

## Original Research Article

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# Perception of medical students towards serving rural people: A study from central India

Yachana Choudhary, Manju Dubey\*, Manju Toppo, D. K. Pal

Department of Community Medicine, Gandhi Medical College, Bhopal, Madhya Pradesh, India

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**\*Correspondence:**

Dr. Manju Dubey,

E-mail: manju.rsmma@gmail.com

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## ABSTRACT

**Background:** India is facing critical problem of paucity of certified physicians in rural areas, although majority of the population resides in rural areas. According to rural health statistics report 2015, there is a deficit of 659 doctors in rural areas. The study was done with the objective to capture the perception among medical students (interns / postgraduates) about their preference of work place after graduation/post-graduation and to know the factors responsible for preference / non-preference.

**Methods:** A cross sectional study was carried out, among 203 medical students in a government medical college of Bhopal (M.P) from January to March 2016. A semi-structured questionnaire was used to obtain information regarding their preference to serve in rural areas and reasons associated with their choices. The data was entered in MS excel and analysis was performed using Epi-Info7.

**Results:** The study participants included 203 medical students, only 33 (16.26%), were willing to work in rural area. The major reasons for non-preference of rural area were lack of primary facilities like equipments, paramedical staff, non favorable working conditions. Majority of them responded that good salary, better lifestyle and security for doctors especially for females would make them work there.

**Conclusions:** Very less proportion of study participants preferred rural area as their preferred work place. Our study has shown a need for intervention to overcome these perceptions and attitudes of the students towards practice in rural area in order to reverse this disparity.

**Keywords:** Attitude, Central India, Medical students, Rural service, Perception

## INTRODUCTION

Rural part of the India is suffering from severe scarcity of certified allopathic physicians. Majority of the Indian population resides in rural area who are facing the brunt of the same. PHC is the first contact point between village community and the health system. Manpower in PHC includes a medical officer supported by paramedical and other staff. According to Rural Health Statistics report 2015, total post sanctioned for primary health centre (PHC) is 1658 and presently in position are 999, which showed deficit of 659 doctors in rural areas.<sup>1</sup> In case of PHC, for Health Assistant (Female) /LHV(Lady

Health Visitor), the shortfall was 49.2% and that of Health Assistant (Male) was 61.3%. For allopathic doctors at PHC, there was a shortfall of 11.9% of the total requirement. The state with highest average shortfall during 2007-2011 were Madhya Pradesh (33.95%) followed by Uttar Pradesh (27%), Assam (22%) and Punjab (22%).<sup>2</sup> To increase the availability of doctors in rural areas government has made one year rural service compulsory after MBBS and Post-graduation. But the doctors serve in rural areas for the completion of their rural bond and again shifts back to urban areas. This study aims to understand the perception of both internship and postgraduate students regarding the rural

services i.e. whether they wish to serve in rural areas or not. So, the study was done with the following objectives:

1. To capture the perception among medical students (interns/postgraduates) about their preference of work place after graduation/post-graduation.
2. To find out the factors responsible for preference/non-preference of rural service.
3. To catch the perception of medical students about the amenities which they feel should be provided to work in rural area. This study will help the policymakers to understand the view of the medical students including reasons for not going to rural areas and facilities which should be provided to doctors working in rural areas, which will help the government to take necessary action to further increase the number of doctors in rural areas and will in turn help in improving the overall health status of our country.

## METHODS

This was a cross sectional study carried out among interns and postgraduate students of Gandhi Medical College, Bhopal from January-March 2016 for duration of 3 months. After explaining the aims & objectives of

the study, informed verbal consent was obtained from the study participants. A semi-structured questionnaire was used to obtain information about student's socio-demographic characteristics and their views about a rural health career. Information was obtained, regarding whether they want to serve in rural areas or not and reasons associated with their choices. They were also asked about the facilities which should be included which will make them work in rural areas. Students responses to open-ended questions were grouped into broad categories according to similarities among the responses. Then frequency of these response categories was noted. The analysis was performed using Epi-Info 7. Frequency tables and cross tabulations were generated and level of significance was based on a p value of less than 0.05.

## RESULTS

In this study total 203 doctors were interviewed, out of which 101 participants were interns and 102 were postgraduates. Table 1 depicts the socio-demographic characteristics of the study participants. Out of total 203 students, 101 (49.75%) were males and 102 (50.25%) were females. Majority of (73.89%) students belonged to urban area (Table 1).

**Table 1: Socio-demographic characteristics of study participants.**

Variables	Interns n=101 (%)	Postgraduates n=102 (%)
<b>Age of respondents</b>		
Mean	25.1±1.64 years	27±2.12 years
<b>Age (in years)</b>		
20-24	48 (47.52)	12 (11.76)
24-30	51 (50.5)	76 (74.5)
30-35	2 (1.98)	13 (12.76)
>35	0	1 (0.98)
<b>Sex</b>		
Males	48 (47.52)	53 (51.96)
Females	53 (52.48)	49 (48.04)
<b>Marital status</b>		
Married	4 (3.96)	27 (26.47)
Unmarried	97 (96.04)	75 (73.53)
<b>Home town</b>		
Rural	28 (27.72)	25 (24.51)
Urban	73 (72.28)	77 (75.49)
<b>Decision of choosing medical career</b>		
Self	64 (63.37)	63 (61.76)
Family	11 (10.89)	19 (18.63)
Both	26 (25.74)	20 (19.61)
Total	101	102

Out of total 203 study participants, 170 (83.7%) didn't prefer to work in rural settings, reasons for the same are illustrated in Table 2. The majority of students didn't prefer because of lack of primary facilities like equipment's, paramedical staff, and unfavourable working conditions (83%). The other reasons were less

salary, less job opportunities and no career growth (64%), followed by lack of housing infrastructure, career growth and good lifestyle (46.7%) (Table 2).

