How Medical Students Think about Ethical Issues

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Background. Although bioethics has become an established part of medical school curricula, relatively little is known about how students apply didactic material to clinical problem-solving situations. **Method.** Each of 92 second-year students (54 men and 38 women) at the University of California, Irvine, College of Medicine in 1991–92 wrote a paper identifying and attempting to resolve a clinical ethical dilemma of his or her choice. The papers were then coded for content, use of ethical theories and principles, degree of resolution, and level of personal orientation (i.e., evidence of personal involvement in the dilemmas). Data were analyzed by student sex and age, using chi-square tests of significance and correlational analysis. **Results.** The students had no difficulty in identifying a range of ethical dilemma. Most students appeared to have understood and become familiar with the major ethical theories and principles currently in use, and to have employed them correctly. A majority of the students were able to successfully resolve their ethical dilemmas. Differences between the men and the women students were found regarding choice of topic, ethical principles used ($p = .03$), and level of personal orientation ($p < .01$). **Conclusion.** The women tended to be interested in issues involving broad social perspectives; to favor arguments emphasizing the rights of patients and families; and to incorporate personal responses, as well as abstract theories, in their essays. The men tended to be interested in issues involving personal control, authority, and responsibility; to advocate utilitarian, cost-containment thinking; and to rely exclusively on abstract, logical arguments. Further research should determine whether these differences can be identified in actual clinical decision making, and whether the differences have implications for the nature or quality of clinical decisions. *Acad. Med.* 69(1994):591–593.

Many medical schools now require a course in medical ethics as part of the mandatory curriculum.[1] Most such courses have goals of teaching students to recognize ethical issues, stimulating moral reasoning, and developing a sense of moral obligation and personal responsibility.[2,3] Students generally evaluate such courses positively,[4] and seem to appreciate their relevance to real-world medicine.[5] However, questions remain as to whether the teaching of bioethics can make a difference in such areas as physician values, social responsibility, and the doctor–patient relationship.[6,7] Specifically, we know relatively little about how the academic learning of students is related to applications in their own lives.

METHOD

The participants in the present study were 92 second-year students in good standing at the University of California, Irvine, College of Medicine in 1991–92. The sample comprised 54 men and 38 women. The average age of the students was 25.1 years, with a range of 20 to 38. Eight minority students, representing five racial–ethnic groups, were included in the sample.

As part of a seven-week, 18-hour mandatory medical ethics course, the students were each required to write a three- to five-page paper exploring an ethical issue of personal concern and their efforts at its resolution. Guidelines for paper completion were open-ended. The students were encouraged to write essays of a personal nature, and to draw on information gained during the course.

All papers were scored in four categories by two undergraduate students, one male and one female. The raters had completed an undergraduate elective course in medical ethics, were both premedical majors, had volunteered in emergency room settings, and had expressed an interest in bioethical issues. They were trained for approximately four hours by the first author (JS) in the rating schema described below. Five essays from the previous year's medical ethics class were used for training purposes, and were not included in the actual study. Coding was designed to be as quantitative and objective as possible, to reduce the degree of subjective interpretation.

The coding categories developed were as follows: (1) *Content analysis*, which determined the topic being addressed, usually by the title of the paper (e.g., national health care, AIDS, abortion, etc.). (2) *Principles and theories used*, which noted for each essay the number of ethical principles, concepts, and theories referred to. Each time a new theory was introduced to defend a particular argument, it was listed. Most of the constructs mentioned in the papers could have been subsumed conceptually under the theories and principles of utilitarianism, consequentialism, deontology, virtue, autonomy, justice, beneficence, and nonmaleficence, but were scored separately if they appeared to be used as independent entities by the student. (3) *Resolution*, which rated yes/no whether the essay was able to resolve the ethical dilemma posed, a determination based on whether the student adopted a clear pro or con stance (e.g., "Euthanasia is morally indefensible"). (4) *Personal versus theoretical orientation*, which ranked each essay on a five-point scale for level of personal disclosure. A rank of 5 on the scale indicated an extremely abstract essay, with no personal references; 4, theoretical, but with a few personal references; 3, a hypothetical situation, but including some personal value statements; 2, a personally encountered situation with many personal value statements; and 1,

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a description of a within-family medical–ethical dilemma. Although this category involved some subjective judgement on the part of the raters, the specificity of the descriptors enabled us to achieve good reliability on this category. All coding was done with the raters blind to the sex of the essay writer. Thirty essays (approximately one-third) were scored by both raters, and used for reliability calculations. Rater reliabilities ranged from .73 to .94, with a mean interrater reliability of .82.

