Perspectives in Professional Education

Description and evaluation of a course in veterinary ethics

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Within the past decade, the teaching of veterinary ethics has become part of the curriculum in all of the US veterinary schools. Although this report does not focus on the importance of including veterinary ethics in the curriculum, the data suggest there is a consensus that teaching veterinary ethics is important. However, there are tremendous differences in how veterinary ethics training is accomplished. Course content and curriculum time devoted to veterinary ethics vary widely among the US veterinary schools. Most teaching occurs in the preclinical years; indeed, only 4 schools have a formal ethics course in the fourth-year curriculum.

As the field of veterinary ethics has grown, so has the literature about it. Despite this rapid expansion of literature, no studies have evaluated how well veterinary ethics is taught and to what extent the teaching of ethics influences the moral reasoning capabilities of veterinary students. One study reports comparing the moral reasoning of small animal veterinarians to that of large animal veterinarians. The study took moral reasoning, or the ability to think and draw conclusions based on moral values, to be a function of the principle of justice or fairness, which is one of the basic concepts on which our society is built. It held implementing the principle of justice to be the highest form of ethical thinking. Significant differences between the levels of moral reasoning of small animal and large animal veterinarians were not detected; however, a significant difference (P ≤ 0.045) was found between the levels of moral reasoning of male and female veterinarians, with female veterinarians consistently scoring higher than their male colleagues. Another study addressed the general effect of veterinary medical education on the moral development of veterinary students. In that study, students were tested when entering veterinary school and again 4 years later, just before graduation. Normally, during early adulthood some increases in moral reasoning skills would be expected in association with maturation, increased age, and education. Moral reasoning skills have been found to be related to age and education in other studies with non-veterinary students. However, results of the study in which veterinary students were tested as they entered and graduated from veterinary school indicated that the normally expected increases in moral reasoning did not develop over the 4 years of veterinary medical education, suggesting that the veterinary education experience somehow inhibited moral reasoning development rather than facilitating it. A parallel study with students in human medicine had similar results. None of the reports in the literature addressed the topic of teaching veterinary ethics and its effect on students’ moral reasoning skills.

In contrast, there are reports of several studies in human medical literature in which the effect of teaching medical ethics on medical students’ moral reasoning skills were evaluated. These studies identified a substantial increase in the moral reasoning skills of students who participate in courses in medical ethics. There are also studies that link moral reasoning skills to clinical competency in residency training in the field of human medicine.

To understand and evaluate students’ moral reasoning skills, one must first understand the difference between moral values and moral reasoning. Moral values are generally values about what is right or wrong and are generally believed to be learned from parents and other significant adult authority figures during childhood development. Values are based on the principles of justice, respect for persons, and autonomy or self-determination (ie, basing one’s choices on one’s own set of values). In contrast, moral reasoning is the reflective inquiry about moral values regardless of what one’s particular set of moral values happens to be. It involves a cognitive, logical, thinking process for drawing conclusions based on moral values. There are considerable data from research by Kohlberg and others about the general moral reasoning of young adults. The moral reasoning of undergraduate college students has been nicely summarized by Pascarella and Terenzini, who found evidence from many studies in various circumstances that indicates that attending college is linked with significant increases in the use of higher level moral reasoning skills for judging moral issues. Longitudinal studies after 10 and 20 years document the long-term influence of college on retention of increased moral reasoning skills. These increases in moral reasoning skills have been found to be linked systematically to positive moral behaviors, including resisting cheating, keeping contractual promises, and helping those in need.

There have been several reports regarding intervention studies, with much discussion about the duration of intervention necessary for effecting a change and the format best for accomplishing it. Similarly, there has been much discussion about the relationship of moral
reasoning to moral behavior and the efficacy of improving moral behavior by improving moral reasoning skills. Generally, it has been found that there is a positive relationship between moral reasoning and moral behavior. Research by Rest and others has shown that moral reasoning skills can be substantially altered even during early adulthood.

In this report, we describe and offer our evaluation of a course in veterinary ethics that was designed to improve moral reasoning skills of veterinary students. We tested the hypothesis that a 1-semester course (15 contact hours) devoted strictly to veterinary ethics would significantly increase the moral reasoning skills of veterinary students, as measured by the Defining Issues Test (DIT) developed by Rest.

