MAK HILL Publications International Journal of Tropical Medicine

Research Article
doi: 10.59218/makijtm.2023.3.72.77

Rural Practice Preferences: A Survey of Medical Interns in Western India

[1]Pawar Sunita Parshuram, [2]Gurule Sarvesh Anandrao and [3]Damkondwar Omprasad Bhagwat

[1]Department of Community Medicine, Dr. Vasantrao Pawar Medical College, Hospital and Research Centre, Nashik, MS India

[2]Dr. Vasantrao Pawar Medical College, Hospital and Research Centre, Nashik, MS, India

[3]Department of Community Medicine, Parbhani Medical College, Parbhani, MS, India

ABSTRACT

The study addresses the challenge of the uneven distribution of medical professionals between urban and rural areas, focusing on rural regions that often face a shortage of qualified medical personnel. The research aims to explore the perceptions and inclinations of medical students in Western India towards serving in rural areas, emphasizing the factors that may attract them to these underserved regions. A cross-sectional analytical study was conducted at medical College in Western India, encompassing all medical interns registered in the 2023-2024 academic year. Participation was voluntary with informed consent. Data collection done in October 2023 using a semi-structured questionnaire on Google Forms, focusing on intern's preferences and socio-demographic factors. Analysis was conducted using Microsoft Excel 2021. The study found a predominance of early-twenties students, slightly more males than females and a majority having urban educational backgrounds. Key concerns included inadequate residential facilities and health infrastructure in rural areas, limited professional growth opportunities, and excessive workload. Conversely, attractions to rural practice included altruistic motives, a pollution-free environment and a lower cost of living. The study concluded that there is a complex interplay of factors influencing medical intern's willingness to serve in rural areas. Barriers include concerns about infrastructure and professional growth, while attractions involve altruistic motives and environmental benefits. The findings highlight the need for comprehensive strategies addressing both the deterrents and motivators in rural healthcare.

OPEN ACCESS

Key Words
Rural practice preferences, medical interns, rural healthcare

Corresponding Author
Pawar Sunita Parshuram, Department of Community Medicine, Dr. Vasantrao Pawar Medical College, Hospital & Research Centre, Nashik, MS, India. Pin Code 422003
drsunitapawar@gmail.com

Author Designation
[1]Associate Professor
[2]1st Year MBBS
[3]Assistant Professor

Received: 20 October 2023
Accepted: 23 November 2023
Published: 30 November 2023

Citation: Pawar Sunita Parshuram, Gurule Sarvesh Anandrao and Damkondwar Omprasad Bhagwat, 2023. Rural Practice Preferences: A Survey of Medical Interns in Western India. Int. J. Trop. Med., 18: 72-77, doi: 10.59218/makijtm.2023.3.72.77

INTRODUCTION

The distribution of medical professionals across urban and rural areas presents a challenge in healthcare in India, with rural regions often facing a shortage of qualified medical personnel[1]. Understanding the factors that influence medical student's decisions to practice in rural settings is crucial for addressing this maldistribution. This study aims to explore the perceptions and inclinations of medical students towards serving in rural areas, particularly focusing on the factors that may attract them to these underserved regions[2].

The World Health Organization (WHO) has identified initiatives such as educational interventions, regulatory interventions, financial incentives and personal and professional support packages to attract health workers to take up positions in disadvantaged areas[3]. WHO has also proposed that countries identify appropriate interventions suitable to their local contexts, given the diversity in local demand factors as well as of health professionals and the specific characteristics of each labour market[4]. Thus, the development of such strategies requires precise insight into the job preferences of health professionals in various countries.

Research indicates various determinants that affect medical student's career choices, ranging from personal and familial influences to educational experiences and perceived quality of life. Additionally, factors such as professional growth opportunities, financial incentives and the societal impact of their work play a significant role in shaping their future practice settings.

Each years, students get admitted to medical colleges with definitive objectives and attitude. They are destined to serve humanity in need irrespective of the geographical distribution of their placements. Nowadays, students graduating from medical institutions are opting to work in urban rather than rural areas and not willing to practice in rural areas after their qualification[5]. Added to this is the emerging trend of medical graduates preferring to pursue post graduation, which has become a mandatory thing which prevents them in entering the rural sector to deliver health care needs.

