

## Original Research Article

# Community medicine: perceptions among medical students and career preference: a cross sectional study

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## ABSTRACT

**Background:** Learning community medicine helps the student not only to become a good clinician but also a good manager, educator and a researcher. Community medicine exposes medical students to primary and secondary healthcare settings and to promotive, preventive, curative and rehabilitative health services. This helps them to serve the needy people with a holistic approach. The objective is to find the perceptions of medical students regarding Community Medicine as a Medical Subject and as a career preference.

**Methods:** A cross-sectional study was conducted over a period of 2 months. It was conducted on 200 students of Final year part I of MBBS in a tertiary care hospital by using universal sampling method. Data was collected from all the students using a self-administered pre-tested questionnaire using Likert's scale.

**Results:** Total 212 students participated in this study out of which 125 were boys and 87 were girls. The perceptions of students about community medicine were that this field gives an overall view of community's medical needs. Curriculum is too vast and needs to be modified. More research should be done in community. Teaching methodology should be modified for making topics interesting. More number of girls was interested in taking community medicine as a career.

**Conclusions:** Students perceptions regarding the field of community medicine showed that community medicine is essential for successful medical practice. But the teachers must make this subject more interesting by giving more practical insight and improving the teaching modalities.

**Keywords:** Perception, Community medicine, Career

## INTRODUCTION

In 1977, the World Health Assembly decided that the main social target of governments and of WHO should be the attainment by all the people of the world by the year 2000 of a level of health that would permit them to lead a socially and economically productive life.<sup>1</sup> The Department of Community Medicine (CM) in medical colleges focuses on teaching and training medical students with an aim to ensure value-based education and help in moulding a basic doctor of first contact. The

functions of a doctor include the care of the individual, the care of the community and the role as a teacher.<sup>2</sup>

The chief objectives of the CM programme are to ensure value education to the undergraduate student through service to marginalized groups, strengthen skills and attitude input to help them serve later as effective doctors and leaders in the society.

Today, most of the teaching in CM is carried out using didactic lectures within the 'ivory tower' of an institution

with limited exposure to the community. Public health education must be an active process, student-centred, enquiry-driven, evidence-based and problem-solving as well as addressing the needs of the community. The role of the teacher should be to facilitate the student to acquire the competencies through field-based experiential learning of public health competencies, involving dedicated time for practice, receiving feedback and reflecting on its application in their future role as primary care doctors.<sup>3</sup>

Learning CM helps the student not only to become a good clinician but also to become a good manager, teacher/educator and a researcher. CM (preventive and social medicine) exposes medical students to primary and secondary healthcare settings and to promotive, preventive, curative and rehabilitative health services. This helps them to serve the needy people in the community as primary healthcare physicians, with a holistic approach, in alignment with the National Health Goals and the vision of the Ministry of Health.<sup>4</sup>

A WHO expert group on teaching CM concluded that inculcation of public health and epidemiological skills is needed for understanding of disease dynamics for effective control, for need-based health planning, effective monitoring and efficient supervision of health programmes by future health managers and to develop the concept of an efficient management information system.

After completion of a bachelor's degree (MBBS), the career pathways available for medical students are medical officers in the government sector or general practitioners in the private sector. They can also go for higher education either in India or abroad.

Few studies have been done to ascertain the career preferences of medical students. Studies from Delhi and Manipal showed that 83.5% and 99.2% students wanted to pursue post-graduation. The choice of specialty was limited to a few subjects such as Surgery, Internal Medicine and Obstetrics and Gynaecology. Globally, the choice of subject seems to be surgery for men and obstetrics and gynaecology and internal medicine for women.<sup>5-7</sup>

Despite the National Health Policy 2002's recommendation of reserving 25% of all post-graduation seats for CM, no such commitment of increasing seats for CM was observed in any of the colleges/Institutions in India.<sup>8</sup> However, before increasing the seats it's imperative to understand the students' perception about future career choices as it will play a vital role in determining the success of universal health coverage in India. Hence, the study is planned among MBBS students to document their career choices and perceptions toward CM as a career option in a tertiary care hospital and teaching Medical college.

