

## Anatomical Dissection: A Positive Experience for Venezuelan First Year Medical Students

Dissección Anatómica: una Positiva Experiencia para  
Alumnos Venezolanos de Primer Año de Medicina

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**SUMMARY:** An anonymous survey was handed out to 616 first year medical students of the José María Vargas School of Medicine of the Central University of Venezuela during the six academic years from 2002 and 2008, so that they answer it voluntarily after a cadaver dissection session, after the first unit of the practice syllabus of Gross Anatomy I had completed. The results of these surveys delivered to first year medical students report a positive response to their initial experience with a cadaver in the anatomical dissection room. In fact, the students described this initial experience as positive in a 52.22 %, while 34.25 % referred to it as very positive, 7.14 % as stressing and only a 1.13 % rated it as traumatic. In the case of only 13.63 % of these students the anatomical dissection room was the most stressing aspect of the anatomy syllabus.

**KEY WORDS:** Anatomical dissection; Initial experience in the anatomical dissection room; Human anatomy; Cadaver.

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### INTRODUCTION

Human anatomy is a science that has its origin in pre-historic times. It is a basic pillar within the vast and complex field of medicine. The word anatomy is derived from Greek term *anatomē* that means dissection.

Despite the major problems, limitations and obstacles that the different social and religious beliefs have implied and imposed during many centuries, as time went by there was growing acknowledgement of the fact that a good medical or surgical practice could only be possible based on an adequate and very exact knowledge of the human anatomy. The latter was derived, in turn, from learning and teaching human anatomical dissection. (Montemayor, 2006; Elizondo – Omaña *et al.*, 2005).

Despite the syllabus changes that were made during the past few years in the schools of medicine throughout the world and of the probable changes that might be made in the near future in the syllabus for medical studies which include the decrease of hours of theory and anatomical dissection, the use of prosection, the implementation of a

problem - based teaching technique, as well as the use of digital resources via the Internet, the observation and manipulation of cadavers in the dissection room are still key methods that efficiently contribute to the teaching and learning process related to the human anatomy. (Tschernig *et al.*, 2000; Babinski *et al.*, 2003)

Gross Anatomy is a first year subject in the J. M. Vargas Medical School of the Central University of Venezuela. As part of its syllabus, cadaver dissection practices start during the first week of the academic year with a simple empiric verbal introduction offered by the professors in charge of this course. They first address the respect these cadavers deserve from the group of students when they use them for studying the human anatomy. Likewise the aspects of death and dying are also addressed, though in general terms.

Working with cadavers for dissection or examination purposes is a potentially stressing situation that may have possible consequences and effects that the professors of the

Gross Anatomy Chair of the J. M. Vargas Medical School of the Central University of Venezuela have not documented. (Arráez-Aybar *et al.*, 2004)

By assessing some data of interest in this respect, we might be helping to prepare the first year medical students for their experience in the anatomical dissection room.

How do we prepare first year medical students to cope with their first experience in the anatomical dissection room?

These aspects have been hardly addressed and they have not been a topic of research in Venezuela. Indeed, there are no bibliographic references in Venezuela on this topic. This was the reason that made us attempt this research project. (Nnodim, 1996; Abu – Hijleh, *et al.*, 1997; Dickinson *et al.*, 1997; Dinsmore *et al.*, 2001; Bataineh *et al.*, 2006; Arráez-Aybar *et al.*, 2007)

The purpose of this survey is that of researching on certain significant aspects that are related to the following issues: death, dying and psychological needs and physical reactions that first year medical students may have during their experience when they are faced with a cadaver.

## SUBJECT AND METHOD

The first year medical students of the J. M. Vargas Medical School of the Central University of Venezuela have an average age ranging between 17 and 18 years. For them, this would probably be their first direct near contact with cadavers, as also it would probably be one of the first occasions when they have to deal with issues as death and dying.

An anonymous survey was handed out to first year medical students of the José María Vargas School of Medicine of the Central University of Venezuela during the following six academic years: 2002 - 2003, 2003 - 2004, 2004 - 2005, 2005 - 2006, 2006 - 2007 and 2007-2008. According to the study design, the survey should be answered voluntarily after a cadaver anatomical dissection practice, after having completed the first unit of the practice syllabus of Gross Anatomy I about upper limb, which approximately takes place between the first and the second month of the first year of Medical School.

The written informed consent of all the participants was obtained prior to their participation.

An average of 110 surveys was delivered to an equal

number of students per year, for a grand total of 616 students surveyed. This survey was made up of a set of seven close – ended questions that had to be answered during a 10 to 15 minute session. The first four questions had to be answered with a Yes or a No, while the last three ones were multiple choice and simple selection questions.

