DESCRIPTIVE ARTICLE

ASE

Medical Students' Perceptions of the Body Donor as a "First Patient" or "Teacher": A Pilot Study

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University of Michigan Medical School (UMMS) students attending a seminar on the history and ethics of anatomical dissection were fascinated by a report on the dissection room experience in Thailand that relates the body donor's status as a teacher. The students felt that they had naturally adopted the "body as teacher" approach in their dissection course, rather than the "body as first patient" approach that is encouraged by faculty. It was decided to explore the question whether other medical students shared these perceptions. A questionnaire was sent out to all UMMS students who had finished the anatomical dissection course. One hundred twenty-eight responses from a population of 500 students were received. Results indicate that students believe the "body as teacher" approach is more effective in engendering respect and empathy towards the body and towards future patients, and in facilitating students' emotional development. Students also reported wanting a more personal relationship with their donors. Eighty four percent of students preferred the "body as teacher" approach to the currently taught "body as first patient" approach. The results support the hypothesis that students' desired closer personal relationship with donors might be better facilitated by the "body as teacher" approach, and that this closer relationship engenders empathy and respect towards the donor and future patients. A new model for anatomy programs could introduce the donor first as a teacher and later transition into viewing the donor as a patient. Anat Sci Educ 4: 208–213. © 2011 American Association of Anatomists.

Key words: anatomical dissection; body donors; first patient; empathy; perception of anatomy course; great teacher

INTRODUCTION

Global experiences with anatomical dissection courses are the topic of a seminar on the history and ethics of anatomical dissection at the University of Michigan Medical School (UMMS). This year's class was fascinated by a report on the dissection room experience in Thailand (Winkelmann and Güldner, 2004) that relates the body donor's status as a teacher. Medical students in Thailand respect their donors as "ajarn yai," or "great teachers," a highly regarded status in Thai culture (Winkelmann and Güldner, 2004; Prakash et al., 2007; Lin et al., 2009). These students are encouraged to develop a personal relationship with their body donors based on the same gratitude and respect that is afforded to highly regarded teachers. This approach differs from a common concept many Western medical schools, including UMMS (UMMS, 2011), use in their introduction to anatomical dissection. Here, respect for the body donor and an appreciation of human dignity are encouraged by introducing the donors as "first patients" to promote the students' entry into their professionalization as doctors (Swartz, 2006; Swick, 2006; Tank, 2008; Pearson and Hoagland, 2010). Students in the

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Received 6 May 2011; Accepted 20 May 2011.

Published online 25 May 2011 in Wiley Online Library (wileyonlinelibrary.com).
DOI 10.1002/ase.231

seminar strongly felt that they naturally adopted the "body as teacher" in their actual dissection course experience, rather than the "body as first patient" approach that was encouraged by the faculty. They felt that a dissection curriculum promoting the "body as teacher" concept would have helped them to develop a desired closer relationship to their donor and possibly a better balance between clinical detachment and empathy. It was decided to explore the possibility that these perceptions might be shared by a larger group of medical students through a pilot study. The study aimed to answer the questions whether body donors are more commonly perceived by medical students as "first patients" or as teachers and whether the students felt either concept helpful in the development of a balanced future attitude toward patients. The results of the study survey will inform further inquiries into the relationship between body donors and medical students.

METHODS

The following hypotheses were formulated as basis in designing a questionnaire:

1. The "body as teacher" approach might be preferable to the "body as first patient" approach because it allows for a closer personal relationship.
2. This closer personal relationship is something that some students feel they need for their own well-being during the dissection course.
3. The need for this closer relationship may be due to its facilitation of an easier balance between empathy and clinical detachment. That is, to help the students experience themselves as humane and caring human beings during the course.
4. The "body as teacher" concept is more effective in forging a relationship with the donor, because this is a familiar relationship for students, whereas the "body as first patient" approach places students in the yet unfamiliar and perhaps even intimidating role of doctor.
5. A close and familiar relationship with the donor may encourage respect for the donor.
6. Respect for the donor may facilitate the development of respect for patients.

