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RESEARCH ARTICLE

PREFERENCES OF UNDERGRADUATE MEDICAL STUDENTS FOR CHOOSING A CAREER SPECIALTY AND THEIR INTEREST IN COMMUNITY MEDICINE

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Abstract

Background: India being a developing country, with the highest burden of multiple preventable diseases including tuberculosis proposes a more robust public health care system. Considering the lack of efficient leadership in public health, this study has been conducted in order to assess the interest of medical students in community medicine as a career and to understand their point of view with respect to public health.

Materials & Methods: A cross- sectional study was conducted among II, III, IV M.B.B.S students from government medical college, Chhatrapati Sambhajinagar, Maharashtra during the period of July to august 2024 through a structured, pretested questionnaire.

Results: 390 students took part in the study. Of which II MBBS (33.4%), III MBBS (38.8%), IV MBBS (28%). Males and females were represented as 215(55%) and 162 (41.5%) respectively. The specialties most preferred by students were general surgery, general medicine and dermatology, while the least preferred were pre and paraclinical subjects including community medicine. Significant variation in data was noted with respect to the location (urban or local) of pursuing career as a doctor semester wise.

Conclusion: The study finds that curative medicine is still being sought better than preventive medicine in India, further on it also provides significant proofs for the difference in urban and rural division of resources. More insightful studies are required to assess how to improve the allocation of resources into rural localities.

Introduction: -

The goal of medical education is to prepare future doctors with the skills they will need to perform their likely duties. Medical schools have a responsibility to direct their education, research, and service efforts toward resolving the most pressing health issues in the communities, regions, and countries they are mandated to serve[1].

Globally, India has the most medical colleges, around 91415 MBBS graduates completing every year from 607 colleges as per National medical commission (NMC). In India, medical curricula have not been kept up to date with changes in public health, demography, and health policies. Rather than a population-based preventative health care

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strategy, health practitioners are taught a treatment-oriented therapeutic approach. The importance of basic health care is being ignored, and there is a growing trend toward super specialization in numerous medical specialties[2].
Today there is an unfinished agenda of infectious diseases, nutritional deficiencies and unsafe pregnancies as well as the challenges of escalating epidemics of noncommunicable diseases and emerging/ re-emerging epidemics of infectious diseases and this needs a concerted public health response to prevent disease and promote health in masses[3].

The high-level expert group on universal health coverage recommends the creation of an All-India Public Health Service Cadre, a new cadre comprising of public health professionals with an aim to improve the functioning of the health system by enhancing the efficacy, efficiency and effectiveness of health care delivery. This cadre should be supported by a state level public health cadre starting at the block level and going up to the state and national level comprising of postgraduates in Public Health and Community Medicine. This highlights the need for Community Medicine specialists who identify the determinants of health and take them into account while planning promotive, preventive, therapeutic and rehabilitative measures/strategies. They also organize and supervise the assigned health care services demonstrating adequate managerial skills in the clinic/hospital or field situation. As per the National Health Policy 2002, there are deficiencies in various specialties including Community Medicine specialists[4].

One of the reasons for this is that models of medical education and selection into specialty programs vary globally. In India, before students opt for a specialty, they are required to complete an undergraduate degree program (Bachelor of Medicine and Bachelor of Surgery, MBBS). The duration of the MBBS program is 4.5 years, with 4 different stages (referred to I to IV MBBS). Upon successful completion of the MBBS program, medical students undergo a compulsory residential rotatory internship (also referred to as internship) in a hospital setting for a year. Subsequently, medical graduates compete for selection a residency program (known as postgraduate courses in India) through a national-level examination; the mode of selection for admission to the residency programs has also undergone significant changes over the past several years. Finally, graduates are awarded an MS (Master of Surgery; for surgical specialties) or MD (Doctor of Medicine; for non-surgical specialties) degree upon successful completion of a residency program in India[5].

Objectives: -

The primary objective of this study was to evaluate the preferences of medical students in choosing a career or specialty, thereby investigate factors influencing the choice and also to assess their interest in community medicine specifically as a specialty.

Materials and Methods: -

Study Design:

A cross sectional study was conducted among MBBS students studying in Government Medical college, Chhatrapati Sambhajinagar, Maharashtra during the period of July to august 2024.

Study Participants:

This study included only II, III, IV-year MBBS students studying in Government medical college, Chhatrapati Sambhajinagar, who were willing to participate in the study after an informed consent.
I year students would be unaware of all specialties and would also lack clinical exposure thus were not included in the study.
Students doing compulsory rotatory internship were also excluded from the study.

Study Methodology: -

Approval was obtained from institutional ethics committee, government medical college, Chhatrapati Sambhajinagar. An appropriate structured pretested questionnaire was prepared and was distributed among all eligible participants for the study.

Objective of the study being factors determining the choice of specialty, questions mainly assessed their knowledge, background and perception to subject community medicine. Questionnaire also included their vision in their choice of specialty, and their opinions on how to make community medicine more attractive to future students.

