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Attitude, body donation, communication, cadaver, dissection, embalming, ethics

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## Analyzing the Effectiveness of Attitude Ethics and Communication Module “The Cadaver as our First Teacher” Among Medical Students of Maharashtra State of India

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### ABSTRACT

Cadaveric dissection plays an important role in anatomy teaching since centuries. The Medical Council of India now National Medical Commission has decided to implement Attitude, Ethics and Communication module (AETCOM) in all medical colleges with a goal to create doctors possessing requisite knowledge, skills, attitudes, values and responsiveness. Present cross sectional study was carried out to analyse the effectiveness of implementing this AETCOM module 1.5 by sharing the questionnaire as online Google form, with 500 students of Phase I MBBS in Maharashtra state of India. 75.19% respondents were unaware of cadaveric study, 40.75% were unaware about body donation, 84.04% were unaware about embalming and 63.7% were unaware of dissection hall etiquettes. 97.70% respondents were stating that they had understood the importance of cadaver as teacher in medical education after studying this module. 95.34% respondents stated that this module has added to their knowledge of body donation. 90.94% stated that module has added to their knowledge about cadaveric embalming and 95.5% stated that this module has added to their knowledge of Anatomy act. Students were asked to give overall rating to this AETCOM module with respect to its effectiveness in increasing their knowledge and awareness about body donation, cadaver dissection, embalming. 59.6% have given highest score of 5, 28.1% of 4, 9.7% of 3, 1.5% of 2 and 1.1% of 1 rating. Implementing this AETCOM module for phase I MBBS students has definitely helped them to gain knowledge regarding role of cadaver in medical education and research, body donation, embalming procedure and its usefulness and has helped students to be respectful towards cadaver and follow dissection hall etiquettes.

## INTRODUCTION

Attitude Ethics and Communication (AETCOM) has become the crucial component of newly structured Medical education in India. Various studies are done till now to see the effectiveness of implementing the AETCOM module among medical students. Health care is growing faster in technical means so medical education is focusing more now on procedures. While fulfilling this aim of medical education, dissection of a body must be carried out in a respectful manner to show gratitude towards the deceased person till very end<sup>[1]</sup>.

The Medical Council of India now National Medical Commission has decided to implement Attitude, Ethics and Communication module (AETCOM) in medical education to produce doctors possessing requisite knowledge, skills, attitudes, values and responsiveness. For medical students entering into medical education, their first encounter with human body is in the form of human cadaver in the dissection hall. So students if learn to respect the cadaver will respect the patients also<sup>[2]</sup>. Anatomy is the subject which gives the medical students their very first exposure to human body and helps them overcome their inhibitions. It was Sushruta's belief that for one to be a skilful and knowledgeable surgeon, one must first be a good anatomist. Cadaver acts as first teacher in medical education and without them medical education will be hamper and therefore cadavers are the valuable gift to medical education. Cadaveric dissection has been the foundation of Anatomy teaching since centuries<sup>[1]</sup>.

This study is an attempt to see the effectiveness of AETCOM module 1.5 'The cadaver as our first teacher' which is implemented in new CBME (Competency based medical education) curriculum since 2019. The study also aims to see whether the students see toward consider cadaver as a mere dead body for study or as a teacher who teaches selflessly.

## MATERIAL AND METHODS

500 medical students of Phase I MBBS of Maharashtra state in India were included in this cross sectional study. Aetcom module for the study was selected as per the AETCOM booklet released by Medical Council of India/National Medical Commission<sup>[2]</sup>. Aetcom module 'The cadaver as our first teacher', was taught to the students of phase I of MBBS in department of Anatomy in 2hrs session and various topics related to module were covered in it and soft copy of chapter on this module was also shared with students<sup>[1]</sup>. Initially students were instructed that the answers they are giving to present questionnaire are broadly divided in two groups; one is before entering the medical profession and second is after learning this module and were asked to answer accordingly. For this cross sectional study questionnaire was given online by

sharing the link of Google form. The questionnaire was structured and validated from statistician and faculty of Community medicine (PSM) so that the study is able to evaluate all aspect taught in the module like body donation, embalming, Anatomy act, dissection hall etiquettes, role of cadaver in medical education before and after the study of this module<sup>[3,4]</sup>. It consists of 12 questions out of which 5 were multiple choice question type and remaining were open ended assessment type. Survey was kept open for students for period of 1 month. Link was shared on the group of students for collecting responses. Total 268 responses were received out of 500 students. Responses received for survey was analysed by authors and statistician and result was prepared.

