

Surgical Education

# Moral angst for surgical residents: a qualitative study

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**KEYWORDS:**

Surgical education;  
Ethics;  
Moral angst;  
Moral distress

**Abstract**

**BACKGROUND:** The ethical dilemmas that residents experience throughout their training have not been explored qualitatively from surgical residents' perspectives.

**METHODS:** Grounded theory methodology was used. All University of Toronto surgical, otolaryngology, and obstetrics and gynecology residents were invited to participate. Twenty-eight face-to-face interviews were conducted. Interviews were transcribed and analyzed by 3 reviewers.

**RESULTS:** Five encompassing themes emerged: (1) residents prefer operating with another resident while the staff watches; (2) residents felt that patients were rarely well informed about their role; (3) residents develop good relationships with patients; (4) residents felt ethically obliged to disclose intraoperative errors; and (5) residents experience ethical distress in certain teaching circumstances.

**CONCLUSIONS:** Residents encounter ethical dilemmas leading to moral angst during their surgical training and need to feel safe to discuss these openly. Staff and residents should work together to establish optimal communication and teaching situations.

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The resident–patient relationship is immensely important to the dynamics of teaching hospitals. Although staff physicians are responsible for the patients' care overall, it is the residents who primarily care for patients. Patients often see the residents more than they see their staff surgeon. Furthermore, it is the residents who are called first at all hours of the day and night to care for emergencies. If the case is beyond their level of expertise they call the staff physician. This is the structure of care on the wards, designed to give residents autonomy under supervision such that they can evolve into capable independent physicians.

In the surgical world, this dynamic extends into the operating room. To forge skilled surgeons, residents must have hands-on experience. Consequently, it is common practice for surgeons to allow residents to perform portions

of surgical cases depending on their level of training. Although this system is designed to forge competent surgeons, it may also place trainees in situations of stress and perhaps even moral distress.

Other areas of medicine such as nursing are replete with studies examining the level of comfort and decision-making skills of trainees versus experienced nurses.<sup>1–5</sup> Such studies have confirmed that trainees, due to their lack of experience, report more moral angst in difficult situations and they rely on didactic teachings rather than experiential judgment in moral decision-making.

In other nonmedical professions, such as firefighting, law enforcement, and commercial piloting, graded responsibility also exists.<sup>6</sup> In all of these fields, trainees are exposed to distressing situations in a controlled environment with supervision before exposure to real-life situations alone. Despite the controlled environments, such trainees may still experience trepidation and hesitation in ethically distressing situations.<sup>7</sup>

Such ethical matters have not been explored in the surgical literature, especially not from the perspective of the trainees themselves. The purpose of this study was to explore

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ethical concerns and distress that surgical residents may encounter as a result of their being “on-the-job trainees.”

## Methods

### Design

This was a qualitative study using grounded theory methodology to explore ethical issues with surgery residents. An e-mail was sent to all University of Toronto surgery, otolaryngology, and obstetrics and gynecology residents by the office of their respective departments. Residents responded directly and privately to the interviewer (A.G.) if they desired to participate.

### Setting, participants, and sample size

Potential participants were all surgery, otolaryngology, or obstetrics and gynecology residents at the University of Toronto (approximately 300). We intended to complete approximately 30 interviews as this is usually well beyond the number where “saturation” is reached in qualitative studies. Saturation is the point at which information begins to be repetitive with each additional subject.<sup>8</sup>

### Data collection

Face-to-face interviews were conducted with residents who responded to the e-mail requesting their participation in the study. Interviews were based on a study guide (Figure 1). Themes not outlined on the guide were explored when

