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Cutting Edge Education: "Uncovering Dental Students Attitudes towards Dissection Room Experiences"

Dr. S. SreeMadhumitha[1*], Dr. K. V. N. R. Pratap[2], Dr. T. Madhavipadma[3], Dr. Srujan Kumar[4], Dr. Surbhit Singh[5], Dr. Voleti. Bhavya Jhansi[6]

[1]Student, Department of Public Health Dentistry, Mamata Dental College, Khammam, India.
[2]Professor and HOD, Department of Public Health Dentistry, Mamata Dental College, Khammam, India.
[3]Professor, Department of Public Health Dentistry, Mamata Dental College, Khammam, India.
[4]Reader, Department of Public Health Dentistry, Mamata Dental College, Khammam, India.
[5]Senior Lecturer, Department of Public Health Dentistry, Mamata Dental College, Khammam, India.
[6]Student, Department of Public Health Dentistry, Mamata Dental College, Khammam, India.

Original Article

***Corresponding Author**: S. SreeMadhumitha**,** Department of Public Health Dentistry, Mamata Dental College, Khammam, India.
E-mail: madhumithasanki@gmail.com
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ABSTRACT

This study aimed to explore the attitudes and perceptions of undergraduate dental students towards their experiences in the dissection room. A mixed-methods approach was employed, combining survey responses from 213 dental students. The results revealed a significant positive correlation between hands-on experience and improved understanding of anatomical structures, as well as increased confidence in clinical skills. However, students also reported initial anxiety and discomfort, highlighting the need for supportive faculty and peers. The findings provide valuable insights into the complex emotions and learning processes involved in dissection room experiences, informing the development of more effective and student-centered anatomy education.

Aim: To investigate the attitude and perception of undergraduate dental students towards their experiences in the dissection room.

Objectives

To Assess the attitude and perception among undergraduate dental students experiences in the dissection room based on age.

To Assess the attitude and perception among undergraduate dental students experiences in the dissection room based on year of study.

Method: A cross-sectional survey was conducted among 213 dental students, comprising 86 males (40.4%) and 127 females (59.6%), including. The survey included 12 questions exploring awareness, perceptions, and attitudes towards dissection room experiences. Responses were analyzed based on gender, age, and year of study using chi-square tests to identify statistically significant differences.

Keywords: Anatomy, Dissecting Room, Stress, Cadaver Based Learning, Anatomy Knowledge.

Introduction

The teaching of gross anatomy has long relied on the dissection of human cadavers. In many countries, dissection is an integral part of the anatomy curriculum in dental schools. The study of the human body through dissection is widely accepted as a fundamental method of education in the medical and dental fields. However, in recent years, attention has been drawn to the potentially traumatic effects of dissection on some students and the impact these experiences may have on their future education and professional practice. Previous studies indicate that while working with cadavers can be distressing, it can also be rewarding. Several studies have reported various challenges students face in the dissection room, including revulsion from the sight and smell of cadavers, profanation of the body, violation of cultural taboos, feelings of dehumanization, and invasion of privacy. Over the decades, anatomists have explored the emotional and physiological reactions of dental students to cadaver dissection. This study aimed to investigate the reactions of first-year and second-year dental students.

There are two main ways to study human anatomy: looking closely and visualizing what you see. Because of this, practical sessions are very important. Anatomy is a visual science that focuses on structures. Dissecting cadavers helps students understand the subject better. The dissection room is where medical students take their first steps toward becoming doctors. Research in the U.S. has shown that about 5% of students experience symptoms related to Post-Traumatic Stress Disorder (PTSD). Another study by Penny found that some American students have strong reactions to dissection and should be well-prepared for it. Reports from Britain indicate that serious distress is uncommon, and most medical students view their first experience with cadaver dissection as a significant challenge. Studies in Ireland found that 80% of students felt little to no stress on their first visit to the dissection room. In contrast, a study of Arab students at Sultan Qaboos University in Oman found that very few felt scared before or during their first dissection classes.

Two primary techniques are used to study human anatomy: observation and visualization. As such, practical sessions are crucial for learning. Anatomy is fundamentally a visual science due to its structural nature, and anatomical dissection is a key step in understanding the subject. The precise dissection of cadavers and the examination of dissected specimens are essential methods for learning anatomy. Students in the anatomy room experience post-traumatic stress disorder (PTSD).

However, while dissection is widely regarded as an effective instructional tool, it also elicits a range of emotional and psychological responses from students. Research indicates that the experience of working with cadavers can be both distressing and rewarding, as students navigate feelings of repulsion, anxiety, and even ethical dilemmas surrounding the use of human remains. Such reactions can significantly impact their learning experience and subsequent professional practice.