## RESULTS

Total 268 responses were received for this survey. For first question 267 responses were received out of which 266 (99.6%) students stated that they were aware about AETCOM module 'Cadaver as first teacher' and most of them (97.74%) studied this module in phase I of MBBS.

For the question on the awareness of cadaveric study before studying this module, 262 responses were received out of which 197 (75.19%) respondents were not at all aware of cadaveric study. Respondent who was aware of cadaveric study, most of them came to know about it from friends and relatives who were in medical profession. Some came to know it from internet, school teachers and from newspaper.

In response to the question regarding the awareness about body donation before studying this module, 265 responses were received out of which 108 (40.75%) respondents were not at all aware of body donation before studying this module. Rest of respondent were aware of body donation mainly through body donation campaign arranged by medical colleges and news about it published in newspapers, relatives, school teachers, social media, internet, medico friends. With regards to question on awareness about embalming 257 responses were received. In this 216 (84.04%) respondent were unaware about embalming before studying this module. Rest knew about embalming through movies and youtube videos showing body preservation. Few came to know it from medico friends and relatives.

In survey it was asked that has this module have added to your knowledge about cadaver as teacher. Total 262 responses were received. 256 (97.70%) responses were stating that they understood the importance of cadaver as teacher in medical education after studying this module and came to know why one should respect the cadaver. They also understood that cadaver gives 3D view of human body and body structures can be studied well from cadaveric dissection.

Table 1: List of Abbreviations Attitude, Ethics and Communication

Abbreviation	Definition
AETCOM	Attitude, ethics and communication
IMG	Indian medical graduate
CBME	Competency based medical education

The responses for the question whether this module has added to knowledge about body donation were noted. Total 258 responses were received. 246 (95.34%) respondents were stating that this module has added to their knowledge about body donation. Most of the respondents have said that they have understood importance of body donation and how it helps in medical education and research and why it is important to spread awareness about body donation in society.

Responses were noted for the question regarding knowledge gained about cadaveric embalming after studying this module. Total 254 responses were received out of which 231 (90.94%) respondents were stating that this module has added to their knowledge about cadaveric embalming. Respondents have gained the knowledge of embalming procedure, methods of embalming, need of embalming and various chemicals used for embalming.

In the survey it was asked, whether students were aware of dissection hall etiquette to be followed during dissection before studying this module. Total 267 responses were received out of which 170 (63.7%) have responded that they were not aware and 97 (36.3%) responded that they were aware. But when asked about awareness dissection hall etiquette after studying this module, 267 responses were received out of which 265 (99.3%) have responded as yes knowledge regarding dissection hall etiquettes was gained.

Students were asked to give overall rating to this AETCOM module with respect to its effectiveness in increasing their knowledge and awareness about body donation, cadaver dissection, embalming. One was lowest and 5 was highest rating to be given. Total 267 responses were received. 159 (59.6%) has given score of 5, 75 (28.1%) of 4, 26 (9.7%) of 3, 4 (1.5%) of 2 and 3 (1.1%) of 1. Regarding Anatomy act, out of 266 responses received 255 (95.5%) stated that this module was helpful in adding to their knowledge of Anatomy act, whereas 11 (4.1%) respondents disagreed with it.

## DISCUSSIONS

To create a responsive and efficient "Indian Medical Graduate" (IMG) changes were made in undergraduate medical education program so that the IMG can function appropriately and effectively as a doctor of first contact of the community. In order to fulfil this goal the Indian Medical Graduate must be able to function appropriately and effectively as

clinician, leader and member of the health care team and system, communicator, lifelong learner, professional. To see whether this change was effective or not, assessment becomes very important component of newly adopted competency based medical education. Assessment in form of feedback from beneficiary plays a very important role to see the effectiveness of teaching<sup>[5]</sup>. The article on ethical viewpoint "The Cadaver as our first teacher" by Ropmay AD, looks at the cadavers being a potential and important means of learning for medical students. The word "cadaver" is derived from the Latin "*cadere*" meaning "to fall", referring to soldiers who died in battle. Therefore, a cadaver is a dead human body used in scientific or medical research<sup>[6]</sup>. On basis of this article present study was structured to evaluate importance of teaching about cadavers in form of AETCOM module is a potential and important means of learning for medical students.

