

Original Research Article

# Attitude and perception of medical interns towards rural healthcare services in India: A cross-sectional study

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## Abstract

**Introduction:** To provide equitable distribution of healthcare there is a need for increased number of healthcare professionals willing to provide rural health services. As the interns are the future workforce of India, this study was taken up among them.

**Aim:** To assess the attitude and perception of medical interns towards rural healthcare services and to find out associations between socio-demographic characteristics and their attitude towards rural healthcare. **Materials and methods:** A cross-sectional study was carried out among 97 interns in a medical college of Odisha, during February to April 2020. A pre-deigned, pretested semi-structured questionnaire was used with questions on attitudes towards rural healthcare services were used to calculate scores and categorize the attitude of the interns into positive and negative. Data was analyzed using SPSS version 20 and results were presented in terms of means, standard deviation and proportions. Chi-square test was applied and p value of <0.05 was considered significant.

**Results:** The mean±S.D. age of the study participants was (23.7±0.96) years. Majority (52%) of them were males. The mean±SD of the total score of respondents' attitudes towards working in rural areas was 43.7±7.76, indicating a negative attitude. Males had a higher mean score. A significant association was found between gender, place of residence, parents' education and the attitude towards rural healthcare services.

**Conclusions:** Even though the interns realized the importance of working in rural areas, their attitude was somewhat negative. Improved residential facilities, opportunities for post-graduation, professional growth and additional allowances for rural service can help in conditioning a more favorable attitude.

## Key words

Rural healthcare service, Unmet need, Attitude, Perception.

## Introduction

There is skewed distribution of doctors working in rural and urban areas [1]. This results in inadequate performance of the public health system; decrease in availability and quality of health services [2]. Though the public sector has made considerable efforts to increase manpower, vacancies absenteeism and dual practice have compromised this effort [2]. The Central Bureau of Health Intelligence (CBHI) in 2010 documented the doctor population ratio as 1:1600 [3]. This scarcity leads to dependency on harmful cultural-practices and treatment by unskilled persons. The attitude and perception of medical interns towards rural health services may account for a great change for rural Odisha.

## Objectives

- To assess the attitude and perception of medical interns towards rural healthcare services
- To find out associations between socio-demographic characteristics and their attitude towards rural healthcare

## Materials and methods

**Ethical clearance** - The study proposal was presented in the institutional research and ethics committee and the clearance was taken from both before the initiation of the study. The ethical committee approval was obtained (IEC/231/2020). Written informed consent was taken from each participant and the purpose of

the study was explained to them before collection of data.

**Type of study** - It was a cross-sectional study.

**Study area** - The study was conducted in a private medical college of Odisha, India

**Study population** - All the students pursuing internship in the year 2019-20 in a private medical college of Odisha. The interns were enrolled during their posting in the respective departments of the investigators of the study.

**Inclusion criteria** - All those interns who wanted to participate and gave written informed consent were included in the study.

**Exclusion criteria** - Medically unwell interns and those not willing to participate in the study were excluded.

**Study period** - The study was undertaken for a period of two months i.e. from February to April 2020.

**Sample size** - All the 100 students who were pursuing internship in the year 2019-2020 in the medical college were included in the study after taking written informed consent.

**Study tool** - A pre-designed, pretested semi-structured questionnaire was used for collection of relevant data from the study participants having the following parts:

- 1] Socio-demographic details
- 2] Attitude towards rural health services
- 3] Factors affecting them

A scale with questions on attitude towards rural healthcare services was used to calculate scores and categorize the attitude of the interns into positive and negative.

**Data analysis** Data was entered in MS excel and SPSS version 20 was used for analysis. Results were presented in terms of means, standard deviation and proportions. Chi-square test was applied as the test of significance and a p value of <0.05 was considered significant. Out of the 100 collected data, three incomplete questionnaires were rejected and only the 97 completed questionnaires were analyzed.

