

ATTITUDE AND ISSUES FACED BY MEDICAL STUDENTS WITH THE NEW COMPETENCY BASED MEDICAL EDUCATION CURRICULUM: LEARNER'S PERSPECTIVE

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Abstract

Background: Competency Based Medical Education (CBME) was introduced by National Medical Commission (NMC) in the academic year 2019-20 as an approach to ensure that the graduates attain competencies required to discharge their professional duties as healthcare personnel. For a relatively new curriculum, there are little studies focussing on the attitude and issues faced by the medical students. Hence this study was done to assess the attitude of medical students and issues faced by them towards the CBME curriculum. **Materials and Methods:** A cross-sectional study was conducted using pre-tested, semi-structured questionnaire among Phase I, II, III medical students of a government medical institution in Manipur. Descriptive statistics like mean and percentages and analytical statistics like Chi-square and ANOVA and Tukey's post-hoc test were used. A p-value of < 0.05 taken as significant. Approval of the Institutional Ethics Committee was obtained for the study. **Results:** Out of 272 respondents, around half (139, 51.1%) were female. Majority of the respondents (204, 75%) stated that the frequency of exams is stressful while nearly half (129, 47.4%) stated they have benefitted from frequent examinations. Majority of the respondents (232, 85.3%) stated that their schedule have become more hectic and more than half (170, 62.5%) had health issues due to exam tension. A one-way ANOVA revealed that there was a statistically significant difference in study hours per day, hours spent on recreation per day and writing log book among the three phases. Tukey's HSD Test for multiple comparisons found that the mean value of hours spent per week in writing log book was significantly different between CBME phase I and phase II (p < 0.026). **Conclusion:** CBME curriculum is found to be stressful and hectic by most of the students. Majority of the participants had health issues and difficulties with time management. Extracurricular activities like sports, yoga, and meditation classes can be organized from time to time to de-stress the students.

INTRODUCTION

Medical Council of India (MCI),^[1] the apex body on medical education in their 2011 document 'Vision 2015' and again in the new Graduate Medical Education regulations 2012.^[2,3] have stressed the need for restructuring the undergraduate medical education with a programme designed to create an Indian Medical Graduate.^[4]

Competency based medical education (CBME) is an effective strategy to ensure that the graduates attain the competencies required to discharge their professional duties as health care personnel.^[5] The curriculum is outcome-based and learner-centric unlike the traditional structured (TS) teaching followed in most of the medical schools.^[6] In CBME a learner is expected to learn a set of competencies integrating multiple domains of

knowledge, skills, attitudes and communication within the cultural and social contexts.^[7,8] It focuses on affective and cognitive domains and inculcates leadership qualities amongst competent clinicians.^[4] Alignment and integration among different disciplines is one of the core strategies in implementing the new curriculum.^[9,10] New curricular elements include the foundation course, early clinical exposure, attitudes, ethics and communication (AETCOM), elective postings, alignment and integration, clinical clerkships, and more. Incorporation of structured feedback, maintenance of log books are other notable features of the CBME.^[9,11]

New educational roles of the young medical aspirants: instead of passive listening, students must take personal responsibility for learning by adopting self directed learning (SDL) methods (library/on line access), performing under observation in skills, laboratory and encountering real and simulated patients. The learner must demonstrate and document the evidence of acquisition of competency.^[12] A total of five core competencies have been identified in CBME in the Indian set-up, namely clinician, communicator, leader and member of the healthcare team, lifelong learner, and professionalism.^[13,14]

In India, under the guidelines of NMC, competency-based Undergraduate Curriculum has been implemented since August 2019. In the context of Manipur, CBME curriculum has been implemented in the medical colleges since August 2019 MBBS batch, beginning with foundation course.

There are only handful of studies focusing on the attitudes of the students towards this fairly new CBME curriculum. Therefore, this study will be conducted to explore the attitude and issues faced by medical students with the CBME curriculum.

MATERIALS AND METHODS

A cross-sectional study was conducted among the CBME batch medical students of a government tertiary care hospital and teaching institution in Manipur from September to December 2022. As per records obtained from Dean's office, there were a total of 299 MBBS students of CBME Phase I, II and III (Part-I). Those students who consented were included in the study. Students who could not be contacted up to two attempts or refused to participate were excluded from the study.

Study tool comprises of pre-tested, semi-structured questionnaires comprising of four domains: 1) Socio demographic profile: like age, gender, address, religion, and phase. 2) Attitude on: frequency of exam, log book maintenance, end of posting exam, adaptation to the new CBME curriculum, AETCOM, class hour distribution which was rated on Likert's 5-point scale ranging from: Strongly disagree, disagree, neutral, agree and strongly agree. 3) Stress related questions like: trouble falling

asleep due to exam tension, worry about failing phase exams, etc. in the last six months were asked. 4) Questions related to Time management like: number of hours per day spent in study, number of hours per day spent in recreation or leisure activities etc.