<p>Preamble: Thank you for agreeing to participate in this study. The purpose of this study is to determine how the resident-patient relationship is impacted by the patients' discovery that the residents have been involved in their operations. A number of open-ended questions will be asked around this topic. Your privacy will always be respected. Please feel free to answer the questions in any way you please.</p> <ol style="list-style-type: none"> <li>1. How often do you operate with the staff surgeon?</li> <li>2. How often do you operate with another resident and the staff surgeon is scrubbed and supervising?</li> <li>3. How often is the staff surgeon unscrubbed and supervising while you and another resident operate?</li> <li>4. How often does the staff surgeon leave the room while you and another resident operate?</li> <li>5. Under what conditions does the staff surgeon leave the room while you operate and when does s/he return (ie at what part of the operation does the staff surgeon leave and return)?</li> <li>6. How often do you introduce yourself to the patient prior to operating on her/him?</li> <li>7. How often do you meet a patient for the first time post-operatively?</li> <li>8. How often do you feel that the patient has been informed of your role in their care prior to you meeting them?</li> <li>9. How often do you feel that the patient is aware that you operated on them?</li> <li>10. How do patients react when they meet you? (ie. Are they happy, upset, inquisitive, or suspicious?, do they ask many questions about how you will be involved in their operation?)</li> <li>11. If you meet the patients pre-operatively, what do you tell patients when they directly ask you whether you will do their operation?</li> <li>12. If you only meet the patient post-operatively, what do you tell patients when they ask if you 'did' their operation? - do you tell them the explicit details of their operation including where the staff surgeon was the entire time?</li> <li>13. How do unknowing patients react to finding out that you were involved in their operation?</li> <li>14. Do patients ever request to have the staff surgeon because they do not feel that you are their 'real' doctor? If so, how do you handle this situation?</li> <li>15. How would you describe your relationship with the patients under your care?</li> <li>16. Do you feel that the resident-patient relationship changes when patients find out the residents have operated on them without their knowledge? - how does it change?</li> <li>17. With the increased media dramatization of residents operating on patients in the absence of staff surgeons, do you find that patients treat you differently?</li> <li>18. Of the following scenarios which do you feel provides you with the best educational experience and why? i. assisting the staff surgeon during a case. ii. Doing the case with another resident while the staff surgeon looks on unscrubbed? iii. Doing the case with another resident while the staff surgeon is not in the operating room?</li> <li>19. If you made a consequential error while the staff surgeon was absent from the operating room and the patient was not aware of your presence, would you tell the patient after the operation? - Why or why not?</li> <li>20. Do you have any further comments regarding this study?</li> <li>21. Do you have any questions or concerns?</li> </ol> <p>Thank you for participating in this study. Your time is greatly appreciated.</p>
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**Figure 1** Structured interview guide used during the interviews with the residents.

residents brought them up. All interviews were audiotaped and transcribed. Demographic information was collected for each participant.

## Data analysis

All interview transcriptions were analyzed by 3 reviewers. Modified thematic analysis was conducted in which overarching themes were extracted from the interviews.

## Research ethics

The study was approved by the Research Ethics Board at University Health Network, and written informed consent was obtained from each participant. Participation was completely voluntary and did not impact the participants' residency in any way. To thank residents for taking time out of their busy schedules to participate, participants were enrolled in a draw for a single resident to receive \$2,000.00 to reimburse the costs of attending an academic conference.

## Results

### Participant information

Twenty-eight residents were interviewed from June 2008 to September 2008. The residents were from the departments of surgery, otolaryngology, and obstetrics and gynecology (Table 1).

### Thematic analysis

Analysis of the 28 interview transcripts yielded 5 themes. The themes are described below and are illustrated with verbatim quotes from the participants.

**Residents preferred the teaching scenario in which they operate with another resident while the staff looks on and guides them.** Residents experienced a variety of teaching scenarios, the most common being operating with the staff. However, they preferred operating with another resident while the staff surgeon observed them and gave guidance and advice.

*"I think that's the most educational experience . . . because you have at the same time the so called freedom of actually doing the technical part of the case but at the same time you're not overwhelmed by the fear that something might go wrong because the staff surgeon is not available somewhere."*

*"I enjoy operating and getting hands-on experience, but I still feel that I need the security of having a staff person present, to give advice and help out in times of trouble."*

**Table 1** Demographics data of interviewed residents

Age (y)
Median = 29
Range = 25–43
Sex
Male = 18
Female = 10
PGY
One = 1
Two = 8
Three = 11
Four = 4
Five = 2
Six = 2
Speciality
Neurosurgery = 6
Plastics = 4
General Surgery = 6
Orthopedics = 2
Cardiac = 3
Urology = 2
Otolaryngology = 2
Obstetrics & Gynecology = 3

PGY indicates postgraduate year.

Residents also reported being left alone with another resident to operate. This occurred at the opening and closing of the case, and when the staff surgeon had sufficient knowledge of and confidence in the operating residents.

**Residents felt that patients were rarely well informed about their role.** Most residents felt that there was a lack of awareness in the patient population regarding the exact role of residents in patient care. They felt that patients were aware that there were other people on the surgical team but that they did not understand the extent of resident involvement in their care.

*"I think it's a problem of education in the public. I think most patients just assume you're a doctor. They see your badge. They see that you're a doctor and they kind of see you every morning. They know you're part of the team. They have some concept that you're below in a level of priority. I don't think fully . . . they know we graduated med school, but they don't understand the different realms like what's a fellow, what's a junior resident, what's a senior resident."*

Some residents noted that this lack of knowledge of detail was the natural consequence of elective patients dealing most with the staff surgeon until the day of their operation when residents are present.

