

**Original Article****Understanding the perception of medical students regarding the newly introduced competency based medical education (CBME) and identifying the challenges which hamper its proper implementation**

Mehwish Majeed, Zuryat Ashraf, Sami Manzoor, Saima Bashir

**Abstract:**

**Background:** Current medical education system is based on knowledge acquisition, but a successful health professional should not only be knowledgeable but at the same time skillful. Students have very good theory knowledge but they are incapable of applying this knowledge practically in the right direction. MCI (Medical council of India) conducted a review of the existing curriculum for medical undergraduates and introduced CBME (competency based medical education). In spite of putting tremendous efforts, there are some factors responsible for poor student participation and attendance. The aim of this work was to assess the student's perspective regarding CBME and its various components.

**Material and Methods:** Total number of 180 students were included in the study. A questionnaire analyzing the knowledge, perception and attitude of students towards CBME was prepared. The questionnaire was handed over to the students, who filled the questionnaire themselves and appropriate responses were then analyzed.

**Results and Conclusion:** Most students agreed that change in traditional system of medical education is a must (75%). The most needed changes incorporated in the old curriculum have many advantages and are an improvement on the older version of 1997. The ultimate recipients of CBME are the students going to be future doctors, so understanding their perception regarding this paramount change is very necessary.

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**INTRODUCTION**

Medical education in India dates back many decades but unfortunately there have been no timely required major changes in revamping, delivering and assessing this paramount educational forum. We still are clinging to the traditional methods set out by UK, although they themselves adapted to the changing trends required to suit the changing health care needs. Now we seem to be waking up to the fact that there is a need for change from knowledge-based education to skill-based education. There has also been a tremendous increase in the number of medical colleges in India which has warranted an upgradation in the traditional methods of medical education. Current medical education system is based on knowledge acquisition, but a successful health professional should not only be knowledgeable but at the same time skillful. The current education system is not providing students with the required skills for them to be called competent. Students have very good theory knowledge but they are incapable of applying this knowledge practically in the right direction to handle a situation in the right manner. Medical professionals confront new challenges everyday which can be faced boldly only when they are appropriately trained to be competent. Students with good amount of knowledge fail to deliver practical skills like empathy, communication, professionalism and ethics. So, they should be trained efficiently to communicate with patients and their relatives in a very respectful manner which includes values, beliefs, privacy and confidentiality.

With the aim to improve the health care system, MCI (Medical council of India) responsible for maintaining and establishing the standards of medical education conducted a review of the existing

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**Keywords**

Competency, AETCOM, CBME, Traditional system, Medical students, Foundation course.

curriculum for medical undergraduates and introduced CBME (competency based medical education) to be implemented across the country from 2019. Competence means the attainment of enough knowledge, decision making skills, attitude to perform required actions and skillful tasks to a desired level of proficiency. [1, 2] CBME ensures that the graduates attain observable abilities in a time independent and learner centered manner.[3] In time independent manner, each student gets an opportunity to learn at his or her own pace. CBME provides platform which is learner centric, so that student gains competencies in knowledge, attitude, communication, skills and ethics. [4,5] There are around 2949 competencies enlisted in CBME curriculum. Alignment and integration between different disciplines is one of the paramount strategies for implementing this new curriculum. [6,-8] The elements in new curriculum are foundation course (FC), early clinical exposure (ECE), attitudes, ethics and communication (AETCOM), elective postings (EP), alignment and integration, clinical clerkship etc. CBME also includes maintenance of log books and feedback sessions. [9-11]

CBME directs faculty members to change their method of teaching. Teaching should be more practical and conceptual. Countrywide faculty training programs are being conducted for successful implementation of CBME. [12,13] In traditional method teaching was confined to classrooms and practical laboratories, while CBME stresses on skill acquisition and assessments in work place which involves direct observation. [14,15]

CBME is a well thought out approach for shifting the paradigm of medical education from traditional to the current method of teaching, however there are various challenging in the way of implementing this program successfully. Its success depends on various factors like proper planning, proper infrastructure, supportive management, availability of resources and timely supervision to ensure the proper implementation of the program. [16-18]

As far as our scenario is concerned, in spite of putting tremendous efforts for implementation of CBME, there are some factors responsible for poor student participation and attendance. This prompted us to conduct this study with the aim to assess the student's perspective regarding current pattern of medical education, its advantages, their understanding about competencies and to find out the roadblocks responsible for poor student participation so that medical education system could be made more practical and appropriate to cater the public health care needs.