Collection Procedure

After taking informed consent from the eligible participants, information was collected by using Google forms using the semi-structured questionnaire.

Statistical Analysis

Data collected through Google form was retrieved using MS Excel spreadsheet and transferred to IBM SPSS version 20. Descriptive statistics like mean, standard deviation (SD), percentages and proportions were used. ANOVA test and Tukey's Post hoc test were used to find association between variables of interest. A p value of < 0.05 was taken to be significant.

Ethical Clearance

Ethical clearance for protocol No.381/75/2022 was taken from the Institutional Ethics Committee of the institution. Strict privacy and confidentiality were maintained for all collected data.

RESULTS

Out of the total 299 eligible participants, 272 (90.96%) responded. The mean \pm SD age of was 21.9 ± 1.74 years with females (139) constituting 51.1%. Around one-third of the participants (100, 36.8%) were from Phase III (Part I). More than half (155, 57%) of the respondents belong to urban area and majority of them (105, 38.6%) belong to Hindu religion. [Table 1].

Around three-fourth of the respondents (204, 75%) strongly agreed and agreed that the frequency of exams is stressful while almost half 129 (47.4%) strongly agreed and agreed that they are benefitted from frequent exams. Majority of the respondents 230 (84.6%) disagreed and strongly disagreed that they are able to manage time efficiently writing logbooks side by side with weekly exam preparation. More than half 164 (53%) strongly agreed and agreed that foundation course was useful and majority (221, 81.2 %) strongly agreed and agreed that AETCOM classes are useful. [Table 2].

Nearly all of the respondents 268 (98.5%) worry about failing phase exams, 255 (93.8%) find it difficult to concentrate, 228 (83.8%) find trouble falling sleep due to exam tension, 170 (62.5%) have health issues due to exam tension whereas only 51 (18.8%) take medications to reduce stress. [Table 3]. Phase I students spent the maximum hours per day on study (3.45 ± 1.35 hours). They also spent the maximum hours per day on screen for reading academic materials (3.46 ± 4.65 hours). Phase II students spent the maximum hour per week in writing log book (8.76 ± 9.61 hours). [Table 4]. A one-way ANOVA revealed that there was a

statistically significant difference in study hours per day, hours spent on recreation per day and writing log book among the three phases. Tukey's HSD Test for multiple comparisons found that the mean value of hours spent on studying per day was significantly different among all the different CBME phases and also for mean value of hours spent per day on screen reading academic materials. Tukey's HSD Test for multiple comparisons found that the mean value of hours spent per week in writing log book was significantly different between CBME phase I and phase II ($p < 0.026$).

Some of the common health problems CBME students have in relation to their academic workload are headache, stress, insomnia, palpitation, hair-fall, gastritis, feeling exhausted at the end of the day, irregular menstruation etc.

Suggestions given by CBME students on ways to improve the CBME curriculum are: 'More classes to be allotted for the main subjects of each phase', 'to give sufficient gap/off between each paper during exam' "to focus more on the phase wise subjects rather than other subjects during each CBME phase".

Table 1: Socio-demographic characteristics of the respondents (N = 272)

Characteristics	N (%)
Gender	
Male	133 (48.9%)
Female	139 (51.1%)
Age (Completed Year)	
18 – 20	52 (19.1%)
21 – 23	169 (62.1%)
24 – 26	51 (18.8%)
Phase	
I	86 (31.6%)
II	86 (31.6%)
III (Part I)	100 (36.8%)
Residence	
Rural	
Urban	155 (57%)
Religion	
Hindu	
Christian	
Islam	105 (38.6%)
Sanamahism	81 (29.8%)
Others	17 (6.3%)
	56 (20.6%)
	13 (4.8%)

Table 2: Attitude of CBME students on the CBME curriculum (N=272)

Questions on	Strongly agree n (%)	Agree n (%)	Neutral n (%)	Disagree n (%)	Strongly disagree n (%)
Frequency of exam is stressful	79 (29%)	125 (46%)	50 (18.4%)	10 (3.7%)	8 (2.9%)
Benefitted from frequent exam	13 (4.8%)	116 (42.6%)	82 (30.1%)	38 (14%)	23 (8.5%)
Advantageous to give exams apart from respective phase subjects	5 (1.8%)	93 (34.2%)	64 (23.5%)	67 (24.6%)	43 (15.8%)
Able to manage time efficiently writing logbooks side by side with weekly exam preparation	1 (4%)	13 (4.5%)	28 (10.3%)	131 (48.2%)	99 (36.4%)
Maintaining logbook is helpful	0 (0%)	66 (24.3%)	95 (34.9%)	73 (26.8%)	38 (14%)
EOP exams after every clinical posting or part completion is helpful	18 (6.6%)	145 (53.3%)	67 (24.6%)	23 (8.5%)	19 (7.0%)
Our schedules have become more hectic	102 (37.5%)	130 (47.8%)	30 (11%)	8 (2.9%)	2 (0.7%)
Able to adapt to CBME curriculum	3 (1.1%)	42 (15.4%)	109 (40.1%)	87 (32%)	31 (11.4%)
Foundation course was useful	13 (4.5%)	132 (48.5%)	78 (28.7%)	32 (11.8%)	17 (6.3%)
AETCOM classes are useful	36 (13.2%)	185 (68%)	32 (11.8%)	13 (4.8%)	6 (2.2%)