The 5 point Likert scale was used to score the responses [4]. Both positively and negatively framed questions were included for assessing the attitude by referring to some similar articles [5, 6 7]. The maximum score that could be attained was 95 and the minimum was 19.

A score of >57 was considered to be positive and < 57 was considered to be negative.

### Scoring as per Likert scale

Score	Positive response	Negative response
1	Strongly disagree	Strongly agree
2	Disagree	Agree
3	Undecided	Undecided
4	Agree	Disagree
5	Strongly agree	Strongly disagree

### Results

Out of the 100 questionnaires given to 100 interns who were included in the study, three incomplete questionnaires were rejected. The mean age of the study participants was 23.7± 0.96 years. The mean score for attitude towards rural posting was 43.7± 7.76. The mean score was more in males than in females.

The socio-demographic characteristic of the study participants was evaluated in the first part of the questionnaire and is depicted in **Table - 1**.

**Table - 1:** The socio- demographic characteristics of the study participants (n= 97).

Sr. no.	Socio-demographic characteristics	Frequency in number (n)	Frequency in percentage (%)
1	<b>Gender</b>		
	Male	50	52%
	Female	47	48%
2	<b>Place of boarding presently</b>		
	Hostel	76	78.4%
	Day scholar	21	21.6%
3	<b>Place of residence</b>		
	Rural	29	29.9%
	Urban	68	70.1%
4	<b>Father's educational level</b>		
	Graduate and above	92	94.8%
	Below graduate level	5	5.2%
5	<b>Mother's educational level</b>		
	Graduate and above	86	88.7%
	Below graduate level	11	11.3%
6	<b>Family member practicing in rural area as a doctor</b>		
	Yes	23	23.7%
	No	74	76.3%

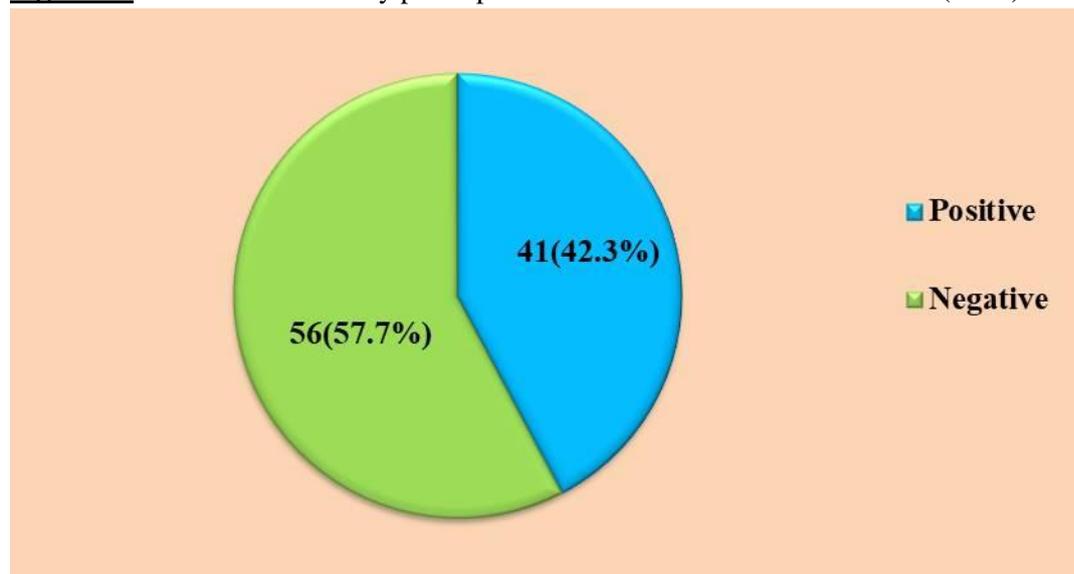
**Table - 2.1:** Responses of the study participants to questions showing their attitude and perception towards rural healthcare services (Encouraging factors).