Kohlberg's theory, which is the basis for the DIT, is summarized here and has been described elsewhere in detail. His theory of moral reasoning was based on results obtained over 30 years of quantitatively reproducible research. It divides moral reasoning into 6 stages. Stage 1 is an authority punishment stage in which one does whatever authority figures say to do in order to avoid punishment. Stage 2 is an egoist instrumental exchange in which one attempts to exchange equally with another, usually with a sense of fairness. This is often in the form of an "I'll scratch your back if you'll scratch mine" type of morality. Stage 3 encompasses issues of mutual interpersonal expectations, peer relationships, and interpersonal conformity. One chooses what is right on the basis of what people close to them expect. Stage 4 represents a conscience orientation and societal maintenance, in which one contributes to the welfare of the entire group in order to maintain a smoothly running society. Stage 5 emphasizes individual rights, such as life and liberty, but ultimately these are extended to protect all people's rights, thereby creating the greatest good for the greatest number. Stage 6 is committed to the universal ethical principles of autonomy, justice, equality, and respect for the dignity of all human beings as individuals. Laws and societal agreements usually are based on these principles. However, if laws or societal agreements violate these principles, then one functions with a personal commitment to these principles and forgives the law or agreement.

Kohlberg's theory of cognitive moral reasoning has been widely tested cross-culturally and in various socioeconomic conditions, in both the east and west and in the northern and southern hemispheres. As outlined by this theory, people advance through these stages in sequence as they mature. The sequence never varies, although the rate and final stage achieved varies between individuals.

Course Description

The course was taught at the Texas A&M University College of Veterinary Medicine in the first semester of the first-year veterinary curriculum in 1993. Course content was limited strictly to topics in veterinary ethics. Classes met for either 1- or 2-hour sessions for a total of 15.0 contact hours for the semester. One-hour sessions consisted of a didactic lecture format featuring such topics as moral theory, ethical decision making, The Veterinarian's Oath, use of animals in teaching and research, and professional interactions. Four 2-hour evening sessions featured small-group case study discussions of actual real-life scenarios obtained from practicing veterinarians, veterinary faculty, and literature on veterinary ethics. Each small group consisted of 6 to 8 students and 1 or 2 facilitators. The facilitators were not always the same individuals, although some facilitators participated in more than 1 session. Composition of the groups changed with each session to enhance exposure to others' ideas and opinions. The group facilitators were practicing veterinarians recruited from across the state. They included small, large, and mixed-animal practitioners encompassing board certified specialists from solo and group practices. Their practice communities represented small towns of several thousand to large cities with populations in the millions. Students and facilitators received sets of case study scenarios that posed difficult ethical dilemmas involving care and treatment of animals, client relations, animal use in research, and professional interactions. The facilitators guided students through a discussion of the dilemmas without offering them "correct" answers. Stimulating reasoning about the issues was the main object of the course, not just inculcating a particular set of positions. Students were encouraged to interact with each other and listen to others' opinions and ideas before offering a solution to the problem.

Methods of Testing and Analysis

The moral reasoning skills of first-year veterinary students were tested at the beginning and upon completion of the formal course in veterinary ethics. Complete moral reasoning data were obtained on 105 first-year veterinary students. The test sample included 82.0% of the first-year student body. Demographic data including gender, age, and Medical College Admission Test or Graduate Record Exam scores. The instrument used for pretest and posttest measurement of moral reasoning was the DIT. It is a pencil and paper, computer scorable, multiple-choice test. The DIT is group administrable and relatively inexpensive compared with other tests that measure moral reasoning, such as the original Moral Judgment Interview of Kohlberg or the Siciomoral Reflection Measure of Gibbs. With the DIT, continuous scores are readily obtainable and range from a low of 0 to a high of 95. These scores are obtained on the basis of the 6 stages of cognitive moral reasoning described by Kohlberg. Results are reported as a P score, which is the percentage of responses based on higher levels of principled moral reasoning, which represent stages 5 and 6 of Kohlberg's cognitive moral development theory. Thus, a P score of 52 would indicate that 52% of the student's test responses were based on stage 5 or 6 moral reasoning.

Statistical comparisons of DIT scores and demographic data were evaluated by use of the two-sample students' t-test with P values ≤ 0.05 being considered significant.