## METHODS

This was a cross-sectional study conducted over a period of 2 months from June 2017 to July 2017 in a Tertiary care hospital and Medical College. It was conducted on 212 students of Final year part I of MBBS in a Tertiary care hospital and Medical College. Universal sampling was applied and all final year part I of MBBS students were explained in detail regarding the various aspects of the study. They were also given the assurance that due confidentiality will be maintained while conducting the study. Ethical permission was obtained prior to the commencement of the study. Students who were willing to participate were chosen for the study. The students who refused to participate in the study were excluded from the study. All the students who consented to participate in the study were given a self-administered pre-tested questionnaire using Likert's scale. This data collection was done after their curriculum had been taught to the students and they were attending the classes for revision tutorials prior to the exams. Data was entered in Microsoft Excel 2007 and was analysed using SPSS 16.0.

## RESULTS

Total 212 students participated in this study out of which 125 were boys and 87 were girls. Maximum students were 21 yrs of age (Table 1).

**Table 1: Socio demographic profile: (Figures in brackets indicate percentage).**

| Age of the students |            |             |            |            |             |
|---------------------|------------|-------------|------------|------------|-------------|
| Sex of the students | 20 yrs (%) | 21 yrs (%)  | 22 yrs (%) | 23 yrs (%) | Total (%)   |
| Male                | 8 (3.77)   | 84 (39.62)  | 25 (11.80) | 8 (3.77)   | 125 (58.96) |
| Female              | 23 (10.85) | 50 (23.59)  | 14 (6.60)  | 0 (0)      | 87 (41.04)  |
| Total               | 31 (14.62) | 134 (63.21) | 39 (18.40) | 8 (3.77)   | 212 (100)   |

68% males disagreed that CM is same as Family Medicine while more than 55% girls believed that it was the same. All the students agreed that CM is relevant in today's Medical world. About 60% & 75% students believed that there is much more to CM than just

Preventive Medicine and it includes curative aspect as well respectively. Around 90% students opined that CM is an important aspect to become a Doctor and can be practiced by all the Medical Fraternity and not just Physician or General Practitioner. Surprisingly, around

45% boys and 23% girls said that CM deals mainly with sanitation and around 20% students claimed that there were not many skills to be acquired in CM. Maximum

students agreed that CM is an integral part of Patient care, much more than vaccines & nutrition and gives an overall view of a community's medical needs (Table 2).

**Table 2: Perceptions regarding CM as subject in medical curriculum: (Figures in brackets indicate percentage & Separate for males and females).**

