreatment and mistreatment sensitivity

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Abstract

Background—National statistics reveal that efforts to reduce medical student mistreatment have been largely ineffective. Some hypothesize that as supervisors gain skills in professionalism, medical students become more sensitive.

Aims—The purpose of this study was to determine if medical student perceptions of mistreatment are correlated with mistreatment sensitivity.

Method—At the end of their third year, 175 medical students completed an Abuse Sensitivity Questionnaire, focused on student assessment of hypothetical scenarios which might be perceived as abusive, and the annual Well-Being Survey, which includes measurement of incident rates of mistreatment. It was hypothesized that those students who identified the scenarios as abusive would also be more likely to perceive that they had been mistreated.

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Results—Student perceptions of mistreatment were not statistically correlated with individual's responses to the scenarios or to a statistically derived abuse sensitivity variable. There were no differences in abuse sensitivity by student age or ethnicity. Women were more likely than men to consider it "harsh" to be called incompetent during rounds (p <0.0005).

Conclusion—This study provides preliminary evidence that challenges the hypothesis that medical students who perceive mistreatment by their superiors are simply more sensitive.

Background

Medical student mistreatment has been associated with increased levels of cynicism about medicine, lack of confidence in skills, depression, anxiety, post-traumatic stress symptoms, hostility, and problem drinking in affected medical students (Sheehan et al. 1990; Richman et al. 1992; Frank et al. 1998; Schuchert 1998; Dahlin & Runeson 2007; Heru et al. 2009). While medical student mistreatment has been recognized as a problem for over half a century, current evidence suggests few substantial gains have been made in eliminating it. According to the 2011 Association of American Medical Colleges' (AAMC) Medical School Graduation Questionnaire, most medical students in the United States are aware their school has a mistreatment policy (57.4% in 2005 vs. 88.7% in 2011). During this same time frame, student perception of mistreatment has increased from 12.7% in 2005 to a steady rate of about 17.0% in the years 2008–2011 (AAMC Medical School Graduation Questionnaire 2011).

Domains of mistreatment include inappropriate physical contact, verbal abuse, sexual harassment, ethnic insensitivity, and power abuse. The most commonly reported forms of mistreatment, public belittlement and humiliation, have been described as "misguided efforts to reinforce learning" that are experienced by students and then passed down from generation to generation of "teacher to learner" (Kassebaum & Cutler 1998). Because clinical faculty and residents are most commonly the identified sources of mistreatment, these individuals might be the most appropriate targets for intervention. Past research suggests that attending physicians, nurses, residents, and medical students generally agree about what constitutes mistreatment (Ogden et al. 2005). However, due to their own medical school experiences, attendings and residents might feel that current medical students are overly sensitive if they complain when traditional teaching techniques are employed or hierarchical behavior demands are made.

Ogden and colleagues (2005) found that their multi-institutional sample of 54 attending physicians, 71 residents, 53 medical students, and 42 nurses were more likely to consider a hypothetical scenario as abusive if they had personally experienced abuse. While a valuable contribution to the literature on this topic, their study was limited by a potential ceiling effect and selection bias. In terms of ceiling effect, three of the five scenarios they presented were rated by 80–99% of their sample as abusive, limiting the response variance for those scenarios. Additionally, they recruited volunteers through announcements, introducing the possibility of selection bias that participants may have been more interested in the topic, more likely to have experienced abuse, and/or more inclined to perceive abuse.

To assess whether perceptions of mistreatment are correlated with sensitivity to the phenomenon, we developed a survey for medical students, administered at the end of their third year along with their annual Well-Being Survey (WBS). To extend the prior research on this topic, we sought to increase response variance in our hypothetical scenarios by creating somewhat ambiguous abuse scenarios that include more response options and to reduce selection bias by capturing the responses of an entire medical student class. Additionally, we chose to focus on the most common types of inappropriate treatment medical students might encounter in order to make the scenarios as applicable as possible to all respondents. Our specific goals were (1) to determine if increased perceptions of medical student mistreatment are related to a higher level of mistreatment sensitivity among the students and (2) to assess student perceptions of appropriate teaching behavior.

