International Journal of Current Advanced Research
ISSN: O: 2319-6475, ISSN: P: 2319-6505, Impact Factor: 6.614
Available Online at www.journalijcar.org
Volume 10; Issue 07 (A); July 2021; Page No.24754-24757
DOI: http://dx.doi.org/10.24327/ijcar.2021.4933.24757

Research Article

ATTITUDE OF FIRST YEAR M.B.B.S STUDENTS ON CADAVER MEDIATED SESSION IN LEARNING GROSS ANATOMY IN DISSECTION HALL

Shruthy K M and Chanemougavally J

A.C.S Medical College and Hospital, Dr. M.G.R Educational and Research Institute (Deemed to be University), Chennai

A R T I C L E I N F O

Article History:

Received 6th April, 2021
Received in revised form 15th May, 2021
Accepted 12th June, 2021
Published online 28th July, 2021

A B S T R A C T

Knowledge in anatomy is essential for students practicing medicine. Acquiring basic knowledge in anatomy can be done efficiently with the help od cadaver dissection in the dissection hall. Major part of the learning of this crucial subject happens during cadaveric sessions. Aim: The aim of this study to compare the perception of the students to cadaveric dissection in male and female students. Materials and methods134 students volunteered to participate in this Comparative study. The Data was collected using a pre-validated closed-structured questionnaire from the 1st year M.B.B.S students of A.C.S Medical College and Hospital. All the students of the study participants had anatomy small group teaching every day in the month of February 2021, each session lasting for 2 hours The data collected from the students were segregated as per gender. The study included 65 male and 69 female students. The data collected were analysed in Excel windows version10Result: On data analysis, we found out that the unpleasant feeling while entering the dissection hall, fear and stress related to dissection hall and cadaver was more in females (89%,75%, 75%). Disturbances due to smell of formalin, irritation of the eye and recurring disturbing thoughts were more in the malestudents (71%,86%,85%). 99 % percent of students (both male and female) felt that dissection is mandatory. Conclusion: Perception to cadaver and sessions in dissection hall with cadaveric dissection varies with gender. The emotional component is more in female students and physical effects are more evident in the male students. But both the groups are agreeing to the fact that dissection cannot be replaced and is the best teaching tool to learn Anatomy.

INTRODUCTION

Knowledge in anatomy is essential for students practicing medicine[1]. Imparting of knowledge in human anatomy is best achieved by using 3 dimensional models and cadavers. Dissection has been the main teaching tool in learning anatomy for centuries[2]. Through dissection the students get an opportunity to experience the human body in reality. The students get to feel the texture of the body which can contribute to building concepts for application in clinical skills in the future[3]. Cadaveric dissection can be used as a teaching tool to obtain a wide range of knowledge and orientation of the body and its parts in the best possible manner[4].

Very often, the first tie a student is close to experiencing the agony of death is when they are exposed to the cadaver for the first time in the dissection hall[4]. There is a significant amount of emotional trauma in the early stages of cadaveric exposure to students.

Corresponding author:* **Shruthy K M
A.C.S Medical College and Hospital, Dr. M.G.R Educational and Research Institute (Deemed to be University), Chennai

It can be worsened with the effects of formalin that could cause some minor symptoms and the long durations spent in the dissection hall surrounded by cadaver could be tasking for a young adult to handle. In spite of all these drawbacks, cadaveric dissection continues to be the preferred tool for teaching and learning anatomy[5].

Students have a very diverse approach to cadaveric dissection. They are exposed to physical and emotional trauma[6]. The attitude to cadaveric dissection varies in both genders of student population[7]. Cultural background of the students also has an effect in approach to cadaveric dissection and learning anatomy in the dissection hall [8-12].

Over the years availability of cadaver in medical colleges are decreasing. To obtain cadavers is becoming an expensive affair. Medical schools are striving hard to obtain cadavers for their students because cadaveric dissection is the most favoured teaching tool for the teachers and a learning tool for the students in attaining knowledge in anatomy.