| Sr. No. | Question  | Agree      |            | Disagree   |            |
|---------|---|------------|------------|------------|------------|
|         |   | Male (%)   | Female (%) | Male (%)   | Female (%) |
| 1.      | CM is same as Family Medicine.                            | 40 (32)    | 48 (55.17) | 85 (68)    | 39 (44.83) |
| 2.      | CM is not relevant in today's Medical world.              | 0 (0)      | 0 (0)      | 125 (100)  | 87 (100)   |
| 3.      | CM is more theoretical than practical.                    | 41 (32.8)  | 28 (32.18) | 84 (67.2)  | 59 (67.82) |
| 4.      | CM applies only in Rural areas.                           | 5 (4)      | 0 (0)      | 120 (96)   | 87 (100)   |
| 5.      | CM is only about Preventive Medicine.                     | 48 (38.4)  | 36 (41.38) | 77 (61.6)  | 51 (58.62) |
| 6.      | CM does not include Curative Medicine.                    | 32 (25.6)  | 20 (23)    | 93 (74.4)  | 67 (77)    |
| 7.      | CM should be learnt only to be a physician.               | 12 (9.6)   | 4 (4.6)    | 113 (90.4) | 83 (95.4)  |
| 8.      | CM is practiced only by a general practitioner.           | 17 (13.6)  | 8 (9.2)    | 108 (86.4) | 79 (90.8)  |
| 9.      | There is no need to learn about CM to become a Doctor.    | 8 (6.4)    | 9 (10.34)  | 117 (93.6) | 78 (89.66) |
| 10.     | CM deals mainly with sanitation.                          | 56 (44.8)  | 20 (23)    | 69 (55.2)  | 67 (77)    |
| 11.     | CM has nothing to do with hospitals and patient care.     | 0 (0)      | 3 (3.45)   | 125 (100)  | 84 (96.55) |
| 12.     | Not many skills to be acquired in CM.                     | 32 (25.6)  | 16 (18.4)  | 93 (74.4)  | 71 (81.6)  |
| 13.     | Preventive medicine is only about vaccines and nutrition. | 0 (0)      | 7 (8.05)   | 125 (100)  | 80 (91.95) |
| 14.     | CM gives an overall view of a community's medical needs.  | 117 (93.6) | 87 (100)   | 8 (6.4)    | 0 (0)      |

**Table 3: Perceptions regarding curriculum and teaching of CM.**

| Sr. No. | Question  | Agree      |            | Disagree  |            |
|---------|---|------------|------------|-----------|------------|
|         |   | Male (%)   | Female (%) | Male (%)  | Female (%) |
| 1.      | The curriculum of CM is too vast.   | 105 (84)   | 83 (95.4)  | 20 (16)   | 4 (4.6)    |
| 2.      | The time allotted to CM teaching is more as compared to other medical subjects.     | 68 (54.4)  | 36 (41.38) | 57 (45.6) | 51 (58.62) |
| 3.      | The teaching curriculum of CM needs to be revised.                                  | 97 (77.6)  | 71 (81.6)  | 28 (22.4) | 16 (18.4)  |
| 4.      | Community based research should be a part of curriculum.                            | 109 (87.2) | 79 (90.8)  | 16 (12.8) | 8 (9.2)    |
| 5.      | PG entrance examination prevents concentration on CM as compared to other subjects. | 32 (25.6)  | 60 (69)    | 93 (74.4) | 27 (31)    |
| 6.      | More practical topics should be covered in CM.                                      | 117 (93.6) | 87 (100)   | 8 (6.4)   | 0 (0)      |
| 7.      | Teaching methodology needs to be modified to make topic more interesting.           | 121 (96.8) | 87 (100)   | 4 (3.2)   | 0 (0)      |

Strikingly, about 90% students said that the curriculum is too vast but only 50% commented that more time is allotted to the subject, thus implying that a vast subject is covered within a brief period. Around 80% students suggested revision of the curriculum of CM and addition of the Community based research component in it. Almost all the students stressed that more practical topics should be covered and teaching methodology needs to be modified to make topic more interesting. An interesting finding was that 69% girls agreed that PG entrance examination prevents concentration on CM as compared to other subjects while about 75% males were of the exact opposite opinion (Table 3).

Around 65% students opined that CM has a limited scope as a career and that they believed that CM professionals

become Public Health Administrators only. Around 70% students claimed that CM is an ideal choice for PG as there is not much financial gain in CM. Surprisingly, about 22% males commented that Knowledge of CM is essential for successful medical practice. A very striking finding is that around 87% students compared CM with sociology and as such there is no need to keep it as a post-graduate subject (Table 4).

About 60% students said that they would not choose CM as a career (Table 5).

The 40% students who would choose CM as a career gave their reasons for the same as lots of job opportunities, administrative skills, opportunity to serve community and a good career for females (Table 6).

Less clinical utility, not a practical subject, lack of interest in statistics and interest in clinical fields especially surgery, thus less financial gain, not important

in our country and politically dominated jobs were the reasons which drove about 60% students away from choosing CM as a Career (Table 7).

