Do Clinical Clerks Suffer Ethical Erosion? Students' Perceptions of Their Ethical Environment and Personal Development

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Background. Little is known about the ethical dilemmas that medical students believe they encounter while working in hospitals or how students feel these dilemmas affect them. The authors examine how clinical students perceive their ethical environment, their feelings about their dilemmas, and whether these dilemmas erode students' ethical principles. **Method.** An anonymous mail survey was sent in 1992–93 to the 1,853 third- and fourth-year medical students enrolled at six Pennsylvania medical schools. The survey addressed whether students had encountered situations they felt were ethically problematic, their attitudes toward these situations, and their perceptions of their personal ethical development. Data were analyzed with logistic regression; respondents' comments were analyzed qualitatively. **Results.** Of the 665 students (36%) who responded, 58% reported having done something they believed was unethical, and 52% reported having misled a patient; 80% reported at least one of these two behaviors. In addition, 98% had heard physicians refer derogatorily to patients; 61% had witnessed what they believed to be unethical behavior by other medical team members, and of these students, 54% felt like accomplices. Many students reported dissatisfaction with their actions and ethical development: 67% had felt bad or guilty about something they had done as clinical clerks; 62% believed that at least some of their ethical principles had been eroded or lost. Controlling for other factors, students who had witnessed an episode of unethical behavior were more likely to have acted improperly themselves for fear of poor evaluation [odds ratio, OR, 1.37 (95% CI, 1.18–1.60)] or to fit in with the team [OR 1.45 (1.25–1.69)]. Moreover, students were twice as likely to report erosion of their ethical principles if they had behaved unethically for fear of poor evaluation [OR 2.25 (1.47–3.45)] or to fit in with the team [OR 1.78 (1.18–2.71)]. **Conclusion.** The ethical dilemmas that medical students perceive as affecting them while serving as clinical clerks are apparently common and often detrimental, and warrant the attention of physicians, educators, and ethicists. *Acad. Med.* 69(1994):670–679.

Little is known about the ethical dilemmas that medical students believe they encounter while working in hospitals or how students feel these dilemmas affect them. While many studies have examined related occurrences—such as the alteration of students' outlooks and attitudes,[1–4] their desensitization to certain moral issues,[5–7] and the problems associated with medical student stress and abuse[8–11]—the ethical life of clinical students remains largely enigmatic.[12]

Our inquiry into student-level dilemmas began while teaching an ethics course for third-year students. During one session each month, the small group of students who were taking their introductory medicine rotation discussed the ethical dilemmas that they themselves confronted, and then submitted individual case reports. Over the course of a year, we learned that clinical clerks encounter certain recurrent dilemmas that derive specifically from their position as students on hierarchical medical teams. Each type of dilemma emanates from a particular pressure created by the social environment that impinges upon the student, such as (1) witnessing unethical acts committed by other team members, (2) trying to be a good "team player," (3) being evaluated for grades, (4) knowing a patient more personally than the rest of the team, and (5) being subtly coerced to put oneself at risk of personal injury.[13]

Students attested that grappling with these dilemmas led to feelings that ranged from inspiring to distressing. Although heartened by accounts in which students developed greater confidence and maturity, we grew concerned about reports of adverse consequences on student morale. Numerous students indicated that struggling with certain dilemmas and their unsatisfactory resolutions could erode students' ethical self-identities and hinder their ethical development.[13,14]

We designed the present study to determine whether these disturbing qualitative findings would be borne out in a survey of a large sample of students training at different institutions. Specifically, we sought to examine three questions: How do clinical students perceive their ethical environment? How do students feel about their ethical dilemmas? And does clinical training lead to ethical erosion? Mindful that our survey is limited by purposefully imprecise definitions of what constitutes "ethical dilemmas," by respondents' subjective and retrospective assessments of whether they had encountered such dilemmas, and by potential bias in the sample of respondents, we present our findings as a reconnaissance into this largely unexplored territory of medical education.

METHOD

Students

We surveyed all 1,853 third- and fourth-year medical students attending eastern Pennsylvania's six medi-

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cal schools: 338 at the Hahnemann University School of Medicine, 430 at the Jefferson Medical College of Thomas Jefferson University, 230 at the Medical College of Pennsylvania, 192 at the Pennsylvania State University College of Medicine, 330 at the Temple University School of Medicine, and 333 at the University of Pennsylvania School of Medicine.

Procedures

Survey instruments, including prepaid return envelopes, were delivered between November 1992 and January 1993 to students' school mailboxes. A cover note informed students that their participation was voluntary and that their participation and responses would be kept anonymous. To further guarantee anonymity, we did not encode the surveys to track respondents and non-respondents. This final level of assurance precluded a second mailing, since we could neither conduct a selective mailing to all non-respondents nor, if we had resampled all students, exclude double respondents. As a incentive to participate, each survey packet included a raffle entry for one of five dinners at area restaurants, which students could return anonymously either with the survey or separately. This anonymous survey research met the requirements of the University of Pennsylvania Committee on Human Subjects.

Survey Instrument

The two-page instrument was developed based on the findings of our previous qualitative studies,[13,14] and on other published literature on the training of medical students[1-12,15,16] and house officers.[17-21] The survey, which comprised several clinical vignettes and 38 questions, took approximately five minutes to read and complete, and was pretested for clarity on a small sample of clinical clerks prior to distribution. The vignettes illustrated situations that students potentially face, thereby focusing respondents' attention on medical-student-level ethical dilemmas (see boxed presentation of vignettes elsewhere in the text). Students were also invited to provide examples of their own ethically problematic experiences.