Table 3: Stress issues faced by CBME students (N=272)

Questions on	Yes n (%)	No n (%)
Worry about failing phase exams	268 (98.5%)	4 (1.5%)
Difficult to concentrate even if there is lots of things to do	255 (93.8%)	17 (6.3%)
Have many things to do but do not have enough time	254 (93.4%)	18 (6.6%)
Feel pressured to get things done	254 (93.4%)	18 (6.6%)

Trouble falling asleep due to exam tension	228 (83.8%)	44 (16.2%)
Get satisfaction from small joys or simple pleasures of life	202 (74.3%)	70 (25.7%)
Have health issues due to exam tension	170 (62.5%)	102 (37.5%)
Take medications to reduce tension	51 (18.8%)	221 (81.3%)

Table 4: Comparison between different phases based on time management (N=272)

Hours spent on Mean± SD	CBME PHASES			F value	P value
	I	II	III		
Studying (per day)	3.45±1.35	2.90±1.32	2.40±1.07	16.639	0.001
Screen reading academic materials (per day)	3.46±4.65	3.08±3.00	1.91±1.49	5.703	0.004
Recreation (per day)	2.00±1.92	1.80±1.34	1.81±1.44	0.438	0.646
Writing log book (per week)	5.84±5.98	8.76±9.61	6.44±6.00	3.834	0.026*

*Test applied - A one-way ANOVA & Tukey's HSD Test

DISCUSSION

The current study was conducted to access the attitude of medical students towards the new CBME curriculum and to explore the issues faced by medical students. A total of 272 students participated in our study with a mean age of 21.9 ± 1.74 years from Phase I, II, and III (part I).

In our study, 29% strongly agreed and 46% of the students agreed that the frequency of the exams was stressful and it could be because of frequently conducted internal assessment exams and end of posting exams of other phase subjects which they find difficult to cope with. Similarly, findings can be seen in a study by Ramanathan et al.^[18] where a majority of their study participants experienced psychological morbidity in medical education due to several examinations. Among the respondents, 26.8% disagreed and 14% strongly disagreed that maintaining logbook is helpful as compared to the study conducted by Ramanathan et al.^[18] where 19.2% disagreed and 25.5% strongly disagreed that it is possible to maintain a separate logbook for each department. It may be due to students lacking an idea of the benefits of maintaining a log book with some of the students even responding that maintaining a log book for each department was expensive. Among the respondents, 32% of the respondents disagreed and 11.4% of the respondents strongly disagreed that they are able to adapt to the CBME curriculum. Ramanathan et al.^[18] found that more than 80% felt that the first year curriculum is too stressful.

Among the respondents, 4.5% and 48.5% strongly agreed and agreed that foundation course was useful respectively as compared to a study conducted by Raveendra et al.^[18] where a majority of the respondents 39.2% and 40.8% agreed and strongly agreed that the foundation course was interesting and useful respectively. Similarly, Dabas et al.^[19] reported positive feedback with an average score of 3.9 out of 5 for the overall feedback on the course. This could be because foundation course orients them to all aspects of the medical college environment and medical profession.

Among the respondents, 13.2 % strongly agreed and 68% agreed that AETCOM classes are useful. Similar findings can be seen from a study conducted

by Ramanathan et al.^[18] where three fourth of the participants agreed that AETCOM training must start from Phase I MBBS itself. The majority of the participants (79%) have a positive attitude toward AETCOM. It may be because AETCOM are addressed in the roles of an Indian Medical Graduate in order to make him responsible and accountable to patients, community and profession.

In our study, Phase I spent the maximum hours on recreation per day with Mean ± SD of 2.00 ± 1.92 hours. In a study conducted by Ramanathan et al.^[18] 62% strongly agreed and 23% agreed that there should be some time for sports activities during weekdays. This may be because although NMC's new curriculum has given directions for activities like sports, we need to focus on how many hours are allocated for sports related activities. In our study, 62.5% of the respondents have health issues due to exam tension. Some of the health issues to be mentioned are headache, stress, tension, anxiety, hypertension, and irregular menstruation. While in a study conducted by Goel et al.^[20] CBME system made a significant impact on the mental health of undergraduate medical students for anxiety, although its effect on depression and stress remained equivocal and more studies need to be done in this issue.

