

# Perception And Attitude Of Undergraduate Medical Students Towards Rural Health Services – A Cross Sectional Study

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## Abstract

**Introduction:** Medical students are under immense pressure and competition to advance in their career. 65% of Indian population resides in rural area and their health care needs are to taken care of. Understanding perception and attitude of undergraduate medical students towards rural health service will help in better provision of rural healthcare services.

**Objectives:** 1) To assess the perception and attitude of medical students towards rural health services  
2) To understand the factors influencing willingness and unwillingness of medical students towards serving in rural areas

**Material and methods:** A cross-sectional study was conducted among 600 students of first, second and final MBBS studying in a private medical college in Andhra Pradesh. A predesigned semi-structured, self-administered questionnaire was used for data collection and the data was analyzed in Epi Info 7

**Results:** A total of 467 completed questionnaires were returned with participation rate of 78% out of which 67.9% were females and 32.1% were males. 44.3% of the respondents had a family member working in rural area. 81.4% of respondents believed that rural services should be made compulsory for doctors. 79.9% of respondents expressed willingness to work in rural areas. The commonest reason for willingness to work in rural areas was to gain experience (62.2%) while the commonest reason for unwillingness to work in rural areas was limited infrastructure (57.5%).

**Conclusions:** Rural health services can be improved by employing young medical graduates.

**Keywords:** Rural health, medical students

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## I. Introduction & Rationale:

In India the health care infrastructure is heavily skewed in favor of urban areas. There are several barriers that limit the access to health care for rural population and work force shortage are one of the most important among them. There is a shortfall of medical personnel in rural areas<sup>1</sup>. Nearly 86 of entire medical visits to urban hospitals in India are made by rural population with majority travelling more than 100 km to avail health care free facilities<sup>2</sup>. In this given scenario it's important to focus on the undergraduate medical students who have the potential to be the major medical workforce in the rural areas.

## II. Aim & Objectives:

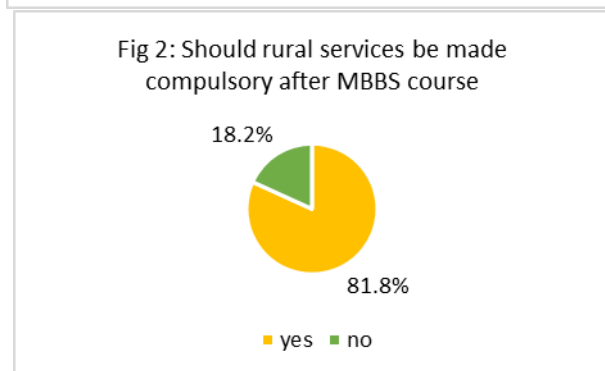
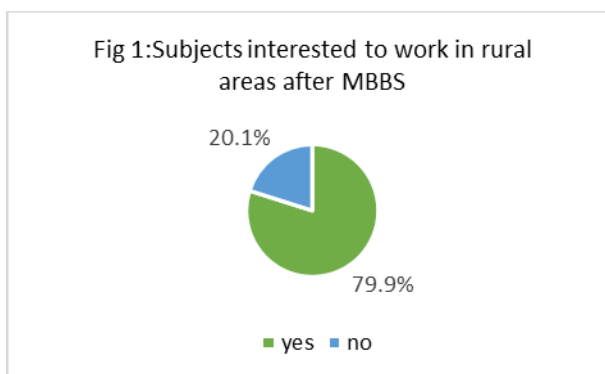
- 1) To assess the perception and attitude of medical students towards rural health services
- 2) To understand the factors influencing willingness and unwillingness of medical students towards serving in rural areas

## III. Material & Methods:

A cross-sectional study was conducted among 600 students of first, second and final MBBS studying in a private medical college in Andhra Pradesh during months of Jan-Feb 2023. A predesigned semi-structured, self-administered questionnaire was used for data collection and the data was analyzed in Epi Info 7. All the procedures related to the conduct of a research study at the institutional level were followed.

#### IV. Results:

A total of 467 completed questionnaires were returned with participation rate of 78% out of which 67.9% were females and 32.1% were males. The mean  $\pm$  SD age of study subjects was  $20.1 \pm 1.5$ . 59.82% of study subjects belonged to families below poverty line.



Variable		Interested to work in rural area (n=373)	Not interested to work in rural areas (n=94)	Total	P-value
Gender	Male	113 (75.33%)	37 (24.67%)	150 (32.1%)	0.0925
	Female	260 (82.02%)	57 (17.98%)	317 (67.9%)	
Permanent residence	Urban	249 (76.85%)	75 (23.15%)	324 (69.4%)	<b>0.0143</b>
	Rural	124 (86.71%)	19 (13.29%)	143 (30.6%)	
Mother's education	Below graduate	202 (85.96%)	33 (14.04%)	235 (50.3%)	<b>0.001</b>
	Graduate & above	171 (73.71%)	61 (26.29%)	232 (49.7%)	
Father's education	Below graduate	119 (87.5%)	17 (12.5%)	136 (29.1%)	<b>0.0084</b>
	Graduate & above	254 (76.74%)	77 (23.26%)	331 (70.9%)	
Type of family	Nuclear	319 (79.55%)	82 (20.45%)	401 (85.9%)	0.6704
	Joint	54 (81.82%)	12 (18.18%)	66 (14.1%)	
Family member working in rural areas	Yes	180 (86.96%)	27 (13.04%)	207 (44.3%)	<b>0.0007</b>
	No	193 (74.23%)	67 (25.77%)	260 (55.7%)	

Gender differences did not show significant influence ( $p = 0.0925$ ) on rural work interest, although a slightly higher percentage of female students (82.02%) expressed interest compared to male students (75.33%). However, permanent residence significantly impacted this choice ( $p = 0.0143$ ), with students from rural backgrounds (86.71%) more likely to be inclined towards rural service compared to their urban counterparts (76.85%).