Data collected from the questionnaires were tabulated using Microsoft excel sheet 2019 and further summarised into frequency and percentages. The statistics of interest including chi square test at 95%CI was used to analyse the data further.

Results: -

Table 1: - Demographic characteristics of student's year wise.

CHARACTERISTIC	II MBBS N (%)	III MBBS N (%)	IV MBBS N (%)	TOTAL N (%)
	130(33.4)	151(38.8)	109(28)	390
GENDER				
Males	69(17.7)	92(23.6)	54(13.8)	215(55)
Females	61(15.6)	59(15.1)	55(14)	175(45)
PLACE OF RESIDENCE				
Rural	56(14.3)	63(16.1)	43(11)	162(41.5)
Urban	74(19)	87(22.3)	66(16)	227(58)
OCCUPATION OF FATHER				
Agriculture	29(7.4)	43(11)	28(7)	100(25.6)
Teaching	32(8.2)	24(6.1)	19(4.9)	75(19.2)
Government employee	23(5.89)	25(6.4)	24(6.1)	72(18.5)
Business, finance and managers	10(2.5)	23(5.9)	13(3.3)	46(11.8)
Self employed	13(3.3)	11(2.8)	12(3)	36(9.2)
Professionals	5(1.3)	12(3)	4(1)	21(5.4)
Health sector	7(1.8)	9(2.3)	5(1.3)	21(5.4)
Others	10(2.6)	4(1)	5(1.3)	19(4.9)

A total of 390 students participated in the study. Out of the 390, II MBBS consisted of 130(33.4%), III MBBS 151(38.8%), IV MBBS 109 (28%).

Males and females were represented as 215(55%) and 175(45%) respectively.

Based upon geographical background majority of participants were hailing from an urban background 227 (58%) and 162 (41.5%) were from rural background.

Occupation of father mainly being agriculture (25.6%), teaching (19.2%) and government employee (18.5%).

Table 2: - Likely choice of career path post MBBS.

Likely choice of career path post MBBS	N (%)
To complete Post graduation in India	295(75.6)
To acquire doctors license for countries outside India (USMLE/ PLAB)	11(2.8)
Civil services	15(3.8)
Not sure till date	55(14.1)
Join to be a medical officer (M.O / H.O)	14(3.6)

Only 23.8% of participants had a close family member who is a doctor in working. Around 295(75%) of the students wished to pursue postgraduation in India after their bachelors' course with top three choices of specialty to pursue postgraduation being general medicine (21%), general surgery (14.6%), and dermatology (13.3%).

Community medicine being one of the least sought out subjects (0.9%).

Table 3: - Choice of top 3 specialties post MBBS.

SUBJECTS	N	%
General medicine	235	21 %
General surgery	164	14.6 %
Dermatology	149	13.3 %
Radiodiagnosis	115	10.2 %
Pediatrics	108	9.6 %
Orthopedics	46	4.1 %
Obstetrics and gynecology	43	3.8 %
Ophthalmology	32	2.8 %
Anesthesia	27	2.4 %
Ear, nose throat	23	2 %
Emergency medicine	22	1.9 %
Radiotherapy	19	1.7 %
Forensic medicine	16	1.4 %
Respiratory medicine	14	1.2 %
Community medicine	10	0.9 %
Others	59	5.3 %
Not sure	39	3.5 %

Others include anatomy, biochemistry, family medicine, geriatric medicine, microbiology, nuclear medicine, pathology, pharmacology, physiology, transfusion medicine, physical medicine and rehabilitation.

The primary factor influencing one's choice of specialty being personal satisfaction (28.5%), personal growth (38%), professional growth (33.6%).

With regard to awareness of all career specialties and the certainty of their choices, full awareness and complete certainty present for only 15.4% of the participants, while 39.5% of the participants were not only unaware of the work requirements and likely challenges encompassed in each specialty but also uncertain of their choices.

Table 4: - Awareness of various career specialties and certainty of the one's choice.

	II MBBS	III MBBS	IV MBBS	Total
I am aware of all career specialties available, and I am certain of my choices	20	24	16	60(15.4%)
I am not aware of all career specialties available, and I am not certain of my choices	61	56	37	154(39.5%)
I am aware of all career specialties available, and I am not certain of my choices	26	33	31	90(23%)
I am not aware of all career specialties available, and I am certain of my choices	23	38	25	86(22%)

Importance of having a specialty degree to serve in the rural remote areas in comparison to MBBS degree as assessed from subjects' point of view, more than 60% were of the opinion that a specialty degree is important for practising in rural areas/remote areas as a doctor.

Table 5: - Importance of having specialty degree to serve in the rural/remote areas in comparison to MBBS degree.

On a scale of 1 to 5. How would you rate the importance of having a specialty degree to serve in the rural/remote areas, in comparison to MBBS degree?	**N**	**%**
1. Very unimportant	18	4.6
2. Unimportant	16	4.1
3. Neutral	113	28.9
4. Important	159	40.7
5. Very important	84	21.5

Whereas the choice of location to pursue career as a doctor semester wise most participants preferred to work in urban setting rather than rural areas with p value of 0.029 which is significant at 95% significance level using chi square test.