The survey did not define precisely "unethical behaviors" or criteria for the various attitudes or self-perceived changes; instead, respondents were asked whether they had ever seen and done something that *they thought* was improper, wrong, or unethical, and how *they felt* about aspects of their ethical development. This definitional flexibility reflected our desire to assess students' perceived dilemmas and their consequences.

The questions provided multiple-choice, dichotomous, and scaled options as possible answers, along with open answers for age, year in school, and name of school. Multiple choices were offered for sex, race-ethnicity ("white, African American, Asian,

Survey Vignettes Illustrating Ethical Dilemmas Potentially Faced by Clinical Clerks

Vignette 1: I was on call with a resident who was inundated with admissions. She asked me to see a patient and start his IV. After two unsuccessful attempts, the increasingly irritated patient snapped, "Do you know what you are doing?" I wanted to stop, but I was worried that my resident would think less of me for not succeeding, so I tried again.

Vignette 2: Following morning "lightning" rounds (during which we had seen 20 patients in half an hour), my resident asked me to write SOAP notes in five charts. I felt uneasy because I had not actually examined these patients and wasn't sure if anybody had done a routine morning physical exam. But the whole team was doing it and I wanted to fit in, so I complied.

Vignette 3: I had interviewed and examined Mr. F.S. when he first was admitted to the hospital for his intractable cough, and I had gotten to know him very well. We respected each other, though other members of my team referred to him as a "dirt ball." When I learned that the biopsy of a lung nodule showed an undifferentiated cancer, I was very upset. My resident told me that we were not to tell Mr. S. his diagnosis. Instead, the oncologists would tell him, since they knew more about the disease and had more experience telling patients bad news. For the next two days, Mr. S. was very anxious and he repeatedly asked me if I knew the results of his test. With many misgivings I told him "no." When he finally learned, he was very angry that I had kept the truth from him—and I couldn't blame him.

Vignette 4: I was assisting my resident with a lumbar puncture on a known HIV-positive patient. He gloved and draped sterilely and after subcutaneously injecting the lidocaine, he decided that the anesthesia was inadequate. He asked me to hold the bottle of lidocaine out for him so he could draw up some more without breaking sterility. As I watched him use the same needle that had been in the patient, I was very nervous, fearful that he might miss the bottle and stick my fingers instead. I wanted to say something about it, but at the time I just froze up.

Vignette 5: Ms. J. was a middle-aged woman that I saw in the gynecology clinic. On routine pelvic exam, my intern found a small pigmented lesion on her vulva; the resident suspected condyloma but wanted to rule out melanoma. The patient was pleasant and cooperative until the resident informed her that she was going to do a biopsy, at which point Ms. J. became quite agitated and insisted that it not be done, stating, "I don't want any needles down there." The patient was crying as the resident informed her how important it was to have this done. "I said I didn't want it. Are you gonna do it anyway?" the patient, still in stirrups, implored. Then, as I held her hand and tried to comfort her, the resident did the biopsy while all along the patient insisted that she stop. Finally, biopsy in hand, the resident, obviously shaken herself, walked out.

Examples of Ethical Dilemmas Reported by Clinical Clerks*

1. Witnessing Unethical Behavior by Other Team Members

- A patient I was following did not want to take her medications for a variety of valid reasons. The resident in charge decided that she was of "impaired judgment," sedated her with Haldol, and gave her medications intravenously. The patient was entirely with it, and it was disgusting and ethically abhorrent.
- Encouraged while on surgery to call my patients "stool," "pieces of shit," etc.
- My ob/gyn resident performed a couple of unnecessary forceps deliveries "for practice." The patient had been "warned" before the delivery that there might be a "need" to use forceps.
- A test result came back positive which may not have been significant. However, the resident asked me not to put it in my note because the supercautious attending would have kept the patient in the hospital.
- I have written entire H and P's on patients that were never seen by residents, merely signed.

2. Being a Team Player

- Not stressing certain points so as not to contradict intern, resident, or attending who did not do a thorough job.
- Not "squealing" about a resident's oversight and taking the blame myself.
- Resident reported findings on a physical exam on a patient he did not examine. The attending [then] asked me what I found on exam. The resident replied, "She found the same thing." I kept silent.
- I wrote an order and signed the intern's name. Everyone was doing it at the intern's request. I refused the next time.
- Obtained informed consent for a procedure I wasn't knowledgeable about.

3. Evaluation by Team Members

- Fearing that I had contaminated myself in the OR, I said nothing, because I knew how annoyed the team would be if I had to re-gown.
- A physical finding that I had heard on exam and the intern didn't. If present, it would have necessitated further work-up. I was told to record in the chart that it was not there. Unfortunately, I agreed.
- I was told: if you don't know the exact values for vitals, just estimate or say "stable."

4. Knowing the Patient as a Person

- Allowing an involuntarily committed bipolar–manic, psychotic patient to persist in her belief that I was not sharing with her doctor features of her delusional system which she knew would prolong her admission.
- Pathology report came back for a patient with colon CA. I was instructed not to tell him—wait for the attending to tell him. The attending was on vacation for the week.
- Marched in and out of patients' rooms without interacting with them as I normally would if I were by myself.
- Laughing at a patient during rounds.

