**Original article**

# COMMUNITY MEDICINE AS A CAREER OPTION! HOW IS IT PERCEIVED BY MEDICAL STUDENTS?

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**Financial Support:** None declared

**Conflict of interest**: None declared



**How to cite this article**:
Singh MK, Singh AK. Community Medicine as a Career Option! How is it Perceived by Medical Students?. Natl J Community Med 2013; 4(2): 241-246.

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**Date of Submission:** 21-03-13

**Date of Acceptance:** 20-05-13

**Date of Publication:** 30-06-13

## ABSTRACT

**Aim**: This study was conducted to assess possible reasons for medical students opting for or shying away from Community medicine as a career option.

**Methodology:** A cross-sectional study was done among MBBS students, interns and fresh medical graduates at a medical college in Uttar Pradesh. Study tool was an open-ended questionnaire in first phase and a pre-tested structured questionnaire in second phase.

**Results:** About 15.7% students opted for Community medicine as a career option. Male students and students not having a doctor in their family showed higher preference. Community medicine cannot bring in "name/fame equivalent to other clinical subjects" ranked topmost in rejection criteria, followed by "lack of personal satisfaction", "recognition in society" and "lack of information on future career prospects". A statistically significant difference was also observed for the above cited reasons.

**Conclusions:** Fear of not being able to earn name/fame, recognition in society and job satisfaction in comparison to other clinical subjects along with lack of information regarding future career prospects seem to be the most important causes for rejection of Community medicine as a career option.

**Key words**: Community Medicine, Career choice, Mann Whitney U test, Likert scale

## INTRODUCTION

`India is in a phase of rapid health transition. Today there is an unfinished agenda of infectious diseases, nutritional deficiencies and unsafe pregnancies as well as the challenges of escalating epidemics of non-communicable diseases and emerging/ re-emerging epidemics of infectious diseases. This needs a concerted public health response to prevent disease and promote health in masses.

A working group for the seventh five year plan estimated the number of public health managers needed as 9,600 to 10,750 by the year 2010. There is an additional need of 1000 public health specialists for programs run by the international agencies. The yearly output from existing public health institutions is not more than 400.[1] National Commission on Macroeconomics & Health -2005 also identified acute shortage of human resources for health of all categories, including lack of good teaching faculty, low quality of instruction and skill acquisition and neglect of Community medicine.[1]

Majority of medical students want to pursue their specialization in clinical branches, other than Community medicine.[2] In a previous study on career aspiration among medical students in Uttar Pradesh (UP), training in public health held little attraction, even though government policy continues to prioritise its importance.[3] Despite the huge demand for public health

doctors in India, the framework of public health remains unsatisfactory. Community medicine is considered to be at the bottom of the medical educational system.[4] As per National Knowledge Commission-2005, in the year 2001, out of 3181 degrees awarded, only 58 were in Community medicine, reflecting the low preference of Community medicine as a choice for pursuing post-graduate studies.[5] Over 2000 teachers are required in Community medicine for the Bachelor of Medicine and Bachelor of Surgery (MBBS) course alone and if this deficiency persists, it will definitely have its impact upon the fundamental structure of medical education and will also dilute it.[6] Government of India has undertaken some remedial measures to fill up this gap, for example, doubling up the post-graduation (PG) seats in medical colleges, but mere doubling of seats, is unlikely to attract students to opt for Community medicine until interest develops in public health specialties. Even if they opt for Community medicine, they will not do so out of interest, but just to have a PG degree. This trend is even more dangerous, as any branch if pursued without interest is not going to produce quality doctors and academicians.[7]

The present study intended to know the possible reasons why medical students opt for or shy away from Community medicine as a career option and to look for the possible determinants behind their decision.

## METHODS

The present study is a cross-sectional study carried out at a government medical college in eastern Uttar Pradesh, with post graduate degree being offered in 13 subjects including Community medicine. The study unit consisted of willing MBBS students, interns and MBBS pass outs. As per a cohort study on career choices for public health among graduates of a UK medical school by Goldacre MJ et al, public health was the unreserved first choice of 8% of all doctors practising public health in the first post-qualification year.[8] A sample size of 118 was calculated, using the formula $4pq/d^2$, with 'p' equal to 8% &'d' equals 5% as absolute error. Adding 10% for non-response/ absenteeism and 10% rejection for incomplete information, a sample of 142 participants was obtained. MBBS students, interns and fresh medical graduates preparing for PG entrance were selected using simple random sampling.