The doctor-population ratio in the country is 1:834 which is better than the WHO standard of 1:1000[6,7]. For example, according to a report by the United Nations, 75% of the health infrastructure in a country like India including doctors and specialists and other health resources is concentrated in urban areas where only 27% of India's population lives[8]. In India, where the disparity between rural and urban healthcare services is pronounced, the need to attract young doctors to rural practice is particularly acute. This study, conducted among medical students in Western India, delves into these aspects, examining the extent to which certain factors may encourage these future healthcare providers to consider a career in rural medicine.

By identifying and analyzing these attractors the study seeks to contribute valuable insights that can inform policy development, educational strategies and healthcare planning. The goal is to foster a more equitable distribution of medical practitioners across different geographical areas, ultimately improving access to quality healthcare for the rural population.

MATERIALS AND METHODS

The study aimed to explore the preferences of medical interns regarding the practice of medicine in rural areas and to examine the factors influencing their perceptions of rural medical practice. Employing a cross-sectional analytical approach the research was carried out at a Medical College in the Western region of India. The participants included all medical interns registered and active in the 2023-2024 academic year internship program at the institution. Enrolment was limited to those who voluntarily agreed to participate in line with ethical standards. The data collection spanned October 2023. The study received approval from the Institutional Ethical Committee, ensuring adherence to ethical norms.

A complete enumeration method was used for sampling, listing all medical interns who met the inclusion criteria to avoid selection bias and ensure a representative sample. Data were collected using a pretested, semi-structured questionnaire via Google Forms, enhancing the efficiency and uniformity of data gathering[9]. The study focused primarily on interns' preferences for rural medical practice, with secondary variables including socio-demographic factors like age, gender, residential background parental education and occupation and These were analyzed to identify potential correlations[10,11].

Statistical analysis: For data analysis, the collected information was exported to Microsoft Excel 2021. Descriptive statistics provided insights into distribution, mean and standard deviation. Statistical analyses included descriptive statistics to summarize socio-demographic data and Likert response frequencies. Appropriate statistical tests were applied to test the association between variables, with a $p>0.05$ indicating statistical significance[12].

RESULTS

Table 1 provides a sociodemographic overview of medical students, showing a majority in their early twenties, particularly at 23 years (41.9%). Males form a larger group (56.5%) compared to females (43.5%). A significant portion (77.4%) studied in urban areas until the 12th standard, indicating better accessibility to premedical education in these regions. Parental

Table 1: Sociodemographic profile of medical interns (n =124)

Sociodemographic information	count	percentage
Age		
23	52	41.9
24	44	35.5
25	13	10.5
26	8	6.5
27	5	4.0
28	1	0.8
29	1	0.8
Gender		
Male	70	56.5
Female	54	43.5
From which region you did your premedical studies? (up till 12th standard)		
Rural	28	22.6
Urban	96	77.4
Father's education		
Graduation	60	48.4
Higher secondary school	16	12.9
Illiterate	3	2.4
Post graduation	32	25.8
Primary schooling	3	2.4
Secondary schooling	6	4.8
Super speciality	4	3.2
Mother's education		
Graduation	47	37.9
Higher secondary school	24	19.4
Illiterate	4	3.2
Post graduation	21	16.9
Primary schooling	9	7.3
Secondary schooling	15	12.1
Super speciality	3	2.4
Teacher	1	0.8
Parent's occupation		
Business	20	16.1
Doctor	13	10.5
Engineer	11	8.9
Farmer	17	13.7
Govt. employee	22	17.7
Labourer	1	0.8
Laywer	1	0.8
Policeman	3	2.4
Private service	9	7.3
Shopkeeper	5	4.0
Teacher	22	17.7
Marital status		
Single	123	99.2
Married	1	0.8
Occupation of spouse		
Doctor	1	0.8

Table 2: Perceptions of medical interns on factors affecting service in rural areas(not in favour). Ratings are based on a likert scale (strongly disagree to strongly agree)