**Table 4: Perceptions regarding CM as a career.**

| Sr. No. | Question  | Agree     |            | Disagree  |            |
|---------|---|-----------|------------|-----------|------------|
|         |   | Male (%)  | Female (%) | Male (%)  | Female (%) |
| 1.      | CM has a limited scope as a career.   | 48 (38.4) | 24 (27.6)  | 77 (61.6) | 63 (72.4)  |
| 2.      | CM is same as sociology, hence no need to keep it as a post-graduate subject. | 20 (16)   | 8 (9.2)    | 105 (84)  | 79 (90.8)  |
| 3.      | The end of CM is in practicing as a General physician.                        | 36 (28.8) | 4 (4.6)    | 89 (71.2) | 83 (95.4)  |
| 4.      | CM should have super Speciality subjects in it.                               | 64 (51.2) | 52 (59.77) | 61 (48.8) | 35 (40.23) |
| 5.      | CM professionals become Public Health Administrators only.                    | 40 (32)   | 32 (36.78) | 85 (68)   | 55 (63.22) |
| 6.      | CM is an ideal choice for PG.   | 40 (32)   | 28 (32.18) | 85 (68)   | 59 (67.82) |
| 7.      | Not much financial gain in CM.  | 96 (76.8) | 44 (50.57) | 29 (23.4) | 43 (49.53) |
| 8.      | Knowledge of CM is essential for successful medical practice.                 | 97 (77.6) | 87 (100)   | 28 (22.4) | 0 (0)      |

**Table 5: CM as a career.**

| Sr. No. | Yes/No | Number of students |            |
|---------|--------|--------------------|------------|
|         |        | Male (%)           | Female (%) |
| 1       | Yes    | 44 (35.2)          | 40 (45.98) |
| 2       | No     | 81 (64.8)          | 47 (54.02) |

**Table 6: Reasons for choosing CM as a career.**

| Sr. No. | Reason  | Number of students |             |
|---------|---|--------------------|-------------|
|         |   | Males (%)          | Females (%) |
| 1       | Field of disease prevention, hence control of epidemics.    | 9 (20.45)          | 5 (12.5)    |
| 2       | Good career for girls.                                      | 0 (0)              | 7 (17.5)    |
| 3       | Help in strengthening health infrastructure                 | 4 (9.09)           | 2 (5)       |
| 4       | Research oriented.  | 6 (13.64)          | 4 (10)      |
| 5       | Lots of job opportunities                                   | 7 (15.91)          | 4 (10)      |
| 6       | Includes medical knowledge and administrative skills        | 6 (13.64)          | 6 (15)      |
| 7       | Opportunity to serve community                              | 8 (18.18)          | 10 (25)     |
| 8       | Financial gain to country through various health programmes | 4 (9.09)           | 2 (5)       |

**Table 7: Reasons for not choosing CM as a career.**

| Sr. No. | Reason  | Number of students |             |
|---------|---|--------------------|-------------|
|         |   | Males (%)          | Females (%) |
| 1       | Interest in other subject                           | 22 (27.16)         | 9 (19.15)   |
| 2       | Less clinical utility                               | 19 (23.46)         | 8 (17.02)   |
| 3       | Only theoretical not practical                      | 14 (17.28)         | 7 (14.89)   |
| 4       | Lack of interest in statistics                      | 10 (12.35)         | 12 (25.55)  |
| 5       | Not given importance in our country                 | 7 (8.64)           | 6 (12.76)   |
| 6       | Politically dominated, hence not interested         | 5 (6.17)           | 3 (6.38)    |
| 7       | Good only for MBBS level no need of post-graduation | 4 (4.94)           | 2 (4.25)    |

## DISCUSSION

Kumar et al found in their study that median age of the students was 21 years which is like our study. They also

found that Surgery was the most opted subject for post-graduation (37.1%) which is also like our study finding.<sup>6</sup>