*A total of 665 clinical clerks at six Pennsylvania medical schools responded to a 1992–93 survey about the ethical dilemmas they faced; these examples are quoted verbatim.

Hispanic, other"), and numbers of hours of formal ethics education ("less than 10, 11 to 30, more than 30"). "Yes/no" questions addressed whether the students had ever acted unethically for fear of a poor evaluation; had ever acted unethically in order to fit in with the team; felt that they knew their patients as people better than other members of the team did; had ever heard patients referred to in a derogatory manner by physicians; had ever been expected to lie to or withhold information from patients, and whether they had done so; had ever felt pressured to do something that put them at personal risk, and whether they had done so; had ever felt like an accomplice to unethical acts committed by team members; had ever felt bad or guilty about anything they had done or not done while on the wards; and, when confronted by a situation with ethical implications that was not being managed as they deemed appropriate, whether they had kept their feelings to themselves, spoken with other medical students, spoken with the individual(s) directly involved, spoken with family or friends, and/or spoken with senior members of the team. Students were also asked whether some of their ethical principles had been eroded or lost since starting medical school, and whether they were displeased with how their ethical principles had developed.

Questions with three-, four-, or five-category answers addressed how often students had acted unethically for fear of a poor evaluation or in order to fit in with the team, and how many times they had witnessed unethical behavior; how often they found derogatory references appropriate; how uncomfortable they felt challenging other team members about ethical issues; and how well they felt they fit in with their classmates.

Analysis

Analysis was conducted in four stages. First, univariate statistics were obtained to determine prevalences of specific self-reported behaviors, circumstances, and feelings. Sec-

ond, *a priori* hypotheses regarding associations between these variables were tested with bivariate analysis, conducted with Pearson's chi-squared test for tables other than 2×2, and McNemar's marginal symmetry test and Fisher's exact test for 2×2 tables. Third, binary logistic regression was performed to ascertain whether specific associations, most of which had tested at $p < .01$ in bivariate analysis, would remain significant after controlling for potential confounders. Since almost all findings remained significant, we primarily report the multivariable results. Finally, students' comments were thematically categorized and integrated with the quantitative findings so as to illustrate, elaborate, and qualify specific aspects of student-level dilemmas.[22,23]

RESULTS

Respondents

There were 665 respondents (response rate of 36%). Due to occasional missing data, not all analysis totals equal 665. The mean age of the respondents was 26 ± 3 years; 55% were men; 50% were third-year and 50% were fourth-year students; 76% were white, 15% Asian American, 5% African American, 2% Hispanic, and 2% other. The majority of the students, 52%, reported less than ten hours of formal ethics education in medical school; 32% reported 11–30 hours, and 16% reported more than 30 hours. Comparison with demographic data of all upper-year students attending the six schools indicated that the respondents did not differ significantly from non-respondents with regard to age and class year; women were slightly more likely to respond (39.7% response rate) than men (32.7%), and whites were slightly more likely to respond (37.2%) than non-whites (31.2%).

How Do Students Perceive Their Ethical Environment?

Collectively, 80% of the respondents reported either having acted unethically or having willfully misled patients. Importantly, the students perceived that these behaviors had occurred in a context of specific social pressures and of widely shared acceptance of unethical behavior (see boxed presentation, elsewhere in the text, for examples of dilemmas reported by respondents, and see Figure 1).

Pressure of witnessing unethical behavior. Sixty-one percent of the students had "witnessed behavior by a member of [their] team that [they] thought was unethical," and 45% had witnessed such behavior two or more times. While many of these behaviors may have been mild, several respondents detailed substantial transgressions of a patient's rights and dignity. One wrote that her "ob-gyn resident performed a couple of unnecessary forceps deliveries 'for practice.' The patient had been 'warned' before the delivery that there might be a 'need' to use forceps." Another described how "a patient that I was following did not want to take her medications for a variety of valid reasons. The resident in charge decided that she was of 'impaired judgment,' sedated her with Haldol, and gave her medications intravenously. The patient was entirely with it, and . . . [this action] was disgusting and ethically abhorrent." Of those students who had witnessed unethical behavior, 54% reported that they had "felt like an accomplice" to one or more of these actions.

Pressure and desire to be a "team player." Forty percent of the students had done something they thought was unethical "to fit in with the team," and 36% of all respondents reported having done so two or more times. A desire to function efficiently and adhere to the status quo sometimes provided the rationale, as was the case for a student who "wrote an order and signed the intern's name. Everyone was doing it at the intern's request. I refused the next time." On other occasions, students stuck up for another team member in a display of loyalty or *esprit de corps*; such thinking seemed to underwrite the practice of "not 'squealing' about a resident's oversight and taking the blame myself." Another student, however, sketched a more coercive scenario: "Resident reported findings on a physical exam on a patient he did not examine. The attending [then] asked me what I found on exam. The resident replied, 'She found the same thing.' I kept silent." As this anecdote suggests, the role of being a "team player" can be enforced by superiors who evaluate the students, as well as hold other powers over them.

