

Original Research Article

Perception of current medical practitioners about undergraduate community medicine training, implications for future undergraduate curriculum: a cross sectional study

Murali Mohan Reddy^{1*}, Anisha Mohan Panakkal¹, Loganathan S.¹, Jagannath Venkatappaiah²

¹Department of Community Medicine, Chettinad Hospital and Research Institute, Kelambakkam, Tamil Nadu, India

²Department of Public Health Dentistry, Dental College, Chettinad Hospital and Research Institute, Kelambakkam, Tamil Nadu, India

Received: 13 November 2016

Revised: 14 November 2016

Accepted: 06 December 2016

*Correspondence:

Dr. Murali Mohan Reddy,

E-mail: drreddypgi@gmail.com

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Background: Assessing the perceptions of medical practitioners regarding undergraduate community medicine training, its utility in their practice may provide vital inputs necessary for curriculum reforms. This study has been conducted to address this vital gap in the knowledge.

Methods: Cross sectional study for 6 month period conducted among 213 medical practitioners from Chennai, by convenient sampling. Pre tested structured self - administered questionnaire used to collect data using email and manually.

Results: Mean age of participants was 37(±12). Seventy (33%) MBBS graduates. Clinical, Pre & Para-clinical and super specialties constituted 72 (33%), 62 (29%) and 10 (5%) of participants respectively. Majority 164 (77%) participants felt disproportionate amount of time is allotted to the subject in under-graduation. To make it more relevant to practice, 150 (70%) suggested that there should be practical application of research methodology, 94 (44%) suggested more field work and 90 (42%) people suggested training in family medicine practice. Regarding application of community medicine principles in practice, 122 (57%) said they routinely assess and address social determinants, 192 (90%) regularly advise patients on preventive aspects, 61 (29%) displayed good knowledge about public health issues.

Conclusions: Need to revamp the undergraduate community medicine curriculum to make it more relevant. Practical application of research to be given priority in curriculum as essential foundation for evidence based medical practice. Intense, skill based training in clinic social case management suggested.

Keywords: Curriculum reform, Community medicine, Undergraduate medical education

INTRODUCTION

The concept of social and preventive medicine was first introduced by the Bhore Committee in India in 1946 when it stressed upon a compulsory 3 month rural rotation during internship.¹ Even though, many new specialties are being evolved in medical practice and

some of the existing specialties are branching out to new subspecialties, community medicine still occupies the major chunk of undergraduate medical curriculum –that is 215 hours in lecture and tutorials (52 hours in phase 1, and a total of 60 hours in phase 2, 105 hours in phase 3).² The recently released MCI Vision 2015 document stresses the need of generating a pool of socially

committed competent specialists for providing community health care, who should be able to play the role of a clinician, communicator, leader or team player in the health care system as well as professional who is accountable to both the patient and community.³

But unfortunately the undergraduate students in our system fail to grasp the importance of community medicine and its relevance in clinical practice after and neither is it a commonly chosen speciality at the post graduate level. The reasons for opting community medicine after MBBS vary widely from family commitment, not getting a clinical branch, interest in teaching, desire to work for international agencies and lack of night duties.⁴ Critical analysis of all these reasons shows that the choice more of convenience than passion for the speciality. This is largely due to the existing medical curriculum and the teaching methods adopted.

The burden to imbibe in the students a passion for the subjects lies wholly on the faculty and an innovative curriculum. To attract best talent to community medicine and making it one of most sought after specialties and to make it more relevant to the MBBS graduates seeking their careers in other specialties, it is imperative to sit back do in-depth analysis of the current curriculum, teaching methods of the specialty. Even though periodic small scale reforms are made in the undergraduate community medicine curriculum, there is a strong argument that the rate of reforms is not keeping pace with the changing health care scenario of the country, because basic training affects how doctors practice.⁵

The new sub specialties, which are seeking a share in MBBS curriculum are predominantly targeting the curriculum space occupied by community medicine⁶. Many of these specialties apart from aggressively advocating for the need of introducing their own specialties in the curriculum are posing serious questions regarding the relevance of community medicine training in undergraduate curriculum.

Assessing the perceptions of existing medical practitioners regarding undergraduate community medicine training, its utility in their practice may provide us with vital inputs necessary for curriculum reforms. But unfortunately, no attempts were made in the past in this direction. The current study has been conducted to address this vital gap in the knowledge.

