Teaching Medical Ethics to First-year Students by Using Film Discussion to Develop Their Moral Reasoning

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Purpose. To evaluate a project on teaching medical ethics to first-year students by using film discussion to develop the students' moral reasoning. **Method.** The participants were 114 first-year students at Texas A&M University Health Science Center College of Medicine in 1989–90, 1990–91, and 1991–92: (1) 48 (20 women and 28 men) who participated during the fall quarter in an elective course on social issues in medicine, which consisted of weekly one-hour discussions of short films; (2) 37 (18 women and 19 men) who participated in the course during both the fall and winter quarters; and (3) a control group of 29 (8 women and 21 men) who did not take the course and so had no exposure to the film discussions. The influence of the discussions on the students' moral reasoning was measured by using Rest's Defining Issues Test for pretests and posttests. The scores of the three groups were compared by using multivariate analysis of variance. **Results.** There were statistically significant increases in the moral reasoning scores of both the course registrants with one-quarter exposure to the film discussions ($p < .002$) and those with two-quarter exposure ($p < .008$) compared with the scores of the students who did not take the course and had no exposure ($p < .109$). **Conclusion.** No doubt there was a self-selecting bias on the part of the course registrants; however, since both groups of registrants showed significant increases on their posttest scores, clearly the course did have a positive influence on these students' moral reasoning. Thus, it is possible to develop young people's moral reasoning in medical school as well as in earlier educational environments. *Acad. Med.* 68(1993):383–385.

In recent years both the popular press and the professional literature have shown an increasing concern over the quality of the physician–patient relationship. One approach to creating more humanistic, compassionate, and caring physicians has been to implement medical humanities programs throughout medical education. Reports in the literature indicate that this has been done widely.[1,2] The importance of promoting higher-level moral reasoning in physicians has been demonstrated by Sheehan and colleagues.[3] Their work has shown a positive relationship between higher-level moral reasoning and good clinical performance as a physician.

Most of the teaching of medical ethics, however, is done in lecture format. Films are sometimes used as discussion triggers, but few reports on the use of films have appeared in the literature. Even fewer reports on evaluating the use of films have appeared. Indeed, very little evaluation has been done on teaching medical humanities. This report explicitly addresses that deficit by describing the pre- and posttesting of the moral reasoning of students in an elective film discussion course that has been described elsewhere.[4]

METHOD

The study participants were 114 first-year students at Texas A&M University Health Science Center College of Medicine in 1989–90, 1990–91, and 1991–92: (1) 48 (20 women and 28 men) who participated during the fall quarter in an elective course on social issues in medicine, which consisted of weekly one-hour discussions of short films; (2) 37 (18 women and 19 men) who participated in the course during both the fall and winter quarters; and (3) a control group of 29 (8 women and 21 men) who did not take the course and so had no exposure to the film discussions. The students in the three groups were similar in age and background. All groups contained students from three consecutive years in order to have a sufficiently large number of participants in each group (the study was done at a school with a small student body).

The students' moral-reasoning skills were pretested and posttested on the Defining Issues Test (DIT) developed by Rest.[5] The DIT is the instrument most widely used for assessing moral reasoning. It has been used in hundreds of studies. The DIT was chosen because of its extensive literature[6] (including the necessary validity studies) and its cost and efficiency when compared with other instruments. Cognitive moral development theory, from which the DIT was derived, has been described elsewhere.[7]

The DIT scores of the three groups of students were compared by using multivariate analysis of variance, with significance set at $p < .05$.

RESULTS

Statistical analyses showed that the significant differences were primarily among the groups' posttest scores. Comparison of pairs of means by analysis of contrasts indicated that the only significant difference ($p \leq .045$) in pretest scores occurred between the control group (43.65) and the students with two quarters of exposure to the film discussion (50.22). The students with one quarter of exposure had a mean pretest score of 46.78.

The only significant difference in posttest scores also occurred between

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the control group and the students with two quarters of exposure, but this difference was considerably larger and more significant (47.68 versus 56.40, $p \leq .009$). The difference between the posttest scores for the control group and the students with one quarter of exposure did not reach the 95% confidence interval level (47.68 versus 53.01, $p \leq .089$).

