# **Original Research Article**

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# Community medicine learning - medical student's perspective

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## **ABSTRACT**

**Background:** The goal of teaching Community Medicine in undergraduate medical curriculum is to ensure that medical graduates acquire competencies needed to solve common health problems of the community. This study aims to determine the perceptions of medical students in learning Community Medicine as part of their MBBS curriculum and to assess their preference of the subject for post-graduate studies.

**Methods:** This study was conducted among third year MBBS students of a private Medical College. Universal sampling method was adopted and data was collected using a pre-tested, self-administered questionnaire. A three-point Likert scale was used to assess the perceptions of the medical students in learning Community Medicine. Data analysis was done using SPSS version 16.0.

**Results:** Out of 183 students, 166 students participated in the study of which 42.8% were males and 57.2% were females. Nearly 89% of students agreed that learning community medicine during MBBS is very essential. About 83.7% felt more field visits or practical assignments need to be added to the curriculum to enhance students' interest in the subject. Community medicine was preferred for post-graduation by only 12% of students. Interest in clinical specialties, limited career growth and less social recognition was the main reasons quoted by the students for not choosing the specialty for post-graduation.

Conclusions: Learning Community Medicine is essential to produce community oriented primary health care physicians. Community Medicine as a future career option was found to be limited among the medical students. More exposure is needed on the wide career opportunities available after post-graduation. Community Medicine learning should be made more interesting, highlighting its importance in public health, primary health care & family medicine services.

Keywords: Preventive medicine, Medical education, Career

# INTRODUCTION

India has the largest number of medical colleges in the world with an annual output of nearly 30000 doctors and 18000 specialists. The medical curricula in India have not been updated much with the changing dynamics of health policies, public health and demography. Education imparted to the health professionals is more treatment-oriented curative approach instead of a population focused preventive health care approach. The essential

primary health care services are neglected and there is an increased drive towards super specialisation in various medical disciplines.<sup>1</sup>

The high level expert group on Universal Health Coverage for India recommended that the curriculum for MBBS should be revised to provide more focus towards promotive, preventive and rehabilitative healthcare. Community Medicine (CM) as a branch of Medicine provides comprehensive health services which ranges

from preventive, promotive, curative to rehabilitative services. It is the speciality which deals with populations (both sick and well), measures the population needs, plans, administers and evaluates the services to meet such needs and also engages in research and teaching.<sup>2</sup>

Department of Preventive and Social Medicine was established in all medical colleges across the country, based on the recommendations of Medical Education Conference in 1955. The terminology "Preventive and Social Medicine" was later modified into "Community Medicine" in the 1980s. Today, the speciality has evolved as a field of learning that contributes to the development of societies, more significantly in developing countries like India.3 But this most important area of medical education is being neglected and the curriculum needs to be continuously reviewed and updated keeping in mind with the present-day public health problems and health needs of the societies.

The guidelines given by the Expert Committee of the Regional Office of South-East Asia of World Health Organisation (WHO) in 2009 for teaching Community Medicine in the undergraduate medical curriculum have identified the goal as 'to ensure that the medical graduate has acquired broad public health competencies needed to solve health problems of the community with emphasis on health promotion, disease prevention, cost-effective interventions and follow-up'. To achieve these goals, different components of Community Medicine subjects are taught during the first year, second year and third year of the MBBS programme. Recently the Medical Council of India (MCI) increased the number of postgraduate seats in Community Medicine across the Country to expand the learning of Community Medicine by Medical Graduates.

In medical colleges, clinicians are the role models for the students and Community Medicine is not viewed by the students as an attractive career option.<sup>5</sup> Preference to pursue post-graduation depends on several factors like family influence, gender, personal interest, intelligence, skills, financial benefits, time commitment, international opportunities, job security, societal respect, peer pressure and future career growth. 6,7 Few studies have reported the feedback of students regarding learning of Community Medicine in the undergraduate medical education.<sup>8,9</sup>

This study was planned with the objectives of analysing the perceptions of undergraduate medical students towards learning Community Medicine and assessing the students' preference of Community Medicine as their future career option, in the present medical education scenario, where the National and State Governments are emphasising the importance of preventive medicine strategies.

## **METHODS**

Study design: This is a cross sectional descriptive study.

### Study area and population

The study was done in a Medical College, located in Kancheepuram district, Tamil Nadu. The whole batch of third year MBBS consisting of 183 students forms the study population. The students belonged to different socio-demographic and regional background.