MATERIALS AND METHODOLOGY

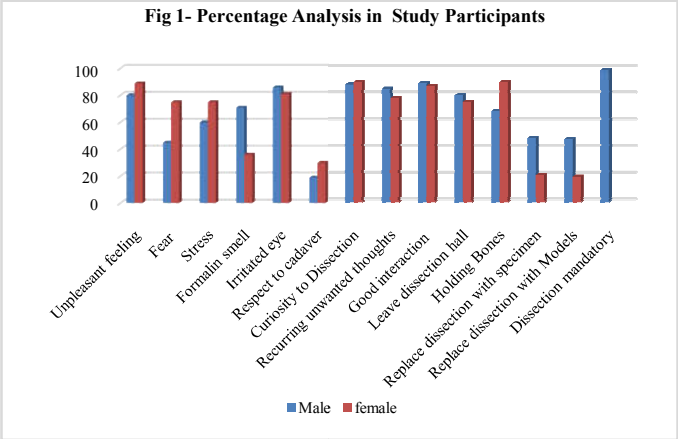
134 students volunteered to participate in this Comparative study. The Data was collected using a pre-validated closed-structured questionnaire from the 1st year M.B.B.S students of A.C.S Medical College and Hospital, Dr. M.G.R Educational and Research Institute (Deemed to be University). The Questionnaire containing 15 questions was given to the students after the exposure to cadaveric dissection for a month. All the students of the study participants had anatomy small group teaching every day in the month of February 2021, each session lasting for 2 hours. Each small group had a facilitator who was instructed priorly. The data collected from the students were segregated as per gender. The study included 65 male and 69 female students. The data collected were analysed in Excel windows version10

RESULTS

The Data was collected from 134 study participants included 65 male and 69 female. The comparison of the data between male and female study participants were done. When asked if they had an unpleasant feeling as the students entered the dissection hall, 80 % of the male participants and 89% of female participants agreed to it. The feeling of fear was perceived in 45% and 75% of the Male and females respectively. 60% and 75% of male and female participants were stressed prior to entry into the dissection hall. Only 36%of the female participants were uncomfortable with the smell of formalin when compared to the male participants (71%). 86% and 81% of male and female participants respectively had irritation of eyes on exposure to formalin. 30 % of the female students wanted to pay respect to the cadavers whereas only 19% of the male participants had such a feeling. Curiosity to dissection was 88% and 90% in both male and female participants. 15 % of the male participants and 21% of female participants have had a prior experience in seeing a body after life. The Male participant's (85%) had developed unwanted thoughts after sessions involving cadaveric dissection and the same was experienced by 65% of the female participants. When asked if the students had the urge to leave the dissection hall, 80% of male and 75% of female wanted to do so. 89% of the male 87% of females expressed those cadaveric sessions introduced them to critical thinking and stimulated an interactive session 68% of the male and 90 % of the female participants wanted to hold the bones provided for learning. Not many students in both the gender were interested in replacing cadaveric dissection with models or museum specimens. Majority of the male and female participants insisted on having cadaveric dissection to learn anatomy.

Table 1 Percentage Analysis of Questionnaire

S No	Question	Male (n=65)%	Female (n=69)%
1	Unpleasant feeling in entering dissection hall	80	89
2	Feeling of fear entering the dissection hall	45	75
3	Were you stressed before entering the dissection hall?	60	75
4	Were you uncomfortable with the formalin smell	71	36
5	Was there irritation of eyes	86	81
6	Did you pay respect to the cadaver	19	30
7	Were you curious to do dissection	88	90
8	Have seen a dead body before	15	21
9.	Did you develop unwanted thoughts after seeing the cadaver	85	78
10.	Did you want to leave the dissection hall	80	75
11.	Dissection helped in critical thinking and interaction	89	87
12.	Did you want to hold the bones	68	90
13.	Do you want to replace dissection with museum specimens	48	47
14.	Do you want to replace dissection with Models	20	19
15.	Is dissection Mandatory	99	99



DISCUSSION

The students entering medical school are excited to have enrolled in the programme that provides them with a promising future. The first Stage of this exciting journey is to enter into the dissection hall. Even though cadaveric dissection is a key component of learning anatomy, the first exposure to cadaver can take a toll both emotionally and physically. There have been several studies that has confronted with difference in the attitude of approach to cadaveric dissection pertaining to the gender of the students.[13]

In this study majority of the male and female students had an unpleasant feeling during entering the dissection hall. Higher percentage of female students were fearful and stressed with the thought of entering the dissection hall. Recurring unpleasant thoughts after being in the dissection hall was more in female study participants than the male participants. Atlasi *et al* in their study reports that stress and fear is more in females than in males in the dissection hall with exposure to cadavers[14]. Though there are emotional disturbances among the students, but the fact is that cadaveric dissection cannot not be replaced as it is the best teaching tool to learn gross anatomy to the fullest potential[15]. Sandor[12] and Granger [16] have also reported stress and fear in more in female students.