*"They automatically assume the relationship they've made with the staff surgeon, who's talked to them about the operation, explained it to them, obtained their consent is the relationship that he or she is doing the operation. So it doesn't occur to them that the resident will be doing a significant part of the case"*

Some residents did point out that there is a difference in the patients' knowledge of residents between elective and emergency patients. For the most part, residents rarely met elective patients they were operating on in the clinic, but they generally met almost all emergency patients as they were the ones called to the emergency room for the consult. Therefore, for emergency patients, residents were generally the ones who explained the operation and obtained consent.

#### **Residents develop good relationships with patients.**

Most residents indicated that they made an effort to meet patients preoperatively, regardless of whether or not the staff surgeon expected them to do so. They generally introduce themselves and explain a little but about their position.

*"I always mention that I will be assisting Dr. X in the surgery . . . I would say 'I'm a senior resident on Dr. X's team and I will be assisting him during the operation.'"*

Despite their efforts many residents admitted that they often do not get to meet elective patients outside of the operating room. As an integral part of their training, surgery residents are routinely scheduled to the staff's outpatient clinics but they would only meet a small minority of patients they subsequently operate on.

*"So for elective cases, patients would come in and they've been seen in clinic . . . we often times don't have a chance to meet them before we actually end up doing the operation. So I'd say 90% of the time for elective cases we do not meet the patients before. But for patients we admit, that come through the emergency service, invariably we obviously will meet the patient and actually get the consent ourselves."*

Despite this delay in meeting elective patients, most residents reported that patients generally are very accepting once they find out that residents were involved in their operation.

*"Most people are receptive and understanding that at a teaching hospital residents are there . . . to operate as well. I think often, outcome has a lot to do with people's reactions. If there's a good outcome and everything goes well, then patients are quite happy. But if there's a complication, then they're much more interested to know who actually did that part of the case at that moment of time."*

Finally, most residents thought that they had good working relationships with the patients under their care. Many felt that this was a direct result of the amount of time during the day that the patients saw them.

*"I think the relationship with the patients under my care is excellent. Often patients will see me and the other resident doctors being there. As their primary surgeon, they realize that the staff person is the one who is ultimately responsible, but because we're there in the operation, we take part in the preoperative course as well as postoperative management,*

*they often treat us as if we were their doctor, and we have good relationships with them."*

#### **Residents felt ethically obliged to disclose intraoperative errors.**

All residents interviewed felt that any consequential errors should be reported; however, they were divided on how to go about this. Approximately half of the residents felt that the error should be reported directly to the patient either by themselves or the staff surgeon.

*"Yes, I would tell the patient. In fact this happened to me where a complication arose . . . and I saw the patient on the postoperative day as I was taking care of them and he explicitly asked me who was holding the instrument when the complication occurred, and I told him straight out that I was because sooner or later the information may come out and I think that truth telling is an important part of medicine."*

The other half stated that they would inform the staff surgeon about the complication but would then leave it up to the staff to decide whether or not to inform the patient since the staff surgeon is ultimately responsible.

*"I wouldn't tell the patient without letting the staff know. I think it's the staff's responsibility to say there was a problem during the surgery, this happened and this happened. I would certainly inform the staff of what I've done and then I feel it's the staff's responsibility to say, 'Mr. Smith, we're sorry but such and such happened,' I wouldn't go behind the staff's knowledge and say I did this."*

#### **Residents experience ethical distress in certain teaching circumstances.**

Most residents indicated that at some point during their training to date they have been placed in situations that caused them ethical distress. Most of these situations involved the residents being given more responsibility and freedom than they felt they were able to comfortably handle at that point in their training, like being left to do parts of procedures that they felt were beyond their skill level. Most residents stated that in such situations they simply called for help.

*"Occasionally it happens that the staff surgeon overestimates my comfort level or ability. When that happens, I don't proceed and let the staff surgeon know. I never operate beyond my comfort level."*

A few residents felt that such ethical dilemmas were distressing but beneficial to their education.

*"Things are challenging but you have to be taught like that. You have to be left alone to finish off and figure out something, but not something that's going to have any morbid consequences. Some staff people do that, but very few."*

A minority of residents felt uncomfortable in the situation of disagreeing with the staff surgeon's decision. This element figured even more strongly in residents' discomfort

when they imagined their own family member as the patient.

*"I mean there are times when you're operating with staff and you disagree with their management or you disagree with their approach, and you think they are doing something not in the patient's best interest or you know, and it's uncomfortable to think that this is happening to this patient and there's not much you can do about it because it's the staff's patient and the staff is going to do what they want."*

Most residents who noted that they do at times find themselves thinking that they would not want their family members to be in such a situation, do not attribute this sentiment to the fact that a resident is operating.