Chi-square tests of significance were used to compare differential endorsements for those categories for which large descriptive differences between the men and the women students existed. A total of five chi-square tests were performed. Age-related correlational analyses showed no significant trends.

RESULTS

Content Analysis

Among the 92 students, a total of 17 different topics were addressed. The greatest number of students (20, 22%) wrote about national health care, inadequate access, and inequitable distribution of resources. The other two topics of greatest interest to students were euthanasia and physician-assisted suicide (17, 19%) and death and dying (13, 14%), especially withholding or withdrawal of life support.

There were some differences in topics chosen according to the sex of the students. Twelve women (32% of all the women students) addressed the issue of national health care, whereas only 15% (8) of the men considered this subject. By contrast, 22% (12) of the men and only 13% (5) of the women examined euthanasia. Proportionally, somewhat more men (9, 16%) than women (4, 11%) were interested in the question of withholding or withdrawal of life support.

Principles and Theories Used

The students used a total of 20 principles, theories, or concepts. The most frequently cited principles were (1) autonomy (43, 47%); (2) rights (32, 35%); (3) economic constraints (30, 33%); (4) utilitarianism (29, 32%); (5) beneficence and nonmaleficence (27, 29% each); and (6) justice (25, 27%).

The men and the women students used the various principles with approximately the same frequencies. The men used an average of 3.2 theories per paper, while the women used an average of 3.6 theories. The men students tended to cite economic constraints as a factor in their thinking more frequently than the women students did (21, 39%, versus 9, 24%, ns), while the women used rights-based arguments (i.e., right to life, to privacy, to choice, to health care) significantly more often than did the men ($p = .03$).

Resolution

Sixty-nine (75%) of the essays were evaluated as reaching resolution on the ethical dilemma posed. The men were slightly more likely to reach resolution (39, 72%) than were the women (25, 66%). Both the men and the women were more likely to reach resolution than not.

Personal versus Theoretical Orientation

Approximately half (49, 53%) of the essays were rated as either completely theoretical (5) or mostly theoretical (4). A little under a third (27, 29%) were rated as having some personal disclosures and value statements (3). Most of the remainder (17, 18%) were rated as highly personal (1 or 2).

This category revealed striking differences between the sexes. While 65% (35) of the men wrote essays that received ratings of 4 or 5, only 37% (14) of the women's essays received these ratings. Conversely, 63% (24) of the women but only 36% (19) of the men wrote essays receiving scores of 3 or lower. When the percentage of the women scoring 4 or 5 was compared with that of the men receiving the same scores, the difference was highly significant ($p = .008$).

DISCUSSION

This study of free-form ethics essays indicated that the second-year medical students were interested in examining a wide range of controversial issues, and were not inhibited about addressing subjects not directly covered in class. Selection appeared to be based primarily on the pressing social implications of the topics chosen, in that the three most commonly selected were all subjects regularly covered by the media. Thus it is reasonable to conclude that the students' preoccupations reflected those of society at large, a finding that accords fairly well with a 1989 study of 202 internal medicine residents.[8]

The women students appeared to be interested in issues that adopted a broad social perspective with significant policy implications, such as national health care. A greater proportion of the men students appeared interested in topics such as euthanasia and termination of life support, which, while clearly containing policy implications, also raise issues of personal control, authority, and individual responsibility.

In general, approximately equal proportions of the men and the women referred to basic ethical principles of utilitarianism, autonomy, justice, and nonmaleficence. There appeared to be a trend for the men to advocate utilitarian, "bottom-line," cost-containment thinking in approaching ethical decision making, while the women tended to favor arguments that emphasized the rights of patients and families regardless of cost. Both the men and the women students most frequently put greatest emphasis on the principle of autonomy, reflecting a general trend in ethical thinking to treat autonomy as first among equals in terms of the four basic principles.[9]

While a majority of the students were able to satisfactorily resolve their self-imposed ethical dilemmas, a large percentage (35%) were unable to reach resolution. However, this hesitation may be interpreted as a healthy respect for the complexity and, at

times, moral relativity of ethical decision making.

One of the most intriguing findings was the difference in levels of personal orientation in the essays, especially since all students were encouraged to adopt a personal approach in the assignment. As noted above, the men did not use more abstract theories than did the women in their arguments. Rather, the difference seemed to be that they relied on abstract, logical arguments more exclusively. The women were much more likely to intersperse their discussion with comments such as "I don't know if I could live with myself," or "I would feel terrible." Further research needs to determine whether these differences can be identified in actual clinical making, and whether they have implications for the nature or quality of those decisions.

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