Table 3 shows the association of the preference of workplace with various factors. Males were more likely

to prefer working in rural areas as compared to females. Medical students belonging to rural area preferred working in rural areas. However other factors were not

found to be significantly associated with the preference of workplace (Table 3).

**Table 2: Reasons perceived for non-preference of rural area.**

Reasons perceived for non preference of rural area	Intern (n=101)	Postgraduate (n=102)
<b>Lack of primary facilities in hospitals like equipment's, paramedical staff, not suitable working conditions</b>	80 (79.2)	90 (88.23)
<b>Lack of good career options, and salary, chances of job opportunities and career growth are not there</b>	70 (69.3)	60 (58.82)
<b>Lack of housing, infrastructure, child education, better lifestyle, water and electricity facilities</b>	40 (39.6)	55 (53.9)
<b>Born, brought up and education all took place in urban areas, so it is difficult for them to adapt in rural areas</b>	20 (19.8)	17 (16.67)
<b>Parents and spouse living in urban areas</b>	15 (14.8)	12 (11.76)

\*Multiple responses permitted.

**Table 3: Determinants for preference of workplace (rural/urban) among medical students.**

Preference of Workplace			P value*
Gender	Rural n (%)	Urban (%)	Total
<b>Male</b>	23 (22.8)	78 (77.2)	101
<b>Female</b>	10 (9.8)	92 (90.2)	102
<b>Marital status</b>			
<b>Married</b>	6 (19.4)	25 (80.6)	31
<b>Unmarried</b>	27 (15.7)	145 (84.3)	172
<b>Hometown</b>			
<b>Rural</b>	22	31	53
<b>Urban</b>	11	139	150
<b>Medical student</b>			
<b>Intern</b>	18 (17.8)	83 (82.2)	101
<b>Postgraduate</b>	15 (14.7)	170 (83.7)	102

\*p value on bivariate analysis.

**Table 4: Facilities which should be incorporated which will make the students join rural service.**

Facilities to be incorporated	Interns (n=101)	Postgraduates (n=102)
<b>Good salary, better lifestyle, and living conditions.</b>	75 (74.25)	82 (80.39)
<b>Security for doctors specially females</b>	66 (65.34)	77 (75.49)
<b>Better infrastructure and working conditions</b>	62 (61.38)	70 (68.62)
<b>Upgradation of facilities like 24 hour ambulance services, better transport, housing, sanitation, basic medicines, diagnostic and treatment facilities.</b>	60 (59.40)	65 (63.72)

Regarding the compulsory rural service bond following under graduation and post-graduation, 70.4% of students were not in favour for the same. Students were also asked about the facilities, if incorporated in rural settings which might change their preference. Good salary, better lifestyle and living conditions (77%), security for doctors especially females (70%) followed by good housing infrastructure and up-gradation of facilities (65%) are some of the facilities which would attract the students to serve in rural areas (Table 4).

## DISCUSSION

Indian government is finding it very difficult to fill the vacant post of doctors in rural areas. For the same government has to understand the reason why doctors do not prefer the rural area or what facilities they actually need. Keeping this idea in mind we have done this survey on resident and interns to know their preference. In our study we found that only 18% interns and 14.8% PGs preferred rural area for working. Similar findings were also observed from studies in Delhi and Haryana,

Chattisgarh.<sup>3,4</sup> The reason for such a less proportion of students preferring to serve in rural areas is mainly due to lack of primary facilities in hospitals like equipments, paramedical staff, not suitable working conditions, lack of good career options, and salary, less chances of job opportunities and career growth, as told by the study participants. Also, when asked about the facilities to be included which will make them join rural service, the suggestions were good salary, better lifestyle, security for doctors specially females, basic trained medical staff, drugs. Up-gradation of facilities like 24 hour ambulance services, better transport, housing, sanitation, food facilities, availability of basic medicines and diagnostic facilities, better infrastructure, and working conditions were the other suggestions by the participants. This is corroborated with other findings observed in the literature.<sup>3-6</sup> In the present study most common reasons for rural preference were to serve rural people, to get respect in community, to gain experience, early settlement less competition. Similar reasons were perceived in other studies.<sup>3,5</sup> A shortage of doctors in rural areas is a major problem not just in India, but internationally. Looking at the apparent unwillingness of doctors to work in rural areas, the government made one year rural bond after Graduation /P.G compulsory. But the government should understand the need of medical students for their rational deployment in rural areas and then only it will increase their willingness to join rather than forcing them which is the process. Government also tried to promote rural service by giving reservation and additional marks in P.G seats but this could also attract them for time being and is not an effective retention strategy. Majority of the medical students were of the opinion that compulsion will not increase rural sector employment; rather they should focus on increasing the facilities and resources in rural areas. Government could also increase the salary of those working in rural areas as compared to urban area, along with improved infrastructure, good security and less political interference. This study was undertaken to understand the perceptions of medical students regarding their choice of working place urban versus rural area. Most of the study participants didn't preferred rural area, however many of them were ready to give their services if basic amenities which included respectful salary, security and education for their children made available. So if policy makers give attention to these very basic amenities people in

rural areas can be benefited with medical services by trained physicians.

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