## Comments

The present study explored surgical residents' perspectives on their training, their relationships with their patients, and the ethical dilemmas that they face during their training. The study was inspired by 2 previous studies conducted by the authors on the subjects of the patients' level of knowledge about residents, and the staff surgeons' level of disclosure of residents' involvement to patients.<sup>9,10</sup> The authors felt it important to interview the residents themselves and explore their experiences in ethical situations encountered during their training.

This study is unique because (1) it employs open-ended interviews to explore ethical issues encountered by residents; (2) it involves residents from many surgical specialties in various years of their training and therefore captures a wide array of experiences; and (3) it examines the residents' perspectives themselves instead of the reflection of other professionals or patients on them or the outcomes of their involvement.

An important finding of this study is the discussion of residents' preferred teaching model. Some surgeons might be surprised to discover that most residents prefer to operate with another resident but like to have the staff surgeon in the operating room as a "safety net," in case clarification or guidance is required. Residents enjoy the relative freedom of making some decisions but enjoy the security and comfort as well as the teaching opportunities that the presence of the staff surgeon offers. This affirms an earlier study that concluded that a fruitful teaching environment in the operating room results only from the collaboration of the staff surgeon and the residents in creating a communicative instructional interaction.<sup>11</sup> This does not diminish the importance of the scenarios at the ends of the delegated responsibility spectrum: a resident operating with the staff scrubbed, and residents operating together unsupervised.

It is not surprising that residents felt that many patients were not well informed about the role of residents in their care. Previous studies have demonstrated that for the most part patients are relatively ignorant of the roles and quali-

fications of residents.<sup>9,12,13</sup> However, it is comforting to note that the residents felt that they cultivated good relationships with the patients under their care and that most of them made an effort to speak with the patients before operating on them. The latter point is one that many patients appreciate before undergoing an operation.<sup>9</sup>

Residents also had a strong sense of ethical obligation towards the patients under their care. Ethics is an important part of medical education and training. Sadly, it was lacking from medical education at one point but has now become integrated into medical school curricula. In terms of surgical training, many centers have adopted a case-based ethics teaching model that is validated.<sup>14</sup> Unfortunately, many surgical programs still lack a solid ethics curriculum as part of their regular training.<sup>15</sup> However, this does not seem to affect residents' sense of obligation especially towards error disclosure to patients. Most residents reported that patients should be informed about any errors that occurred during their operation. A study by White et al also found the same result; however, they uncovered that although most trainees would like to disclose medical errors to patients, most have not been formally taught how to do so properly.<sup>16</sup> This is a very important area of deficiency in residency programs that should be remedied.

In accordance with their strong sense of ethics, many residents admitted that they had been in teaching situations where they had felt ethically distressed or uncomfortable. This is not an uncommon occurrence in medical training. Some of the trainees confessed that their ethical distress was the result of disagreement with the staff surgeon about the surgical decision and/or approach/methods used on a particular patient. This is not a novel finding in medical education. One study, exploring exactly this issue of disagreement between the staff and trainee regarding treatment, concluded residents often do not express their views to the staff and hide their frustrations.<sup>17</sup> Another study, discovered that most residents were unaware of the ethics consultation services that were available at their institutions.<sup>18</sup> Knowledge of such resources could be useful to residents in navigating through uncomfortable and murky ethical situations that they may feel are beyond their capabilities and training. It could also ease the distress some residents felt when put in ethically stressful teaching situations.

## Limitations of the study

The study was conducted at one large university in Canada. The results may vary with different teaching centers that might have different policies or in different countries where the teaching requirements and/or models differ.

Also, despite the use of a semi-structured interview guide, important questions may have been missed or avenues not brought up and explored. The interesting issues uncovered in the course of the interviews were arguably not examined in as much depth as one would have liked.

Finally, since participation in the study was voluntary, it is possible that the residents who participated in the interviews represent a particularly vocal and expressive subsample of the residents at the teaching institution. It is impossible to know if the views of the nonresponders would be reflected in the results of this study so one must recognize the potential of a sampling error. This is a weakness of all qualitative (and indeed most quantitative) studies.

## Conclusions and recommendations

Surgeons and residents should work together and have open lines of communication to create the most effective teaching environment in the operating room. This open communication should be extended to all persons involved in the training program including program directors, to ensure an effective educational environment. Surgeons must be mindful to the skill level of their residents and residents should feel safe to speak up if they feel they are working beyond their competency.

Ethical teaching should be an integrated part of surgical residency both formally and practically. In particular, all residents should be taught how to properly disclose errors and what their obligations are in such a situation. Residents should be made aware of ethics consultation services available at their centers. Also, services should be readily available for residents to discuss any ethically distressing situations that they have experienced and help in dealing with these situations should be offered to all residents.

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