

A study how human cadavers become healthcare students' first patients

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Abstract

Introduction

This study concentrates on how a human cadaver becomes the students' first patient. In a cultural anthropological study, the behaviour of Medical, Dental, Physician Assistant and Radiation Therapy students was analysed as they worked with human cadavers in a Clinical Human Anatomy course. Many studies have investigated the merits of human cadaver dissection versus computer-generated anatomy regarding cost effectiveness and the value of the students' experiences. This study concentrates on how a human cadaver becomes the students' first patient.

Materials and methods

Methods to acquire data were by participant-observation and interviews spanning two years, encompassing more than 300 hours of lab time and representing 235 students.

Results

Results revealed that students experienced a three-stage process when exposed to a human cadaver: 1) dehumanization, 2) reanimation, and 3) humanization as first patient.

Students initially consider the cadaver an inanimate object; it ultimately becomes the students' first patient with whom they have strong attachments.

Conclusion

This study suggests that dissecting human cadavers has educational and tactile benefits and may play an important role in the early development of future healthcare providers' relationships with their patients. This study also suggests that anatomy programs with human cadavers should hold a funeral service for the cadavers to give students closure.

Introduction

Fascination with human anatomy has a longstanding history. In the 16th century universities began to offer specialized instruction in the areas of human cadaver dissection; during this time period anatomical dissection was mainly a science of inquiry¹ (Figure 1).

Now, however, human dissection is considered a necessary 'rite of passage' for students in healthcare professions. Previous studies on human dissection in healthcare education described this rite of passage as the primary site where students learn acceptable behaviours in regards to their emotions^{2,3,4,5}.

In these studies, students were generally described as becoming emotionally withdrawn, coping with their emotions by dehumanizing the cadavers and making jokes. Considering previous documentation of dehumanization in anatomy labs, the authors sought to bridge the gap between students calling cadavers "beef jerky" and students regarding their cadaver as their "first patient."

The objective of this study is to observe the behaviour of first year Medical, Dental, Physician Assistant and Radiation Therapy students to see

how a human cadaver becomes the student's first patient.

Materials and methods

This work conforms to the values laid down in the Declaration of Helsinki (1964). The protocol of this study has been approved by the relevant ethical committee related to our institution in which it was performed. All subjects gave full informed consent to participate in this study.

Research for this study was collected through participant-observation and personal interviews during a two-year period, encompassing more than 300 hours.

Students (235) were represented from Medical, Dental, Physician Assistant, Radiation Therapy, and Postgraduate programs. Research also included previous literature that explores the psychological impact and educational value of human dissection.

Results

Literature search revealed no obvious anthropological studies on the impact of human dissection in healthcare education. The participant-observation portion of this study revealed that students generally experienced a three-stage process during first year anatomy lab: 1) dehumanization, 2) reanimation, and 3) humanization of the cadaver as their first patient (Figure 2).

Discussion

In contemporary healthcare institutions, human cadaver dissection is common. In this study, the experiences of first year students in the anatomy lab were revealed to be an evolving process that didn't end with students dehumanizing cadavers, as previous research had suggested.

Though dehumanization is apparent in the lab, the student-cadaver relationship is not strictly objectifying. Instead, dehumanization was simply

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the first stage for the students during their initial emotional response to dissecting a human. During this stage students made jokes about the cadavers, compared them to different types of meat, and generally were unable to make comparisons between the anatomy of the cadavers and the anatomy of their own living bodies.

Emotional suppression was the most prevalent coping behaviour observed, and was prevalent especially in the first weeks of lab. By curbing feelings about the cadavers, the students were able to stall the realization that the cadaver was not only a learning tool, but also a human referent with a very real former life. Comparing various parts of the cadaver to different types of meat is one example of this. One student explained to the others early on in the class that she had stopped eating meat, especially pork, because “all I can think about is how much it looks like the body that we dismembered hours before.” Pointing to various parts of the cadaver before her, she explained, “See, this is like the pork you get in a Mexican restaurant, and this is like shredded turkey... my cat would like that...and this looks like beef jerky because it is so dark.”