#### MATERIAL AND METHODS:

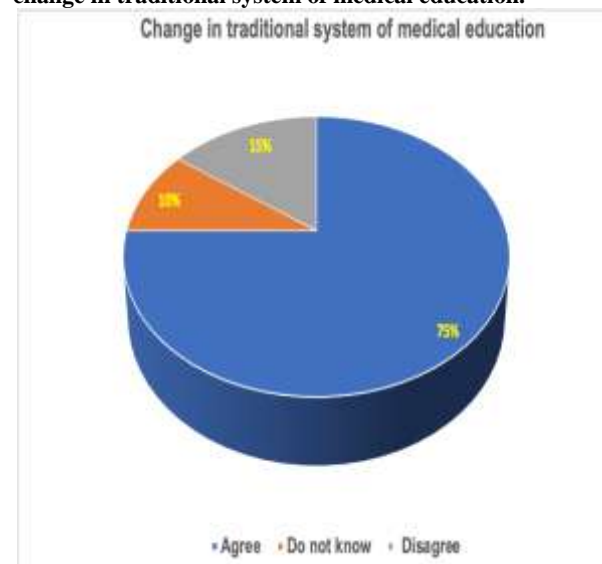
This observational study was conducted from 1<sup>st</sup>october to 1<sup>st</sup>november 2021 among 1<sup>st</sup> year MBBS students of 2020-2021 batch after obtaining clearance from Institutional Ethical Committee. Total number of 180 students were included in the study. A

questionnaire analyzing the knowledge, perception and attitude of students towards CBME was prepared. Proper informed consent was taken from the respondents. The questionnaire was handed over to the students, who filled the questionnaire themselves and appropriate responses were then analyzed. Out of 180 students, we received response from 150 students whose responses were finally included in the study. Options of questions were framed on a 3-point Likert's scale. Our questionnaire was prepared based on earlier studies. The identity of the respondents was kept confidential.

#### RESULTS

As shown in Table 1, total 16 questions were included in the questionnaire for which responses were put as agree, don't know and disagree. As is evident from the table most of the students agreed that change in traditional system of medical education is a must (75%). Students were of the thought that they should have early exposure to simulation and research laboratories (90%) and that there is a need to inculcate skill based learning from 1<sup>st</sup> year MBBS (90%). When asked about basic skills that should be included most of them said that communication, first aid, life support skills should be included from 1<sup>st</sup> year. When asked about foundation course all of them (100%) agreed that basic life support training should be incorporated early in the curriculum. Also, most of them agreed that stress management, time management, language and communication skills should be included. About (AETCOM), only 60% agreed that it should be included. To our surprise only (35%) agreed that SDL should be incorporated in the curriculum. Almost similar response was seen for SGD as well.

**Figure 1. Showing perception of students towards change in traditional system of medical education.**



We also noted down several comments provided by medical students about CBME as shown in the comments box.

#### DISCUSSION

This observational study was conducted in Government Medical College, Srinagar from 1<sup>st</sup>

Table no. 1: Showing perception of students about CBME curriculum.

