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Assessing the impact of foundation course among medical students affecting their outlook, responsibilities and attitude towards the medical profession

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Abstracts--Background: The medical education programme apart from imparting knowledge has prepare the medical graduate to appraise oneself with the evolving new evidences for appropriate care of the patient considering the health care needs of the patient population, focusing on assessing the performance (outcomes), learner's continuous quality improvement and making it learner driven. The universities across the world are developing and implementing orientation programmes to further strengthen medical education. Objective: To evaluate the student's perception towards the contents of the foundation course as well as its relevance in their day to day academic activities. Methods: A cross sectional study was conducted among all the students of our institute. The feedback data for the foundation course was collected from the first years after six months along with the students across the years in medical school, as they had undergone only one day orientation programme. Results: About 457 students participated in the study of which 94 belonged to the first MBBS. About 90% of the students agreed with concept of the foundation course and about 85% of senior students felt the need for

the same. However, they were not receptive to topics such as comprehensive and integrative approach to subjects (28.7%), development of rapport with teaching faculty (25.5%), need for time and stress management (35.1%), need for peer assisted learning and group dynamics (26.6%) and need for importance to physical activity to be part of their daily routine (24.5%) to be a part of foundation course. Conclusion: The implementation of the foundation course will help in shaping the medical education towards the achievement of the desired outcomes like from the Indian medical graduate. The paradigm shift in understanding the health care needs of the patient, focusing on the competencies, continuous self directed learning and professional ethics.

Keywords--foundation course, curriculum, professionalism, competencies.

Background

Medicine is a profession that requires high standards of behaviour and appropriate attitudes, understanding of a large body of knowledge, acquisition of clinical skills and proficient in communicating across the various sections of the society. Medical education programme needs to provide knowledge which is evolving with new evidences for appropriate care of the patient considering the health care needs of the patient population, focusing on assessing the performance (outcomes), learner's continuous quality improvement and making it learner driven.¹ Medical education has undergone changes from time to time and worldwide colleges and universities are updating their curriculum and conducting orientation programme for the students to acclimatize them to the college environment and teaching programmes which will help them to adjust for the challenges in the undergraduate curriculum from high school.²

The Global Minimum Essential Requirements (GMER) defined by the institutes of International Medical Educations (IIME) New York has grouped the educational domains into seven broad areas. They are- 1. Professional values, attitudes, behaviour and ethics 2. Scientific foundation of medicine 3. Clinical skills 4. Communication skills 5. Health schemes, 6. Management of information 7. Critical thinking and research.³ Globally there is a felt need for implementation of competency based medical education (CBME) proposed for nearly 50 years now, based on Hardens Concept of curriculum which focuses on outcomes and abilities while de-emphasis on the time-based training and promotion of learner centeredness.⁴

Need for the Study

The MCI has revised undergraduate medical education curriculum such that the Indian Medical Graduate is able to recognise "Health for All" as a national goal and fulfil his/her social obligations towards its achievement. The revised curriculum has been implemented in all the medical colleges in India since August 2019.⁵ The course begins with the objective to orient the students to

national health scenario, medical ethics, health economics, learning skills, communication skills, basic life support, computer skills, sociology and demographics, biohazard safety, environmental issues, community orientation and time management spread over a month time, namely the foundation course.⁵ After implementation of Competency Based Medical Education (CBME) by MCI for the batch 2019-2020 with a foundation course for one month duration there are no documented studies on the same. This prompted our institute to conduct a study among the students for better understanding of the students perspective towards it. The feedback from the students will lead to improvisation of the foundation course and understanding their mindsets towards medicine.

Aim and Objective

After conducting the foundation course in our institute, this study aims to evaluate the student's perception towards the contents of the foundation course as well as its relevance in their day-to-day academic activities.