Pressure of evaluation by team members. Forty percent of the respondents reported having done something they thought was unethical "for fear of a poor evaluation," and 33% of all respondents reported having done so two or more times. One respondent related how, "fearing that I had contaminated myself in the OR, I said nothing, because I knew how annoyed the team would be if I had to re-gown." Another acknowledged a strategy of "not stressing certain points so as not to contradict intern, resident, or attending who did not do a thorough job."

Importantly, the respondents who had done something unethical in order to be a team player were not identical to those who had acted improperly because of evaluation pressures. Indeed, a total of 386 (58%) of the respondents had done something they thought was unethical during their clinical rotations. Of these students, 31.6% cited "fear of a poor evaluation," 31.6% "to fit in with the team," and 36.8% gave both reasons for their unethical behaviors.

Pressure of knowing the patient as a person. Since 92% of the respondents believed that they knew "their patients as people better than other team members," another tension arose when students' personal relationships with patients were put at odds with team conduct. Examples of such tension are one student's concern at marching "in and out of patients' rooms without interacting with them as I normally would if I were by myself," and another student's discomfort with the practice of "making jokes about patients while they are asleep on the OR table."

Fifty-three percent of the students reported having been expected to

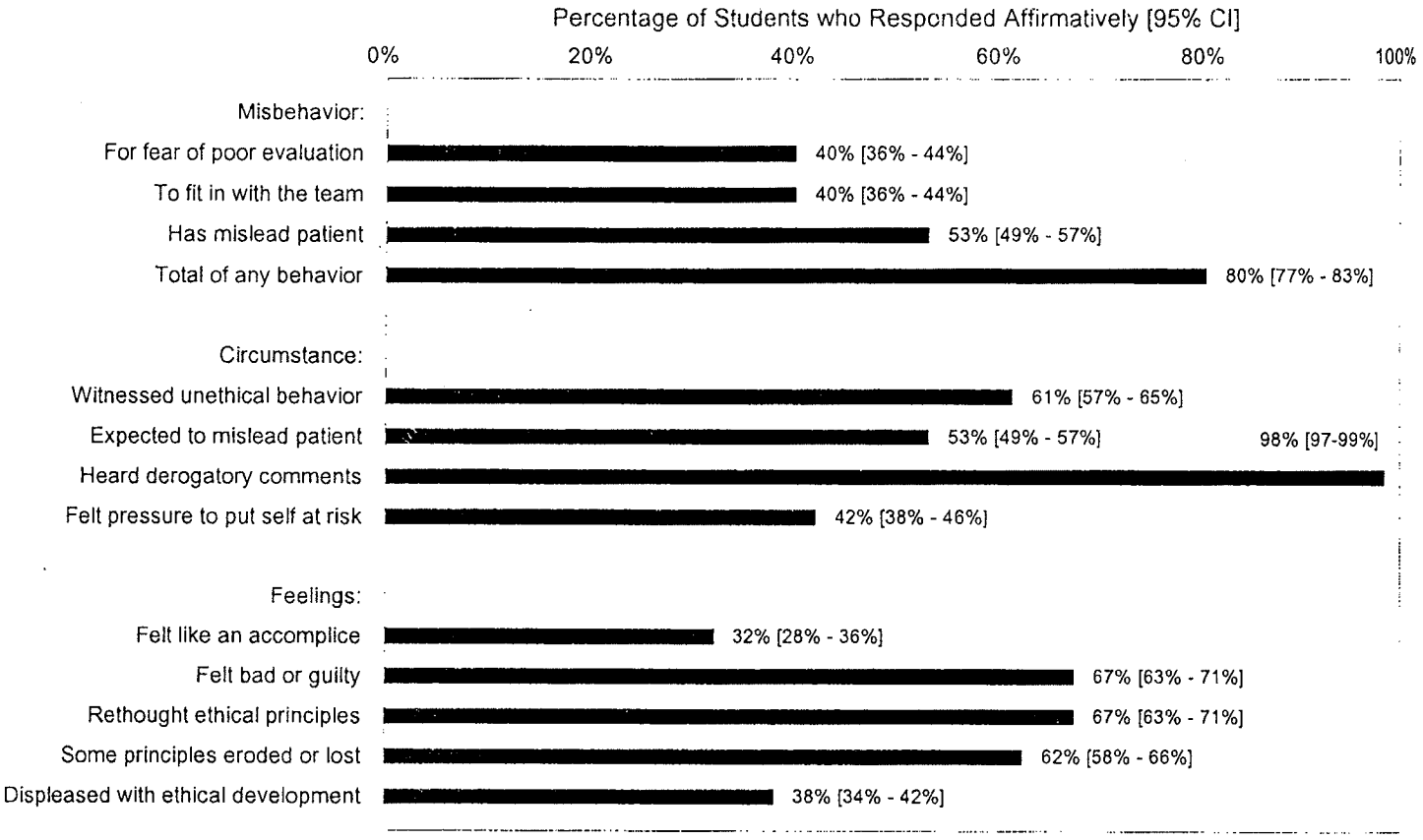

Figure 1. **Prevalences of misbehaviors, unethical circumstances, and detrimental feelings reported by clinical clerks. A total of 665 clinical clerks at six Pennsylvania medical schools responded to a 1992–93 survey about the ethical dilemmas they faced.**

mislead their patients either by lying or by withholding information, and 98% of these students subsequently did so. Withholding information was often blamed on the regimented structure of hospital relationships. One student observed that "the attending *always* breaks news to patients—students are not allowed [to do so]—even if the attending takes days." This division of responsibility can have untoward consequences, for patients and students, as in the case of a student who "withheld for several days a likely serious and terminal diagnosis from a patient, as 'official' reports were being written up and the doctor prepared to inform patient and family together," adding as a postscript that "I still have not successfully evaluated and resolved my 'dis-ease' in these cases."