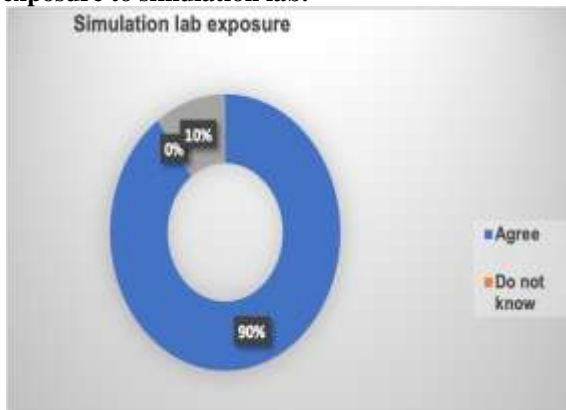
	Components	Agree	Don't know	Disagree
1.	Is there a need for change in traditional system of medical education.	113(75%)	15(10%)	22(15%)
2.	Do you think division of a broader topic into multiple small competencies has simplified teaching and improved learning.	105(70%)	23(15%)	22(15%)
3.	Should students have exposure to simulation/ research laboratories from 1 <sup>st</sup> year MBBS.	135(90%)	0(0%)	15(10%)
4.	Is there a need to inculcate skill based learning from 1 <sup>st</sup> year of MBBS.	135(90%)	5(3.3%)	10(6.6%)
5.	Do you think the following basic skills are necessary to be included in your curriculum from 1 <sup>st</sup> year			
	a) Communication skills	143(95%)	0(0%)	7(5%)
	b) First aid skills	143(95%)	0(0%)	7(5%)
	c) Life support skills	143(95%)	0(0%)	7(5%)
	d) Radiological skills	128(85%)	0(0%)	22(15%)
	e) Surgical skills like suturing, giving injections.	128(85%)	0(0%)	22(15%)
6.	Is early clinical exposure necessary from 1 <sup>st</sup> year MBBS.	98 (65%)	7(5%)	45(30%)
7.	Do you think the following components of Foundation Course (FC) should be incorporated in the curriculum.			
	a) Basic life support training	150(100%)	0(0%)	0(0%)
	b) Field/ health center visits	120(80%)	10(7%)	20(13%)
	c) Time management	143(95%)	3(2%)	4(3%)
	d) Stress management	150(100%)	0(0%)	0(0%)
	e) Language and communication skills	120(80%)	10(7%)	20(13%)
	f) Professionalism and ethics			
	g) Biomedical waste management	75(50%)	5(3%)	70(47%)
	h) IT/ computer skills	60(40%)	20(13%)	70(47%)
		60(40%)	10(7%)	80(53%)
8.	Is it necessary to incorporate ethics and communication (AETCOM) in students from 1 <sup>st</sup> year.	90(60%)	15(10%)	45(30%)
9.	Should the topics be taught keeping alignment and integration in mind.	143(95%)	7(5%)	0(0%)
10.	Do you think skill based learning is more beneficial than theory classes.	123(85%)	8(5%)	19(10%)
11.	Do you think skill based learning can help to build a healthy doctor patient relationship.	113(75%)	30(20%)	7(5%)
12.	Should sports activities be included in the curriculum.	143(95%)	7(5%)	0(0%)
13.	Do you think self-directed learning (SDL) is beneficial.	53(35%)	23(15%)	74(50%)
14.	Do you think small group discussions (SGD) are of any benefit.	60(40%)	23(15%)	67(45%)
15.	Do you think demonstrate, observe, assist and perform (DOAP) has an edge over educational video in imparting clinical skills.	120(80%)	15(10%)	15(10%)
16.	Do you think alignment and integration results in repetitions of the same topic.	90(60%)	5(3%)	55(37%)

*Comments provided by medical students about CBME.*

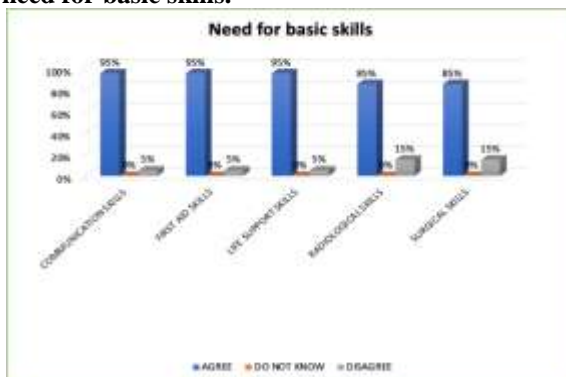
1. Proper implementation of CBME is lacking. Regulatory authorities need to work on it.
2. Division of a topic into various competencies has made syllabus elongated and tiring rather than elucidate and germane.
3. Students are of the view that teachers seem to be racing to complete the syllabus rather than focusing on delivering it at a pace understandable to the students.
4. AETCOM sessions are boring and unimportant.
5. In SDL most of the students are not confident enough to delineate the topic properly, which makes the session dull for the whole class.
6. SGDs get converted into interrogative viva rather than an interactive session.
7. Feedback taken from the students are not taken into account and thus not put into effect, so students think that these sessions are futile.

October to 1<sup>st</sup> November 2021 among 1<sup>st</sup> year MBBS students of 2020-2021 batch after obtaining clearance from Institutional Ethical Committee. Total 180 second phase MBBS students were included in our study. We conducted this study with the aim to know the perception of MBBS students about the newly incorporated Community Based Medical Education (CBME) curriculum.