# Sample size and sampling method

We adopted the universal sampling method for this study. All the 183 students belonging to the third year MBBS batch were given the self-administered questionnaire for data collection. Out of that, 166 students completed the questionnaire and returned it. The response rate from the students was 90.7%.

### Study period

This study was done during the period of two months, from June to July 2018.

# Ethical approval and informed consent

Ethical approval was obtained from Institutional Ethics Committee of Sree Balaji Medical College and Hospital to carryout this study. Written Informed consent was obtained from the study participants before data collection, after explaining about the objectives of the study.

### Data collection

Data was collected from the willing participants using a pre-tested, structured, self-administered questionnaire. Information was collected on the socio-demographic profile, variables on learning and practice of Community Medicine and the students' preference to pursue specialty in Community Medicine in the future. A three-point Likert scale (Disagree - 1, Neutral - 2, and Agree - 3) was used to assess the perceptions of the medical students in learning Community Medicine.

# Statistical analysis

Data entry was done in Microsoft Excel and data analysis was done in SPSS software version 16.0. Descriptive statistics were used to summarize the socio-demographic characteristics of the study participants. Chi-square test was applied to find the significance of difference in proportions (qualitative variables).

## **RESULTS**

This study on the perceptions of third year medical students in learning Community Medicine as part of their MBBS curriculum and their preference to choose the subject for their career showed interesting results which are described below using tables and graphs.

#### Socio-demographic characteristics the study population

Table summarizes the socio-demographic characteristics of the study population. Out of the total 183 students, 166 students participated in the study, the response rate being 90.7%. Among the respondents, 42.8% were males and 57.2% were female students. About 70% belonged to nuclear type of family. Majority of the students (80.7%) had their permanent residence in an urban area. With regard to religion, 76.5% were Hindus, 12.1% were Christians and 11.4% were Muslims. About 24% of the students reported medical profession as their father's occupation and 18.7% as their mother's occupation.

Table 1: Socio-demographic characteristics of the respondents (n=166).

S.No	Characteristic	Number of respondents	Percentage (%)			
1.	Gender					
	Male	71	42.8			
	Female	95	57.2			
2.	Type of family					
	Nuclear	116	69.9			
	Joint/three generation	50	30.1			
3.	Religion					
	Hindu	127	76.5			
	Christian	20	12.1			
	Muslim	19	11.4			
4.	Permanent residence					
	Urban	134	80.7			
	Rural	32	19.3			
5.	Occupation of Fa	ther				
	Medical	40	24.1			
	Non-medical	126	75.9			
6.	Occupation of Mo	other				
	Medical	31	18.7			
	Non-medical	135	81.3			

# Medical students' perceptions on learning Community Medicine during MBBS

The perceptions of the undergraduate third year MBBS students on learning Community Medicine assessed using Likert scale are summarized in Table 2. About 88.6% of the students agreed that learning Community Medicine during MBBS is very essential. Nearly 55.4% agreed that learning the subject is interesting. About 64% of the students agreed that understanding the concepts and principles of Community Medicine will give a perception for holistic approach to better patient management. Around 82% of the students agreed that Community Medicine classes helped to understand the concept of research methodology.

The topics in Community Medicine, which were found to be interesting for the students to learn, are summarized in Table 3. Epidemiology of Infectious Diseases was the most preferred topic to learn, followed by primary health care, public health, nutrition, occupational health and epidemiology of non-communicable diseases (NCDs). Biostatistics and Sociology were the least preferred topics by the students.

# Role of community medicine in medical teachinglearning programme

The students' understanding on the role of Community Medicine in medical teaching-learning programme was assessed and the responses were as follows (Table 4): CM helps to learn about Community focused healthcare (65.1%), to develop doctor patient relationship skills (41%), to gain research skills (35.5%), to learn about disease preventive measures (63.9%), to find the causes of disease (11.4%) and to develop leadership qualities (10.8%). Regarding the interest to do research projects in Community Medicine during MBBS, 106 students (63.8%) replied positively and were willing to do research projects.

Table 2: Perceptions of the medical students towards learning community medicine [CM].