Finally, virtually all students (98%) reported having "heard patients referred to in a derogatory manner by physicians." The derisive comments ranged from ignoring patients "simply because they were considered 'gomes'," to "laughing at a patient during rounds" or joking about anesthetized patients, to a report of having been "encouraged while on surgery to call patients 'stool' [and other insulting names]." Thirty-six percent of the students thought that derogatory references were appropriate "often" (6%) or "sometimes" (30%), while 36% believed they were "rarely" appropriate, and only 26% felt they were "never" appropriate.

Pressure to put oneself at risk. The health threat posed to students by working in the hospital creates another potential tension between students and their team members, especially when the hasty actions of a senior member increase the student's risk of being inadvertently inoculated with a patient's blood and thus becoming infected with HIV or other pathogens. Forty-two percent of the students reported that they had, at one time or another, "felt pressured to do something that puts [them] at personal risk," such as foregoing universal precautions while performing a procedure. Of these students, 75% had "succumbed to that pressure against their better judgment," suggesting the strength of the pressure students feel to oblige senior medical personnel. The expectation that one may be put at such great risk and should silently endure it—or worse yet, actually experience such a scenario—could profoundly affect how students conceptualize hierarchial relationships. Ultimately, their experiences as underlings may shape

their development as authority figures and how they wield power themselves.

How Do Students Feel about Their Ethical Dilemmas?

Many students reported dissatisfaction with their own actions and ethical development: 67% had felt bad or guilty about something they had done as clinical clerks; 62% believed that some of their ethical principles had been eroded or lost; 38% were displeased with their ethical development; and 67% had had many occasions and reasons to rethink their ethical principles (see Figure 1). While some students may have accepted these changes as inevitable, others found them quite disturbing, causing one student to lament: "Slowly I'm seeing my classmates become 'destroyed' and it scares me! I've become so cynical that it's just not right!!"

Confronted with witnessing various unethical situations unfold, students reported several ways of reacting. Twenty-nine percent had kept their feelings to themselves. Forty-two percent claimed to have spoken with the individuals directly involved, while 27% had talked with senior members of the team.

In part, the students' reluctance to confront ethical issues directly arose from their perceptions of being vulnerable or ignorant. When asked how comfortable they were challenging other members of the medical team about ethical issues, 65% of the students reported that they currently felt either "very" or "somewhat" uncomfortable. As one student commented, he avoided "openly questioning some practices that didn't seem to benefit the patient," a habit that he viewed as arising from his being "usually reticent due to the lack of experience compared to decision makers." This belief in exculpatory medical ignorance may be what underwrites a widely shared strategy of ethical postponement: when asked to predict how comfortable they will feel as resident physicians, 58% believed that they will feel more comfortable than they do now (Figure 2).

Does Clinical Training Lead to Ethical Erosion?

The foregoing results suggest that students frequently observe and participate in clinical events that they find ethically questionable, and that many students feel guilty about their actions or are displeased with their ethical development. One of the central aims of this study was to determine whether what students see,

