Section: Anatomy

Original Research Article

A COMPARATIVE STUDY ON AWARENESS ABOUT KNOWLEDGE AND ATTITUDE OF BODY DONATION AMONG MEDICAL STUDENTS IN CBME CURRICULUM

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ABSTRACT

Background: Cadaveric dissection is a crucial element in medical education, fostering spatial and tactile understanding of human anatomy. It is a key component of the student-centred learning approach in CBME (Competency-Based Medical Education) curriculum, relying heavily on body donation. Given the rising demand for cadavers in medical institutions, increasing awareness about body donation is essential.

Materials and Methods: A comparative study was conducted between MBBS students from the 2021 (150 students) and 2022 (150 students) batches to assess their knowledge and attitudes towards body donation and cadaveric dissection. A validated questionnaire with 30 questions (covering knowledge and attitudes) was distributed via Google Forms. Data was analysed using SPSS software version 30.0.

Results: Results revealed that 72% of the 2022 batch students lacked awareness about the legal aspects and procedures for body donation, compared to 60% of the 2021 batch. Additionally, 70% of new students were unaware of the procedures involved in cadaver preparation, while 45% of the previous batch lacked this knowledge. Despite these gaps, 96% of students from both batches agreed that dissection improves their medical and surgical skills, and 94% felt it enhances logical thinking. A significant 86% of students considered dissection irreplaceable and had a positive attitude toward handling cadavers. Furthermore, 93% preferred hands-on dissection over demonstrations of preserved specimens. While 83% saw body donation as beneficial for society, only 42% were willing to donate a family member's body, and just 36% were willing to donate their own.

Conclusion: Medical students are aware that cadaveric dissection plays an integral role in learning anatomical and surgical skills. More awareness is also needed about procedures for body donation and its significance in medical curriculum among medical students.

Keywords: Cadaver, Dissection, CBME (Competency-Based Medical Education), Anatomy, Awareness, Questionnaire, Attitudes, Legal aspects.

INTRODUCTION

Study of anatomy is inseparable from cadaveric dissection. Body donation is the major source of cadavers worldwide. It is defined as an informed and free act of giving one's whole body after death for medical education and research purposes.[1] Anatomy dissection hall is a unique experience, where medical students begin the transition from layman to physician and maybe a student's first experience with death.[2] Dissection of human cadaver was started by Sushruta at 500 BC but the knowledge and awareness among public and medical graduates about body donation as a novel programme is lacking. Ignorance, religion and other factors may be the obstacles in people's involvement.[3]

MATERIALS AND METHODS

The study was conducted after the approval was granted by Institutional Ethical Committee, Kanyakumari Government Medical College, Asaripallam.

Study design: Descriptive comparative study

Study setting: Department of Anatomy, Kanyakumari Government Medical College, Asaripallam.

Selection of participants: The age limit of the participants was from 17 – 22 yrs.

Inclusion criteria

Students who are willing to participate in this study.

Exclusion criteria

Students who are absent and not willing to participate in this study.

Duration of study- 6 months

Intervention: Before and after cadaveric dissection.

Methods of measurement: After obtaining voluntary informed consent, the validated Questionnaire containing 30 questions was distributed through google forms to the 2021 Phase II MBBS students after completion of first year and to 2022 Phase I MBBS students during their foundation course before starting cadaveric dissection. The validated questionnaire contained 3 domains, each of 10 questions which included knowledge regarding body donation (Closed ended), Attitude about body donation (Likert scale), knowledge regarding cadaveric dissection (Closed ended).

Data collection and processing: Data was compiled and organised in Microsoft excel. Descriptive and comparative analyses were carried out using statistical package for the social sciences (SPSS) Inc. Chicago version 30.0 for windows. Statistical differences among groups were assessed using chi-square tests. Results are expressed as percentages of the total study population.

RESULTS

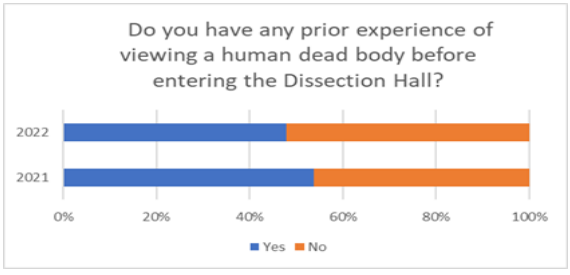

Figure 1: We analysed that 37.3 % of 2021 batch and 98 % 2022 batch had prior experience of viewing a dead body

We also found that while 79.3% of students in 2021 batch and 79.3% of students from 2022 batch were supportive of the idea of promoting the act of body donation to others such as their peers and colleagues, they were more hesitant when it came to themselves or their own family members. 45.3% of 2021 batch and 42.7% of 2022 batch willing to discuss body donation with their families. 48.7% of 2021 batch and 49.3% of 2022 batch were willing to donate their own body.