The most sensitive test in a repeated-measures analysis such as this is the comparison of the within-participants scores (i.e., each individual's pretest and posttest scores). By having the measure repeated for each participant, it is possible to remove the portion of the variation caused by differences between individuals. What is left is the true difference between the measured quantities, plus some degree of random error. The within-participants comparisons showed highly significant differences between the pretest and posttest scores for the two groups of students who took the course: for those with one quarter of exposure, a mean increase in score of 6.23, $p \leq .002$; for those with two quarters of exposure, a mean increase in score of 6.18, $p \leq .007$. The mean increase in score for the control group was not significant: 4.03, $p \leq .109$.

Analysis of variance in which the pretest scores were used as a covariable did not change the outcome of the results appreciably. This analysis, which adjusts the posttest scores as if all three groups began with the same pretest score, showed that both groups that were exposed to the film discussion scored statistically significantly higher than the control group, but that their scores were not significantly different from each other.

DISCUSSION

Although the changes in DIT scores did reach the level of statistical significance in this study, several issues are important to consider. The noticeable differences among the groups' pretest scores no doubt reflect a self-selecting bias on the part of the course registrants. This was expected, since in general, students whose levels of moral reasoning are higher appear more likely to elect additional courses that explore and develop further the moral-reasoning skills in which they are proficient. But since the changes in the scores for the two groups receiving exposure to the film discussions did reach the level of significant difference, clearly educators can have a positive influence on the moral reasoning of medical students by paying careful attention to the structure and method of the medical education curriculum. As Rest has argued,[8] it is not too late to effect a change in the moral reasoning of young adults, and their values are not inflexibly determined at mother's knee, or at some other time before young adulthood. Verbal reports from the students in the present study certainly indicated that the course influenced their thinking and attitudes about the issues covered.

Since both experimental groups achieved posttest scores that were higher than those of the control group but were not significantly different from each other, it may be that a floor or foundation effect in moral reasoning, which resulted from the success of the one-quarter course, was so high that the addition of the second quarter of film discussion could not significantly go beyond the level of moral reasoning established by the one-quarter course. This is supported by the fact that the scale of measurement of the DIT is not linear, i.e., the higher one's score on the scale, the harder it is to score still higher. There is a threshold of achievement beyond which it takes disproportionately more time, effort, and energy to advance further.

The last concern has to do with the theory behind this study, namely, cognitive moral development theory. The pioneering work of Blatt and Kohlberg[9] later replicated by others, demonstrated that systematic participation in structured moral-dilemma discussions, in which students actively had to choose a position in a moral conflict and defend it with reasons, significantly increased students' levels of moral reasoning in contrast to passive exposure to similar material in a lecture format. It could be argued that seeing a film and engaging in a discussion about its issues is somewhat similar to participation in moral-dilemma discussions, especially if the film is carefully selected and the discussion is vigorous, in that students are not just passively involved in absorbing the information presented. Certainly seeing a film engages more of the senses more intensely than does just hearing a lecture. Therefore, one should expect to influence moral reasoning significantly by offering a film elective. That is, the method is compatible with the theory. But there are theoretical problems with the theory of cognitive moral development. These theoretical issues have been discussed in the literature.[10]

One theoretical issue not widely discussed in the literature, however, is Kohlberg's equation of moral reasoning with justice reasoning. That is, throughout his work, Kohlberg systematically talks about moral reasoning when in fact he means reasoning based on the principle of justice. Even though he holds the principle of justice to be the highest moral principle, he gives inadequate justification for why justice is the highest form of morality. The works of Noddings[11] and Gilligan[12] indirectly draw attention to this distinction by emphasizing an ethics of care in contrast to an ethics of justice in accounting for morality.

CONCLUSION

More attention needs to be devoted to the evaluation of medical humanities teaching. Kohlberg's theory may or may not be an adequate theory, but whatever approach is used should have a significant commitment to evaluation. It has often been argued that there are not adequate methods to measure the effectiveness of medical humanities programs. This is simply not true. The present study demonstrates both that adequate measures are available for objectively evaluating changes in the moral-reasoning skills of medical students and that the use of film discussion is an appropriate method for teaching

medical humanities if increasing the moral-reasoning skills of students is one of the major objectives.