Despite the recognized importance of this educational practice, studies examining students' attitudes and perceptions of the dissection room experience remain limited, This article seeks to explore the attitudes and perceptions of undergraduate students regarding their experiences in the dissection room, focusing on factors such as emotional responses, perceived educational value, and the influence of cultural beliefs. By investigating these dimensions, we aim to contribute to a deeper understanding of how dissection impacts students' learning and professional identity formation in medical and dental education.

Methodology

A) Study design and area: A cross-sectional study was carried out at the tertiary care teaching hospital khammam.

B) Study population: The health care students including those of first-year and second-year

dental students who responded to the offline paper print questionnaire survey.

C) Study Instrument: A self-administered questionnaire was designed based on knowledge attitude and awareness of the dissection room experiences had a total of 12 questions. Each participant has to fill in their demographic data like Name, age, and year of study. Participants have to select one option from the answers provided against questions and the questions were based on knowledge, attitude and awareness among dental students.

D) Pilot study: A pilot study was conducted on a group of students to assess the validity and reliability of the study.

E) Sampling method: The sampling method used is a convenience method.

F) Inclusion criteria: The students who were interested in the study and who were willing to participate.

G) Exclusion criteria: students who are not willing to participate are excluded.

H) Organizing the study: The study was designed in a paper-based version of the self-administered questionnaire of 1w questions focusing on knowledge, and awareness.

Includes the sections of demographic data: Name, Age, Sex and Year of study demographic information and asked to answer all questions by selecting one option from the provided answers.

I) Statistical analysis: Data from the filled questionnaire was conducted in a tabular form in an Excel worksheet and evaluated for analysis. The analysis was performed by SSPS version 29.

Results

A total of 213 students took part in this with females (59.6) and males (40.4). Age of the participants ranging from 18-25 years. In this study, females were more likely to demonstrate perception in dissection room experiences than males. Significantly second years showed greater familiarity with advanced applications than first-year students.

AGE					
	N	Minimum	Maximum	Mean	Std. Deviation
Age	213	18	25	21.89	1.035

Gender	Frequency	Percent
MALE	86	40.4
FEMALE	127	59.6
Total	213	100.0

Year of Study	Frequency	Percent
I BDS	103	48.3
II BDS	110	51.7
Total	213	100.0

Distribution and comparison of responses based on gender:

Item	Response	Males		Females		Chi-Square value	P value
		n	%	n	%		
Q1	1	50	36.4	87	63.5	7.315	**0.007***

	2	16	44.4	20	55.5		
	3	5	45.4	6	54.6		
	4	15	51.7	14	48.2		
Q2	1	8	32	17	68	2.750	0.432
	2	6	33.3	12	66.7		
	3	6	60	4	40		
	4	66	41.2	94	58.8		
Q3	1	57	40.7	83	59.3	1.920	0.589
	2	13	33.3	26	66.6		
	3	16	47.1	18	52.9		
Q4	1	80	42.1	110	57.8	0.697	0.874
	2	6	26.0	17	65.3		
Q5	1	56	12.5	97	87.5	2.930	0.402
	2	30	47.1	30	52.9		
Q6	1	15	51.7	14	48.2	3.720	**0.05***
	2	5	45.4	6	54.6		
	3	16	44.4	20	55.5		
	4	50	36.4	87	63.5		
Q7	1	74	40	111	60	1.489	0.475
	2	11	40.7	16	59.3		
	3	1	1.2	0	0		
Q8	1	8	33.3	16	66.7	3.980	0.409
	2	65	42.2	96	57.8		
	3	13	46.4	15	53.6		
Q9	1	50	36.4	87	63.5	0.671	0.413

	2	16	44.4	20	55.5		
	3	5	45.4	6	54.6		
	4	15	51.7	14	48.2		
Q10	1	5	25	15	75	7.241	0.065
	2	73	42.9	97	57.1		
	3	8	23.8	15	76.2		
Q11	1	36	33.3	87	66.7	2.655	0.448
	2	50	52.5	40	47.5		
Q12	1	2	18.2	9	81.8	6.418	0.093
	2	69	45.1	84	54.9		
	3	8	25.8	23	74.2		
	4	7	38.9	11	61.1		

P≤0.05 is statistically significant

Distribution and comparison of responses based on year of the study:

Item	Response	III BDS		IV BDS		Chi-Value	P-Value
		n	%	n	%		
Q1	1	63	46.3	73	53.6	3.998	0.135
	2	27	61.3	17	38.6		
	3	3	37.5	5	62.5		
	4	10	40	15	60		
Q2	1	6	24	10	40	28.554	**0.0001***
	2	33	52.3	30	47.6		
	3	2	20	1	10		
	4	62	38.8	69	43.1		
Q3	1	55	39.3	58	41.4	21.445	**0.002***