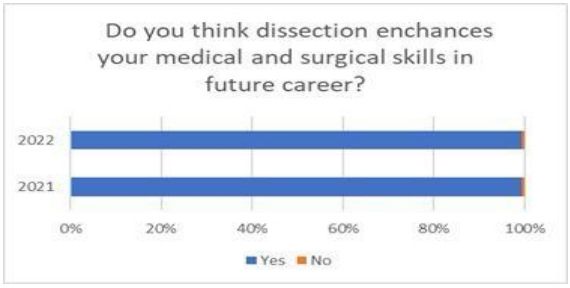

Figure 2: 99.3% of 2021 batch and 99.3% of 2022 batch were of the opinion that dissection enhances medical and surgical skills in future career, and 97.3% of 2021 batch, 98% of 2022 batch agreed that dissection enhances logical thinking.

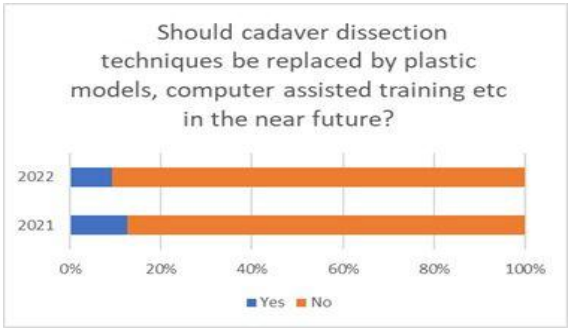

Figure 3: 12.7% of 2021 batch and 9.3% of 2022 batch agreed that cadaveric dissection technique should replaced by plastic models, computer assisted training in the future

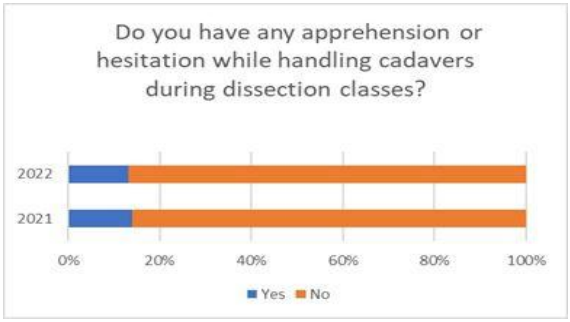

Figure 4: 14% of 2021 batch and 13.3% of 2022 batch have a hesitation while handling cadavers during dissection classes

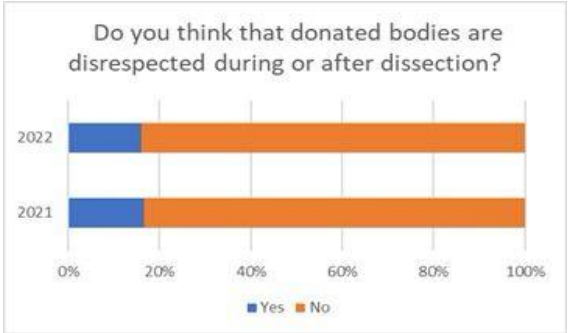

Figure 5: 16.7% of 2021 batch and 16% of 2022 batch think that donated bodies are disrespected during or after dissection.

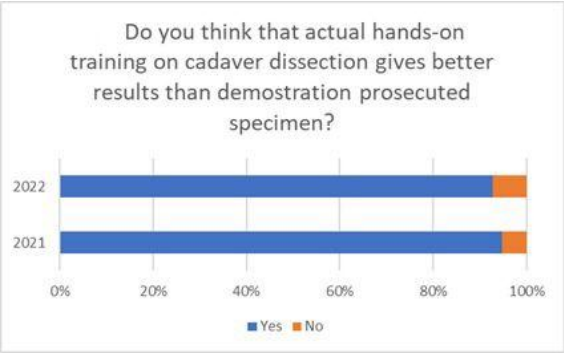

Figure 6: 94.7% of 2021 batch and 92.7% of 2022 batch think that actual hands-on training on cadaver dissection gives better results than demonstration prosecuted specimens

