Medical Students' Perception Regarding Community Medicine as a Subject and a Career Option Amongst Medical Colleges of Lahore City



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ABSTRACT

Introduction: Community medicine is an integral part of the healthcare profession, and inculcates the knowledge and skills needed to solve health issues in society.

Aims & Objectives: The objective of this study was to compare the perception of medical students about community medicine as a subject and as a career path between government and private sector colleges.

Place and duration of study: The study was conducted at CMH Lahore Medical College and Shaikh Khalifa bin Zayed AlNahyan Medical And Dental College for a dutration of 6 months from December 2021 till May 2022..

Material & Methods: A comparative cross-sectional survey was conducted on fourth and final-year students from medical colleges in the private and public sectors. The survey was conducted through the "Google Forms" application through a self-made questionnaire with a sample size of 421. The survey consisted of three sections. Section one pertained to the demographic information, whereas section 2 and 3 pertained to the perception of community medicine as a subject and as a career, respectively. Data was analyzed using SPSS software version 25.0, P-value<0.05 was taken as significant.

Results: Majority of participants in the study were females (59%). Half of the participants (50%) agreed that community medicine is related to health-related issues and the majority (40%) believed that it is integral for solving problems at a community level. However, most participants (57%) reported that they would not opt for community medicine as a career. The contributing factors were reported to be less fame (66%) and salary (61%).

Conclusion: Students showed a good understanding and perception of community medicine as a subject. However, they are reluctant to pursue it as a career.

Keywords: Community medicine, Perception, Medical Students, Career, Public Health, Medical Education

INTRODUCTION

Community medicine is defined as a discipline concerned with the identification and solution of health care problems of communities or other defined populations. It comes under the broader discipline of Public Health¹. As such, it pertains to the prevention of diseases, the determinants and natural history of disease in populations, and the influence of the environment and society on health and disease¹. The discipline lays the foundation for the popular slogan; "Health For All" which was first introduced by WHO and publicized in 1977. It aims to establish and affirm the health and wellbeing of people worldwide. Today, health is not merely an absence of disease; it is instead pertinent to the quality of life. Consequently, health may be expressed as a state of complete physical, mental and social well-being. One can now say that health, as well as the healthcare system as a whole, plays an integral role in the socio-economic development of the whole community¹. The scope of medicine has rapidly expanded from individual to the community and as such preventive medicine has begun to take precedence over curative medicine. As such, there is a greater need for community medicine as it bridges the gap between traditional fields of public health and clinical medicine and brings community perspective into health¹.

With the rapid advancement of healthcare systems, the evolution of teaching practices pertaining to community medicine and public health is inevitable^{2,3}. As such community medicine has been inculcated in medical colleges' curricula at an undergraduate level. The discipline is taught to 4th and 5th year medical students throughout Pakistan. It equips medical students with the resources and expertise to understand the basic principles of community medicine and the determinants of health while subsequently using

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this knowledge in the future as healthcare professionals when planning promotive, preventive, therapeutic, and rehabilitative measures^{1,2,4}. As such, it ensures the understanding and application of epidemiological studies to determine public health problems and find their appropriate solutions⁵.

understanding Despite students' of the significance of community medicine, few opt for it as a career. The reasons for which past studies have ascertained are prestige, fame, status, and job satisfaction that other fields or disciplines may bring them.^{5,6} Undergraduate students, as well as medical professionals, give more stature to clinical and hospital-based medicine over preventive and community medicine. Consequently, we see very few people adopting community medicine as a career. According to previous studies conducted in Pakistan and Jordan, community medicine seems to be one of the least preferred disciplines as a career choice, a result that has been exhibited in various other studies conducted afterward^{5,6,7,8}. Additionally, a study conducted on Canadian medical students reveals that a lack of role models is a big influence on the perception of students towards the subject of public health and its curriculum^{5,6,9}.

The recent COVID pandemic has highlighted the significance of Community Medicine both as a discipline as well as the vital role that the public health infrastructure plays in our country. Inadequate attention to management and institutional reforms is an important barrier to achieving universal health coverage¹⁰.

In accordance with the times and the aftermath of the pandemic, this article aims to ascertain whether there is a rise in the number of students who prefer community medicine as a career path and the perception of medical students about community medicine as a subject.