METHODS

The present study was a cross sectional study undertaken in the metropolitan city of Chennai. The study was done over a period of 6 months from June 2015 to November 2015. All medical practitioners with a undergraduate degree who had completed their internship as well as from various specialties and subspecialties were included. Those with a degree in Public Health or Community Medicine were not included in the study as their

perception of the subject and relevance in practice would not be a questionable factor. A structured, self-administered questionnaire was prepared and validated to collect information regarding factors: personal profile, community medicine training in MBBS, attitude towards community medicine, public health orientation in clinical practice and knowledge regarding important public health issues. The questionnaire was validated by distributing it to five experts in the field and incorporating their inputs. The questionnaire was pre tested on 20 participants' further validation. The time taken to fill the questionnaire and the relevance of questions was taken into account. The finalized questionnaire was then filled manually by the participants themselves as well as distributed via email. A total of 120 participants were approached manually and out of which 111(92.5%) people consented to participate in the study. A total of 200 people were approached through e mail and out of which 102(51%) people agreed to participate in the study. A total of 213 participants were part of the study. All those who were approached were willing to participate in the study. The data was entered in Microsoft Excel and the data was analysed using Statistical Package for Social Sciences Software version 21.

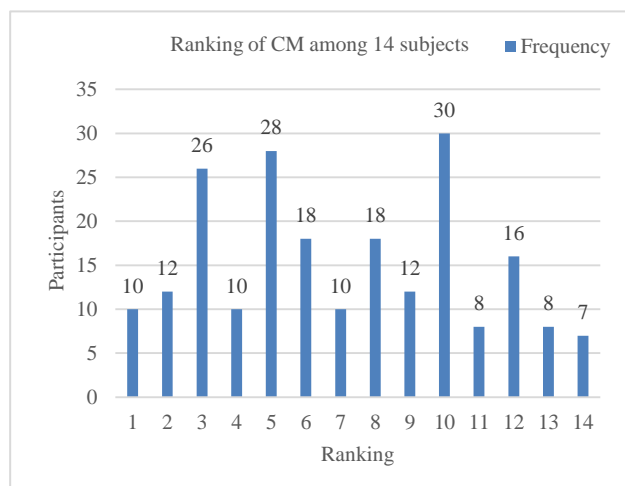
RESULTS

The mean age of participants was 37 (± 12). Majority of study participants belonged to the age group 22-30 years that is 89 (42%) followed by 54(25%) in the age group 31 – 40 years, 36 (17%) in the age group 51-60 years and 22 (10%) in the age group 41-50 years. 6 belonged to age group more than 61 years. Of the participants 85 (40%) were male and 128 (60%) were female, the ratio was 1:1.25. Around 70 (33%) were MBBS graduates with a similar chunk of the population belonging to clinical speciality 72 (33%). 42 (20%) belonged to para-clinical, 20 (9%) to preclinical and 10 (5%) to super specialties. Majority of the study participants were working in the government sector i.e. 144 (68%), with 78 (37%) involved in private self- owned occupation. There was considerable overlap between government, private and charitable fields of work. 93 (44%) were involved primarily in health care provision, with 38 (18%) involved in teaching/training and 88 (41%) in administration. Most were involved in two or more areas of work (Table 1). The mean number of years of clinical experience after passing MBBS was 12.54 with a range of 42 and SD 12.18.

With regard to perception of the community medicine subject and relevance in clinical practice a majority gave a rating of 8 (42 persons) and 5 (36 persons). It was ranked as 10 amongst the 14 subjects in undergraduate course by 30 participants, followed closely by 28 persons giving it a ranking of 5 and 26 gave it a ranking of 3. 164 (77%) participants felt that disproportionate amount of time was allotted to the subject at the undergraduate level (Figure 1).

Table 1: Personal profile of participants (n=213), frequency distribution, Chennai, India 2015.

Parameter	Frequency	Percentage
Age group		
22-30	89	42
31-40	54	25
41-50	22	10
51-60	36	17
61-70	8	4
>70	4	2
Gender		
Male	85	40
Female	128	60
Specialization		
MBBS	70	33
Pre-clinical	20	9
Para clinical	42	20
Clinical	71	33
Super-specialisation	10	5
Current place of work*		
Government	144	68
Private self-owned	78	37
Private employed	29	14
Charitable	34	16
Others	14	7
Nature of current job*		
Health care provision	93	44
Teaching/training	38	18
Administration	88	41
Research	2	-

**Figure 1: Community medicine training in MBBS and attitude toward community medicine (n = 213), frequency distribution, Chennai, India 2015.**

Out of the participants 150 (70%) suggested that there should be more practical application of research methodology, 94 (44%) suggested to include more field work and 90 (42%) persons suggested that there be more training with regard to family medicine practice (Table

2). 115 (54%) had previous interaction with public health department and mostly for research methodology (64), outbreak investigation (62) and training (69) - most citing 2 or more reasons.