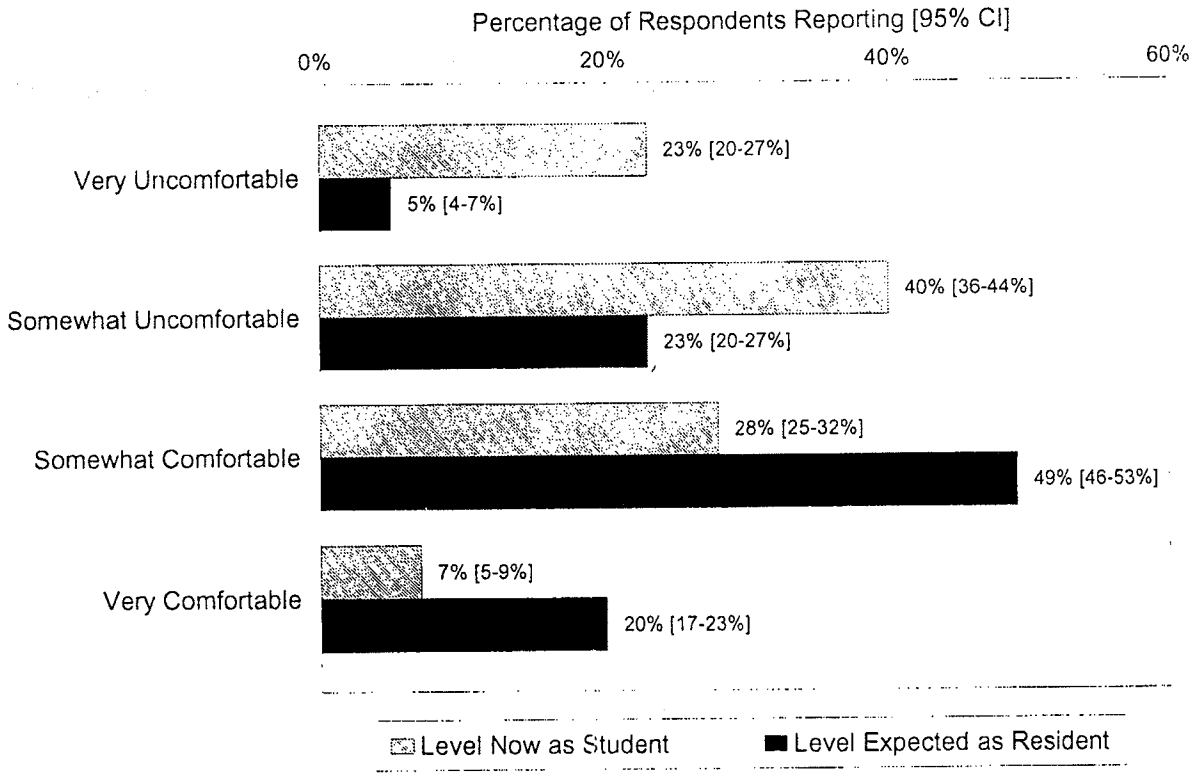

Figure 2. **Levels of comfort when challenging team members about ethical issues: a comparison of clinical clerks' current levels and the levels they anticipate having when residents. A total of 665 clerks at six Pennsylvania medical schools responded to a 1992–93 survey about the ethical dilemmas they faced. In the figure above, the shift in individual students' current to anticipated comfort levels was significant: McNemar's chi-squared = 320.45, $p < .001$.**

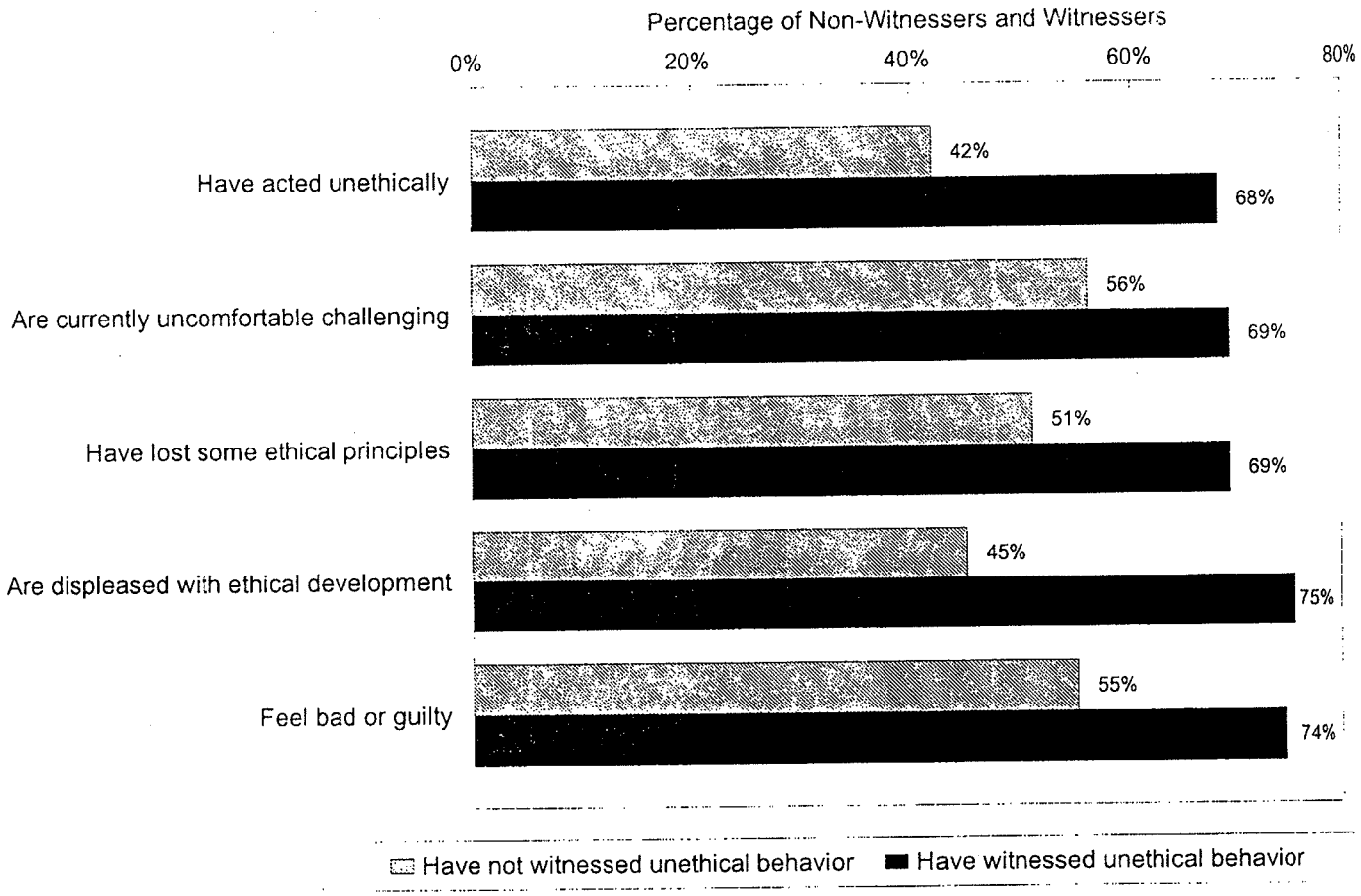

Figure 3. **Associations between clinical clerks' having witnessed unethical behavior by other team members and detrimental outcomes for the clerks. A total of 665 clerks at six Pennsylvania medical schools responded to a 1992–93 survey about the ethical dilemmas they faced. All differences between the responses of witnessers and non-witnessers are significant at $p < .01$.**

what they do, and how they feel about themselves are interrelated.