Smell of formalin in dissection hall, from the cadaver is a common reason why students prefer to skip classes. Naz *et al* in their study states that 45% of the students were so disturbed with formalin smell that they skipped cadaveric dissection sessions[17].

Female students had more interest to handle bones given as a part of osteology session in our study. This was also reported in a study by Older[18] and Rawland *et al*[19] where the students had expressed that the inclusion of osteology sessions only enhances the learning of gross anatomy.

In the present study (Male 86% and female 87%) agreed that cadaveric dissection sessions brought about interaction and critical thinking. In a study, the data says that students interacted more with cadaveric dissection. Interaction was more between peers as well as between students and faculty[20]. Even though cadaveric dissections have faced several ethical

controversial issues, the students still continue to believe that cadaveric dissection is required for learning anatomy and enhance its knowledge[21,22,23]. Cadaveric dissection has been followed for several years, and students have been taught to respect the cadaver in the best possible way. Students did get the primary impulse to shower respect for the 'living' dead as soon as they were in contact with the cadaver[24,25].

Students do not support the idea of replacing cadaveric dissection with museum specimens or Models. Cadaveric dissection has been considered as the most important tool for medical students to understand the anatomy. Students did suggest to that a blended teaching learning methods could make cadaveric teaching more fruitful[26,27]. In the end, dissection continues to be the preferred teaching tool in teaching gross anatomy in medical students[21]

Perception to Dissection Hall and Cadaver is different in male and female students. From the current study we can conclude that the female students are ore sensitive to exposure to cadaver. However, the students continue to adapt to the needs in medical education understanding the importance of gaining knowledge in anatomy

CONCLUSION

Perception to cadaver and sessions in dissection hall with cadaveric dissection varies with gender. The emotional component is more in female students and physical effects are more evident in the male students. But both the groups are agreeing to the fact that dissection cannot be replaced and is the best teaching tool to learn Anatomy.

Acknowledgements

I thank the First year M.B.B. S students for their active participation in the study. I also thank Dr. M. Sasirekha the HOD of the department of Anatomy and Dean of A.C.S Medical College and Hospital for the Motivation and support to conduct the study. Sincere Thanks to Mrs. P Chanemougavalli for the help offered to conduct the study.