**Figure 2. Showing perception of students towards exposure to simulation lab.**



**Figure 3. Showing perception of students towards need for basic skills.**



Various components were included in the questionnaire and feedback was taken from each student. Our questionnaire was prepared based on earlier studies. CBME is a new concept for the students and various new elements have been added to it to revamp the old traditional way of teaching. Educationists across the globe agree that there is a need of shift from teacher centric to student centric teaching. [19] As shown in table no 1, most of the students (75%) agreed that there is a need for change in traditional method of teaching. Similar results were obtained in a study done by Adarsha et al. [20] Majority students welcomed the practice of dividing a bigger topic into multiple small competencies (70%). According to them it has simplified teaching and improved learning. In CBME competencies relevant to the priority health care needs of the people are included. [21] MBBS students are now taught various clinical skills like giving I.V injections, I.V infusions etc. which they were not taught before. Even (90%) students agreed that skill-based learning should be included from 1st year. Around (95%) of students were of the notion that communication skills should be introduced from the beginning of the curriculum. So far medical students have been learning to communicate with patients by watching or copying their seniors without getting any formal training to acquire good communication skills. This no doubt is a very good initiative to introduce this paramount skill from the beginning of the course. Same results (responses) were seen for first aid, life support, radiological and surgical skills. Many students (65%) were of the opinion that early clinical exposure should be incorporated from the 1<sup>st</sup> year itself as it acclimatizes the students with the hospital environment and gives them an opportunity to interact with the patients. This introduces compassion and professionalism in students. Most of the students in our study welcomed the introduction of many

components of the foundation course. Medical students experience extreme psychological stress due to several examinations. [22-24] (100%) students agreed that basic life support training and stress management should be included in their course. Some students were of the notion that sessions on stress management should be conducted throughout the course. Many suggested (80%) that field visits in the beginning will be very useful in understanding the functioning of health care system. Although computer technology is immensely used in every aspect of education but sessions to foster the same were not much welcomed by the students (40%). The reason for the same can be that they have already acquired basic computer skills in their schools and auxiliary skills for the same can be self-learned. There was an overall average response for AETCOM sessions. Only 60% agreed that they are beneficial and should be incorporated in the curriculum. Some pilot studies have been done which explained the role of training for communication skills. [25, 26] There was a strong positive response (95%) for teaching while keeping making it simple and easily understandable. There were negative reviews about AETCOM, SDL and SGDs. They also said that feedback taken from them are not taken into consideration and thus not used to revamp this newly introduced program.

#### CONCLUSION

There are three subjects on which the knowledge of medical profession in general is woefully weak: they are manners, morals and medicine – *Gerald Lieberman*.

The must needed changes incorporated in the old curriculum have many advantages and are an improvement on the older version of 1997. The ultimate recipients of CBME are the students going to be future doctors, so understanding their perception regarding this paramount change is very necessary. Hence our study focused on understanding the student's perspective about various components of this new curriculum. Most of the students agreed that the major changes incorporated in the new curriculum

integration of topics into consideration. It is recommended by the new curriculum that at least 80% of the topics should be temporally aligned. [27] In our study 60% students opined that alignment and integration leads to repetition of the same topic. To our surprise taking about SDL and SGD most of the students 50%, 45% respectively did not admire these two modes of teaching and learning. Many said that these were time consuming and not properly followed. We think students need to be properly familiarized to perceive these two modules of learning positively. Majority students 80% welcomed the introduction of DOAP as a means of imparting clinical skills.

We also noted down some comments from students regarding CBME. Most of them said that CBME is not being properly implemented as of now. Regulatory authorities need to make sure that proper sensitization has taken place among students and teachers need to be appropriately trained for proper implementation of the same. They said teachers seem to rush through the topics for completion rather than

were need of the hour but when asked about few components like SDL, AETCOM, SGDs, computer skills etc. the response was not welcoming. Old medical curriculum was stressing more on instructive lectures which needed to be changed if we wanted a better health care outcome. Medical education should be framed and conducted in a way so that the new doctors are clinically more competent rather than just having mugged up knowledge.