MATERIAL AND METHODS

After Receiving Ethical Review Committee Permission vide letter no: 4417/ERC/CMH/LMC a comparative cross-sectional survey was conducted on data gathered from fourth and final-year medical students at CMH Lahore Medical College and Shaikh Khalifa bin Zayed AlNahyan Medical And Dental College for a dutration of 6 months from December 2021 till May 2022.A questionnaire pertaining to the perception of Community Medicine both as a discipline and a career option was used. The sample size was calculated to be 421 with a 95% confidence

interval and 5% error margin. It was calculated via the WHO formula. 4th and 5th-year medical students (MBBS) were included in the study. Medical students who have not yet studied community medicine or have already graduated will be excluded from this study. The questionnaire was self-validated through a pilot study of 30 subjects. Cronbach alpha gave a reliability greater than 0.7.

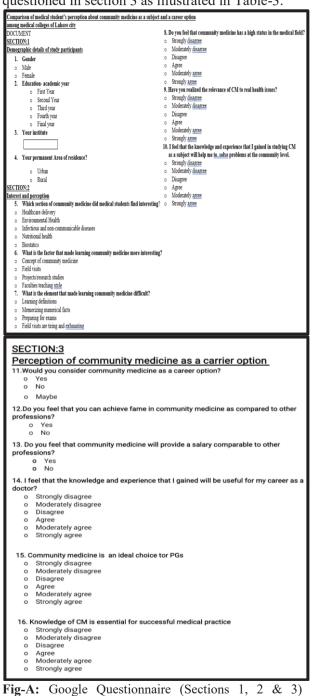
Participants answered the questionnaire anonymously with informed consent through 'The Google Forms' application over a time span of two months (Fig- A). The questionnaire can be divided into 3 sections: Section 1 pertains to the demographic details of study participants. General information about their age, gender, year of study, as well as their permanent area of study was asked. Gender distribution has been illustrated in Figure 1. Section 2 refers to the interest and perception of medical students pertaining to community medicine. Participants were asked about factors that made community medicine interesting or difficult. As well as general knowledge about community medicine, its purpose as a subject and relevance to real health issues. Section 3 broached the perception of community medicine as a career option. Knowledge on salary, relevance, and personal preference for community medicine as an ideal choice for PGs was ascertained. General knowledge relevant to community medicine as a career and the role that such professionals play in society was also established.

421 complete responses were obtained and data was analyzed. All data for statistical analysis was entered into Statistical Package for Social Sciences (SPSS) version 25.0. The variables were categorical in nature and expressed as frequencies and percentage tables. Chi Square test was applied to the data. A P-value of less than 0.05 was taken as significant.

There were no risks involved for participants in this study. Informed consent was taken by explaining the purpose of this study in the survey with a consent form attached. Confidentiality and privacy of participants was maintained as no personal information that could lead back to the participants was asked; only data relevant to the study was collected. Furthermore, information obtained from the survey was only used for the purpose of data analysis.

RESULTS

Out of 421 medical students, 205 belonged to the private medical sector, and 216 were from the government medical sector. They were further classified by demographic characteristics asked in section 1 of the questionnaire Fig-A1 as illustrated in Table-1, their perception of community medicine as a subject inquired in section 2 as illustrated in Table-2, and their interest in community medicine as a career option questioned in section 3 as illustrated in Table-3.



Displayed

Variable	Pvt.Sector N(%)	Govt.Sector N(%)					
Gender							
Male	79 (38.5)	92 (42.6)					
Female	126 (61.5)	124 (57.4)					
Academic Year							
4th Year	142 (69.3)	114 (52.8)					
5 th Year	63 (30.7)	102 (47.2)					
Area Of Residence							
Rural	14 (6.8)	25 (11.6)					
Urban	191 (93.2)	191 (88.4)					
No.of Participants	205 (48.7)	216 (51.3)					

Table-1: Demographic Characteristics of Participants. The majority of the participants were female (59%), belonged to urban areas of residence (91%), and are currently studying in their fourth year of medical school (61%).