Scale items	Strongly agree (%)	Agree (%)	Undecided (%)	Disagree (%)	Strongly disagree (%)
1. Must be compulsory after MBBS	13.1	30.3	12.1	31.2	13.3
2. Provides an opportunity for independent working	24.6	47.9	14.4	9.3	3.8
3. Provides an good exposure of general practice	24.7	48.4	16.1	7.3	3.5
4. Helps to build confidence as a clinician	20.9	50.2	9.4	17.8	1.7
5. Working in rural area gives more job satisfaction	5.8	17.6	13.7	31.4	31.5
6. Working in rural area helps in earning more money	3.7	2.6	14.7	38.8	40.2
7. Working in rural area helps in better recognition among medical fraternity	1.7	7.3	17.8	46.1	27.1
8. People in rural areas are more supportive	34.3	39.1	21.8	3.2	1.6

**Table - 2.2:** Responses of the study participants to questions showing their attitude and perception towards rural healthcare services (Discouraging factors).

Scale items	Strongly agree (%)	Agree (%)	Undecided (%)	Disagree (%)	Strongly disagree (%)
9. Hospital infrastructure is adequate	0.0	0.2	4.7	43.9	51.2
10. Residential facilities are good	2.1	4.7	10.6	53.8	28.8
11. Professional growth is limited	29.2	41.9	9.2	17.6	2.1
12. Provides lesser opportunities to upgrade knowledge and skills	47.6	29.1	14.6	7.1	1.6
13. It is frustrating if unable to pursue post-graduation	54.2	39.9	3.1	2.8	0.0
14. Connectivity with cities is not good	48.6	38.7	9.5	3.2	0.0
15. Isolation from family and relatives	34.8	47.6	7.2	8.6	1.8
16. Provides lesser opportunities for interaction with colleagues of medical field	47.7	36.7	7.1	8.1	0.4
17. Recreation facilities are limited	25.2	48.6	16.3	9.4	0.5
18. Schooling for children is a problem	48.4	41.1	7.3	3.2	0.0
19. Difficult to pursue PG after working in rural areas for a considerable time	39.1	44.6	11.4	4.7	0.2

**Figure - 1:** Attitude of the study participants towards rural healthcare services (n=97).



**Table - 3:** Association of socio demographic characteristics with attitude towards rural healthcare services (n=97).

Variable	Positive attitude (n=41)	Negative attitude (n=56)	Chi sq value	P value
<b>Gender</b>				
Male	34(82.9)	16(28.6)	25.87	<0.0001
Female	7(17.1)	40(71.4)		
<b>Place of residence</b>				
Rural	18(43.9)	11(19.6)	5.54	0.0186
Urban	23(56.1)	45(80.4)		
<b>Mother's education</b>				
Graduate and above	37(90.2)	49(87.5)	0.01	0.9203
Less than graduation	4(9.8)	7(12.5)		
<b>Father's education</b>				
Graduate and above	40(97.7)	52(92.8)	0.33	0.5657
Less than graduation	1(2.3)	4(7.2)		
<b>Family member in rural service</b>				
Yes	16(39.0)	52(92.8)	30.21	<0.0001
No	25(61.0)	4(7.2)		

**Table - 1** shows that majority of the participants were staying in hostels. Around 23.7% of the students had some family member (near as well as distant) who was practicing in some rural area of Odisha. This data was collected so that the experience of that family member might have influenced the response and attitude of the study participant.

The responses of the participants were used to assess their attitude towards taking up a rural posting following internship. The responses were scored positively or negatively as per the Likert scale as described above.

**Table - 1** depicts that male doctors had a more positive attitude towards rural healthcare service; which was also found to be highly statistically significant. The other socio-demographic

variable found to have a high statistically significant association with a negative attitude was some family member working in a rural area as a doctor. The attitude might have been affected by the experience shared by the family member. This adversely affected attitude could be addressed as not all rural areas lack basic amenities and not all doctors are unhappy with rural healthcare services. The place of residence of the study participant also had association with the present attitude towards rural health care service (**Table – 2.1, Table – 2.2, Table – 3, Figure – 1**).