Material and Methods

The foundation course was designed and conducted for a month as per new MCI guidelines during August 2019 by the medical education unit (MEU) of the institution. The topics were selected according to the MCI regulations and faculty from various specialities (Anatomy to Anaesthesiology) as well as other relevant academicians (Language, Computers, Lawyer, Sociologist etc.) were involved in the programme as facilitators for the various interactive sessions. The previous batches of MBBS students had undergone one day orientation programme for the same. A cross sectional study was conducted among all the MBBS students (including interns). The data was collected in the form of feedback for the foundation course from the first years as well as from the students across the years in medical school. The study was conducted after six months of the initiation of the MBBS course for the academic year 2019. The feedback was a structured questionnaire where the responses were graded on a five-point Likert scale, ranging from strongly agree to strongly disagree.

The feedback was related to the topics and areas that were focused during the foundation course, as well as to evaluate whether the desired outcome as emphasized by MCI was achieved. Assessment of the students across the years in MBBS who were not exposed to such an elaborate foundation course programme was also carried out to understand their mental framework and to evaluate whether the same would have affected their academic performance and professional attitude.

Statistical Analysis

Data was entered into a Microsoft Excel 2007 version and analysed. Descriptive statistics like percentages were used for describing the demographic factors and categorical data. The chi-square test was applied to examine the differences in opinion regarding the foundation course among the medical students from various years in medical school. P-value of less than 0.05 was considered as statistically significant.

Results and Discussion

About 457 students participated in the study of which 94 belonged to the first MBBS and 363 {91(25.1%), 92 (25.3%), 79 (21.7%) and 101 (28%)} from the respective years of MBBS including the interns. The overall response rate for the study was 91.4%. The questionnaire was qualitatively analysed to understand the mindset and perception of the students towards the medical profession. The results and discussion of each component of the questionnaire is as follows:

Usefulness and need for Foundation Course

Majority (94%) of 1st year students appreciated the role of foundation course for providing an insight into field of medicine. Most (87%) of the senior students expressed that they needed proper insight into the field of medicine before the start of the academic course, however, 23% among them did not feel the need for a foundation course. The goal of the foundation course is to prepare the students for a challenging profession which requires acquisition of not only knowledge related to core subjects but as well as skills, behaviour and attitudes, to adapt to the new professional environment to overcome the anxieties and build confidence and for a life-long career in the medical profession.^{6,7} Though providing orientation was a long pending initiative from late 1990s, this programme has made positive influence in adapting to the profession. The students coming from various regions, socio economic strata and different languages need some orientation for knowledge and skills and time management required for the medical profession.⁸

Responsibilities of Indian Medical Graduate

The intent of the foundation course is to provide an overview of the roles and responsibilities of a medical graduate with regards to current health needs and situation in India. Majority (95.8%) of 1st year students could understand the roles and responsibility of Indian medical graduate. Among senior students 77% felt that current curriculum makes them aware of the responsibilities of an India medical graduate and nearly a quarter (23%) felt the present methodology does not prepare them to understand their role as medical graduate. Sensitizing about the health care system of the country and health situation at the start of the course will help in evaluating the patients better during their clinical training and develop an holistic approach towards patient care considering the principle of primary health care and universal health care concepts.

Orientation to the campus and study environment

Adjustment as a whole is a prerequisite to any profession and thus facilitating the student to get acquainted to the campus and study environment is necessary. Majority (85.1%) of 1st year students appreciated that foundation course helped them in adjusting to the new environment that is both the learning as well as the campus. Majority (90.6%) of senior students expressed the need for formal familiarization with the various facilities available in the campus. Due to busy schedule of clinical posting and classes, the students will not be able to explore the hospital and will not even be aware of the facilities available in the hospital

and other accessory departments associated with patient care. Most students in the first year do not tend to explore the campus voluntarily either due to fear of ragging or there is no felt need to do so. The affective domain gets stimulated when they visit the patients in the wards and interact with them.