A survey with 11 questions was electronically mailed to all UMMS medical students who had finished the anatomical dissection course, that is, the second-, third-, and fourth-year students. Participation in the survey was voluntary and confidential and fulfilled the University of Michigan IRB criteria for exempt research. A primer was included in the survey, (see Appendix), to introduce students to the purpose of the study. It contained a brief summary and quote from the report by Winkelmann and Güldner (2004). The survey was created and the data analyzed using Qualtrics survey software, version 15853, (Qualtrics Labs Inc., Provo, Utah). Space was left at the end of the survey for any comments. All questions except for Question 11 were scored on a ten-point Likert scale (1 = "definitely no" or "doctor–patient" is more effective, 10 = "definitely yes" or "student–teacher" is more effective). Question 11 had only two answer choices: "first patient" or "highly regarded teacher."

RESULTS

The survey was emailed to the current second-, third-, and fourth-year medical students. One hundred and twenty-eight responses from a population of approximately 500 students were registered, for a response rate of 25.6%. This number was considered sufficient for a pilot study concerning a qualitative question. Mean response scores and standard deviations were calculated for Questions 1–10 and are summarized in Figure 1. Student responses to Questions 1 and 2 both had standard deviations that fell across the neutral score of 5.5. This indicates ambiguity toward the effectiveness of our current "body as first patient" approach in helping to maintain respect and empathy for the body. Contrarily, the mean response scores for Questions 3 and 4 were 7.10 and 7.19, respectively, with standard deviations for both falling above the neutral threshold. This indicates that students were more likely to believe approaching the body as a teacher would be effective in helping them to maintain respect and empathy for the body. When asked if they believe that treating cadavers as patients may one day lead to students treating their patients like cadavers, students responded with a mean score and standard deviation that fell well below the neutral threshold, indicating that students generally do not agree with this statement (mean response = 3.61). Students responded strongly that they wish it had been possible for them to develop a more personal relationship with their body, with 25% of students responding with a maximum score of 10, another 25% scoring 8 or 9, and a full 76% of students giving a score of 6 or higher (mean score = 7.05, SD above neutral threshold). They also believe that it would have been beneficial to them as future physicians to have regarded their body donors as teachers rather than as patients (mean response = 6.83, SD above neutral threshold). Student responses were more ambiguous; however, when asked if they believed that viewing the body as a highly regarded teacher would have made it easier for them to dissect with the appropriate balance of clinical detachment and empathy (mean response = 6.07, SD across the neutral threshold).

Questions 9–11 asked students to directly compare the two approaches to dissection (doctor–patient versus student–teacher). Students felt that encouraging a student–teacher relationship with the body, rather than a doctor–patient relationship, would be more effective in facilitating the emotional development of medical students over the course of first-year anatomy (mean response= 7.15, SD above neutral threshold). Students also felt that regarding the body as a teacher would be more effective in facilitating their development of empathy and respect for future patients (mean response = 6.75, SD above neutral threshold). Finally (Question 11), when asked whether they would rather view the body as their first patient or a highly regarded teacher, 84% of students preferred viewing the body as a highly regarded teacher.

DISCUSSION

An Alternative Concept

In contrast to the "body as first patient" approach that is taken in many western dissection courses (Bertman and Marks, 1985; Segal, 1988; Rizzolo, 2002; Tank, 2008), medical schools in Thailand promote the personalization of the