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References

1. Pellegrino, E. D., and McElhinney, T. K. *Teaching Ethics, the Humanities, and Human Values in Medical Schools: A Ten-year Overview.* Washington, D.C.: Society for Health and Human Values, 1982.
2. Bickel, J. *Integrating Human Values Teaching Programs into Medical Students' Clinical Education.* Washington, D.C.: Association of American Medical Colleges, 1986.
3. Sheehan T. J., Husted, S., Candee, D., Cook, C. D., and Bargen, M. Moral Judgment as a Predictor of Clinical Performance. *Eval. Health Prof.* **3**(1980):394–404.
4. Self, D. J,. and Baldwin, D. C., Jr. Teaching Medical Humanities Through Film Discussions. *J. Med. Humanities* **11**(1990): 23–37.
5. Rest, J. R. *Development in Judging Moral Issues.* Minneapolis: University of Minnesota Press, 1979.
6. Rest, J. R. *Moral Development: Advances in Research and Theory.* New York: Praeger, 1986.
7. Kohlberg, L. Moral Stages and Moralization: The Cognitive Developmental Approach. In *Moral Development and Moral Behavior: Theory, Research and Social Issues,* T. Lickona, ed., pp. 35–53. New York: Holt, Rinehart, and Winston, 1976.
8. Rest, J. R. Can Ethics Be Taught in Professional Schools? The Psychological Research. *Ethics: Easier Said Than Done* **1**(1988):22–26.
9. Blatt, M., and Kohlberg, L. The Effects of Classroom Moral Discussion upon Children's Level of Moral Judgment. *J. Moral Educ.* **4**(1975):129–161.
10. Reed, T. M Development Moral Theory. *Ethics* **97**(1987):441–456.
11. Noddings, N. *Caring: A Feminine Approach to Ethics and Moral Education.* Los Angeles, California: University of California Press, 1984.
12. Gilligan, C. *In a Different Voice: Psychological Theory and Women's Development.* Cambridge, Massachusetts: Harvard University Press, 1982.

Extent to Which Guided-discovery Teaching Strategies Were Used by 20 Preceptors in Family Medicine

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Background. Learners learn more and are able to categorize problems at higher levels when their teachers use *guided-discovery* strategies (e.g., questions and advice to investigate relationships between concepts), as opposed to directly telling learners the answers. This study examines the extent to which clinician preceptors of residents use guided-discovery strategies when faced with a diagnostic problem-solving situation. **Method.** Twenty family medicine preceptors from four residencies volunteered in 1991–92 to role-play with a simulated first-year resident on a single standardized case. Judges coded the preceptors' verbal behaviors by type (question, statement, or advice) and by category. The categories were *teacher*, i.e., behaviors relating to more than the present case (hence exemplifying guided-discovery strategies), and *consultant*, i.e., behaviors relating to the successful disposition of the case (without overt concern for the education of the resident). **Results.** Of the preceptors' 846 verbal behaviors, 602 (71%) were coded as teacher behaviors, but only 329 (39%) were teacher behaviors that were of the specific types (high-level advice or questions promoting reflectivity, i.e., mindfulness) described in the literature as being most likely to promote learners' reflectivity and transfer of knowledge and skills from a lower level of abstraction to a higher level. **Conclusion.** The results suggest that the 20 preceptors were aware of the importance of "getting residents to think" and did use teaching strategies known to promote transfer. However, their repertoire of strategies was limited. *Acad. Med.* 68(1993):385–387.

Like any novice practitioner, the newly graduated medical doctor must learn to integrate factual information and intellectual skills learned during his or her formal educational experience with the clinical realities of a practice setting. The interaction between the novice physician (resident) and the experienced practitioner (preceptor) is of interest, since a great deal of what the resident learns is taught informally within this dyad.

Recent studies in the areas of medical decision making and diagnosis have found that the availability and retrievability of relevant knowledge is a major differentiating factor between experts and novices.[1–3] Expert clinicians have arranged their knowledge bases into highly organized, accessible sets of interrelated schemes. These schemes, or cognitive structures, permit the experienced clinician to recognize problems as belonging to a category of problems for which procedural solutions have al-

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