Table 2: Changes suggested by the participants (n = 213), frequency distribution, Chennai, India, 2015.

Changes suggested by the participants	Frequency	Percentage
Field work	94	44
Practical application of Research methodology	150	70
More emphasis on family medicine practice	90	42
Others	8	4

With regard to the community medicine principles in clinical practice, 122 (57%) said they routinely sought to assess the social determinants of health in their practice and 132 (62%) notified diseases to public health authorities. Ironically 192 (90%) said they regularly advised patients on the preventive aspects of disease and 102 (50%) regularly conducted screening camps. 111 (54%) follow clinical guidelines for diseases as recommended and around 115 (54%) regularly updated themselves and their patients on matters of public health legislation. 143 (69%) have displayed posters related to public health issues in their establishments and 97 (46%) regularly organise or participate in health camps (Table 3).

Table 3: Community medicine principles in clinical practice (n = 213), frequency distribution, Chennai, India, 2015.

Parameter	Frequency	Percentage
Frequent assessment of social and environmental factors	122	57
Notification of diseases	132	62
Advice on preventive aspects	191	90
Regularly conduct screening camps	102	50
Do you use clinical guidelines for any diseases	111	54
Regularly update yourself and patients on public health legislation	115	54
Regular organize health camps	97	46
Displayed any posters related to health	143	69

The public health knowledge was judged based on 10 questions related to important public health issue (Table

4). Each correct answer was given a score of 1.61 (29%) obtained a score of 5 and more out of 10.

Table 4: Knowledge of public health issues (n = 213), frequency distribution, India, Chennai 2015.

Question	Frequency of right answer	Percentage
Births to reported within how many days	56	26
Deaths to be reported within how many days	40	19
IMR	69	32
When was the last case of polio in India reported	61	29
Where was it reported	59	28
How many categories for treatment of Tuberculosis are there at present	102	48
Which bin should sharps like needles be discarded	81	38
COI with regard to informing spouse of HIV positive patient	85	40
What is mandatory under JSY scheme	143	67
Which vaccine is not included in National Immunisation Schedule	27	13

DISCUSSION

In the present study, with regard to perception of the community medicine subject and relevance in clinical practice a majority gave a rating of 8 (42 persons) and 5 (36 persons). It was ranked as 10 amongst the 14 subjects in undergraduate course by 30 participants, followed closely by 28 persons giving it a ranking of 5 and 26 gave it a ranking of 3. Hunt DD in his article quoted that “What leads young doctors away from such primary care practice is not money but a medical school culture that devalues the family doctor”⁷. The study indicates that while bad mouthing exists across all disciplines it cannot be the only reason for the prevailing attitude towards the subject. Curriculum reform is the way to go.

Amongst the 213 participants 164 (77%) participants felt that disproportionate amount of time was allotted to the subject at the undergraduate level. A formative research study undertaken amongst medical college students at Sewagram showed that the major problems identified were difficulty understanding the concept of biostatistics and remembering important vital statistics. The students felt that community based camp approach which used integrated task oriented assignments and active community involvement was most useful in understanding the subject.⁸ A study undertaken to assess

students on the experience of a rural clinical rotation reflected the students opinion that the rotation was not structured efficiently, too much of written assignments prevented them from maximising the experience and a time period of two weeks was too short a time to maximally utilise the experience. The author concluded that rural experience allowed the practical application of knowledge, and a structured rotation is necessary.⁹

In the study, 150 (70%) suggested that there should be more practical application of research methodology. A study on the perceptions and predictors of research carrier among undergraduate medical students from a college in South India showed that though many were a part of a research team in the undergraduate level (47%) only few (8%) were confident of research as a career option. Good training and students support would help students strengthen their research goals.¹⁰ A study undertaken in Ireland to assess the attitude towards research and competency in the same amongst medical students show that though most students show only moderate interest in research activities.¹¹ There is low but significant correlation between taking up a career in research is directly associated with exposure to research during their undergraduate training. Many felt that clinical research and practice were two isolated activities.¹¹ As community medicine graduates are considered to be experts in the field of research methodology reforms have to be taken to allot time for research training at the undergraduate level. The renewed interest in the intricacies of community based approaches to public health has highlighted this as one of the most viable approaches to the development of knowledge and action in the practice of evidence based medicine.¹²

Out of 213, 94 (44%) of the participants suggested to include more field work in the undergraduate curriculum. It is vital to produce doctors who can serve the health needs of the community they practice in. The SPICES model of medical education demonstrates how community based training is vital in making students realise the importance of primary health care, understanding the way the community works, acquiring skills that can only be taught in the field, utilisation of untapped resources, exposure to the health care system and exposing the students to a wide spectrum of cases that are “unspoilt” yet.¹³ A systematic review to study the outcomes of early exposure to community setting in medical education showed that early experience improved the student’s professional identity, basic communication skills, helped them learn about the importance of prevention and the functioning of the health care system. It also showed that early experienced increased the rate of those choosing primary care practice. Community based teaching gave insight to the students on the more psychological and social aspects of real patients.^{14 15} Though presently a large amount of time is donated to field work it is imperative to set up well defined objectives regarding skills learnt and capacities acquired at the field level.