Table-2 comprises section 2 of the questionnaire depicts that field visits were the main factor that made community medicine interesting; proven by the significant p-value of 0.006. Moreover, most participants from both the private sector (37.1%) and the public sector (52.3%) reported that memorizing numerical facts was a large factor that made learning the subject difficult. On a positive note; most participants from both sectors; private (53.7%) and public (46.1%) agreed that community medicine was relevant to real health issues. Furthermore, a major portion of students from the private sector (37.8%) and the public sector (40.1%) agreed that community medicine was essential in solving problems at a community level. The perception and views of the usefulness of the subject as a healthcare professional have been depicted in Fig-1.

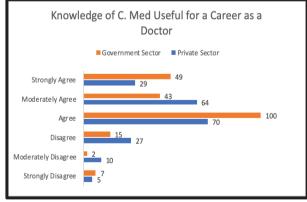


Fig-1: Knowledge of C. Med Useful for a Career as a Doctor.

When asked if they would opt for Community Medicine as a career option in section 3 of the questionnaire, however, the majority of participants reported that they would not be from

the private sector (63.4%) and the public sector (51.4%); with a significant p-value of 0.014; the exact responses may also be seen in Fig-2. Factors leading to this response corresponded with the belief in students from both public (60.2%) and private (73.2%) sectors that the subject had less fame. The less salary also played an important role in this response with a significant p-value of 0.004. While the bulk of the students agreed that community medicine is essential for a successful medical practice as depicted by a p-value of 0.001 and will be useful in their career as a medical doctor. Despite the perception regarding community medicine as a subject, the majority of the participants from both government (31.0%) and private sector (33.7%) disagreed when asked if community medicine is an ideal choice for PGs (As depicted in Fig-3). Further details regarding participant responses have been represented in Table-3.

Overall it is to note that all p-values mentioned in the tables and results depict a correlation between responses of the two institutes for a single question/category, and not for all the variables studied.

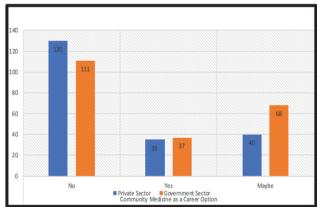


Fig-2: Community Medicine as a Career Option

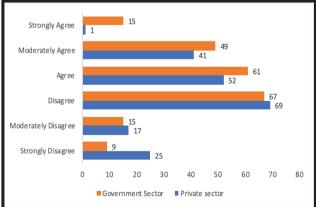


Fig-3: Community Medicine as Ideal Choice for Post Graduates

sr	Factor	Pvt. Sector N(%) 205(100)	Govt. Sector N(%) 216(100)	P – value
1.	Section of C-med students find interesting: Health Care Delivery Environmental Health Infectious and Non- communicable Diseases Nutritional Health Biostats	49(23.9) 27(0.1) 9(28.8) 38(18.5) 2(15.6)	60(27.8) 24(11.1) 69(31.9) 40(18.5) 23(10.6)	.508
2.	Factor made learning C-Med interesting: Concept of C-Med Field Visits Research Studies Faculties Teaching Style	33(16.1) 140(68.3) 31(15,1) 1(0.5)	39(18.1) 117(54.2) 60(27.8) 0(0)	.006
3.	Factor made learning C-Med difficult: Learning Definitions Memorizing Numerical Facts Preparing for Exams Field Visits are tiring	64(31.2) 76(37.1) 58(28.3) 7(3.4)	49(22.7) 113(52.3) 48(22.2) 6(2.8)	.019
4.	Status of C-Med in medical field: Strongly disagree Moderately disagree Disagree Agree Moderately agree Strongly agree	17(8.3) 13(6.3) 38(18.5) 72(35.1) 36(17.6) 29(14.1)	10(4.6) 8(3.7) 25(11.6) 89(41.2) 44(20.4) 40(18.5)	.08
5.	Relevance of C-Med to real health issues: Strongly disagree Moderately disagree Disagree Agree Moderately agree Strongly agree	0(0) 2(1.0) 17(3.4) 110(53.7) 55(26.3) 21(10.0)	6(2.8) 4(1.9) 13(6.0) 101(46.8) 52(24.1) 40(18.5)	.02
6.	Will C-Med as a subject help students solve problems at a community level? Strongly disagree Moderately disagree Disagree Agree Moderately agree Strongly agree	5(2.4) 10(4.5) 28(13.4) 79(37.8) 65(31.1) 18(8.6)	8(3.7) 3(1.4) 15(6.9) 88(40.7) 56(25.9) 46(21.2)	.001