The study was done in two phases. In the first phase, an open ended questionnaire was used to collect the possible reasons for medical students possibly opting/ not opting Community medicine as a career option. In the second phase, the study tool (a self-administered structured questionnaire) containing a compilation of the possible reasons for medical students possibly opting/ not opting for Community medicine was designed. Responses to the reasons cited were arranged over a five-point Likert scale. The study tool was pretested on 10% of the desired sample size. The final questionnaire had two sections: 'General information about participant' (excluding names) and 'Ranking of the possible reasons' over a 'five-point Likert scale' on a scale of 1 to 5. The students were handed out the questionnaire after obtaining written consent. Participants were ensured of complete confidentiality of their personal data and choices made. The response rate was 92.5 percent. Inclusion criteria comprised students from the institution who gave written consent to participate in the study. Students who were part of the pre test or 1st phase of the study and those who declined to give written consent for the study were excluded from the final phase of the study.

**Statistics:** Data collected was analysed using SPSS 16.0 for Windows©. The statistical tests applied were mean score on Likert scale, Mann-Whitney U test and Chi square test. Incompletely filled questionnaire were excluded and final analysis was done on 128 subjects.

## RESULTS

Of the 128 participants included in final analysis, 20 (i.e.15.67%) expressed a possibility of pursuing PG in Community medicine.

Table-1 shows the factors influencing decision making for choosing Community medicine as a career option. Higher proportion of male students (17.8%) and those not having any family member a doctor (27%) opted for Community medicine. A statistically significant difference with 'p value' less than 0.05 was observed for sex, place of residence and family member being a doctor with respect to opting/ not opting for community medicine as a career option. Percentage of marks in intermediate taken as an indirect measure of academic performance also showed an inverse relation with choice of community medicine. The proportion of students choosing community medicine as a career option declined

with increase in percentage of marks secured in Intermediate. However, it was not found to be statistically significant. Higher proportion of students from rural background (23.6%) opted to choose Community medicine as a career option in comparison to students from urban background (9.6%). Also younger students (16.3%) showed a greater interest for Community medicine compared to older age group (14.6%) students.

**Table 1: Analysis of determinants for choosing Community medicine as future career option (n=128)**

| Determinants | Want to choose Community medicine (n=20) | Do not want to choose Community medicine (n=108) | $\chi^2$ (df) , p value |
|---|---|---|---|
| **Sex** | | | |
| Male (n=90) | 16 (17.8%) | 74 (82.2%) | 1.07 (1), 0.302 |
| Female(n=38) | 4 (10.5%) | 34 (89.5%) | |
| **Age in years** | | | |
| < 25 (n=80) | 13 (16.3%) | 67 (83.7%) | 0.06 (1), 0.801 |
| ≥ 25 (n=48) | 7 (14.6%) | 41 (85.4%) | |
| **Residence** | | | |
| Urban (n=73) | 7 (9.6%) | 66 (90.4%) | 4.69 (1), 0.030 |
| Rural (n=55) | 13 (23.6%) | 42 (76.4%) | |
| **Percentage of marks in Intermediate** | | | |
| < 60 (n=16) | 4 (25%) | 12 (75%) | 2.32 (3), 0.509 |
| 60-70 (n=49) | 9 (18.3%) | 40 (81.7%) | |
| 70-80 (n=36) | 4 (11.1%) | 32 (88.9%) | |
| > 80 (n=27) | 3 (11.1%) | 24 (88.9%) | |
| **Is any family member a doctor** | | | |
| No (n=37) | 10 (27%) | 27(73%) | 5.13 (1), 0.023 |
| Yes (n=91) | 10 (11%) | 81 (89%) | |

df = Degree of freedom

**Table 2: Possible reasons for rejecting Community medicine as future career option (n = 108)**

| Rank | Reasons for rejection | Mean score on Likert scale |
|---|---|---|
| 1 | I cannot earn name/fame equivalent to counterparts in medicine/surgery | 3.87 |
| 2 | Career in Community medicine/ Public Health will not be satisfying for me | 3.79 |
| 3 | Career in Community medicine/ Public health will not bring me any recognition in society | 3.28 |
| 4 | I lack of information regarding future career prospects after choosing Community medicine/ Public Health | 3.22 |
| 5 | I am not impressed with anyone in this field | 3.19 |
| 6 | The subject is looked down by my peers & seniors | 3.18 |
| 7 | I have not seen anyone doing well in this field | 3.00 |
| 8 | I might not be able to earn as much as my counterparts in other clinical subjects | 2.99 |
| 9 | The subject is not projected well by faculty/ postgraduates | 2.97 |
| 10 | I have heard of postgraduates/ faculty feeling frustrated after choosing Community medicine | 2.80 |

