

Original Article

GENDER PERCEPTIONS AND BARRIERS TOWARDS THEIR PRACTICE IN UNDERSERVED AREAS AMONG MEDICAL STUDENTS: A MULTICENTRE STUDY

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Objective: Objectives of the present study were to understand and explore the perceptions of medical students towards their intention to practice in underserved areas and to identify the barriers restricting them to take up rural service.

Material and Methods: 12738 medical undergraduate students from five different medical institutions were requested to fill questionnaires during May 2012 to April 2013. SPSS version 17 was used for analysis. Unpaired t test and Chi-square (χ^2) test was applied.

Results: Majority 1719 (64.6%) were not willing to practice in rural area. Rural-background students were more likely to indicate willingness for rural practice. ($p < 0.001$). 'Easy/stress free life' and 'Being respected as a doctor' were gender wise statistically highly significant potential benefits of working in a rural area. Connectivity problems, absenteeism of support staff, available living facilities, distant hometown, social life, low recognition of work, prestige of the job, sense of fulfilment, lack of good physical work environment, security problems and lack of recreational facilities were found to be statistically highly significant ($p < 0.001$). Seventy seven percent of males and almost seventy five percent of females identified "low salary" as an underlying factor.

Conclusion: In spite of having positive view towards the importance of rural health care, certain aforementioned barriers prevent them to serve in rural areas. The findings can be utilised to design or modify the specific strategies to tackle the crisis of doctors in rural India.

Key words: Medical students, rural, service, barrier.

Introduction

The global problem of the uneven distribution of the health workforce between cities and villages, with its severe consequences on health outcomes in rural areas, is also marked in India. Despite more than a half century of proclamations on primary healthcare, most rural facilities in India continue to lack enough providers. Addressing the scarcity of medical practitioners in rural India is fundamental to achieving universal health care in the country.¹

The paucity of qualified health workers in rural areas is a critical challenge for India's health sector.² There is no doubt that the imbalance of doctors in rural and urban areas needs correction. Density of doctors in India is 6 for a population of 10,000.³ India finds itself ranked 52 of the 57 countries facing Human Resources for Health crisis.⁴

Medical professionals also have an essential ethical obligation to help distribute equitably the life-enhancing opportunities affordable by healthcare.⁵ Today's medical student is tomorrow's health care provider either in urban or rural setup. Therefore it is very essential to understand and explore the perceptions of medical students towards their

intention to practice in underserved areas and to identify the barriers restricting them to take up rural service.

Materials and Methods

The present cross sectional study was carried out during May 2012 to April 2013 among medical undergraduate students from five different medical institutions situated in four different states (UCMS-Delhi, PGIMS & MMIMSR- Haryana, SKIMS- J&K, KMC- Karnataka) using self-administered questionnaire.

The study population consisted of MBBS students who were currently studying in respective medical colleges. At the time of study there were 4 batches (First year to Final part 2) of medical students with varying number depending on institutional admission capacity in each medical college. All these students formed the study population. Those students who could not be contacted after three attempts were excluded from the study. Informed consent was taken and complete confidentiality was ensured to the students. Students were explained about the nature

And purpose of study and requested to fill the questionnaires which were distributed by authors in the classrooms just after the completion of lectures. The time allocated for the completion of the questionnaire was 15 minutes. Out of total 2738 students approached, 2660 returned the completed questionnaires. A questionnaire was framed for the purpose of recording socio-demographic profile including the personal characteristics of the study participants. Educational level of parents, residential status, family background, familiarity with rural areas and other relevant data was captured. Potential benefits or drawbacks of working in rural setup were probed in great detail. The collected data was entered in Microsoft Excel. Coding of the variables was done. SPSS version 17 was used for analysis. Interpretation of the collected data was done by using appropriate statistical methods. Unpaired t test was used to assess the significance of difference between the mean age of respondents and their willingness to practice in rural

areas. Chi-square (χ^2) test was applied to test the statistical difference in gender perceptions.

Results

Of the 2738 students approached, 57 students refused to participate. The response rate was 97.9%. Out of total, 21 questionnaires were discarded during data analysis because of incomplete information. Out of total 2660 students, 1629 (61.2%) were males. Respondents' mean age was 22.4 ± 1.1 years. Differences in the characteristics of those willing and those unwilling to practice in rural areas were explored. Out of total 2660 students, majority 1719 (64.6%) were not willing to practice in rural area. Students whose parents were educationally well qualified were significantly less likely to serve in rural areas. Rural-background students were more likely to indicate willingness for rural practice. ($p < 0.001$) (Table 1)

Table-1: Profile of study subjects and their willingness to practice in rural areas .

Characteristic Variables	Willingness to Practice in Rural Area		P value	
	Yes n (%)	No n (%)		
Age (Year) - mean	22.2	22.6	0.17	
Gender	Male	524 (32.2)	1105 (67.8)	0.000**
	Female	417 (40.0)	614 (59.6)	
Location of medical college	Delhi	92 (22.9)	310 (77.1)	0.000**
	Haryana	422 (35.5)	768 (64.5)	
	Jammu & Kashmir	51 (29.8)	120(70.2)	
Father's education level	Karnataka	376 (41.9)	521 (58.1)	0.000**
	Graduate	591 (39.0)	925 (61.0)	
Mother's education level	Post graduate	350 (30.6)	794 (69.4)	0.000**
	Graduate	693 (40.1)	1036 (59.9)	
Residential Status	Living with Patrents	364 (33.4)	726 (66.6)	0.17
	Living away from Patrents	577(36.8)	993 (63.2)	
Family Background	Rural	314 (53.6)	272 (46.4)	0.000**
	Urban	627 (30.2)	1447 (69.8)	
Familiarity with rural context	Familiar	379 (33.9)	738 (66.1)	0.18
	Not well familiar	562 (36.4)	981 (63.6)	
Perception of current status of rural health	Satisfactory	139 (32.8)	285 (67.2)	
Services in India	Unsatisfactory	802 (35.9)	1432 (64.1)	0.22

* $p < 0.05$, ** $p < 0.001$

Table-2: Potential benefits of working in a rural area as perceived by the students willingness to practice in such areas.