## RESULTS

616 first year medical students of the J. M. Vargas Medical School of the Central University of Venezuela gave their voluntary answers to an anonymous survey after a cadaver dissection practice, once the first month of the practice component unit I of the Gross Anatomy I syllabus about upper limb had been completed. The survey was repeated during six years, in the case of the following academic years: 2002 - 2003, 2003 - 2004, 2004 - 2005, 2005 - 2006, 2006 - 2007 and 2007 - 2008.

There were not founded differences in results for each academic year.

Of out the total of 616 first year medical students, 391 were females (63.47%) and 225 were males (36.52%). No differences in results were not founded between females and males,

As related to question number 1: Do I wish to have received some sort of initial preparation prior to my initial experience with a cadaver in the anatomical dissection room?

63.63% which accounted for 392 of the first year medical students without any significant differences as to gender who took the survey answered: No.

As related to question number 2: Do you wish to have had a wider discussion with the professors of the Anatomy Chair regarding your experiences after your first contact with a cadaver in the anatomical dissection room?

400 students -accounting for a 64.93 % of the survey sample answered: No.

As related to question number 3: Have you had any previous contact with a corpse or cadaver, prior to your initial contact with a cadaver in the anatomical dissection room?

59.41 % of those who answered the survey which accounted for a total of 366 students answered: No.

As related to question number 4: Do you wish to talk about death and issues related to death with the professors of the Anatomy Chair as part of your initial cadaver dissection sessions in the anatomical dissection room?

343 students which accounted for a 55.68 % of the study sample answered: No.

As related to question number 5: Who you would have wished to talk with about death and the issues related to death as part of your initial experience in dealing with cadavers in the anatomical dissection room?

295 students accounting for a 52.22 % of the survey sample answered they would have wished to talk about death and death related issues with a professor of the Anatomy Chair. In the case of other 80 students a 12.98 % of the survey sample- they mentioned they would have liked to talk about this issue with a relative. Other 62 students 10.06 % of the survey sample would have wished to talk about this topic with another student, while 4.70 % of the study sample 29 students would have wished to talk about these issues with a priest, a rabbi or a pastor (Notzer *et al.*, 2006).

In turn 4.22 % 26 students would have wished to talk about this topic with an anatomy assistant and 6.33 % 39 students would have preferred to address with another non specified person.

As related to question number 6: How would you describe your initial contacts with cadavers in the anatomical dissection room? (Fig. 1).

334 students accounting for a 52.22 % of the survey sample- described this initial contact as positive; 211 students accounting for a 34.25 % of the survey sample described it as very positive; 44 students accounting for 7.14 % of the survey sample described it as stressing, and only 7 students accounting for 1.13 % of the survey sample- described it as traumatic.

As related to question number 7: In your opinion, what is the most stressing aspect of the Anatomy Chair? In the case of this question they could choose more than one alternative answer.

In a non exclusive manner, 348 students accounting for a 56.49 % of the survey sample answered that the most stressing aspect of the Anatomy Chair was the academic burden; 347 students accounting for a 56.33 % of the survey sample responded that the most stressing factor were the

evaluations related to the Anatomy Syllabus; 84 students accounting for a 13.63 % of the survey sample- mentioned that the anatomical dissection room was the most stressing element of the Anatomy Chair, and finally 73 students - accounting for a 11.85 % of the survey sample- answered that learning anatomy was the most stressing factor in the Anatomy Syllabus (Fig. 2).

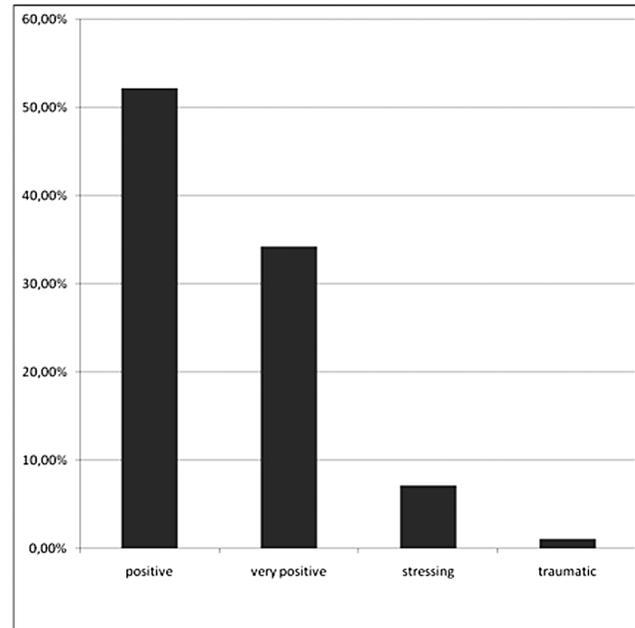


Fig. 1. As related to question number 6: How would you describe your initial contacts with cadavers in the anatomical dissection room?