References

1. Meester LD. Learning anatomy for use beyond the classroom: A guide for medical students. McMaster Univer Med J 2011;8:45-8.
2. Richardson R. Death, Dissection and the Destitute. London: Penguin; 2013.
3. Antonio B. The importance of anatomy and dissection in the human corpse. Open Acc Res Anatomy 2017; 1:OARA.000506.
4. Winkelmann A. Anatomical dissection as a teaching method in medical school: A review of the evidence. Med Educ2007; 41:15-22.
5. Lufler RS, Zumwalt AC, Romney CA, Hoagland TM. Incorporating radiology into medical gross anatomy: Does the use of cadaver CT scans improve students' academic performance in anatomy? Anat Sci Educ 2010; 3:56-63.
6. Bharadwaja A, Aman M. Cadaveric dissection – Its importance and students response: A questionnaire study. Int J Sci Stud 2017 ;5:252-5.
7. Plaisant O, Stephens S, Apaydin N, Courtois R, Lignier B, Loukas M, *et al*. Medical students' attitudes towards science and gross anatomy, and the relationship to personality. J Anat2014;224:261-9.9.
8. Mitchell BS, Xu Q, Jin L, Patten D, Gouldsborough I. A cross-cultural comparison of anatomy learning: Learning styles and strategies. Anat Sci Educ2009;2:49-60.
9. Mustafa AG, Allouh MZ, Mustafa IG, Hoja IM. Anatomy learning styles and strategies among Jordanian and Malaysian medical students: The impact of culture on learning anatomy. SurgRadiolAnat2013;35:435-41.
10. Zurada A, Gielecki JS, Osman N, Tubbs RS, Loukas M, Zurada-Zielińska A, *et al*. The study techniques of Asian, American, and European medical students during gross anatomy and neuroanatomy courses in Poland. SurgRadiolAnat2011;33:161-9.
11. Kerby J, Shukur ZN, Shalhoub J. The relationships between learning outcomes and methods of teaching anatomy as perceived by medical students. Clin Anat2011;24:489-97.
12. SándorI,Birkás E, GyőrffyZ.The effects of dissection-room experiences and related coping strategies among Hungarian medical students. BMC Med Educ2015;15:73.
13. Bleakley A. Gender matters in medical education. Med Educ2013;47:59-70.
14. Atlasi MA, Moravveji A, Nikzad H, Mehrabadi V, Naderian H. Learning styles and strategies preferences of Iranian medical students in gross anatomy courses and their correlations with gender. Anat Cell Biol2017;50:255-60.
15. Prakash, Prabhu LV, Rai R, D'Costa S, Jiji PJ, Singh G. Cadavers as teachers in medical education: Knowledge is the ultimate gift of body donors. Singapore Med J 2007;48:186-9.
16. Granger NA, Calleson D. The impact of alternating dissection on student performance in a medical anatomy course: Are dissection videos an effective substitute for actual dissection? Clin Anat2007;20:315-21.
17. Naz S, Nazir G, Iram S, Mohammad M, Umair, Qari IH, *et al*. Perceptions of cadaveric dissection in anatomy teaching. J Ayub Med Coll Abbottabad 2011;23:145-8.
18. Older J. Anatomy: A must for teaching the next generation. Surgeon 2004;2:79-90.
19. Rowland S, Ahmed K, Davies DC, Ashrafian H, Patel V, Darzi A, *et al*. Assessment of anatomical knowledge for clinical practice: Perceptions of clinicians and students. SurgRadiolAnat2011;33:263-9.
20. Pais D, Casal D, Mascarenhas-Lemos L, Barata P, Moxham BJ, Goyri-O'Neill J. Outcomes and satisfaction of two optional cadaveric dissection courses: A 3-year prospective study. Anat Sci Educ2017;10:127-36.
21. Thidar AM, Myint TT, Naing DK, Mustapha ZA. Preferred modalities for learning anatomy: Medical students' opinion. Borneo J Med Sci 2016;10:1-13.
22. Nuzhat A, Salem RO, Al Hamdan N, Ashour N. Gender differences in learning styles and academic performance of medical students in Saudi Arabia. Med Teach 2013;35 Suppl1:S78-82.
23. Pawlina W, Hammer RR, Strauss JD, Heath SG, Zhao KD, Sahota S,. The hand that gives the rose. Mayo Clin Proc 2011;86:139-44.
24. Persaud TV. Early History of Human Anatomy: From Antiquity to the Beginning of the Modern Era. Springfield, IL: Thomas; 1984.

25. Shaikh ST. Cadaver dissection in anatomy: The ethical aspect. AnatPhysiol S 2015;5:7.
26. Bertman SL, Marks Jr SC. The dissection experience as a laboratory for self-discovery about death and dying: Another side of clinical anatomy. Clinical Anatomy: The Official Journal of the American Association of Clinical Anatomists and the British Association of Clinical Anatomists. 1989;2:103-13.
27. Ngana OM, Tang TL, Chan AK, Chen DM, Tang MK. Blended learning in anatomy teaching for non-medical students: An innovative approach to the health professions education. Health Professions Educ 2018; 4: 149-58.

How to cite this article:

Shruthy K M and Chanemougavally J (2021) 'Attitude of First Year M.B.B.S Students on Cadaver Mediated Session in Learning Gross Anatomy In Dissection Hall', *International Journal of Current Advanced Research,* 10(07), pp. 24754-24757. DOI: http://dx.doi.org/10.24327/ijcar.2021. 4933.24757

****