Importance of understanding the medical subject in a comprehensive way

Learning process is traditionally considered to be subject based however, the subjects have clear separation but still complement each other by and large in the medical education. Emphasizing a comprehensive approach by integrating the related topics across the course has been the motive behind the integrated teaching concept introduced with CBME implementation. Majority (71.2%) of 1st year students understood the importance of comprehensive learning in medicine. However, few (28.7%) were unable to appreciate the need for comprehensive learning. Majority (92.1%) of the senior students felt the need for integrated teaching to have a comprehensive understanding of the subjects.

The teaching in each phase is dissociative in nature as each subject have their specific objectives and priorities, however the current curriculum emphasises on acquiring prescribed competency (which is comprehensive) as the final outcome. As the students move further in the course feel the need for integrated approach. Also, the basic concepts are repeated by all the specialities which significantly increases the duration of teaching and repetition of the topic. The academic programme in medical school not only includes subject wise classroom teaching but also exposure to real time patients with application of the knowledge in treating a patient by integrating the various specialities like for example Anaemia – physiology, histology, biochemistry, pathology, internal medicine, pharmacology and community medicine. So as they move to final year they realize the need for integrated teaching. In our study, the senior students appreciated this integrated teaching method

Rapport with the faculty of all the departments from the beginning of the course

An effective learning environment is necessary for having interactive classes to make the learning process more efficient, thus the students should develop appropriate professional interpersonal relations with the teachers as well. The foundation course platform was utilised to allow the faculty from various departments to conduct sessions which helped them in building a rapport with them. Majority (68%) of the 1st year students agreed with the concept, however few(31.9%) felt it did not make any difference. Majority (76.6%) of senior students felt the need for knowing the faculty from various departments as they sometimes do not come in contact with certain faculty throughout the course. Building a rapport would improve their learning experience by breaking the barrier for effective interactive communication. However nearly a quarter of them were neutral to the concept of building a familiarity with the faculty from the beginning.

Understanding the health care delivery system

The essentiality of being an Indian medical graduate is to cater to the population of India, thus having an insight into the health delivery system prevailing in the country is necessary. Majority (95.8%) of the students felt they could understand the public health care system and inter sectoral coordination in health delivery. Most of the (88.1%) senior students appreciated the visit to public health care facilities and in understanding the health care delivery systems however, few (11.9%) of them still could not comprehend the role of public health care in patient care. When the students are acquitted with the healthcare system at the beginning, it will familiarise them towards the patients actual healthcare settings situation and in understanding the level of health care provided for appropriate management of the patient (accessibility & feasibility), understanding the common barriers encountered in providing appropriate patient care and the principles of primary health care and universal health care.

The study conducted by Ananth, revealed that familiarization with the health care system improved drastically after the orientation programme.⁹ The insight into the health care delivery system is equally important right from the beginning which enables them to provide patient care more emphatically. As providing treatment according to standard textbook description is not always possible. Understanding the intricacies in providing appropriate therapy may lead to some innovative ideas which might help patients especially in resource constrained settings.

Need for stress and time management

Any academic program has time constraints and is stressful especially the medical education. Therefore, appraising the students about need for time and stress management skills will improve the education outcomes. Among the first-year students only about 56.7% felt the need while nearly 35.1% were neutral and 7.4% had negative attitude for time and stress management classes. However, 90% of the senior students felt that some formal orientation would have helped them in better handling of stress and time management issues. A study conducted in Punjab where the orientation programme was conducted for one day and attended by only 50% students showed that the understanding on stress (23%), time (22.09%) and study skill (19.72%) did not improve.¹⁰ In a study conducted in Kerala, students expressed that sessions related to spirituality were useful rather than orientation on stress and time management.¹¹ The students across the country do not appreciate the need for stress and time management sessions, probably due the fact that these issues are not new and sessions on integration of meditation, spiritual health attract their attention.