Method

Data sources

Our data are from two sources: an Abuse Sensitivity Questionnaire (ASQ) focused on student assessment of hypothetical situations which might be abusive, and the annual WBS of UCLA Medical Students.

The authors developed the ASQ based on the literature and our experience in medical student education. The first part of the ASQ includes three scenarios that could be considered abusive (see scenarios presented in Table 1). The instructions to students are “People have different standards when it comes to appropriate behavior at medical schools and teaching hospitals. The following scenarios could represent normal everyday exchanges, helpful learning situations, or inappropriate behavior. Please read them and answer the questions that follow.” The students were asked to indicate their assessment of the scenario by selecting *all* descriptions that applied to the potentially abusive behavior (“justified,” “annoying,” “harsh,” “unacceptable,” “abusive”), and to indicate what they would do if they encountered such a situation by checking all behaviors that applied to the student (e.g., “ignore it,” “apologize,” “complain to peers,” “report it to someone with authority”). There were five descriptions or behaviors for each question. Scenarios were reviewed and edited by attending clinical faculty and residents in order to ensure they represented realistic situations and that the response options were appropriate. Because these scenarios were not meant to be collapsed into a single construct, response options were chosen that best fit the scenario rather than made into a scale.

The second part of the questionnaire has four 4-point Likert scale questions for students to rate various behaviors along a continuum of acceptability. The behaviors they rated were: yelling (loud voice, directed at you); swearing (profanity, not directed at a person); gentle criticizing (“You did not do well on this; try again next week”); and name calling (“You are an idiot.”). These behaviors were also reviewed and edited by attending clinical faculty and residents in order to ensure they represented realistic situations. Because these behaviors were intended to be collapsed into a single scale, consistent response options on a continuum of acceptability were chosen.

The WBS, which we have administered annually at UCLA since 1996, measures numerous features related to student well-being. Included in the survey are perceived incident rates of the following types of medical student mistreatment: Physical (slapped, struck, pushed); Verbal (yelled or shouted at, called a derogatory name, cursed or ridiculed); Sexual harassment (inappropriate physical or verbal advances; intentional neglect, sexual jokes, or mistreatment based on sexual orientation); Ethnic (intentional neglect, ethnic jokes, comments and expectations regarding stereotypical behavior); and Power (made to feel intimidated, dehumanized or had a threat made about a recommendation, your grade, or your career). This measure has face validity and it demonstrated sensitivity to the adoption of the "Statement on an Abuse-Free Environment" in 1998, with reported rates of mistreatment dropping from 75.1% of students reporting mistreatment before 1998 to 56.7% in the years following (p <0.001) (Fried et al. 2012).

Data collection and Analysis

Medical students were mandated to anonymously complete the two instruments (ASQ and WBS) at the end of their third year as a part of ongoing quality improvement. We hypothesized that those students who identified the scenarios as abusive would be more likely to perceive they had been mistreated. We utilized the PASW software package (SPSS, Inc., Chicago, IL) to analyze the anonymized data. We used Chi-square statistics to analyze if observed frequencies of the scenarios differ from expected. Due to the ordinal nature of the data, we used Spearman rho correlation statistics for all correlational analysis.

Finally, an abuse sensitivity factor was constructed with a principal component analysis (without rotation) from the individual items asking respondents how much yelling, swearing, gentle criticizing, and name calling they considered acceptable (see Table 3 for frequencies). The factor loadings ranged from 0.28 to 0.44, with 43.1% of the variance explained. This regression factor score was then correlated with frequency of perceived mistreatment (physical, sexual, ethnic, and power abuse, respectively) to determine if they were related (i.e., if more sensitive medical students were more likely to perceive that they actually had experienced mistreatment, as indicated on the WBS).

The UCLA Institutional Review Board reviewed and approved the retrospective study of these data sources, waiving the need to obtain written informed consent.

