

Original Research Article

Evaluating the effectiveness of curriculum implementation and supplementation program in a private medical college in south India

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ABSTRACT

Background: The new competency based medical curriculum was introduced in India from 2019. The curriculum implementation support program (CISP) developed by medical council of India, provides the much-needed intellectual support to colleges for smooth transition from existing to the new curriculum. This study was done to assess the effectiveness of CISP program by comparing the pretest and posttest questionnaire.

Methods: This retrospective cross-sectional study was conducted among 30 medical teachers in a medical college after getting Institutional Ethical committee clearance. During the CISP training program, a structured and validated questionnaire were administered, and it was evaluated and compared before and after the workshop.

Results: There was a significant improvement in the knowledge of electives, meaning of curriculum, knowledge on curriculum delivery process, knowledge concepts of Miller's pyramid, hardens integration ladder, GMER and the concepts of SLO. Though there is a significant improvement, the knowledge gained on foundation course, Miller's pyramid and GMER are still poor (mean score <0.7).

Conclusions: The CISP program serves as an effective program to bridge the inadequacies of the teaching faculty regarding the implementation of the new CBME curriculum. But not just one session will tide over all the antiquities. A repeated longitudinal structured program in between the academic hours for a short duration will be effective in improving the teaching skills of the medical teachers.

Keywords: Alignment, CBME, CISP, Integration

INTRODUCTION

Teaching is a very complex skill and art. It requires eagerness, self-discipline, hard-work, practice, and feedback to make sure that you are on the right track. Even those endowed with inherent talent, must undergo training to improve their performance.¹ The concept of training in medical education in India had started in the late seventies. In 1999, the medical council of India insisted every medical college to have a Medical

Education Unit and in 2010, made it mandatory, for every medical professional to undergo at least the basic level of training.² Teaching facilitates learning and encourages the learners to learn in a better way. The purpose of teaching is not merely dispensing information, but to develop skills and attitude also. In recent years, with the use of new teaching and learning methods, the focus of assessment has been shifted to the use of higher cognitive abilities, communication skills, IT skills and professionalism. Focus has shifted towards competency-based education

from the traditional outcome-based education.³ The new teaching programme comprises of many newer aspects of teaching and learning methods, and assessment (formative and summative assessment) which are appropriate for the current modern medical education scenario.^{4,5}

The new curriculum based medical education program was introduced in India from 2019. The curriculum implementation support program (CISP) was developed by medical council of India for the smooth implementation of the CBME program, provides the much needed intellectual support to colleges for smooth transition from existing to the new curriculum.⁶ As part of the roadmap to the curricular roll out, a nationwide curriculum implementation support program is being cascaded in a “train the trainer format”. The key players in CISP are the faculty of medical education department of regional and nodal centers to which all colleges are attached. The novel components of the new curriculum are Foundation course, early clinical exposure (ECE), attitude ethics and communication (AETCOM), integrated teaching and skill training.⁷⁻⁹ Though MCI has provided broad framework, it is not possible to bring complete uniformity in the implementation of the foresaid in a vast country like India. Appropriate refinements at a local level are needed to suit their needs keeping the broad framework intact.

All nodal and regional centers are conducting workshops for all MEU unit coordinators and curriculum committee members of the colleges under their charge for faculty development program (FDP). CISP helps the MEU team to understand new curriculum- in terms of its aims, structure, content, processes, and flexibilities and acquire knowledge and skills for implementation of new curriculum and curriculum evaluation. CISP enables the faculty to understand the changes in assessment proposed in CBME. At a student level, the curriculum requires greater commitment, shared responsibility, self-directed and ongoing learning.

So there arises a need to conduct training workshop for medical faculty, to mentor and support them to implement new curriculum at their respective colleges. Mere conduction of programs like CISP will not serve the purpose, it requires stakeholder commitment and involvement. Faculty would be required to learn, unlearn, relearn, adapt, innovate and implement the newly acquired skills in their respective departments.

This study was undertaken to assess the effectiveness of CISP program by comparing the pretest and posttest questionnaire done by the faculty who attended the program.

Aim and objective

This study was conducted to assess the effectiveness of CISP program by comparing the pretest and posttest questionnaire.

METHODS

This retrospective cross-sectional study was conducted during October 2020 to December 2020 among 30 medical teachers in a medical college in western Tamil Nadu after getting Institutional Ethical committee clearance. The research question being the first of its kind, we did not compute sample size; however, we ensured complete enumeration of all participants in CISP training program. During the CISP training program, a structured and validated questionnaire were administered to all the thirty participants before and after the CISP.

The participants willing to participate in the study and completing the questionnaire were included. The questionnaire was evaluated on a score basis and was compared before and after the workshop.

Statistical analysis

Paired Student's t-test will be used for comparing pre- and post-test scores while unpaired Student's t-test was used for comparing the perceptions of male and female faculty and p values were calculated using SPSS 27. $P < 0.05$ was considered as significant.