Results

Pretest DIT scores ranged from 10.0 to 68.0 (mean, 42.2) for the 105 students tested (Table 1). There were 38 male subjects with pretest DIT scores ranging from
Table 1—A summary of Defining Issues Test (DIT) scores including gender comparison

<table>
<thead>
<tr>
<th>Test population students (Range)</th>
<th>No. of students</th>
<th>Test DIT (Mean)</th>
<th>Posttest DIT (Mean)</th>
<th>Net difference (Mean)</th>
<th>P pre- to posttest value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>105</td>
<td>10.0 to 68.0</td>
<td>42.2</td>
<td>13.3 to 75.0</td>
<td>43.7</td>
</tr>
<tr>
<td>Males</td>
<td>38</td>
<td>10.0 to 68.0</td>
<td>39.4*</td>
<td>13.3 to 61.7</td>
<td>36.7†</td>
</tr>
<tr>
<td>Females</td>
<td>67</td>
<td>15.0 to 66.7</td>
<td>43.7‡</td>
<td>20.0 to 75.0</td>
<td>45.1</td>
</tr>
</tbody>
</table>

*The gender difference in pretest DIT scores of 4.3 was not significant (P ≥ 0.0786). †The gender difference in posttest DIT scores of 9.4 was significant (P ≤ 0.0005).

Discussion

Rejection of the hypothesis that a 1-semester 15-contact-hour ethics course increases moral reasoning skills of veterinary students emphasizes the need to pay closer attention to how veterinary ethics is to be taught. Duration and format of an intervention appear significant in changing one's moral reasoning skills. Reports in human medical literature that address these variables indicate that medical students' moral reasoning skills as tested by the Sociomoral Reflection Measure and subsequently also by the DIT improved significantly when exposed to a course in medical ethics.14,32 However, the duration of the course was 44 hours versus 15 hours of contact time for this reported course in veterinary ethics. This same report also studied the difference in moral reasoning scores between medical students exposed to small-group case studies versus a traditional lecture format. Both groups tested with the Sociomoral Reflection Measure of Gibbs improved significantly over their pretest scores with the highest overall increase seen in those exposed to the small-group case study format. Pioneering work by Blatt and Kohlberg13 demonstrated that students exposed to moral dilemma discussion in which they had to choose a position and defend it, significantly improved their moral reasoning skills over those students exposed to similar material in lecture format. Because the reported course in veterinary ethics was limited to 15 hours contact time and was almost equally divided between lecture and small-group case study format, perhaps it should not be expected to evoke the same amount of change as seen with the students in medical ethics.

According to the students, the small-group case study format in which students discussed cases with practicing veterinarians was very enjoyable. We felt it was important for students to have contact with practitioners with a variety of practice characteristics at an early stage in their training. An additional benefit was getting the students out of the lecture hall and into a small-group setting where they addressed real-life scenarios as active participants. Students were stimulated to think about ethical and social issues and hear not only other students' opinions but those of the practicing veterinarians and faculty as well. It was extremely important for students to realize that with every dilemma, there was no single correct answer being inculcated, although unethical and illegal positions were pointed out, and through this their perspectives could be broadened and tolerance for others increased. This would serve as a basis for continued ethical dilemma solving at the clinical level as well. Evaluations completed by students and the practicing veterinarians stated that the case studies were beneficial and urged that this format be continued, which it has been.

According to Kohlberg's theory, stage 5 and 6 level moral reasoning is dependent on universal ethical principles, with the principle of justice being the highest form of morality. Although Kohlberg argues that the theory has components of justice and care, his idea that one should act toward all human beings without consideration to friends and relatives is based on the concept of justice. Indeed, sometimes Kohlberg's notion of moral reasoning is more accurately referred to as justice reasoning.34-37 Thus, with the DIT based on Kohlberg's theory, it measures only one's ability to use justice in solving moral dilemmas.

With the significant increase in moral reasoning skills of the female students (65% of the class) we believe there is considerable merit in developing courses in veterinary ethics. Future studies considering variables such as course duration and format would be crucial in determining how best to design the course in the face of an already overwhelming curriculum.

Veterinary ethics is still in its early development but is already assuming an important role in veterinary education. Continued monitoring of the efficacy of teaching ethics in improving students' moral reasoning skills will provide data to help structure courses that will stimulate students to consider ethical issues when they are students and as graduate veterinarians.

References