Table-2: Perception and Interest of Med Students in Community Medicine (C-Med) as a Subject (n=421)

	Factor	Pvt. Sector N(%) 205(100)	Govt. Sector N(%) 216(100)	<i>P</i> -Value
1.	C-Med as a career option: Yes No Maybe	35(17.1) 130 (63.4) 40(19.5)		.014
2.	Fame in C-Med as compared to other professions: Yes No	55(26.8) 150(73.2)		
3.	Can C-Med provide a salary comparable to other professions? Yes No	66(32.2) 139(67.8)	99(45.8) 117(54.2)	
4.	Will the knowledge of C-Med useful in your career as a medical doctor? Strongly disagree Moderately disagree Disagree Agree Moderately agree Strongly agree	5(2.4) 10(4.9) 27(13.2) 70(34.1) 64(31.2) 29(14.1)	2(0.9) 15(6.9) 100(46.3) 43(19.9)	
5.	Med an ideal choice for PGs? Strongly disagree Moderately disagree Disagree Agree Moderately agree Strongly agree	25(12.2) 17(8.3) 69(33.7) 52(25.4) 41(20.0) 1(0.5)	15(6.9) 67(31.0) 61(28.2)	
6.	Med essential for successful medical practice? Strongly disagree Moderately disagree Disagree Agree Moderately agree Strongly agree	6(2.9) 6(2.9) 30(14.6) 97(47.3) 53(25.9) 13(6.3)	4(1.9) 19(8.8) 94(43.5) 49(22.7)	

Table-3: Perception and Interest of Medical Students in Community Medicine (C-Med) as a Career (n = 421)

DISCUSSION

The results of our study show that most participants developed an interest in community medicine as a subject in the fourth year of medical school, both in private and government sector institutions. Interest was largely credited to field visits (68% of private sector participants, and 54% of the government sector participants) and research studies. A reason for the discrepancies in these viewpoints can be attributed to more exposure of students from private medical colleges, and an overall lack of funding and resources for interactive field visits in the government sector.

Moreover, a lack of proper staff members and educators can lead to disparities in the perception

and viewpoints of medical students. 11 The impact of a lack of funding has been comprehended in a previous study conducted in the United States, where they noted that educating medical students in the community is expensive, and more funding and resources are needed^{12,13}. Our study showed a larger interest in research studies in government colleges (27%) as compared to the private sector (15%). This can be seen in concurrence with a similar study conducted in Nigeria, where they reported that community medicine was the key to modern medicine because of its strong research component¹⁴. In an international conducted, it has been noted that the study of the subject as a whole and writing reports on the prevalence of epidemiological problems in the community, helps improve the outlook and brings major health concerns to light in the public health authorities^{1,11,12,15}. As many of the students belonging to the government sector hail from a rural background with a lack of healthcare facilities, the increased interest in research is justified, especially in the aftermath of the recent COVID-19 pandemic. A similar trend of increased interest and positive perception has often been seen in the aftermath of major public health concerns, echoed in a study conducted in Canada after the SARS outbreak of 2009¹⁶.

The major problems encountered in studying community medicine in our study was memorizing numerical data and learning definitions. A larger majority of government students reported difficulty in memorizing numerical factors (52%) when compared to those belonging from private institutions (37%). This may be accredited to a larger emphasis given on rote memorization of definitions and numerical data in the traditional teaching methods applied in governmental institutions' curriculum at present. A study conducted in California has noted the need to follow medical students' attitudes to increase interest and perception in the subject. 17 This observation has been further substantiated in the University of Toronto where it was noted that an integrated spiral curriculum yielded better results than traditional approaches¹⁸. Research conducted in developing countries has also shown increased interest in the subject as a whole through community-based learning and interactive sessions^{11,19}. This has also been seen in previous studies conducted in India, where the major problems identified in studying the subject consisted of difficulty understanding the concepts of biostatistics, and difficulty recalling disease statistics. Moreover, these issues have developed a prejudice and widespread concept of the subject being monotonous and hard to grasp^{2,11}.