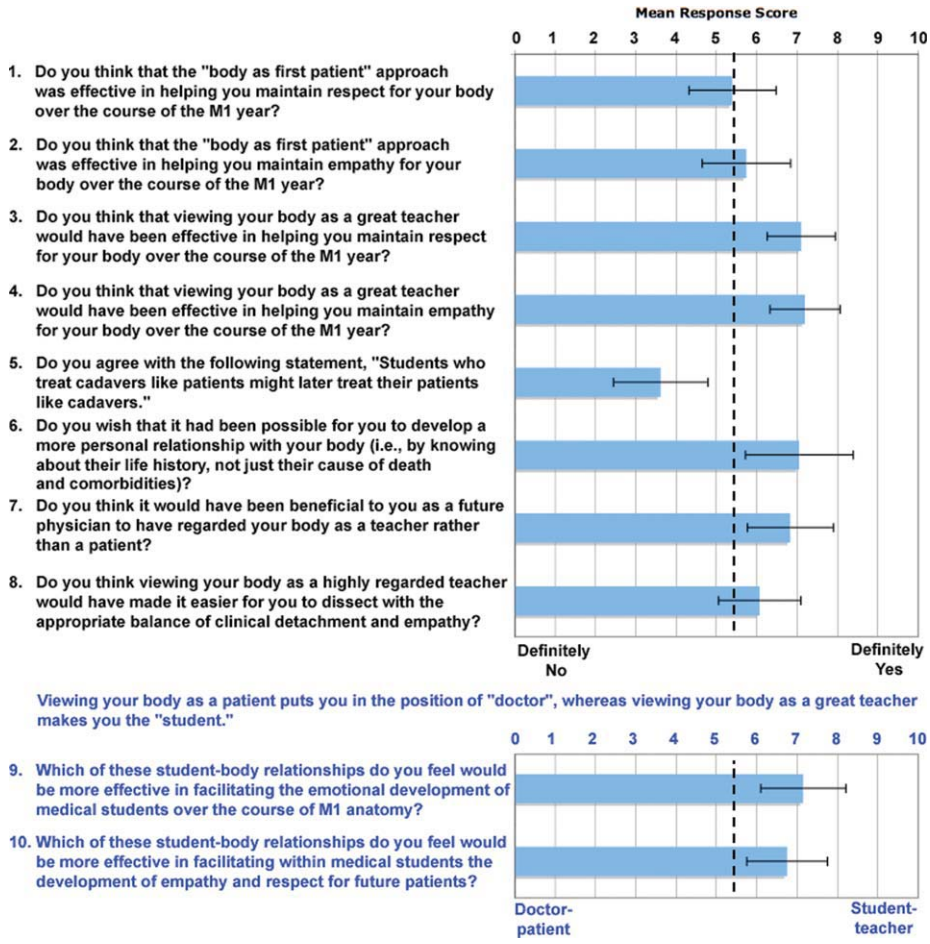

Figure 1.

Mean response scores to students' survey. The survey questions were scored on a ten-point Likert scale, and a value of 5.5 indicates a neutral respondent preference. A dashed line at 5.5 indicates the threshold for a mean response score that is biased to one end of the scale. Questions 1–8 were scored with 1 = definitely no and 10 = definitely yes. Questions 9 and 10 were scored with 1 = "doctor–patient is more effective" and 10 = "student–teacher is more effective."

body by asking students to view the body as a great teacher (Winkelmann and Güldner, 2004). Rather than asking students to enter into a relationship with their donor in the yet unknown role of doctor, Thai students learn to approach their donor as a student would a teacher, a relationship familiar to all students, Eastern and Western, since childhood. A similar approach with the donor as a "silent virtuous teachers" has been taken at the Tzu Chi College of Medicine in Taiwan (Lin et al., 2009). Although religious and cultural differences between Western and Eastern medical students make a Western adoption of the Thai model in its entirety implausible, the universal student experience of learning since childhood to respect and trust at least some of their teachers makes the Thai approach to donors an accessible concept to Western students.

Study Limitations

An explanation of the concept of the "donor as teacher" was included in the survey, as it is unfamiliar to many students. This approach may have biased the students' answers, as one of them comments: "I think it might have been more useful to not have a[n]emotionally loaded passage to read before taking the survey. It made it difficult for me to answer these questions without bias that I had formed in the previous minutes." The risk of a bias was accepted in this case, because the concept needed to be introduced. It was also accepted because of the qualitative nature of the study. Even given the risk of a bias toward the "donor as teacher" model, the results and especially the students' comments give a valuable insight into their attitude. The same respondent quoted above adds, "I think that, in medicine, it is important for us to view the cadavers as both our first patient and great teachers. [...] It would be good to have this idea and model that the dissection experience can and should take both roles." Another possible bias exists in the likelihood of students' inclination toward a new paradigm simply, because it is new, and not because they think, it was more applicable to their situation. However, having such a large majority (84%) of students express a preference for the "donor-as-teacher" model suggests that such a bias is unlikely responsible for the overall trend in the data.

Body as First Patient or Teacher?