Results

The response rate for these mandatory surveys was 100%. There were 175 respondents (81 males; 94 females). Ages were distributed between 20 and 34 years of age: 22% were 20–24 years old, 68% were 25–29 years old, and 9.7% were 30–34 years old. Table 2 displays the ages and ethnicity of the respondents.

Among the three scenarios that could be considered abusive, there were no statistically significant differences in responses when examined by medical student ethnicity or age. Table 3 displays the frequencies.

In the responses to the first scenario, in which an attending physician tells the student he or she is "incompetent" during morning rounds, there was a significant relationship between ratings of the attending's behavior and the gender of the medical student rater (χ^2 =20.71, df =4, p <0.0005). The most common description endorsed for this scenario was "harsh," with 73.4% of women (n =69) and 43.2% of men (n =35) checking this option. Twice as many men described the scenario as "unacceptable" compared to the women (n =20, 24.7% vs. n =11, 11.7%, respectively), and more men described the scenario as "justified" compared to the women (n =10, 12.3% vs. n =2, 2.1%). A gender difference was not detected in the other two scenarios.

There was no relationship between the frequency of perceived mistreatment (physical, sexual, ethnic, or power abuse) on the WBS and that individual's responses to the three hypothetical scenarios.

The abuse sensitivity factor (how much yelling, swearing, gentle criticizing, and name calling would be considered acceptable) was not significantly related to frequency of perceived physical mistreatment (rho =−0.016, p =0.828), frequency of perceived verbal mistreatment (rho =−0.051, p =0.502), frequency of perceived sexual mistreatment e1000 (rho =0.003, p =0.969), frequency of perceived ethnic mistreatment (rho =−0.093, p =0.221), or frequency of perceived power abuse (rho =−0.073, p =0.336).

Discussion

Overall, we found that perceptions of mistreatment during medical school were not statistically correlated with sensitivity to abuse or with descriptions of potentially abusive behavior. This provides preliminary evidence that challenges the hypothesis that medical students who perceive mistreatment are simply overly sensitive (termed the "whiny child" hypothesis).

It is notable that 20 students (11%) indicated that *gentle* criticism was "never" or "rarely" acceptable (Table 3). This level of response was higher than anticipated, because presumably medical students have experienced many years of critical evaluation of their performance during undergraduate and secondary school education. Because the provision of feedback and behavioral shaping via successive approximation are essential aspects of the learning process in medical student education, this finding requires further exploration. Anecdotally, follow-up discussion with a resident interested in medical school education revealed he was not surprised by this finding as he believes that all feedback can be provided without criticism in the form of positive alternative suggestions (e.g., "Good job; you might also consider doing it this way."). Further research is needed to determine if students who indicate that *gentle* criticism is "never" or "rarely" acceptable share this perspective, and whether this perspective may reflect a generational phenomenon.

The differences between male and female medical students in perspective on Scenario 1 ("You are incompetent") were intriguing. While women described the situation as "harsh" much more often than the men (73.4% vs. 43.7%), the male students were significantly more likely to deem it to be an "unacceptable" behavior on part of the attending physician (24.7%

vs. 11.7%). This finding appears to be consistent with prior research that reveals that by the third year of medical school, female medical students worry significantly more than males about their competence (Dahlin & Runeson 2007). Overall, the literature reveals that female medical students are more likely to underestimate their abilities and males are more likely to overestimate their abilities (Coutts & Rogers 1999; Rees 2003; Minter et al. 2005; Rees & Shepherd 2005). This pattern holds even when female medical students scored higher than males on objective measures (Lind 2002). Consequently, male medical students may be more likely to simply reject the idea that they are incompetent while the female medical students may take it more seriously if judged incompetent by an attending.