The bivariate analyses presented in Figure 3 demonstrate significant associations between having witnessed unethical behavior by other team members and a number of detrimental outcomes. We then used multivariable logistic regression models to test the associations of students' attributes and experiences either with having acted unethically or with self-assessed ethical erosion or displeasure with ethical development (Table 1). The students who had witnessed unethical behaviors were much more likely to have acted improperly themselves either for fear of poor evaluation [odds ratio, OR, 1.37 (95% CI, 1.18–1.60)] or in order to fit in with the team [OR 1.45 (1.25–1.69)]. Witnessing unethical acts was also associated with students' feeling that their ethical principles had been eroded [OR 1.23 (1.04–1.45)] and with displeasure at their ethical development [OR 1.18 (1.01–1.39)].

Stronger associations existed between having acted unethically and negative feelings (Table 1). After controlling for other factors, the students still were much more likely to report that their ethical principles had been eroded if they had ever done something either for fear of poor evaluation [OR 2.25 (1.47–3.45)] or in order to fit in with the team [OR 1.78 (1.18–2.71)]. Similarly, the students were much more likely to report displeasure with ethical development if they acted unethically for either of these two reasons [OR 1.98 (1.32–2.97) and 2.09 (1.39–3.14), respectively].

Some of the associations suggest important distinctions between various students and between different kinds of ethical judgement. For instance, the analysis of behaviors in Table 1 hints that a group of relatively insecure students, who felt uncomfortable challenging the team or had felt pressured to do risky things, were particularly vulnerable to evaluation anxiety. The analysis of development indicates that having misled a patient was significantly associated

Table 1

Two Analyses, using Logistic Regression Odds Ratio (95% CI), of Associations between 665 Clinical Clerks' Attributes, Circumstances, or Behaviors and Various Outcomes Related to Ethics, 1992–93*

	Analysis 1: Behavior		Analysis 2: Development	
	Unethical Behavior for Fear of Poor Evaluation	Unethical Behavior to Fit in with Team	Erosion of Ethical Principles	Displeasure with Ethical Development
Attributes				
Age	0.98 (0.92–1.05)	0.92 (0.86–0.99)†	0.92 (0.86–0.98)†	0.91 (0.84–0.98)†
Male	1.00 (0.68–1.47)	1.08 (0.74–1.57)	1.11 (0.75–1.64)	1.19 (0.80–1.76)
African American	0.76 (0.32–1.81)	0.99 (0.44–2.22)	0.36 (0.16–0.82)†	0.50 (0.19–1.28)
Asian American	1.21 (0.71–2.06)	1.59 (0.95–2.68)	1.01 (0.58–1.75)	0.71 (0.40–1.25)
Fourth-year student	1.86 (1.25–2.75)†	2.10 (1.42–3.10)†	1.00 (0.67–1.51)	0.89 (0.59–1.36)
Hours of ethics education	1.00 (0.98–1.02)	0.99 (0.97–1.01)	1.00 (0.99–1.02)	1.00 (0.98–1.01)
Fits in well with classmates	0.84 (0.61–1.16)	1.01 (0.74–1.39)	0.82 (0.59–1.14)	0.52 (0.38–0.73)†
Circumstances				
Witnessed unethical behavior	1.37 (1.18–1.60)†	1.45 (1.25–1.69)†	1.23 (1.04–1.45)†	1.18 (1.01–1.39)†
Uncomfortable challenging team	1.54 (1.22–1.92)†	1.25 (1.00–1.56)	(Not included)	(Not included)
Felt pressure to place self at risk	1.97 (1.34–2.88)†	1.04 (0.71–1.53)	(Not included)	(Not included)
Behavior				
To fit in with team	(Not included)	(Not included)	1.78 (1.18–2.71)†	2.09 (1.39–3.14)†
For fear of poor evaluation	(Not included)	(Not included)	2.25 (1.47–3.45)†	1.98 (1.32–2.97)†
Has misled patient	(Not included)	(Not included)	1.65 (1.12–2.43)†	1.20 (0.81–1.78)
Has placed self at risk	(Not included)	(Not included)	1.45 (0.93–2.25)	1.40 (0.92–2.13)

*The clerks, at six Pennsylvania medical schools, responded to an extensive survey about the ethical dilemmas they faced. In the table above, all dichotomous variables were coded as 1 when present, as 0 when not; all other variables were coded as described in the text. The categories for race-ethnicity omitted from the table are white, Hispanic, and other. For clarity, model constants are not reported.

†$p < .05$.

with erosion of principles, but not with displeasure with ethical development, implying that some students were able to surrender certain principles without being overly concerned.

The models in Table 1 reveal that the older students were slightly less likely to have behaved unethically to fit in with the team, to have felt that their principles had been eroded, or to have been displeased with their ethical development. Fourth-year students, with one more year of clinical exposure, were roughly twice as likely to have behaved unethically than third-year students. African American students were two-thirds less likely to have felt that their ethical principles had been eroded or to have felt bad or guilty. Gender was not associated with unethical behavior or change in principles. Finally, increased number of hours of ethics education did not decrease the likelihood of unethical behavior or negatively assessed changes in ethical principles.