Evaluation of effectiveness of different Attitude, Ethics and Communication (AETCOM) modules was done previously also. In one of such study improvement of communication skills of the interns posted in peripheral health centres in Tamil Nadu was done. As per the results of this study AETCOM module was found effective in improving the communication skills of the medical students<sup>[3]</sup>. Evaluation of the results shows that present study is effective for understanding the basis of implementation of this AETCOM module in medical curriculum. Students were aware of cadaveric study, body donation, embalming and dissection hall etiquettes after studying this module.

Prospective, multimethod study was conducted in Manipal which involved 447 Phase I undergraduate medical students. Reflections of these students were taken and were qualitatively analysed to generate themes. Cadaver as a teacher, acknowledgement and thanksgiving, bonding and empathy were the major themes identified. Result of this study shows that the students strongly felt that the module effectively sensitised them towards the ethical and humanitarian aspects of handling cadavers. Implementation of an educational module about cadavers is a good approach towards sensitising medical students about the ethical aspects of cadaveric dissection and value of the respectful handling of cadavers. The implementation of an educational module of this kind was an approach to develop awareness in students regarding the ethics and values of cadaveric dissection, understand values of professionalism, human values, and empathy.<sup>[4]</sup> Implementation of this module has also encouraged students to do body donation. This enlightened feeling in them definitely will be helpful for promoting body donation in society.

In one study psycho-social attitudes of MBBS students were studied to ensure the human cadaver gets the rightful respect and dignity. For this questionnaire was distributed to the MBBS students (n=60) during the foundation course which is held in first 1 month of 1st year curriculum and on their first encounter with the cadaver. In result it was found that about 95.4-57.5% of students showed positive and negative perceptions regarding human cadaver respectively. The religious beliefs and emotional attachments with the cadaver were noted to be as 23.33-76.11%, respectively. This study has attempted to focus on how cadaver acts as the first silent medical teacher and how it enlightens the thought of empathy in medical students to be expressed towards the patients<sup>[7]</sup>.

Cross-sectional study was conducted at a municipal medical college on First-year MBBS students, in it 31 females and 48 males have participated. Study was done to assess the students after studying various modules of attitude, ethics and communication (AETCOM) training. No significant difference was seen in male and female participants. Data analysis showed that communication skills training was essential, 60.76% were of the opinion that in some situations, what is unethical may be legal and vice versa 97.47% felt that consent required is essential, 77.22% were of the view that a doctor should help regardless of the clinical ability or religion<sup>[8]</sup>.

Learning of AETCOM module "Cadaver as first teacher" is done in Anatomy subject on routine basis throughout the Phase I of MBBS, especially while teaching students on cadaver in dissection hall. Students are made aware of cadaver as their first teacher time to time at every possible point. They are discouraged from showing or expressing any misbehaviour towards cadaver.

When this study was compared with previous studies done on similar topics it was found that this study is useful in evaluating the effectiveness of studying the AETCOM module. This study shows that AETCOM module "The cadaver as our first teacher" is a very effective tool to teach students about various components of this module like role of cadaver in medical education and research, body donation, embalming procedure. And it has also helped students to be respectful towards cadaver and follow dissection hall etiquettes. This study not only taught students about the module but it has also helped them change attitude toward cadaver and encourage them not to consider cadavers as merely a dead body for study but as a teacher and body which is donated for noble deed, which inturn is the main goal of AETCOM module introduced in new curriculum based medical education. Students who understand the importance

of cadaveric teaching and body donation will definitely promote it in society which will improve the rate of body donation and help the future medical students and prevent Anatomical teaching to become completely digitalized in form of virtual dissection Table.

## CONCLUSION

From this study it is concluded that AETCOM module "Cadaver as first teacher" has helped students to gain knowledge regarding role of cadaver in medical education and research, body donation, embalming procedure. The implementation of this module as part of phase I MBBS curriculum has made students aware of usefulness of cadaveric dissection, importance of showing gratitude towards the cadaver and why there is need of the dissection hall etiquettes and protocols to be followed. So study of this module will change the attitude of students toward cadaver as well as patients that they are going to come in contact in future. This will help in reducing the conflicts between doctor and patients and their relatives which has increased in India.

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