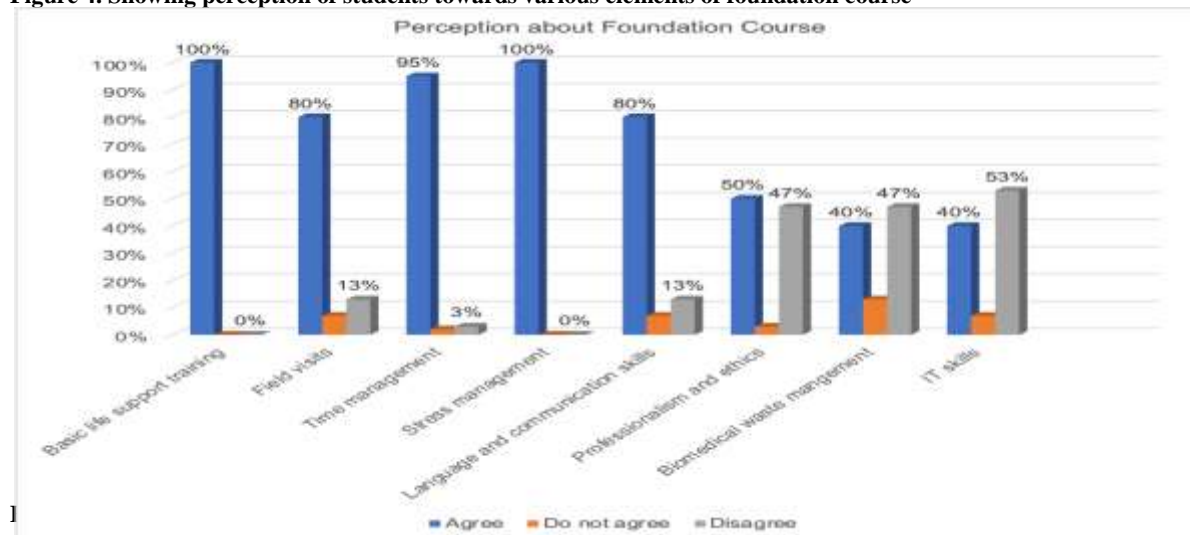
#### LIMITATIONS

1. Only responses to questions in questionnaire were noted down and we did not dig deep to get detailed perspective of the student.
2. Since this curriculum is still in its infancy some students were not fully aware about CBME and it was clearly evident from the poor responses we received from them.

#### CONFLICT OF INTEREST

There is no conflict of interest among authors.

**Figure 4. Showing perception of students towards various elements of foundation course**



## AETCOM sessions

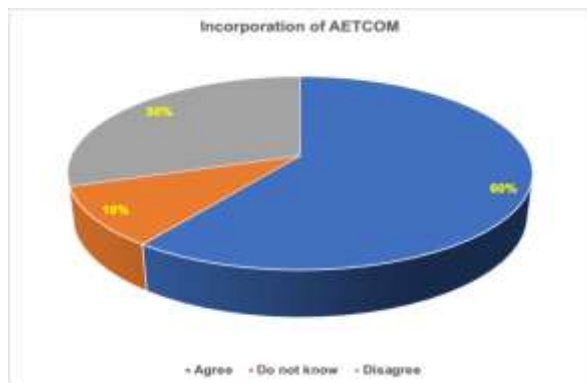
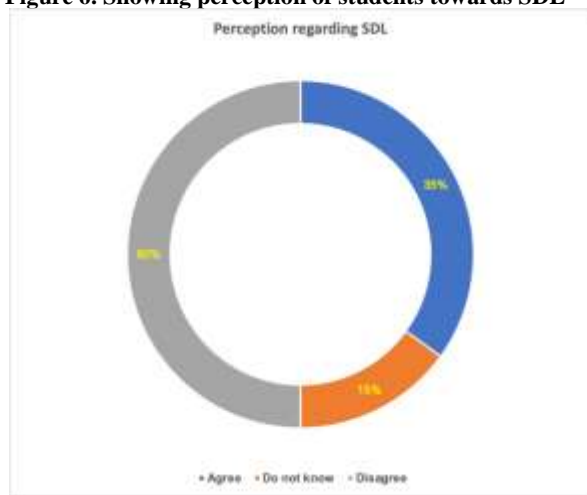


Figure 6. Showing perception of students towards SDL



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