RESULTS

This retrospective study was done among the participants of the CISP workshop. There was a significant improvement in posttest answers for most of the questions. Most of the staff were aware about the role of an Indian medical graduate, ECE, teaching clinical reasoning skills even prior to the CISP. At the end of the three days program, all were aware of it. There was a significant improvement in the knowledge of electives (from a mean score of 0.52 to 0.89), meaning of curriculum (0.33 to 0.7), knowledge on curriculum delivery process (0.22 to 0.7), knowledge concepts of Miller's pyramid (0.22 to 0.67), hardens integration ladder (0.55 to 0.76), GMER (0.19 to 0.63) and the concepts of SLO (0.51 to 0.91). All the faculty were clear about the student doctor learning program even before the start of the study.

Though there is a significant improvement, the knowledge gained on foundation course, Miller's pyramid and GMER are still poor (mean score < 0.7).

Table 1: Results of the study.

Knowledge		M	SD	MD	T-value	P value
Role of an Indian Medical Graduate	Pre	0.85	0.362	0.148	-2.126	0.038

Continued.

Knowledge		M	SD	MD	T-value	P value
	Post	1.00	0.000			
Electives	Pre	0.52	0.509	0.370	-3.199	0.002
	Post	0.89	0.320			
Meaning of curriculum	Pre	0.33	0.480	0.370	-2.878	0.006
	Post	0.70	0.465			
Knowledge on curriculum delivery process	Pre	0.22	0.424	0.480	-3.913	0.001
	Post	0.70	0.267			
Foundation course	Pre	0.30	0.465	.0259	-1.959	0.055
	Post	0.56	0.506			
Early clinical exposure	Pre	0.85	0.362	0.148	-2.126	0.038
	Post	1.00	0.000			
Goals of a student doctor learning program	Pre	1.00	0.000	0.000	-	-
	Post	1.00	0.000			
Teaching clinical reasoning skills	Pre	0.93	0.267	0.074	-1.442	0.155
	Post	1.00	0.000			
Knowledge on concepts of Millers pyramid	Pre	0.22	0.424	0.106	-2.774	0.008
	Post	0.67	0.480			
Knowledge on concepts of hardens integration ladder	Pre	0.55	0.21	0.21	-4.113	0.001
	Post	0.76	0.17			
GMER 2019	Pre	0.19	0.396	0.444	-3.657	0.001
	Post	0.63	0.492			
Knowledge on concepts of SLO	Pre	0.51	0.27	0.4	-7.653	0.0011
	Post	0.91	0.06			

DISCUSSION

The idea of conducting medical education is to train graduates to take care of the health requirements of society efficiently. The current medical education system is based on a subject-centred and time-grounded course. Utmost evaluations are summative, with the little occasion for feedback. The instruction–education conditioning and the assessment styles concentrate more on knowledge than on attitude and skills.¹⁰ Hence, graduates may have extraordinary knowledge but may warrant the introductory clinical experience needed in practice. In addition, they may also warrant soft skills related to communication, doctor-patient relationship, ethics, and professionalism. Competency-based medical education (CBME) tries to address these problems by having competencies which focus on teaching-learning methods and assessments which are more formative than summative.⁷ The medical students would complete the competency, and if not found satisfactory by the faculty, they can do the competency again to achieve their best. Hence, the results of the current study are significant as there is no current literature available online on similar research; hence, it is a very novel research finding.

The role of IMG, knowledge of ECE, Knowledge of teaching clinical reasoning skills and the goals of the student doctor learning program has a post-test score of 1, signifying that all the participants have understood. In understanding the concepts of electives, and SLO, the post-session score is around 0.9.⁹

In understanding the curriculum and its delivery process, the score is around 0.7. The knowledge gained on the foundation course, Miller's pyramid and GMER are less than 0.7.¹¹ This clearly signifies that although many faculties have improved in a few concepts of the new CISP curriculum, a few faculties are still unclear in the new concepts. Especially recent additions like the foundation course, GMER and millers pyramid needs particular concern. We need all the medical teaching fraternity to be well versed in all the concepts of CBME to make the medico a competent physician. Repeated small teaching sessions between the curricular phase for a single concept at regular intervals to reinforce the concepts must be conducted among the teaching faculty to sort this issue.

Strengths and limitations

To the best of our knowledge, there is no available published literature so far on this topic and this is the first of its kind.

This is the report of a single centre study and the results from multicentric study will still throw light upon the exact picture all over the country.

CONCLUSION

The CISP program serves as a effective program to bridge the inadequacies of the teaching faculty regarding the implementation of the new CBME curriculum. But not just one session will tide over all the antiquities. A

repeated longitudinal structured program in between the academic hours for a short duration will be effective in improving the teaching skills of the medical teachers.

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Conflict of interest: None declared

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