C No	Dangantian	Agree		Neut	Neutral		Disagree	
S. No	Perception	n	<b>%</b>	n	%	n	%	
1.	Learning CM in MBBS is very essential	147	88.6	19	11.4	-	-	
2.	Learning CM is interesting	92	55.4	66	39.8	8	4.8	
3.	Knowledge of CM is essential for successful clinical practice		88	20	12	-	-	
4.	Learning CM will help to understand the health needs of the Community	148	89.2	4	2.4	14	8.4	
5.	Community Medicine sessions help me to understand research methodology	136	81.9	30	18.1	-	-	

Table 3: Subjects in community medicine found interesting by the students to learn.\*

S. No	Subject	Number of respondents	Percentage (%)
1.	Epidemiology of infectious diseases	87	52.4
2.	Primary Health Care	78	46.9
3.	Nutrition	68	40.9
4.	Public Health	68	40.9
5.	Occupational Health	48	28.9
6.	Epidemiology of Non-Communicable diseases	38	22.8
7.	Biostatistics	20	12
8.	Sociology	20	12

Multiple responses.

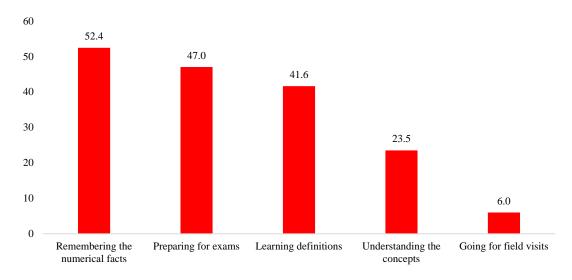


Figure 1: Aspects in Community Medicine which students find difficult to learn.\*

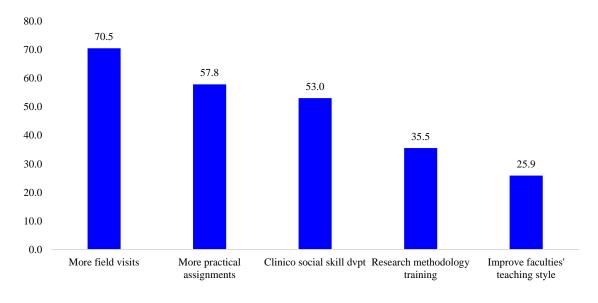


Figure 2: Methods to enhance students' interest in learning community medicine.\*

Students were enquired about specific difficulties they have experienced in learning CM, which is summarized in Figure 1. Remembering numerical facts was the

topmost difficulty followed by exam preparation, learning definitions and understanding the concepts. A

small proportion (6%) of the students expressed difficulty in going for field visits.

# Enhancing students' interest to learn community medicine

Various methods to enhance the interest of the undergraduate students in learning Community Medicine were assessed (Figure 2). Nearly 71% said that more field visits need to be added to the curriculum for hands on training. More Practical Assignments were preferred by 57.8% of the students. Other approaches opted by the students were clinico-social case study skill development and research methodology training. About 26% students felt that teaching faculties need to improve their teaching style to make the learning sessions more interesting.

# Community medicine as the future career choice of medical students

When asked about the preference to take Community Medicine for Post-graduation, 12% of the students responded positively whereas the rest preferred other subjects. (Figure 3) Students were also enquired on the probable reasons for not opting CM as their career choice; the major reason was their interest to specialize in clinical subjects. Other reasons quoted by them were limited career growth, less social recognition, family or friends influence to take up clinical specialties, limited income, less job opportunities and lack of interest in community based activities (Table 5).

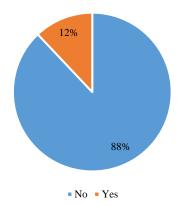


Figure 3: Community medicine specialty as a future choice for post- graduation.

Table 5: Reasons for not choosing community medicine for post-graduation.\*

S. No	Reason	Number of respondents	%
1.	Interest in clinical specialties	104	62.7
2.	Limited career growth	44	26.5
3.	Less social recognition	42	25.3
4.	Family/friends influence	26	15.7
5.	Limited income	24	14.5

\*Multiple responses

Table 6: Association between socio-demographic characteristics of medical students and community medicine (CM) as their choice for post-graduation.