Importance of understanding the professionalism and interpersonal relationship

Traditionally the unintended lessons such as the norms, attitudes, and policies are not included in formal curriculum, however one learns these aspects through socialization and observation. It is called the "hidden curriculum".¹² The present curricula emphasises on knowledge at the expense of skill, attitude and higher

order practice,⁴ thus the foundation course gave an opportunity to provide an insight into these vital aspects of the medical profession. Professionalism, work place relationships and medical ethics concepts were acknowledged by most (87.2%) of the 1st year students and majority (92%) of the senior students felt these aspects were not adequately and equally stressed by all the faculty hence felt the need for dedicated and exclusive sessions for the same.

These topics were not taught formally in medical colleges across the world, but were developed and nurtured by the students, however over the years with increasing emphasis on knowledge-based education has led to a gap between the society's expectations from medical professionals and delivery of health care by them resulting in deterioration of their reputation as well as reducing the moral and confidence level of the doctors. Hence focusing on these topics is within the scope of education during their induction into medical course and reorienting during inter-ship.¹³ In the study conducted in Punjab, the students had expressed the desire to include topics such as social etiquette, interpersonal relationships, communication skills, biomedical waste management, and overview of the whole MBBS curriculum.¹⁰ Prior knowledge among the students is very limited on these aspects.¹³ The faculty also felt appraising the students on these topics were relevant and very useful in the current scenario.

Use of internet and modern teaching aids in understanding the subjects

Information technology has removed the barrier for seeking knowledge, however the traditional teaching methods needs to use modern technology to deliver the content of the topic in more understandable way to create more interesting learning environment and proactively involve the students. Among the 1st year students, majority (81.9%) agreed that modern teaching aids like computers and internet were useful as teaching aids, few (12.8%) were not sure and 5.5% did not agree with the idea. Most (68.9%) of senior students felt that medical teaching should include the modern technology wherever necessary, while few (24.2%) were satisfied with the traditional methods of teaching. A study conducted in Osmania Medical College after a week-long foundation course revealed the relevance of communication skills (98.9%) and study skills (98.4%), mentoring (94.25%), writing skills (92.97%) and use of computers (91.2%) in medical education.¹⁴

Insight into the situation in emergency ward and first aid

A medical graduate should not only know about medical emergencies but also should be trained to perform emergency procedures and face such situations with confidence. Among 1st year students majority (93.6%) felt the insight into commonly encountered emergency situation was very enriching experience. Most (97.3%) of the senior students expressed the need for practical sessions on skill development to handle emergencies should be included in the curriculum, so that they are better prepared to face them independently. The students participated in the study conducted in Kerala opined that skill-based modules were very impressive and very interesting.¹¹ The present curriculum fails to ensure competency in all the domains required for handling medical emergencies as there is no mechanism to ensure that they are learned, assessed and internalised.

Learning of local languages

Knowing and conversing in the local Language is an essential component for effective communication with patient from history taking to follow up of the patient, without which a patient cannot connect to the doctor. Among the 1st year students majority (91.3%) felt speaking to patients and going around the wards helped in understanding the need for knowing the local language, as the non-native people could not strike a meaningful conversation. Similarly, most (95.8%) of the senior students felt that orientation to local languages should be emphasised for better interaction with the patients. A study among medical students and faculty felt the sessions related to languages was most relevant.⁸

Career options after MBBS

The medical graduate today has various options available apart from the traditional pathways which will lead to having a satisfying or a meaningful career option. Thus, providing an insight will help in planning for their future depending on their preferences and temperament. Nearly 87% of all the students on a whole agreed on the topic while 10% were neutral to the idea of having any further guidance on the career. Many Doctors after the under graduation choose career paths that they are not suited for, partly because any departure from the normal course is considered as an irrevocable fall from the career ladder and partly due to lack of insight that the wide range of specialties in medicine can provide a niche for the diverse range of talents and personalities within. The rising morbidity, dissatisfaction and mortality among the medical personnel across the world only emphasise that it's important to appraise the young professional that Career is a part of life and they need to learn to balance their life priorities, and with their aspirations.¹⁵ Career guidance is very minimal and not much emphasis is given in the medical profession according to a survey done in England and the unmet need for the same in developing countries like India is like a tip of iceberg phenomenon.¹⁵ Having periodic and stage wise career guidance will enable the students to make informed and well calculated choices considering their priorities and aspirations in holistic way.¹⁶ The introduction of the concept of opting elective subjects for a period of two months for the CBME batches is an initiative in this direction.