Amongst the participants, 90 (42%) persons suggested that there be more training with regard to family medicine practice. In keeping in par with this vision it has been noted that the major change in the newer MCI undergraduate curriculum is the integration of family medicine practice. It is noted that family medicine specialists should not only be able to handle the obstetric, paediatric, medical, surgical emergencies at the health centres but must also be able to manage the health systems at these levels. The introduction of these family medicine specialists at the peripheral level will decrease the need of super specialists and visit to tertiary health care.¹⁶ A meta-analysis showed that strikingly few schools produce a majority of primary care graduates who enter family practice or who actually practice as generalists. Even specially designed tracks seldom produce more than 60% primary care graduates. Two curricular experiences are associated with increases in the numbers of students choosing primary care: required family practice clerkships and longitudinal primary care experiences. Overall, the number of required weeks in family practice shows the strongest association with the choice of choosing family care practice.¹⁷

It was found that 115 (54%) had previous interaction with public health department and mostly for research methodology (64), outbreak investigation (62) and training (69) - most citing 2 or more reasons. 122 (57%) said they routinely sought to assess the social determinants of health in their practice and 132 (62%) notified diseases to public health authorities. Ironically 192 (90%) said they regularly advised patients on the preventive aspects of disease and 102 (50%) regularly conducted screening camps. 111 (54%) follow clinical guidelines for diseases as recommended and around 115(54%) regularly updated themselves and their patients on matters of public health legislation. 143(69%) have displayed posters related to public health issues in their establishments and 97 (46%) regularly organise or participate in health camps. From the above it is evident that the importance of such preventive practices like health promotion, screening, health education is average. Importance has to be given in the undergraduate curriculum to teach community medicine and prevention in a way that is applicable to clinical practice no matter what speciality the student decides to choose later on.

In the present study it was found that more training be given in research methodology was the most recommended suggestion in the curriculum. There is evidence enough to prove that research is a valuable part of Community Medicine. The renewed interest in the intricacies of community based approaches to public health has highlighted this as one of the most viable approaches to the development of knowledge and action in Public health.¹⁸

Family medicine is an integral part of primary health care and it helps to integrate care given to patients and their families. In keeping in par with this vision it has been

noted that the major change in the newer MCI undergraduate curriculum is the integration of family medicine practice.³ Community based practice essentially requires good family practice skills. As suggested by over 42% of the subjects more training in this regard should be given in undergraduate community medicine curriculum. A task based community oriented model for teaching family medicine practice in medical colleges would prove useful in this regard. It is noted that family medicine specialists should not only be able to handle the obstetric, paediatric, medical, surgical emergencies at the health centres but must also be able to manage the health systems at these levels. The introduction of these family medicine specialists at the peripheral level will decrease the need of super specialists and visit to tertiary health care.¹⁹ Hence family medicine must hold an integral part of the curriculum especially at the post graduate level.

There is strong evidence that introduction of problem based learning into the undergraduate medical curriculum will prove effective in improving skills mainly in the social and cognitive dimensions like coping with uncertainty and appreciating the legal and ethical aspects of health care. This is proved in the systematic review by Choon et al. Problem based learning results in more efficient physician competencies in terms of these dimensions as compared to traditional method and this can be emphasised in the newer curriculum.²⁰ Community based education curriculum can be developed keeping the generic objectives in mind.²¹ The competencies required from the students can be identified. They should learn to integrate with the community, focus on becoming community advocates. Training research and service should be stressed upon.

There is need to revamp the undergraduate curriculum to make it more relevant with the current times. Focus on research methodology and field work is suggested. Practical application of research methods shall be given enough space in UG curriculum as essential foundation for evidence based medical practice.