Table-2 shows the mean Likert scores (MLS) of participants responses to possible reasons for not choosing Community medicine as future career option. The belief that career in Community medicine cannot bring in "name/fame equivalent to other clinical subjects" ranked topmost in rejection criteria, followed by "lack of personal satisfaction" & "recognition in society" with MLS greater than three. Many of the students "didn't have idea regarding future career prospects in Community medicine" and were "not impressed with anyone in the field". Interestingly "earnings not equivalent to other clinical subjects" was among the least cited reasons for rejection with MLS less than 3.

Table-3 shows the level of agreement over the opinions among participants not opting (group 1) and opting (group 2) for a specialisation in Community medicine. Almost half (49%) of the participants in group 1 were in agreement with "lack of information regarding future career prospects" compared to one-fifth of participants in group 2, and this difference was found to be statistically significant (p=0.016).

**Table 3: Agreement with regards to opinions on Community medicine among participants (n=128)**

| Opinion | Percentage of students in agreement | | Mean rank | | Mann Whitney U | Z value | p value |
|---|---|---|---|---|---|---|---|
| | Group 1 (n=108) | Group 2 (n=20) | Group 1 | Group 2 | | | |
| I lack information on future career prospects after choosing CM | 49 | 20 | 67.81 | 46.65 | 723 | -2.413 | 0.02 |
| The subject is not projected well by faculty/ postgraduates | 37 | 10 | 67.69 | 47.30 | 736 | -2.310 | 0.02 |
| The subject is looked down by my peers & seniors | 44 | 60 | 62.44 | 75.60 | 858 | -1.502 | 0.13 |
| I have heard of postgraduates/ faculty feeling frustrated after choosing CM | 34 | 35 | 63.51 | 69.82 | 973 | -0.717 | 0.47 |
| I am not impressed with anyone in CM | 48 | 45 | 65.29 | 60.25 | 995 | -0.571 | 0.57 |
| I have not seen anyone doing well in CM | 37 | 40 | 64.31 | 65.52 | 1059 | -0.138 | 0.89 |
| I might not be able to earn as much as my counterparts in other clinical subjects | 42 | 35 | 64.94 | 62.12 | 1032 | -0.322 | 0.75 |
| Career in CM will not bring me any recognition in society | 47 | 25 | 67.24 | 49.70 | 784 | -1.993 | 0.046 |
| I cannot earn name/fame equivalent to counterparts in medicine/surgery | 69 | 30 | 68.36 | 43.65 | 663 | -2.874 | 0.004 |
| Career in CM will not be satisfying for me | 62 | 20 | 69.87 | 35.50 | 500 | -4.008 | <0.001 |

*Not opting for Community medicine (CM), ** Opting for Community medicine (CM)

A statistically significant difference was also observed between group 1 and 2, with respect to the opinions "subject is not projected well by faculty/ postgraduates" and "career in Community medicine will not bring any recognition in society". There was difference in opinion on "a career in Community medicine cannot earn name/fame equivalent to counterparts in medicine/surgery" among both groups and this difference was highly significant (p = 0.004). A highly significant difference (p <0.001) was observed for "career in Community medicine is not satisfying" between the two groups (Group 1=62%; Group 2=20%). Compared with students in group 1, majority (60%) of participants in group 2 felt that "the subject is looked down by peers/seniors".

Table-4 shows the association between the reasons for opting MBBS and choice of Community medicine as future career option. About 30% of students had cited "social service" as the sole reason or one of the reasons for joining MBBS. Other reasons cited were "seeking name/fame", "personal interest", "family expectations", "financial incentives" and "secure career". Interestingly, about 40% of students in group 2 (opting for community medicine) had cited "social service" as the sole reason or one of the reasons for joining MBBS compared to 29% in group 2 (Not opting for community medicine). However, the difference was not found significant (p=0.31).