The limitations of our study is that all responses are self-reported and we were not able to directly observe the time spent for various activities. The health problems of the respondents as reported may or may not be related to the new CBME curriculum and the diseases might be due to some underlying health problems of the respondents themselves. More studies need to be done regarding stress issues faced by the students. The strength of this study is that it gave room to the students to give suggestions on ways to improve CBME curriculum.

CONCLUSION

CBME curriculum is found to be stressful and hectic by most of the students. Majority of the participants had health issues and difficulties with time management. Extracurricular activities like sports, yoga, and meditation classes can be organized from time to time to destress the students.

Conflict of Interest: Nil.

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REFERENCES

1. Medical Council of India. Regulations on Graduate Medical Education 1997. Available from: <http://www.mciindia.org/Regulations1997.aspx>. [Accessed 2.12.2022]
2. Modi JN, Gupta P, Singh T. Competency-based medical education, entrustment and assessment. *Indian Pediatr*. 2015;52(5):413–20.
3. Medical Council of India. Vision 2015. New Delhi: Medical Council of India; 2011. Available from: http://www.mciindia.org/tools/announcement/MCI_booklet [Accessed 30.12.2022]
4. Pandit S, Thomas MR, Banerjee A, Angadi M, Kumar S, Tandon A, et al. A crossover comparative study to assess efficacy of competency based medical education (CBME) and the traditional structured (TS) method in selected competencies of living anatomy of first year MBBS curriculum: A pilot study. *Med J Armed Forces India*. 2018 Jul 1;75(3):259-65.
5. Ramanathan R, Shanmugam J, Gopalakrishna SM, Palanisami K, Narayanan S. Exploring the learners' perspectives on competency-based medical education. *J Edu Health Promot*. 2021;10:109-14.
6. Carraccio C, Wolfsthal SD, Englander R, Ferentz K, Martin C. Shifting paradigms: from Flexner to competencies. *Acad Med*. 2002;77:361–7.
7. Gruppen LD, Mangrulkar RS, Kolars JC. The promise of competency-based education in the health professions for improving global health. *Hum Resour Health*. 2012;10:43-47.
8. Fleming D. The concept of meta-competence. *Compet Assess*. 1993;22:6–9.
9. Medical Council of India, Competency based Undergraduate curriculum for the Indian Medical Graduate. Vol. 1. New Delhi, Medical Council of India; 2018 [Accessed 2.12.2022]
10. Medical Council of India, Competency based Undergraduate curriculum for the Indian Medical Graduate. Vol. 3. New Delhi, Medical Council of India; 2018. [Accessed 2.12.2022]
11. Medical Council of India. Alignment and Integration Module for Undergraduate Medical Education Program. New Delhi, Medical Council of India; 2019. p. 1- 34. [Accessed 2.12.2022]
12. Chacko TV. Moving toward competency- based education: Challenges and the way forward. *Arch Med Health Sci* 2014;2:247- 53.
13. Shah N, Desai C, Jorwekar G. Competency-based medical education: an overview and application in pharmacology. *Indian J Pharmacol* 2016;48(Suppl 1):S5–9.
14. Touchie C, Cate O. The promise, perils, problems and progress of competency-based medical education. *Med Educ* 2016;50:93–100.
15. Shrivastava SR, Shrivastava PS. Qualitative study to identify the perception and challenges faced by the faculty of community medicine in the implementation of competency-based medical education for postgraduate students. *Fam Med Community Health*. 2019;7:e000043. doi:10.1136/ fmch-2018-000043
16. Bhutani N, Arora D, Bhutani N. A comparison of effectiveness of interactive methods over traditional methods in teaching biochemistry to undergraduate medical students. *Int J Recent Innov Med Clin Res*. 2020;2:57-63.
17. Siddanagoudra S, Doyizode AR, Herlekar SS. Faculty perspectives on introduction of competency-based medical education curriculum. *BLDE Univ J Health Sci* 2022;7:147-50.
18. Raveendra L, Tikare SN, Dandage S. Foundation Course conducted under the new CBME curriculum of Indian Medical Council: Analysis of students' perspective in South Indian Medical Institutions. *Medica*. 2022 Jul;11(2):24-29.
19. Dabas A, Verma D, Kumar D, Mishra D. Undergraduate Medical Students' Experience with Foundation Course at a Public Medical College in India. *Indian Pediatr* 2020; 57(3):261-3.
20. Goel A, Sethi Y, Moinuddin A, Deepak D, Gupta P. Competency-based medical education (CBME) curriculum and its effect on prevalence of anxiety, depression and stress amongst medical undergraduates. *J Edu Health Promot* 2022;1:11-15.