CONCLUSION

Most participants felt that the time allotted to the subject was disproportionate to the amount of knowledge gained. The public health orientation in clinical practice was relatively good with around 90% advising their patients on preventive aspects but this could not be quantified. More intense and skill based training in clinic social case management in the field needs to be incorporated. The knowledge related to important public health issues was poor and this shows that considerable changes have to be made to make the clinical practitioners stay updated.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: Not required

REFERENCES

1. Negandhi H, Sharma K, Zodpey SP. How can departments of community medicine shape the future of Public Health Education in India? *Indian J Public Health*. 2010;54(4):184.
2. Regulations on Graduate Medical Education MCI 2012, Published by Medical Council of India, Official website of the Medical Council of India, Published in March 1997, amended upto February 2012, accessed on 03.02.2016, http://www.mciindia.org/tools/announcement/Revised_GME_2012.pdf.
3. MCI booklet Vision 2015, Published by Medical Council of India, Official website of the Medical Council of India, Published on March 2011, accessed on 03.02.2016, : http://www.mciindia.org/tools/announcement/MCI_booklet.pdf
4. Anita N, Gopal I. From classroom to community: teaching Community Medicine in India. *South-East Asian Medical Education*. 2008;2(2):5-8.
5. Tamblyn R. Is the Public being Protected? Prevention of Suboptimal medical Practice Through Training Programs and Credentialing Examinations. *Evaluation & the health professions*. 1994;17(2):198-221.
6. Gibbins J, McCoubrie R, Maher J, Forbes K. Incorporating palliative care into undergraduate curricula: lessons for curriculum development. *Medical education*. 2009;43(8):776-83.
7. Hunt DD, Scott C, Zhong S, Goldstein E. Frequency and effect of negative comments ("badmouthing") on medical students' career choices. *Academic Medicine*. 1996;71(6):665-9.
8. Dongre AR, Deshmukh PR, Garg BS. Formative exploration of students' perception about Community Medicine teaching at Mahatma Gandhi Institute of Medical Sciences, Sewagram, India. *Online J Health and Allied Sciences*. 2008;7(3).
9. Wilson NW, Bouhuijs PA, Conradie HH, Reuter H, Van Heerden BB, Marais B. Perceived educational value and enjoyment of a rural clinical rotation for medical students. *Rural Remote Health*. 2008;8(3):999.
10. Kumar HH, Jayaram S, Kumar G, Vinita J, Rohit S, Satish M, et al. Perception, practices towards research and predictors of research career among UG medical students from coastal South India: A cross-sectional study. *Indian J Community Med*. 2009;34(4):306-9.
11. Burgoyne LN, O'Flynn S, Boylan GB. Undergraduate medical research: the student perspective. *Medical education online*. 2010;15.
12. Israel BA, Schulz AJ, Parker EA, Becker AB. Review of community-based research: assessing partnership approaches to improve public health. *Ann review public health*. 1998;19(1):173-202.
13. Harden R, Sowden S, Dunn W. Educational strategies in curriculum development: the SPICES model. *Medical education*. 1984;18(4):284-97.
14. Dornan T, Littlewood S, Margolis SA, Scherpbier AJ, Spencer J, Ypinazar V. How can experience in clinical and community settings contribute to early medical education? A BEME systematic review. *Medical Teacher*. 2006;28(1):3-18.
15. O'Sullivan M, Martin J, Murray E. Students' perceptions of the relative advantages and disadvantages of community-based and hospital-based teaching: a qualitative study. *Medical Education*. 2000;34(8):648-55.
16. Kumar R. Academic community medicine in 21st century: Challenges and opportunities. *Indian journal of community medicine: official publication of Indian Association of Preventive & Social Medicine*. 2009;34(1):1.
17. Bland CJ, Meurer LN, Maldonado G. Determinants of primary care specialty choice: a non-statistical meta-analysis of the literature. *Academic Medicine*. 1995;70(7):620-41.
18. Israel BA, Schulz AJ, Parker EA, Becker AB. Review of community-based research: assessing partnership approaches to improve public health. *Ann review public health*. 1998;19(1):173-202.
19. Kumar R. Academic community medicine in 21st century: Challenges and opportunities. *Indian journal of community medicine: official publication of Indian Association of Preventive & Social Medicine*. 2009;34(1):1.
20. Koh GC, Khoo HE, Wong ML, Koh D. The effects of problem-based learning during medical school on physician competency: a systematic review. *Canadian Medical Association J*. 2008;178(1):34-41.
21. Kristina TN, Majoor GD, Van Der Vleuten CP. Defining generic objectives for community-based education in undergraduate medical programmes. *Medical education*. 2004;38(5):510-21.

Cite this article as: Reddy MM, Panakkal AM, Loganathan S, Venkatappaiah J. Perception of current medical practitioners about undergraduate community medicine training, implications for future undergraduate curriculum: a cross sectional study. *Int J Community Med Public Health* 2017;4:160-5.