Subba et al found that the mean (SD) age of the participants was 20.13 ( $\pm$ 1.3) years. Medicine was

reported to be the preferred specialty for students. Overall the most preferred specialties were Internal medicine (30.9%) and General Surgery (24%). Students felt that the scope of the subject was wide as a CM post-graduate could work as a professor in an academic institution, as a program manager in National programs and as a consultant in international agencies and non-governmental agencies. Many students felt that the subject was research centered which was reflected in the responses like “mainly research oriented” and “Public health is an interesting area of research, and it is an important pillar of our health system.” The unfavourable responses were mainly about four sub-themes; “Not interesting”, “Less opportunities”, “Difficult profession” and “Not needed as a separate specialty”. Some even felt that the opportunities for the specialty in India were much less when compared to other specialties as reflected by the responses “It is not a well-developed specialty in India; may be a good one abroad but not here” and “Other fields have better scope”.<sup>7</sup>

The career choices of undergraduate medical students will influence the national availability of healthcare manpower. There is a need to increase manpower in areas such as CM, psychiatry and ophthalmology among others in India. Understanding the factors that influence students’ decisions regarding their future career may help in taking corrective measures.

A study done at a private medical college in southern India has shown that almost all students (99.2%) wish to pursue postgraduate studies, higher than the 83.5% in the study done at a government medical college in Delhi.<sup>9</sup> Similar findings are also reported from our study. This difference could be because (i) that the study included only 1<sup>st</sup> year medical students, (ii) it was done in a different study setting (government versus private), or (iii) it indicates a changing trend.

The choice of specialties showed that the surgery and internal medicine were the most favoured. Traditionally students have favoured these two topics as shown in other studies within India, other developing and developed countries. The most popular choices for men and women in our study were like the choice of students in Jordan, where the most preferred subjects among men were internal medicine and surgery and among women these were Medicine and Obstetrics and Gynaecology respectively. This finding is consistent with other study results.

Though we did not assess the reason for choosing a specialty as a career choice, some underlying factors as suggested by Ko et al and Khader et al could be personal interest, experience during clinical rotations, job opportunities and financial rewards.<sup>10,11</sup> Because India is a developing country, financial rewards could be one crucial factor in choosing a career. This could be the reason why most of the students have chosen specialties which have a proven record of financial gains.

Studies pertaining to perception of MBBS students toward CM as a career choice are limited. A study on primary care specialty choice, which may be considered the counterpart of CM in India, from 1987 to 1993 reported that students predominantly enter medical school with a preference for primary care careers, but that this preference diminishes over time (particularly over the clinical clerkship years). Student characteristics associated with primary care career choice are: being female, older, and married; having a broad undergraduate background; having non-physician parents; having relatively low-income expectations; being interested in diverse patients and health problems; and having less interest in prestige, high technology, and surgery. We did not get such response as we adopted the qualitative methods to assess the perception of students toward the subject.

We developed a conceptual framework based on the responses offered by the respondents which determines the career options of medical graduates. Though there is a favourable attitude toward CM as a subject, but students are not coming forward to take up this subject as it is perceived to be a “boring” subject. Various strategies like field based teaching, group discussion, integrated teaching (horizontal and vertical), application and relevancy oriented teaching will go a long way. The Medical Council of India 2015 vision document provides flexibility to adopt such innovative methods in various specialties.

One of the factors reported was “we will lose touch with patients”; this misconception should be dispelled among undergraduates and as we serve as the point of first contact with the community in the primary and secondary care level and CM is considered a clinical subject as per medical council of India regulations.

There is a divergence of views regarding the scope of CM. Some students felt that it has got a very good scope particularly in western countries. However, a few felt that “other fields have a better opportunity”; this indicates that the career path after post-graduation on CM should be communicated to the undergraduate students which will help them to compare the scope and help to decide them about CM as a career option.

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