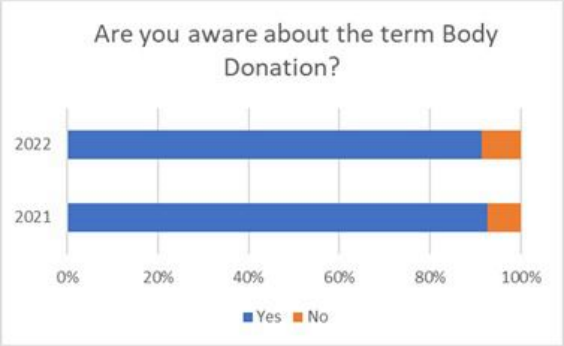

Figure 7: 92.7% of 2021 batch and 91.3% of 2022 batch were aware about the term body donation

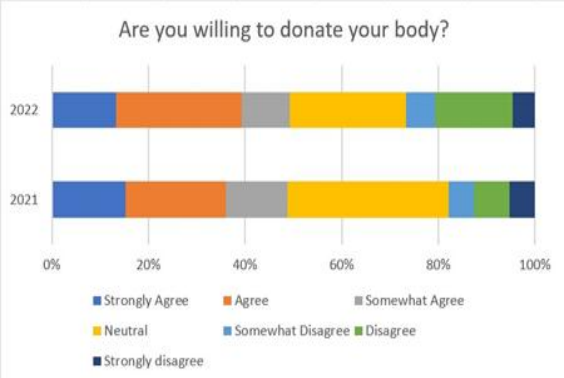

Figure 8: 48.7% of 2021 batch and 49.3% of 2022 batch were willing to donate their own body.

The data collected for the question "Are you willing to donate your body?" was analysed using SPSS for both 2021 and 2022 batches and the p value came out to be 0.09, which being greater than 0.05 at 95% confidence limits, signifies that there is no significant change in willingness to donate their bodies before and after exposure to anatomical dissection of cadavers.

DISCUSSION

Vikani et al,[1] has commented that prior exposure to cadavers is found to be an important factor to reduce stress toward cadaveric dissection. Paul bundi et al,[2] has recorded that in his studies 50.7% students have prior experience of viewing a human dead body and 49.3% didn't have any prior experience. In the present study,34.65% of students have prior experience and 65.35% of students didn't have any prior experience of viewing human dead body.

Edmund et al,[3] Sharma and Gupta et al,[4] Dissabandra et al,[5] and Izunya et al,[6] have concluded in their studies that nearly 90% of students feel that dissection enhances medical and surgical skills in future career. The results of the present study among both the batches corroborates with the above studies.

According to Agnihotri et al,[7] and Paul Bundi et al, nearly 90% of students have admitted that dissection enhances skill and enables to think in a logical manner. In the present study, the value is about 96% which is higher than the above-mentioned results.

A study by Romy Biswas et al,[8] has found that 33% of students have opined that models can replace dissection. In the present study ,13% of the batch of students who were exposed to dissection have recommended for replacement of cadaver dissection by plastic models and computer assisted training whereas it comes down to 9% of the students who were not exposed to dissection. This illustrates that even though dissection is very essential, other innovative ways of learning must be added to supplement the teaching and learning of anatomy.[9,10]

61% of students had no apprehension in handling cadaver directly as seen in a study by Paul Bundi et al,[2] and in a study done by Izunya AM et al 65% of students had no apprehension in handling cadaver directly. In the Present study 86% of students in both the batches had no apprehension which is higher than the previous studies.

Jones et al,[11] has commented that prosecuted specimens can impart similar knowledge as traditional dissection. Lakal O Dissabandara et al in his studies have said that more than 50% of the students preferred that dissection should not be replaced by pre-dissected material. In the present study 93% students of both the batches are willing to get hands-on training by cadaveric dissection.

Kirthinath et al,[12] has commented that 8% of the medical professionals said that they had not heard the term body donation. Ajay N et al,[13] has found in his study that 98% of medical students are aware of body donation. In the present study 92% of the students are aware of body donation which is consistent with the finding of a study conducted by kirthinath et al.

Rokade et al,[14] has noted in his studies that although anatomists encourage cadaver donation, the attitude of anatomist towards donating their own bodies for dissection is not well known. Alashek et al,[15] Bolt S et al,[16] have said that the fear that the body may not be treated with respect and dignity is also an important factor preventing one from a body donation. Sehirli et al,[17] and ballala et al,[18] have added that medicos cannot accept the concept of dissection of their own body. In the present study 16% of the students have addressed that donated bodies are disrespected during or after dissection.

CONCLUSION

Through this study we have found that medical students in first and second year MBBS are aware of the importance of body donation, however most of them were hesitant when it came to donating their own bodies. We also saw that there seems to be no difference in opinions before and after exposure to dissection. This study helps us identify that there is a gap in the attitude and practice domains with respect to body donation that needs to be addressed. The information gained will be helpful in devising newer teaching and learning strategies as well as sensitization methods for promoting body donation.

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