Students also dehumanized the cadavers in the first weeks of the lab by refusing to compare the bodies of the cadavers to their own bodies. However, responses such as dehumanization and emotional suppression were eventually replaced with behaviour that rehumanized and reanimated the cadavers. As students became more comfortable with dissection, they began to “reanimate” the bodies, moving the cadavers’ arms and legs to see how their own limbs worked. Cadavers with physical signs of their former lives – such as tattoos or nail polish – became favourites in the lab.

Students began to re-humanize the cadavers, giving them names, creating personalities for their cadavers, and speculating about their lives and families. Names for cadavers were often based on the unique attributes of the cadaver, such as naming a cadaver “Harry” for the striking amount of hair on his body. Others



Figure 1: Early human dissection lab behavior was that of inquiry.



Figure 2: Using surgical operating greens provides more personalized environment.

were named for the imagined personalities that the physical presence of the cadavers evoked in the students – such as the name “The Professor” for a cadaver that looked particularly intelligent and studious. One student explained, “You have to name them. It’s like christening the body or something. And besides, when there is nobody else in here, you have

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to have someone to talk to. Then they have to have a name! It is just weird to know someone so well and not know their name." Cadavers weren't given names that objectified them; instead, the names the students came up with for the cadavers, as they got more comfortable with them were names that humanized and personalized the cadavers.

Those cadavers who stood out either for their outermost physical appearance or for their anomalous inner structures were avoided in the initial weeks of lab. It seems that the presence of individuality increased the humanity of the cadaver, which students were initially uncomfortable with. Finding unique physical characteristics, either in the form of outer physical features or in pathologies found on the interior, reinstated the identity of the cadaver as a person. The presence of tattoos, a pacemaker, or nail polish, for example, gave the students a sense of the cadaver's individual life. In the beginning students shrank away and were distressed at times, by finding these signs that the cadaver they were dissecting had been a living person with a unique personality.

As the students became more comfortable with the cadaver as a human entity, it was those with physical personality that became the darlings of the anatomy lab.

The embrace of personal attributes of the cadavers represents a shift in the students' response to dealing with the structural contradictions that cadavers elicit. Instead of ignoring the anomalous cadavers, students began to make a place for them to exist. Naming the cadavers and being fascinated with their individual physical presence was the first step in the realization of the cadavers as having a personality and individuality, instead of viewing them as dehumanized objects.

During the rehumanization stage, students found themselves comforting their cadavers during dissections. When flipping the cadavers over, their arms would move in ways that were familiar to students; on more than one occasion the students found

themselves sharing an accidental close embrace with a cadaver. Students described feeling that the cadaver held their hand as much as the student held the cadavers hand.

As time progressed, students made more and more comparisons between their cadavers and themselves. They would trace where anatomical structures were situated in themselves using their cadaver as a map, or by holding up an organ to their own body. They were orienting themselves in relation to the cadaver.

The language of anatomy views the body in terms of function, reducing the body from person to mechanism. In contrast, the students move back to viewing the cadavers as human referents by naming them and appreciating their individual attributes.

The combination of anatomical language and personalizing names signified the creation of a working relationship between the cadavers and the students. This relationship became one between individual student and individual cadaver, but it is also more universal. They began to see the relationship between themselves and other bodies, both dead and alive. As their first patients, the cadavers are only the beginning. The relationship between the students and cadavers will translate into future medical practice; the realization of this relationship is one of the first rites of passage in the anatomy lab.

This final stage culminated in a funeral service, in which the students could meet the families of the deceased, hear stories about their lives, and also express their gratitude for the dissection experience. These three stages revealed the shift between a healthcare student dehumanizing their cadaver in the initial weeks of lab, and looking back on the cadaver as their 'first patient.' This work could be further substantiated with continued participant-observation and interviews with students at varying healthcare institutions across different cultures and geographical areas.

Conclusion

This study suggests that dissecting human cadavers has educational and tactile benefits and may play an important role in the early development of future healthcare providers' relationships with their patients. This study also suggests that anatomy programs with human cadavers should hold a funeral service for the cadavers to give students closure.

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