Gender perceptions regarding potential benefits of working in rural setup among those who are willingness to practice in rural area	Male n (%)	Female n (%)	P value
Health services for the poor	367 (62.8)	215 (71.0)	0.015*
Feeling of serving the nation	315 (53.9)	189 (62.4)	0.016*
Gain knowledge about rural people and diseases	212 (36.3)	136 (44.9)	0.013
Easy / stress free life	423 (72.4)	181 (59.7)	0.000**
Being respected as a doctor	396 (67.8)	168 (55.4)	0.000**
Less competition so career opportunities are more	193 (33.0)	124 (40.9)	0.020*
Others	10 (1.7)	7 (2.3)	0.537

Males (n=584), Females (n=303), *p<0.05, **p<0.001

Table-2: Potential benefits of working in a rural area as perceived by the students willingness to practice in such areas.

Gender perceptions regarding potential drawbacks of working in rural setup among those who are not willingness to practice in rural area	Male n (%)	Female n (%)	P value
Infrastructure facilities are grossly lacking	810 (65.8)	382 (70.5)	0.053
Opportunities for development of children (availability of good schooling, extra activities, future opportunities)	705 (57.3)	342 (63.1)	0.021
Lesser opportunities for career growth (opportunities regarding learning, training, research and higher education)	559 (45.4)	276 (50.9)	0.226
Financial attributes (low salary)	948 (77.0)	403 (74.4)	0.000**
Connectivity (transport availability, sense of isolation)	707 (57.4)	234 (43.2)	0.015
Family's well-being and comfort (spouse job availability, spouse career growth, support to parents)	741 (60.2)	293 (54.1)	0.000**
Absenteeism of support staff (helping hands for working)	530 (43.1)	174 (32.1)	0.14
Limited professional contacts and experience	702 (57.0)	275 (50.7)	0.000**
Living facilities (lack of hygiene and sanitation, housing, electricity, water)	892 (72.5)	349 (64.4)	0.000**
Have to live away from family (distant hometown)	923 (74.9)	293 (54.1)	0.000**
Social life (entertainment facilities, social circle)	700 (56.9)	234 (43.2)	0.000**
Low recognition of work, prestige of the job, sense of fulfilment	467 (37.9)	127 (23.4)	0.000**
Lack of good physical work environment (furniture, toilet etc.)	718 (58.3)	244 (45.0)	0.000**
Security (Possibility of problems at night, afraid of working alone)	582 (47.3)	301 (55.5)	0.001**
Low standard of living, limited technology	765 (62.1)	296(54.6)	0.002*
Lack of recreational facilities	744 (60.4)	248 (45.8)	0.000**
Others	17 (1.4)	11 (2.0)	0.312

Males (n=584), Females (n=303), *p<0.05, **p<0.001

Discussion

The provision of rural healthcare services with trained doctors is a real threat and challenge for India. Others⁶ also have observed an acute deficiency of health workers in rural areas, particularly the physicians. Doctors believe that not only does rural medical service fail to improve access to healthcare in these areas, it also requires personal sacrifice. And they ask: why are medical students expected to make greater sacrifices than other professionals?⁵

The present study showed that the majority (64.6%) of medical students were not willing to serve in rural or underserved areas. Similar results were observed by Saini NK et al.⁷ Most (84.1%) of respondents believed that the current status of rural health services was unsatisfactory.

It was observed in the present study that female doctors were found more motivated (40.4%) to serve in rural areas than the male counterparts (32.2%). It comes in contrast with the findings of Khan AR from Malaysia.⁸ Both female and male students were equally motivated to work in rural communities in his study.

Not surprisingly our study shows that rural-background students were more likely to be willing to practice in rural areas than those from urban areas. Similar finding have been observed by previous studies among medical students.^{9,10} Doctors who feel aggrieved at being forced to serve in rural areas are unlikely to fulfil their obligations to the people there.⁵

Classroom or bedside teaching does not inculcate empathy or compassion among students. Nor does it sensitise them to the real needs of the rural community. Young doctors posted in rural areas often lack insight into the socioeconomic determinants of diseases and do not know how to

treat these diseases economically and effectively. Students fear that the time taken by rural postings hinders their efforts to achieve their career goals.⁵

On being asked about the potential disadvantages of working in a rural area, the commonest mentioned were 'lack of infrastructural facilities', 'less salary', 'low standard of living', and 'limited exposure as a doctor'. Wilson NW¹¹ suggested similar factors in order to redress the inequitable distribution of healthcare professionals to rural and remote areas.

77% of males and almost 75% of females identified "low salary" as a underlying factor which prevented them from taking up rural positions. Others¹² also concluded the same. Most students admitted to the medical colleges especially to private medical colleges are required to personally finance their expensive education. Can one really expect students who have made what is essentially an investment to forget about money and think of their professional ethics and social obligations?⁵ Another study by Shankar PR from Nepal¹², on attracting and retaining doctors in rural concluded that the government should invest in improving working conditions in rural areas.

Conclusion

The findings of the present study highlight the positive view of the importance of rural health service among surveyed medical students. However, certain factors such as lack of infrastructure and low salary were perceived as potential barriers to take-up rural service. The findings can be utilised to design or modify the specific strategies to tackle the crisis of doctors in rural India.

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