COMMENT

Does Ethical Erosion Occur?

The results from this survey sample suggest that medical students' ethical dilemmas are widely prevalent. A majority of students reported witnessing unethical behaviors, being placed in situations that promoted unethical behaviors, and behaving in ways that they themselves viewed as unethical. Corroborating the prevalence levels documented here, a survey study of medical student abuse conducted elsewhere on a single third-year class of medical students, with an 81% response rate, found comparable percentages of students who had observed unethical events (greater than 40%), had been placed at unnecessary medical risk (44%), and reported detrimental changes in their attitudes (77%).[10]

The present survey suggests that many students confront dilemmas that are shaped by their subordinate role within the hierarchical medical team. While wrestling with such predicaments may encourage some students to mature into thoughtful and ethical physicians, our analysis indicates that, for at least a sizable minority, exposures to student-level dilemmas coincide with deterioration of the students' ethical self-identities. The students who reported witnessing unethical behaviors were more likely to have acted unethically themselves, and those who had witnessed or participated in unethical behaviors were more likely to have assessed their ethical development negatively. Importantly, the combination of ele-

vated odds ratios and the high prevalence of reported unethical behaviors and negative feelings suggests that the associations are not only statistically significant but also pedagogically substantial and relevant.

These quantitative findings, while provocative and consistent with the previous qualitative studies, should be evaluated with three major caveats. First, since just over a third of the students responded to the survey, the prevalence levels reported here must be generalized cautiously. Yet, even assuming unrealistically that all the non-respondents had neither acted unethically nor witnessed unethical behavior, the prevalence still would be high: under such a stringent assumption, 29% of all third- and fourth-year students at these schools would have either acted unethically or misled patients, while 22% would have witnessed unethical behaviors by other physicians. Furthermore, for at least the self-selecting third of students who responded, this sizable fraction of clinical clerks encounter ethical dilemmas that potentially result in deterioration of ethical principles. Second, the survey reports students' judgments of the actions of others and themselves, and perceptions of how they have changed since entering the clinics. There is no objective standard against which to test the validity of the students' reports of having encountered ethical dilemmas or having acted unethically, or their assessments of how their ethical principles have changed. Nevertheless, even if the prevalence data are viewed only as reportage of perceptions, they are still worrisome, since these perceptions of having seen and committed unethical acts seem to have adversely affected the students' self-perceptions and hence threatened their personal ethical development. Finally, some of the detected statistical associations may reflect unmeasured attributes of respondents, such as their "sensitivity" to ethical issues or the levels of social support they received through the challenging clinical years. Better characterization of respondents with more detailed instruments and longitudinal study design would be needed to exclude these potential confounders.

It is important to note that statistical associations were not the only evidence indicating that clinical training adversely affects students' ethical development. Many of the findings implicate the educational environment on the ward or in the clinic indirectly. For example, the high prevalences of certain attitudes and behaviors—such as misleading patients and viewing derogatory comments as appropriate—imply that they are considered acceptable by many physicians, as others have noted.[24-26] Even more troubling are the students who reported that their principles had been eroded but were not displeased with their ethical development, as though they have accepted that becoming a doctor requires a transformation of character. Adding more poignancy to these findings were the comments of the students themselves, which reflect the considerable conflicts posed to medical students and the distress these conflicts can produce.

Can Ethical Erosion Be Prevented?

What can be done to improve this situation? As this study suggests, much of the ethical life of medical students is enmeshed in the medical team and how it operates. From its pragmatic ability to get work done to its interpersonal style of distributing responsibility and handling disagreements, the medical team is the primary site of the complex shaping of students' values, attitudes, and emotional stances toward the many difficult and troubling issues that hospital medicine and patient care present to students and physicians. Given the emotionally charged and physically demanding work that students and house officers perform, and the well-known distresses that attend this work,[27,28] many ethically dubious practices may have significant utility in the lives of young physicians.[29,30] To rectify the ethical world of the wards would require, in part, reducing the "distress" arising from untenable work situations for medical students and house officers alike.

All efforts at ethical reform, however, need not be directed at comprehensive change. While this study indicates that ethics education is presently ineffectual in fostering ethical conduct, it suggests alternative approaches that emphasize local action. First and foremost, with so many students in this sample reporting ethical degradation, the educational goal perhaps should not be to improve behavior as much as to maintain and nourish ethical standards. To prevent ethical erosion, ethics education during the clinical years should be refocused upon the dilemmas that students confront as clinical clerks, and attempt to provide timely and practical guidance. Teachers should strive to promote discussions about real occurrences directly involving students. As important, the medical-team origins of students' dilemmas suggests that individual attending physicians and house officers can substantially help or hinder the ethical development of medical students. Since two-thirds of the students reported having had many occasions and reasons to rethink their ethical principles, there may be ample opportunity for team members to reach out. Physicians who ask students about their ethical dilemmas, listen carefully to what they say, and then respond with sensitivity are agents of reform. So, too, are physicians who promote an environment during their private and group interactions where it is both safe and acceptable for students to challenge team members about the ethical implications of various courses of action. In the end, these personal approaches to fostering ethical growth may prove to be as powerful and rejuvenating for physicians as for students.

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