Table 6: - Preference in location practicing as a doctor year wise.

Choice of location to pursue career as a doctor	**II MBBS N (%)**	**III MBBS N (%)**	**IV MBBS N (%)**	**Chi square value**	**Degrees of freedom**	**p- value at 5% significance level**
Urban India	75(19.2)	97(25)	82(21)	14.056	6	0.029
Rural India	20(5)	25(6.4)	10(2.5)			
Not sure	31(8)	22(5.6)	12(3)			
Outside India	5(1)	6(1)	5(1)			

Discussion: -

The main objective of this study was to not only evaluate the preferences of medical students in choosing a specialty but also assess their interest in community medicine as a subject and how we can make it more attractive for the future generations.

More than 60 percent of the students in our study consider a specialty degree important while serving in rural/ remote areas opposed to the Indian health care delivery system in place. Unlike other countries, in India the flow of patients follows a multistage system of health services including community health workers, general practitioners, specialty doctors and finally inpatient care in tertiary care hospital. An effective multistage referral system and strong primary health care keeps check on the rising cost of health care as observed in major cities in India and other countries[6].

A majority of the students (75%) would rather complete post-graduation in India in their choice of specialty rather than working in rural areas and strengthen their basic primary health care skills, furthermore other investigators have seen that about two thirds of the fresh graduates felt that their skills in medicine needed improvement for them to operate independently; about 30% of the graduates expressed lack of confidence in providing services independently and one third of these were not even confident of providing the services under supervision [6].

The top 3 choices of specialties have not seen any change in trend since 1980s as observed by p. ramalingaswami[7], general medicine, general surgery, dermatology, radiodiagnosis, paediatrics still remain the top sought specialties.
In spite of emphasizing on health for all by the world health organization and the government of India being a signatory of Alma- Ata declaration in 1978 through the provision of primary health care approach to the vast majority of underserved rural people and urban poor, Curative medicine is still given more importance and considered of higher prestige with better pay than all pre-clinical and para-clinical departments[8].

The differences in urban-rural health indicators are a harsh reality even today; infant mortality rate is 62 per thousand live births for rural areas as compared to 39 per thousand live births for urban areas (2007)[9]. Only 31.9% of all government hospital beds are available in rural areas as compared to 68.1% for urban population. When we

consider the rural-urban distribution of population in India, this difference becomes huge. Based on the current statistics provided by the Government of India, the current bed-population ratio for Government hospital beds for urban areas (1.1 beds/1000 population) is almost five times the ratio in rural areas (0.2 beds/1000 population)[10,11].

Apart from this shortfall in infrastructure, shortfall in trained medical practitioners willing to work in rural areas is also one of the factors responsible for poor health care delivery systems in rural areas. The number of trained medical practitioners in the country is as high as 1.4 million, including 0.7 million graduate allopath's[12]. However, the rural areas are still unable to access the services of the qualified doctors. A total of 74% of the graduate doctors live in urban areas, serving only 28% of the national population, while the rural population remains largely unserved[21].

Imbalance in urban rural resources has been noticed in our study also, where more than 65% students chose to pursue career in urban localities and also data showed significant variation when tabulated semester wise.

Medical graduates are more urban oriented and heavily dependent on methods used in tertiary care. Their career aspirations are also different from objectives set by the government for human resource development, they have failed to position themselves comfortably in the social ambience of the country, and also failed to recognize health services as a fundamental requirement of the community[6].
Community medicine still remains one of the least attractive subjects for undergraduates consistently as observed in ruban et al[5,] sitanshu et al[4], stating lack of clinical exposure and perceived societal status as primary reasons.

India being a developing country monetary benefits is deemed as the primary motive to pursue any career than passion, purpose or social service.
Even though preventive medicine still seems an unpopular opinion, the debate is still unopposed considering cost effectiveness and cost benefit analysis, primary health care should be the top most priority for effective health care delivery.

As the report of a WHO- SEARO[17] review meeting held in Kathmandu Nepal with the objective of improving the teaching of public health at undergraduate level in medical schools suggested emphasis on field based experiential learning of public health competencies, strengthening of epidemiological, health management, communication, documentation and computer skills, practice-based teaching promoting critical and analytic thinking, and further integration with clinical disciplines.

Medical students should be made to realize that public health knowledge and skill are very important both in daily clinical practice and health promotion, as well as in disease prevention in the community, any doctor can do disease treatment as well as disease prevention at the same time.

Conclusion: -

The study shows significant lacking in certain areas of concern like the social responsibility as a doctor and how they contribute to the progress of the country as a whole. Undergraduate medical education in India should focus on the holistic development of the students including sports, hobbies, interests rather than academics alone.

Confilcts of Interest:
Nil.

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None.

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