Parental education emerged as an important factor. Respondents whose mothers had less than a graduate-level education were more inclined towards rural service (85.96%,  $p = 0.001$ ). Similarly, those with fathers holding below graduate education were more likely to show interest in rural work (87.5%,  $p = 0.0084$ ). This suggests that individuals from less educated families may be more empathetic towards underserved populations.

The type of family structure (nuclear vs. joint) did not significantly affect rural service interest ( $p = 0.6704$ ). However, having a family member already working in a rural area was a strong motivator ( $p = 0.0007$ ), with 86.96% of such respondents showing interest in rural practice.

Reasons for interest & no interest to work to work in rural areas after MBBS course			
Subjects interested to work(n=373)		Subjects not interested to work(n=94)	
To gain experience	62.2%	Limited infrastructure in health facilities	57.45%
Rural people need better medical facilities	53.89%	Scarcity of health facilities	55.32%
Social service	51.21%	No scope to learn advance technique	53.19%
Good exposure of general practice	41.55%	Bad living conditions/Poor basic facilities	46.81%
Build confidence as clinicians	33.24%	No guidance	44.68%
More job satisfaction	31.37%	Less money/ Less salary	43.62%
Get time to study for PG exam	16.90%	Delay in PG/difficulty to pursue PG	41.49%
Better recognition	14.21%	Away from family, friends and relatives	38.30%
People in rural area are more supportive	13.40%	Less safety	34.04%
Less competition in practice	10.19%	Less experience	32.98%
Others	12.06%	Less job, education opportunities for children & spouse	32.98%

Among those interested in rural work, the primary motivation was to gain experience (62.2%), followed closely by the belief that rural people need better medical facilities (53.89%) and a desire to contribute to social service (51.21%). Rural postings are also seen as an opportunity for good exposure to general practice (41.55%) and to build confidence as clinicians (33.24%). Notably, 31.37% indicated that rural practice could provide more job satisfaction, while a smaller percentage (16.90%) saw it as a way to get time to study for postgraduate exams.

In contrast, the primary deterrents for those disinterested in rural work were practical challenges. The majority (57.45%) cited limited infrastructure in health facilities, followed by the scarcity of health facilities (55.32%) and no scope to learn advanced techniques (53.19%). Additional concerns included poor living conditions (46.81%), lack of guidance (44.68%), and lower salaries (43.62%). Many also expressed concern about delays in pursuing postgraduate education (41.49%) and the impact of being away from family and friends (38.30%).

## V. Discussion:

Rural health services are an essential component of healthcare, yet attracting medical professionals to these areas remains a challenge. Our study, along with previous studies by Rajesh et al. and Dheeraj et al., explores the willingness of healthcare professionals to work in rural settings, their motivations, and deterrents.

In our study, 79.9% of participants expressed interest in working in rural areas, a higher percentage compared to 63.12% in Dheeraj et al. This suggests a growing inclination towards rural service among medical graduates, potentially driven by an increased awareness of healthcare disparities. Interestingly, 81.8% of our respondents believed that rural service should be compulsory, higher than the 43.6% in Rajesh et al. and 65.3% in Dheeraj et al., highlighting a stronger consensus for making rural healthcare mandatory.

The primary motivation for rural service across studies varied. Rajesh et al. cited "gaining experience" as the most common reason, while Dheeraj et al. emphasized "general practice exposure" (80%). Our study found a mix of motivations: 57.5% sought experience, while 63% highlighted the "need for services in rural areas." This suggests that, while professional development remains a key driver, there is also a growing sense of responsibility towards underserved populations.

However, the barriers to rural practice are significant. All studies identified "limited infrastructure" as the most common deterrent, with 95.6% in Rajesh et al., 92.6% in Dheeraj et al., and 57.45% in our study. The reduced percentage in our study may indicate a slight improvement in rural healthcare facilities or a shift in perception. Additionally, the "lack of advanced techniques" remains a concern, cited by 53.19% in our study, compared to 76.5% and 81.9% in Rajesh and Dheeraj's studies, respectively.

## VI. Conclusion:

Majority of the medical undergraduate students are interested to serve in rural areas after completing their MBBS course. This indicates that rural population are likely to have qualified and competent medical doctors for their health care needs if the young doctors are recruited.

## VII. Recommendations:

Given the interest and enthusiasm of undergraduate medical students to serve in rural areas efforts must be made to recruit young MBBS pass outs for medical and health care services in rural areas.

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