Though the students surveyed understood the purpose of the "body as first patient" approach, and so tolerated it, they did not embrace it as an effective method of relating to the donor. This is clear in the responses to Questions 1–4, which showed ambiguity toward the effectiveness of the "body as first patient" approach in helping students maintain respect and empathy for the donor, but a strong bias that a "body as teacher" approach would effectively engender these feelings. Interestingly, a direct comparison of these two student–donor relationships (Questions 9 and 10) showed that students believed the "body as teacher" approach would be more effective in facilitating both the emotional development of medical students and their development of respect and empathy for future patients. These results would support a proposal to modify current approaches to the human body especially given the fact that 22 of the 42 students who left comments at the end of the survey wrote that they saw the body as a teacher rather than a patient. Students already assume that donors sacrifice their bodies for the sake of educating medical students. In the students' eyes, this sacrifice makes donors much more similar to teachers-professionals who dedicate their lives to educating others, than it does to patients. One student wrote, "Our patients don't come to us to offer themselves as a gift to learn from. They come to us for cure, care, or healing. A teacher, however, like a doctor, is dedicated to service—to their students, to their own teachers, to society. What could be more appropriate?" Another student noted discomfort associated with approaching the donor as a patient "because at the time of dissection, we do not really have anything to offer them with respect to the patient–doctor relationship." The physical act of dissection is yet another conflicting experience for students viewing the body as a patient. One student wrote, "There was too much disconnect between what we were doing to the bodies and what I hope to do for patients for me to ever really buy into the 'first patient' mentality in the first place." The fact that a majority of survey respondents stated they would prefer to view the donor as a teacher rather than their first patient (Question 11) suggests that the "body as first patient" approach is in some way failing to meet students' needs during the dissection course. As one student wrote, "I think the whole [idea of treating] your body as your 'first patient' is a very forced and contrived notion that is just awkward." Another student points out "[medical students] are not [yet] healers and to act as such seems to me an arrogance that we should better avoid." Although students tended to appreciate the purpose of approaching donors as patients, many felt the relationship it creates between them and the donor was very strained to take seriously.

Potential Problems of ''Body as First Patient'' Approach

Since the mid-20th century, the notion of an appropriate doctor–patient relationship has developed from a paternalistic approach in which the doctor autonomously makes decisions for the patient, to an equal partnership in which the doctor works with patients to serve their health care needs. If a doctor–patient relationship is imposed on students and donors, it is possible that students, autonomous to act on the silent donors as they wish but unable to provide any service in return, may more readily assume a paternalistic framework when interacting with their "first patient." As one student commented at the end of the survey, "I think many of my colleagues put themselves in the 'doctor' role and thus saw themselves as in a position of superiority to the cadaver." Furthermore, some students may feel that being asked to "play doctor" in their first weeks of medical school is demeaning, as expressed by this statement: "To make it [the dissection experience] into a doctor patient relationship cheapens the experience as it tries to create an imaginary situation." Power is asymmetrically distributed in a traditional "donor as patient" view. The power belongs to the doctor–student, who is charged with making executive decisions for the donor's body. However, viewing a donor as a teacher places the student in a subservient position to the donor, and serves to reinforce an ethic of humility that students may take forward into their careers. Thus, not only would a "donor as teacher" paradigm encourage empathy and respect for donors and future patients, but it would also help foster certain desirable personality traits in future physicians.

Directions of Future Research

The strongest and perhaps most surprising result from the survey was that students very much desire a closer personal relationship with their donors (Question 6). The results support those of Coulehan et al. (1995), who showed that their medical students were curious about the personal history of their donor and needed a student–donor relationship. It can be hypothesized that students' desire to develop a closer student–donor relationship likely stems from their need to view themselves as humane and caring human beings during the course, and knowing the donor personally might facilitate the students' balancing of empathy and clinical detachment. Weeks et al. (1995) suggest that supplying as much personal and medical history of donors as possible to interested students would reinforce respect and compassion in students for donors, citing their own experience and that of others (Penney, 1985; Wear, 1989; Druce and Johnson, 1994; Wagoner and Romero-O'Connell, 2009). While the anonymization of donors is still standard in most Western medical schools, there are examples for a different approach that takes the students' wish for a closer relationship with the donor into account (e.g., Weeks et al., 1995; Talarico and Prather, 2007; Quilligan, 2010; Canby and Bush, 2010). In a video project entitled "Donated to Science" at the University of Otago, New Zealand (Trotman, 2009), interviews with donors and their families were recorded and later shown to medical students who had dissected these donors. The students were very much affected by learning more about the donors and felt their relationship to them changes through the interviews (Trotman, 2009). Furthermore, the donors who agreed to being interviewed seemed to benefit greatly from the opportunity to portray themselves to the students who would be dissecting them. It seems likely that encouraging a closer relationship between student and donor might benefit the donor as much as the student, as it could give the donor the opportunity to share with the student their reasons for donating and the assurance that they will be respected as a person by the student dissecting them. A study looking into the attitudes of donors and their families concerning anonymization and whether they would want their personal life history to be known by medical students can inform future decisions on the best way to conduct medical school anatomical dissection courses. At the same time, it will be important to

explore a larger number of students' attitudes toward a closer relationship to the donor, as some students might feel uncomfortable with this concept.