Moreover, participants agreed that the status of community medicine in the medical field was distinguished, with relevance to real health issues and helping students solve problems at a community level. A study conducted in America highlights the importance of the subject realistically. Not only does it highlight important healthcare issues running rampant in the community, but it also brings to light socioeconomic disparities and how we can resolve them to bring equality in the delivery of healthcare^{1,19}. Since many curricular subjects have a community health component, the importance of the subject has been emphasized¹⁸. There is a need to involve students in these real health issues and to help bring about a change in the society they live in to increase interest in pursuance of the subject as a whole¹⁹. When asked about the function of community medicine, the majority believed it to be learning community-focused health care. A summit held in Washington highlights the importance of learning such focused healthcare, noting that these studies would shift resources from traditional healthcare systems and into communities and community-based care²⁰. The findings have also been seen in India, where it was noted that community-based learning is viewed positively by students^{11,19,21}. Educational and technological innovations as well as the training, and use of health comprehensive personnel can help facilitate this learning and create a link between viewpoints and actions of students regarding the subject¹¹. No significant statistical difference was seen between private and government institute participants, and both responded in the same manner to the questions asked.

While the outlook and perception of community medicine as a subject were shown to be favorable in our study, the contrary could be said for community medicine as a career. Participants attributed the lack of interest in this career path due to a perceived inadequacy with regard to fame (33%), prestige (38%), and salary (39%) offered with other professional options^{4,5,6,14,22}. This perception is not restricted to the scope of our study and has been seen in previous studies conducted in Nigeria¹⁴.

According to a study conducted in India, medical students perceived the scope for Community Medicine specialists to be limited to either teaching in medical colleges, working in

international agencies or as a manager in national programs⁶.

Other studies have also included a lack of role models as a major contributing factor to this unfavorable image.⁴ Despite acknowledging that community medicine would be less hectic than other ventures and that the knowledge attained would be useful in one's career as a medical doctor, as well as necessary for a successful medical practice, very few opted for community medicine as an ideal career choice for postgraduates. In a previous study conducted in Canada, it has been shown that students felt more confident as clinicians after taking an elective Public Health/Community Medicine course or opting for a combined MD/MPH degree²³.

This trend agrees with previous studies conducted over time in multiple countries^{6,8,9,14,23,24}.

A previous study has postulated that observation, hands-on projects, and accessible role models mentorship can help remedy this discrepancy in perceptions of community medicine as a subject and encourage more students to select it as a career^{23,25}.

A lack of role models has been recognized to create a vacuum of specialists that make up the backbone of a medical college. A study in India has noted that medical students often take career decisions based on the influence of role models, opportunities and financial intellectual challenges in the specialty, and research opportunities in the given career path⁶. As such, proper career counseling, as well as an expanded scope of job opportunities in this field of healthcare by the government, can help create an interest in the scope of this profession. Incentives should be given both by the medical colleges and the health facilities to help promote and build the prestige and importance of the career and subject as a whole.

Perception can be improved by making the subject more interesting, with an emphasis on demonstrations and community-based outreach projects. As community medicine is a vast and diverse, but practical-based subject, holding community medical camps can help renew the importance it plays in society as well as provide benefits to the surrounding area and eminent health problems, especially for private sector students. The importance these camps can play has been reported in India as well^{11,12,19,26}.

Our study not only determined the perceptions of community medicine as both a subject and profession but considered the possible discrepancies of views in regard to different sectors. However, the results of this study are not vastly different when compared amongst government or private institutions and the perceptions and views of medical students remained more or less the same, with very few discrepancies.

A larger sample size, with the inclusion of a larger number of colleges throughout Pakistan, and not just Lahore could provide perhaps more insight on the subject and bring to light any hidden incongruity between the two sectors educationwise.

CONCLUSION

Students showed favorable views regarding community medicine and its importance in a career as future healthcare professionals by both government and private medical college students alike. Few participants indicated an interest in adopting it as a career path despite it being a less hectic routine with flexible working hours, and an ideal choice for Postgraduates. These are important points to ponder and address for producing future experts in the extremely important subject of community medicine.

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