Role of group dynamics and peer learning in medicine

Peers are always great influencers than the teachers or role models as they relate more intimately and hence their opinion and experience are more acceptable. Health care is not only the responsibility of medical graduate but of the health team, hence necessary for the students to understand how to work in a team and role of each team member for effective patient care. Among the 1st year students majority (71.2%) of them appreciated the topic on group dynamics and peer assisted learning. However, one fourth of them of them did not agree. Most (90%) of the senior student understood the importance of peer education in improving the academic output of the students as they share their views, give some tips which helps in coping with the academic pressure and professional pressure. The field of medicine is multidisciplinary in nature which works as a health team consisting of several individuals interacting towards achieving appropriate patient

care, hence understanding the group structure, function, attitudes and behaviour is necessary to optimise the health care. Introducing concepts of group dynamics at the beginning itself will mould the students to recognise and have better interpersonal relationship with allied team members (staff nurse, technicians etc)

Physical activity as remedy for stress management and as a health promotive initiative

As lifestyle is an important modifiable risk factor for morbidity and mortality more so for young doctors, however, they lack both time and enthusiasm for a routine on physical activity. Going by the principle of “Preach what you do” we need to facilitate the students to inculcate a routine schedule for physical activity as mode of primary prevention. “Vision 2015” from MCI also lays emphasis for bringing in professionalism and goal to create Indian Medical Graduate possessing requisite knowledge, skills, attitude, values and responsiveness. The four key areas recommended are early clinical exposure, integrated teaching, learning & skill development and training. The task force on medical education of the National Rural Health Mission (NRHM), Ministry of Health and Family Welfare suggested foundation course from the inception of the course to the internship phase in order to orient the MBBS graduates in understanding and meeting the needs of Indian health care sector.⁵ The foundation course for medical graduates after their inception into the course was recommended along with the change in the curriculum for Indian medical graduates from the year 2019. The orientation programme may have lasting impact and create an awareness on the hidden curriculum aspects.¹⁴

Conclusion

The approach to medical education has undergone a paradigm shift with the implementation of CBME where the emphasis is not only on knowledge but also on skills and competencies. India has responded by implementing a comprehensive one-month long orientation programme in the form of foundation course to the medical students in lines with colleges and universities across the world in order to improve the teaching learning methods and standard of medical education catering to the needs of our national goals. The senior students in our study have always felt the need for orientation to the course as well the areas such as professionalism, interpersonal communication skills, newer TL methods etc for long period. The first-year students who underwent this elaborate programme well-conceived the concept and purpose of medical education as well. However, they were not receptive to topics such as comprehensive and integrated approach to subjects (28.7%), development of rapport with teaching faculty (25.5%), need for time and stress management (35.1%), need for peer assisted learning and group dynamics (26.6%) and need for importance of physical activity to be part of their daily routine (24.5%).

The implementation of the foundation course will help in shaping the medical education towards the achievement of the desired outcomes like from the Indian medical graduate. The paradigm shift in understanding the health care needs of the patient, focusing on the competencies, continuous self-directed learning and professional ethics. The felt need of the senior students for an orientation to

the course as well the hidden curriculum like professionalism, interpersonal communication skills, newer teaching learning(TL) methods etc will bridge the gap between society's expectations from medical professionals and delivery of health care by them.

Limitations of the study

- The study findings are from only our institute, therefore further similar studies from across the country will be helpful in assessing the success and barriers in implementing this programme.
- A follow up study needs to be conducted for the same batch every year to assess the usefulness of foundation course in their professional outlook.

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