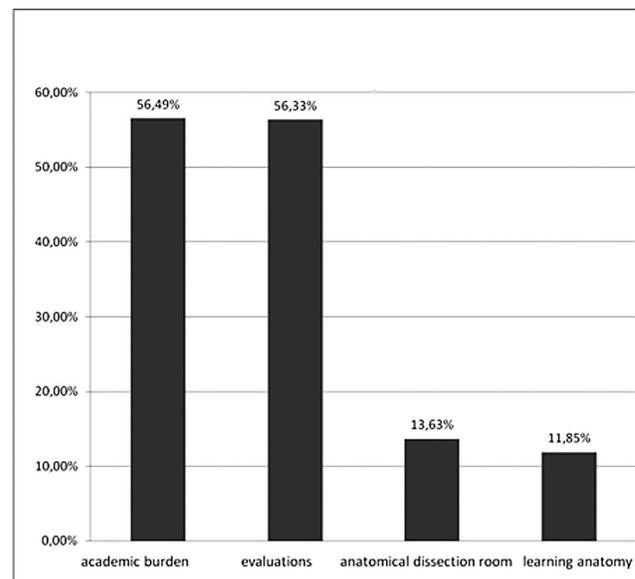


Fig. 2. As related to question number 7: In your opinion, what is the most stressing aspect of the Anatomy Chair?

## DISCUSSION

Despite the changes in the syllabus that have been taking place in the past few years and the probable changes that might be evidenced in the near future in the syllabus design of the Medical School, when addressing the study of the human anatomy the basic pillar in the wide and complex field of medical studies anatomical dissection is still a basic method that efficiently contributes to the teaching and learning process of the human anatomy.

Since pre-historic times, anatomic dissection has been and will continue to be a basic element for learning and teaching human anatomy, as the study of cadavers is indeed the basis for our knowledge of the human body. No doubt, it enables us to efficiently understand the anatomic shape, space and situation of a specific structure, as well as its relations and possible variations. In this way, we can achieve a wider understanding, retention and comprehension of the human anatomy.

The results of these surveys among first year medical students of the José María Vargas School of Medicine of the Central University of Venezuela evidence that they have had a positive experience in their initial contact with a cadaver in the anatomical dissection room. Nevertheless this survey was a preliminary research about these topics in Schools of Medicine in Venezuela, new researches about these topics will need to be done.

In fact, a high percentage of the students a 52.22 % described it as positive, while a 34.25 % described it as very positive, (Garvey *et al.*, 2001). In contrast, a 7.14 % described as stressing and merely a 1.13 % described as traumatic. (Snelling *et al.*, 2003)

There was also evidence that a 63.63 % of the students included in the survey sample did not wish to have received any type of initial preparation for this experience, while 64.93 % of students in the survey did not wish to have discussed more in length their experiences before their initial contact with a cadaver in the anatomical dissection room. This seems to point at the fact that during their initial contacts with a cadaver in the anatomical dissection room, this experience is a positive one for the first year medical students José María Vargas School of Medicine of the Central University of Venezuela.

Among the findings of this survey, it is worth mentioning that the factors of greatest concern for these students as related to the Anatomy Department are the academic burden in a 56.49 % as well as the evaluations in a 56.33 %. Only in the case of 13.63 % of these students, the anatomical dissection room was the most stressing aspect of the Anatomy Department.

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**ROMERO, R. R.** Disección anatómica: una positiva experiencia para alumnos Venezolanos de primer año de medicina. *Int. J. Morphol.*, 28(1):213-217, 2010.

**RESUMEN:** Una encuesta anónima fue distribuida entre 616 estudiantes de primer año de Medicina, de la Escuela de Medicina J.M. Vargas, de la Universidad Central de Venezuela, durante los seis años académicos comprendidos entre 2002 y 2008. Esta encuesta debía ser respondida de manera voluntaria, posterior a una práctica de disección de cadáveres, una vez transcurrida la primera unidad del temario práctico de Anatomía Normal I. Los resultados de esta encuesta, entre estudiantes del primer año de Medicina, indicaron que es positiva la respuesta a su encuentro inicial con un cadáver en la sala de disección anatómica. El 55,22% de los estudiantes calificaron este encuentro inicial como positivo; 34,25 % como muy positivo; 7,14 % estresante y, tan solo el 1,13% de los estudiantes lo calificó como traumático. Para el 13,63% de estos estudiantes la sala de disección anatómica constituía lo más estresante en la Cátedra de Anatomía.

**PALABRAS CLAVE:** Disección anatómica; Encuentro inicial en la sala de disección anatómica; Anatomía humana; Cadáver.

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