## Discussion

In an exploratory study done in India by N. Srinivas, et al; it was found that as few as 9% of private students showed willingness to work in rural areas, in the long run and nearly 44.5% mentioned opportunities for career growth, followed by the possibilities for higher education (26.8%) as major the factors for preferring an urban posting. Similarly, higher pay scales, better working conditions were major factors for preferring the private sector. Most of the students mentioned that good housing, better salaries, and adequate facilities at the work place would attract more students toward rural service [5]. In the present study, around 42.2% of the study participants had a positive attitude towards working in rural areas after internship whereas the rest 57.8% had a relatively negative attitude towards the same. This result shows a much higher number of students from the present study had positive attitude towards taking up rural postings. In a study done in Andhra Pradesh, around 58% of the medical interns had a positive attitude which is more than the present study. Among the factors which attracts them to join rural/remote areas under government health sector, the interns strongly agreed for higher salaries (48.5%), job satisfaction (34.6%) and serving poor and needy patients (38%), better exposure to wide variety of cases, job satisfaction and if given a job near to home place (35%) [6]. Some of the factors were similar to the present study with respect to higher salaries

and posting near home place. Another similar cross-sectional study was conducted among 160 students of the Private University Medical College in Karnataka which depicted that 95% hailed from urban areas and 52% of their fathers had postgraduate education or higher compared with 34% mothers; whereas the present study found that as many as 70.1% of the interns were from urban areas and as many as 94.8% of the students had paternal and 88.7% of maternal qualification to be graduation and above [7]. In the above mentioned study around 43.4% of the Indian students expressed interest in serving in rural areas with similar results as compared to the present study [7]. The reasons for dissatisfaction were also similar in both the studies. Another study on interns who had completed their rural posting under the department of Community Medicine was conducted by B. Soumya, et al. which depicted that good incentive, good accommodation facility, transport facility, good incentives and postings near the home town were the encouraging factors for them to take up rural service in future [8]. These results are similar to the findings of the present study. In the above study, as many as 62.5% interns were not ready to serve in rural area which shows a more negative attitude than the interns (study participants) of the present study. [8] Another similar study done by G. Sonu, et al. among medical students of Northern India identified some encouraging and discouraging factors which are similar to the findings of the present study. The mean age of the study participants in the previous study was lower than the present study [9]. Another study done by Jayashree S, et al. in Karnataka on interns of a Government medical college more than half of the interns were ready to serve through the compulsory government bond in they get benefit for a post-graduation seat, higher pay and get proper living conditions. Around 9% of the interns in the previous study had a fairly negative response for the same. In this study the encouraging factors were; opportunity for independent working thereby enhancing their confidence, schooling and residence in a rural background, some of

them were influenced by a person either from the family or relatives who had served in rural areas [10]. This result is slightly different from the present study. In a study done by G. Manasvi, et al. less than 15% of the students accepted positively for rural posting. Insufficient incentive, security problems, cultural differences from the rural population, lack of infrastructure in rural settings, political motives in implementing rural posting, etc., were main reasons discouraging students from rural posting [11]. The present study shows a much positive response among the interns on taking up rural service after their internship.

### **Conclusion**

This study revealed that the attitude towards rural health services among interns of a private medical college was majorly negative. Though the medical students realized the importance of working in rural areas in their professional growth; better infrastructural and residential facilities, better connectivity, educational facilities for children, opportunities for pursuing post-graduation, professional growth, and additional allowances for rural service can help in conditioning a more favorable attitude of medical students toward working in rural areas. Keeping in view the scarcity of doctors in rural areas the above factors may be looked upon sincerely to address the unmet need. These findings will help policy makers and medical educators to design and implement a comprehensive human resource strategy that shall target specific factors to encourage medical students to choose job positions in rural areas.

### **Acknowledgement**

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### **Limitations**

It is a cross-sectional study done in only one Medical College, the results might be generalized to the whole of Odisha.

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