While these findings provide preliminary evidence that medical students who perceive mistreatment are not simply overly sensitive, further work is needed to replicate this finding, to address study limitations, and to refine our questionnaire. The ASQ used a “check all that apply” format when asking students to respond to the scenarios. While it was helpful for this exploratory first step, the data we collected with the “check all that apply” format provide direction for an informed construction of a Likert scale, which could offer a more psychometrically sound format for scaled data analysis. Additionally, the ASQ did not have a “control” scenario as a way of determining if a clearly abusive (or clearly professional) scenario would be identified as such by the majority of students. Finally, the finding that *gentle* criticism was “never” or “rarely” acceptable by 11% of our medical students also warrants closer examination.

Based on the results of these findings, the ASQ was subsequently revised to create more standardized response options and to include a “control” scenario (that most administrators would consider clearly abusive and worthy of reporting to someone in authority) to determine the number of students who indicate they would report it (to view the updated ASQ, see: http://www.medicalprofessionalism.org/downloads/AbuseSensitivitySurvey.pdf). We plan to administer the updated survey instrument to medical students to determine if our preliminary results reflect a consistent pattern. We also plan to develop a version designed for graduate medical education, to evaluate similarities and differences between medical students and those in residency training programs.

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Practice points

- Medical students who perceive they have been mistreated are not simply overly sensitive.
- Female medical students worry more than males about their competence and may be more likely than males to be distressed if judged incompetent by an attending.
- Even gentle criticism may be interpreted as abusive by some medical students.

Table 1

Scenarios.

Scenario #1: You are post-call and at morning rounds. The Attending asks you for your differential on a patient. You inadvertently start talking about the wrong patient. The Attending calmly and seriously tells you that you are incompetent and asks someone else to answer the question.
Scenario #2: You are rushing to noon conference when your resident pages you to stop by the cafeteria and pick up a Latte for him. You get reimbursed, but this has happened three times per week for two weeks.
Scenario #3: You have noticed that, after the first two teaching sessions she gave, one of the faculty members never calls on you when you raise your hand. It is almost as if she does not see you.

Table 2

Demographics of respondents (in percentage).

20–24 year olds	22.3
25–29 year olds	68.0
30–34 year olds	9.7
American Indian/Alaska Native/Aborigine Asian	2.9
Black/African American	6.3
Caucasian/White	29.1
Hispanic/Latino	10.9
Indian/Pakistani/Bangladeshi/Sri Lankan	12.0
Middle Eastern/Egyptian/North African	3.4
Native Hawaiian/Pacific Islander/Filipino	6.3
Other/Multiple	29.1

Table 3

Frequencies of responses.

Scenario	*What do you think of the behavior?* (Check all that apply)		*What would you most likely do?* (Check all that apply)	
1. The Attending tells you that you are incompetent	It is justified	12	Ignore it	38
	It is annoying	25	Apologize	93
	It is harsh	119	Gripe to other medical students	87
	It is unacceptable	51	Discuss it with the Attending	30
	It is abusive	19	Report abuse to someone with authority	5
	Total	226	*Total*	253
2. Your resident pages you to pick up a Latte for him	It is fine; part of job	10	Ignore it	54
	It is annoying	61	Refuse to do it	39
	It is pushing the limit	76	Complain to the other medical students	89
	It is unacceptable	73	Discuss it with the Attending on team	26
	It is abusive	25	Report abuse to someone with authority	18
	Total	245	*Total*	226
3. One of the faculty members never calls on you	It is a relief	9	Ignore it	49
	It is annoying	122	Be more assertive in class	101
	It is harsh	23	Discuss it the other medical students	60
	It is unacceptable	44	Confront the faculty member	48
	It is abusive	4	Report abuse to someone with authority	2
	Total	202	*Total*	260

When thinking about appropriate standards of behavior for those who train physicians, please indicate how much you think is reasonable for the following behaviors. How much of the following behaviors are acceptable? (***N*** =175)

Behavior	Frequency			
	Never	Rarely	Weekly	Daily
Yelling	65	100	10	0
Swearing	66	55	31	23
Gentle criticism	2	18	81	74
Name calling	153	21	1	0