CONCLUSIONS

The "donor as first patient" framework for dissection is not necessarily correct but rather incomplete and might need to be modified to include the "patient as teacher" concept. A donor is the first body upon which students lay their hands, an act that certainly harkens strongly to a doctor–patient relationship. Nevertheless, the doctor–patient relationship is novel to medical students who have spent most of their lives in an educational system that instead stresses teacher–student relationships. The complex nature of the new doctor–patient relationship should be learned gradually and with proper guidance. It should not be left for newly inducted medical students to figure out for themselves with a donor, especially since the analogy between a donor and a patient falls short. As one student commented, "we did not do our [donor] any services or even attempt to do so. We did not have any skills to offer in the first place. It makes sense only in that it is a respectful relationship."

This study shows that not all students see the "donor as first patient" concept as a supportive approach to the emotional complexities of anatomical dissection. Many believe that the "donor as teacher" concept might be more helpful. An ideal model for anatomy programs to use would be to introduce the donor first as a teacher and, as the dissection course progresses, transition to encouraging students to view the donor as a patient. As students gain more clinical knowledge, the doctor–patient model becomes more relevant and relatable. If students lack experience with the doctor–patient relationship and are asked, without proper guidance, to treat a body as a patient, there is no standard upon which to base their actions or attitudes. It is a new relationship, and one that is far better understood after months of medical training and contact with seasoned clinicians, as opposed to the first weeks of medical education. An unguided approach to a "donor as patient" relationship may lead to an improper perception of the doctor–patient relationship and create an environment in which disrespect toward the donor may occur. The proposed "teacher to patient" transition allows students to first establish a familiar relationship with their donor–teacher, thereby cultivating an ethic of empathy, humility, and respect, and later carry those values forward in relationships with their donor–patient and future patients.

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ACKNOWLEDGMENTS

The authors thank Kelli Sullivan and Andreas Winkelmann for helpful discussions.

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APPENDIX

Primer with explanations about Thailand's approach to dissection included in the student's survey.

Thailand's Approach to Dissection—A Model We Should Emulate?

Body dissection in the M1 year is an experience that is both frightening and fascinating for many students. The ambiguous nature of the body, its possession of both personal and material qualities, is often difficult for us to resolve as we begin dissection. At first, we are held back by our empathy for the body, only to find ourselves later so clinically detached that sawing off a limb hardly gives us pause. Many Western medical schools, including our own, attempt to help students deal with this ambiguity by asking students to view their bodies as

their first patients. This is meant to encourage students to develop a close relationship with the donor, which may in turn encourage empathy and respect for the body, even after students have learned to clinically detach themselves during dissection. It is ultimately hoped that helping students maintain respect and empathy for the donor will facilitate their development of these feelings for future patients.

Some might argue, however, that students who treat cadavers like patients might later treat their patients like cadavers. Medical schools in Thailand take a novel approach to dissection that avoids this potential dilemma. Rather than have students view their bodies as patients, students respect their bodies as "ajarn yai" or "great teachers." This highly regarded status is formally bestowed on donors in a Buddhist ceremony, which takes place annually in Thai schools. Rather than helping students emotionally cope with dissection, students are encouraged by this approach to develop a personal relationship with their body donor based on the same gratitude and respect they have learned to afford teachers since they were children. Students may greet their bodies with a bow, sometimes they bring them flowers or pray for them at the temple. The real names of the bodies are written on the dissection tables, along with their age and cause of death. After the dissection course is over, students carry the bodies of their great teachers in large procession led by monks to a crematorium. Booklets are distributed at this ceremony that contains donor pictures, their address, personal history, and words of gratitude from their students. Here is an example of what one student wrote, "I would like you to know that to me and many others you are a hero. Your sacrifice is silent, most people do not know about it. But I promise, I will never forget you. You have taught me everything. There is to be learnt both in the book and in the facts of life. I will remember you as my great teacher forever."

The Thailand approach to dissection is different from our own in that it helps students create a more personal relationship with their body donor. Rather than placing the student in the foreign, perhaps intimidating role of "doctor" to the donor patient, the Thai approach places the medical student in the already familiar role of "student." Some think that the Thai approach is better at helping students deal with the ethical difficulties of human dissection, and so improve students' ability to balance both detachment and empathy in the care of patients. We would like to know what you think about this approach to body dissection. Please give us your insight by filling out the survey.