	2	36	47.3	40	52.6		
	3	12	35.3	12	35.3		
Q4	1	101	49.2	104	50.7	27.128	**0.0001***
	2	2	9.1	6	27.3		
Q5	1	97	48	105	52	12.714	**0.048***
	2	5	29.4	5	29.4		
Q6	1	66	34.7	77	40.5	2.257	0.323
	2	7	30.4	7	30.4		
	3	30	53.5	26	46.4		
Q7	1	64	34.6	74	40	2.712	0.607
	2	8	29.6	10	37		
	3	31	54.3	26	45.6		
Q8	1	9	37.5	10	41.7	34.979	**0.001***
	2	1	8.3	2	16.7		
	3	93	48.6	98	51.3		
Q9	1	70	36.1	80	41.2	14.651	**0.001***
	2	3	15.8	4	21.1		
	3	30	53.5	26	46.4		
	4	0	0	0	0		
Q10	1	7	35	7	35	12.306	0.055
	2	63	37.1	69	40.6		
	3	33	49.2	34	50.7		
Q11	1	100	48.3	107	51.6	33.408	**0.0001***
	2	3	13.6	3	13.6		
Q12	1	31	50.8	30	49.1	14.996	**0.020***

	2	59	38.6	63	41.2		
	3	8	25.8	13	41.9		
	4	5	27.8	4	22.2		

P≤0.05 is statistically significant

Discussion

The emotional landscape of students during their first dissection session reveals a complex interaction of excitement, curiosity, and anxiety. Females (63.5) are excited in their first dissection session while males (45.4) are neutral. However, the presence of anxiety, discomfort, and nausea highlights the psychological challenges that accompany this crucial educational experience. This duality of emotions underscores the need for preparatory support to help students navigate their feelings effectively. Moreover, a significant majority rated the educational value of dissection as high, indicating that despite initial fears, students recognize the importance of hands-on learning in commanding anatomical knowledge. This aligns with the harmony in medical and dental education that practical experience enhances retention and understanding of complex concepts. As students progress through their studies, their perceptions of dissection often evolve, with many reporting a positive shift in their feelings. This change may stem from increased familiarity and competence, as well as a deeper appreciation for the ethical considerations involved in working with human cadaver. Although most students felt that safety measures were adequate, challenges such as unpleasant odours and room temperature were noted, indicating areas for improvement in the learning environment. The emphasis on peer collaboration emerged as a significant factor in enhancing the learning experience, reinforcing the idea that shared engagement can mitigate emotional stress. Furthermore, the general agreement on the importance of treating cadavers with respect reflects a growing awareness of ethical responsibility among students, especially when coupled with the practice of taking an oath before dissections. Overall, these findings suggest that while dissection can evoke a range of emotions, it ultimately serves as a crucial component of medical education, shaping both knowledge and professional identity. By encouraging students to know the importance of dissection.

Conclusion

This article provides valuable insights into the attitudes and perceptions of undergraduate dental students regarding their experiences in the dissection room, highlighting the complex emotional landscape they navigate during this critical phase of their education. By understanding the diverse feelings—ranging from excitement to anxiety—associated with dissection, educators can better prepare first- and second-year students for the challenges they may encounter. Additionally, the findings emphasize the importance of ethical considerations, peer collaboration, and a supportive learning environment, which can enhance the educational experience and foster a deeper appreciation for the anatomical knowledge being acquired. Ultimately, this understanding not only aids in the personal development of students but also promotes a culture of respect and professionalism within the field of dental education.

References

1. Williams, A. D., Greenwald, E. E., Soricelli, R. L., & DePace, D. M. (2014). Medical students' reactions to anatomic dissection and the phenomenon of cadaver naming. Anatomical Sciences Education, 7(3), 169-180. https://doi.org/10.1002/ase.1391

2. Dene Hancock MW. Impact of cadaver dissection on medical students. New Zealand journal of psychology. https://www.psychology.org.nz/journal-archive/NZJP-Vol331-2004-3-Hancock.pdf
3. Robbins, B. D., Tomaka, A., Innus, C., Patterson, J., & Styn, G. (2009). Lessons from the Dead: The Experiences of Undergraduates Working with Cadavers. OMEGA - Journal of Death and Dying. https://doi.org/10.2190/OM.58.3.b
4. Arraez-Aybar LA, GC-caIC-M A study of cognitive-affective and physiological-motor reactions to human dissection in Spanish students of human anatomy. https://eurjanat.com/v1/journal/paper.php?id=07S10067
5. Horne DJ TJ, Eizenberg N, Tashevska M, Biddle N. Reactions of first-year medical students to their initial encounter with a cadaver in the dissecting room. Academic medicine. doi: https://doi.org/10.1097/00001888-199010000-00011

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