	Characteristic	CM for Post-graduation				OR (95% CI)	Chi square	P value
S.No		Yes		No				
		n	%	n	%			
1.	Gender	•	·					
	Female	16	16.8	79	83.2	3.39	4.78	0.020*
	Male	4	5.6	67	94.4	(1.08-10.64)	4.78	0.028*
2.	Type of family							
	Nuclear	15	12.9	101	87.1	1.34	0.20	0.59
	Other types	5	10	45	90	(0.46-3.90)	0.28	
3.	Religion							
	Hindu	14	11.0	113	89.0	0.68	0.52	0.46
	Others	6	15.4	33	84.6	(0.24-1.91)	0.53	0.46
4.	Residence							
	Urban	16	11.9	118	88.1	1.05	0.0076	0.93
	Rural	4	12.5	28	87.5	(0.33-3.39)	0.0076	
5.	Occupation of father							
	Non-medical	19	15.1	107	84.9	6.9	4.5	0.02*
	Medical	1	2.5	39	97.5	(1.1-53.5)	4.5	0.03*
6.	Occupation of mother							
	Medical	6	19.4	25	80.6	2.07	1.0	0.17
	Non-medical	14	10.4	121	89.6	(0.73-5.92)	1.9	

[\*p value <0.05 Significant at 95% CI] OR: Odds ratio; CI: Confidence interval.

Table 6 summarizes the association between sociodemographic characteristics of respondents Community Medicine as their choice for specialization. We found a statistically significant association between female gender and choosing Community medicine for post-graduation (OR-3.39, 95% CI: 1.08-10.64, p=0.028). Students whose father worked in non-medical sector are more likely to take up Community Medicine for specialization (OR-6.9, 95% CI: 1.1-53.5, p=0.03).

## DISCUSSION

This study conducted among third year MBBS students has highlighted the important perceptions undergraduate medical students in learning Community Medicine and the interesting outcomes are discussed below.

Nearly 89% of our study respondents agreed that learning Community Medicine during MBBS is very essential. A study by Murugavel et al reported that 96.8% of students opined that learning Community Medicine mandatory. 10 In this study, nearly 64% of students expressed their interest to do research studies during their postings in Community Medicine. This is highly significant as earlier the exposure in doing medical research, better would be the students' knowledge on literature review, critical appraisal of research articles and report writing.<sup>11</sup>

Nearly 89% of the students agreed that learning the subject helps to understand the health care needs of the community. This perception was much higher (96.8%) in the study done by Sadawarte in Mumbai. 12 In the study done by Murugavel, a higher proportion of students (83%) found the subject was interesting to learn. 10 This study shows that Learning Community Medicine was found to be interesting by only 55% of the students. To enhance the interest of students in learning the subject, community based learning programmes by using different methodologies might play a major role, so that they may be exposed to the structure, functions and felt needs of the community.

In our study, nearly 84% said that practical assignments or field visits need to be increased to make the subject more interesting to learn. In the study by Sadawarte, majority of students (96.8%) agreed that more practical training need to be added to the curriculum. 12 This was also noted in the study on teaching methods in Community Medicine by Sharma et al where 76% of students opined that field visits are major contributing factors to enhance their practical skills. 13 This is also discussed in already published literature which stresses shifting the emphasis towards family visits, demographic and morbidity surveys, community diagnosis and research projects. 14

In the study done among medical students in Mumbai, 40% opted Community Medicine for their career, which is in contrast to the 12% in this study. 12 Murugavel et al in their study done in a Private Medical College in Chennai reported that 21.8% expressed interest in specializing in Community Medicine. 10 In a study by Kar et al, the authors reported that Community Medicine and Psychiatry were not preferred by students as their career choice and stressed upon the need to enhance the students' interest in these subjects. 15 The main reason given by the students for not choosing a specialization in Community Medicine is their interest in clinical specialties. This finding was also noted in the studies done by Murugavel et al and Singh et al. 10,16

### Limitations of the study

The study was conducted among the third year MBBS students in a private Medical College. The results could not be generalized, as the perceptions might be different among students in other colleges especially in the government sector.

### **CONCLUSION**

This study highlights the perceptions of undergraduate medical students in learning Community Medicine during MBBS course. Though the students understood the significance of learning the subject, they need the teaching to be more field oriented rather than classroom based. In a developing country like India, we need primary health care physicians to serve the community, to manage commonly occurring medical and public health problems. If appropriate corrective measures are not taken, less proportion of students will opt for specialization in Community Medicine in the future. Though the predominant reason was interest to specialize in clinical subjects, learning of Community Medicine subjects is absolutely necessary and the students need more orientation on opportunities available for Community Medicine Specialists to work with the state, national and international healthcare organizations and research institutes.

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