**Table 4: Reason for opting MBBS and opting Community medicine as future career option (n=128)**

| Reason for opting MBBS | Group 1 -Not opting for Community medicine (n=108) | Group 2 -Opting for Community medicine (n=20) | Total | $\chi^2$ (df) , p value |
|---|---|---|---|---|
| Social service | 31 (28.7%) | 8 (40.0%) | 39 | 1.02 (1), 0.31 |
| Other reasons | 77 (71.3%) | 12 (60.0%) | 89 | |
| Total | 108 ((100.0%) | 20 (100.0%) | 128 | |

df = Degree of freedom

## DISCUSSION

In the current study, 15.6% of MBBS undergraduates and pass-outs had expressed their desire to pursue a career in Community medicine. This ratio is comparable to a Dutch study where 15% of students indicated a high level of interest in youth health care (a public health speciality, with similarities to Community medi-

cine) in the first year of medical school. A previous study had revealed that about 3.5% of Indian students studying medicine in Nepal had opted for Community medicine. As per a study in Canada, about 88% of medical students denied opting for Community medicine as a future career.[9,10,11]

In the present study, significantly higher number of male participants desired to take community medicine as a future career option in comparison to females. Roy B et al. had also found that about 80% of medical students who opted for Social Medicine/ Public Health were males.[9] However, the Dutch study by Soethout MB had reported higher mean preference for youth health care (a Public Health speciality, with similarities to Community medicine) in women than men.[10] In the present study, those not having a doctor in the family were more likely to opt for Community medicine. These findings are similar to that of Roy B *et.al.* where none of the students whose father was a doctor and only 15% of those whose mother was a doctor had opted for Social Medicine/ Public Health.[9]

The percentage of marks in intermediate (used as an indirect indicator of academic performance of students) showed an inverse relation with likelihood of choosing Community medicine. An article by Nath Anita, Ingle GopaI had cited low rank in merit list as one of the prime reasons for choosing Community medicine as a subject of specialization. This indirectly hints that students with higher merit or intellect keep themselves at a distance from Community medicine.[4] Higher proportion of students from rural background (23.6%) opted to choose Community medicine compared to their counterparts from urban areas.

Among the reasons for rejecting Community medicine as future career option, interestingly, "financial implications" were rated much below the concern for "prestige in society and peers". Among other reasons cited as cause for rejection were "having no idea for future career prospects" and "no role model". These findings are similar to the findings of Schafer S et.al. who found insufficient prestige as one of the foremost reasons for students rejecting Family Medicine.[12]

The study also assesses level of agreement on opinions for Community medicine as career choice between participants willing to opt / not willing to opt Community medicine. A highly significant difference was observed between the two groups on the opinion regarding "satisfaction after choosing Community medicine as future career option". Surprisingly, there were participants who opted to choose Community medicine as career although they did not feel it satisfying. Other significant differences in opinions between the two groups were observed for 'not earning name/ fame', 'not having enough information regarding future career prospects', 'subject not projected well by faculty/ post-graduates' and 'subject not bringing any recognition in society'. These may very well be the perceptions that require a change for promoting the subject among medical students. While no significant difference was observed between the two groups regarding "subject being looked down by peers/ seniors", high number of students from both groups believed it to be true.

The general perception that Community medicine is a subject meant for doctors who have an inclination for social service seems to be wronged by the study. No significant difference was observed between students who opted for Community medicine and those who did not opt for it with regards to desire for social service. Among students who did not opt for Community medicine about one third i.e. 29% wanted to do social service. This hints at a possibility that medical students willing to do social service would not consider opting Community medicine more compared to other medical subjects.

## CONCLUSION

Fear of not being able to earn name/fame, recognition in society and job satisfaction in comparison to other clinical subjects along with lack of information regarding future career prospects seem to be the most important causes for rejection of Community medicine as a career option. Interestingly income was not found to be a major concern. Another important observation was that about 60% of students opting for community medicine felt that "the subject is looked down by peers/seniors". This issue needs to be handled well; else it would dampen the spirits of those thinking of Community medicine as a future career option, and the subject will continue to be a compromise rather than a choice. The subject needs to be projected well amongst undergraduate medical students as a lucrative career option by sharing of experiences by eminent persons in the field. Interest in social service can be used to advantage to attract more students towards our beloved discipline, as it offers the best opportu-

nities for medical students with aptitude for social service.

### Limitation of the study

The study is restricted to just one medical college in UP for lack of sufficient monetary and man-power resources. A multi-centric study is planned in future. It can possibly give slightly different results with better representation of medical students in the state/country. There is also a possibility of a slight change in preference during the course of MBBS but this factor was excluded as it could be better gauged by a prospective study and also there was negligible difference in the preferences for community medicine among the students of different semesters, interns and MBBS pass outs in the current study.

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