	Strongly disagree	Disagree	Undecided	Agree	Strongly agree	Mean	Std deviation	Decision
Residential facilities are not adequate	1 (0.8%)	1 (0.8%)	3 (2.4%)	61 (49.2%)	58 (46.8%)	4.40	0.66	High Perception
Professional growth is limited	2 (1.6%)	9 (7.3%)	24 (19.4%)	58 (46.8%)	31 (25.0%)	3.86	0.93	Low Perception
Problem with Children schooling	2 (1.6%)	4 (3.2%)	14 (11.3%)	58 (46.8%)	45 (36.3%)	4.14	0.86	High Perception
Isolation with family and relatives	1 (0.8%)	12 (9.7%)	10 (8.1%)	67 (54.0%)	34 (27.4%)	3.98	0.91	High Perception
Lack of modern amenities	1 (0.8%)	3 (2.4%)	8 (6.5%)	53 (42.7%)	59 (47.6%)	4.34	0.77	High Perception
Undesirable political interference	2 (1.6%)	3 (2.4%)	17 (13.7%)	0.00%	63 (50.8%)	4.28	0.91	High Perception
Cultural differences	7 (5.6%)	22 (17.7%)	29 (23.4%)	43 (34.7%)	23 (18.5%)	3.43	1.15	Low Perception
Less opportunity to pursue post-graduation	7 (5.6%)	10 (8.1%)	20 (16.1%)	52 (41.9%)	35 (28.2%)	3.79	1.11	Low Perception
Lack of adequate health infrastructure	1 (0.8%)	4 (3.2%)	8 (6.5%)	67 (54.0%)	44 (35.5%)	4.20	0.76	High Perception
Lack of trained paramedical staff	2 (1.6%)	14 (11.3%)	17 (13.7%)	62 (50.0%)	29 (23.4%)	3.82	0.97	Low Perception
Limited career opportunities	2 (1.6%)	9 (7.3%)	20 (16.1%)	60 (48.4%)	33 (26.6%)	3.91	0.93	Low Perception
Excessive workload	4 (3.2%)	21 (16.9%)	36 (29.0%)	42 (33.9%)	21 (16.9%)	3.44	1.06	Low Perception
Lack of Security and supportive working environment for doctors	2 (1.6%)	8 (6.5%)	19 (15.3%)	53 (42.7%)	42 (33.9%)	4.22	0.80	High Perception
Lack of appreciation and incentives	2 (1.6%)	8 (6.5%)	19 (15.3%)	53 (42.7%)	42 (33.9%)	4.01	0.95	High Perception
Lack of professional support	1 (0.8%)	5 (4.0%)	15 (12.1%)	64 (51.6%)	39 (31.5%)	4.09	0.82	High Perception
Lack of adequate salary	1 (0.8%)	6 (4.8%)	22 (17.7%)	48 (38.7%)	47 (37.9%)	4.08	0.91	High Perception
More stressful life	3 (2.4%)	19 (15.3%)	31 (25.0%)	47 (37.9%)	24 (19.4%)	3.56	1.05	Low Perception
Poor working condition	1 (0.8%)	4 (3.2%)	10 (8.1%)	63 (50.8%)	46 (37.1%)	4.20	0.79	High Perception
Less recognition from society	5 (4.0%)	22 (17.7%)	21 (16.9%)	47 (37.9%)	29 (23.4%)	3.59	1.15	Low Perception
Poor access and communication	1 (0.8%)	7 (5.6%)	17 (13.7%)	59 (47.6%)	40 (32.3%)	4.05	0.87	High Perception
Less long term earning potential	1 (0.8%)	8 (6.5%)	16 (12.9%)	57 (46.0%)	42 (33.9%)	4.06	0.90	High Perception

Decision weighted average = 3.97

Table 3: Perceptions of medical interns on factors affecting service in rural areas(in favour). Ratings are based on a likert scale (strongly disagree to strongly agree)

	Strongly disagree	Disagree	Undecided	Agree	Strongly agree	Mean	Std deviation	Decision
Less professional competition between doctors	3 (2.4%)	10 (8.1%)	27 (21.8%)	66 (53.2%)	18 (14.5%)	3.69	0.90	Low Perception
Greater need of medical professionals	1 (0.8%)	2 (1.6%)	14 (11.3%)	76 (61.3%)	31 (25.0%)	4.08	0.71	High Perception
Lower cost of living	3 (2.4%)	7 (5.6%)	18 (14.5%)	75 (60.5%)	21 (16.9%)	3.84	0.86	High Perception
Better work-life balance	5 (4.0%)	15 (12.1%)	22 (17.7%)	66 (53.2%)	16 (12.9%)	3.59	1.00	Low Perception
Exposure to unique medical cases	4 (3.2%)	20 (16.1%)	28 (22.6%)	50 (40.3%)	22 (17.7%)	3.53	1.06	Low Perception
Pollution free environment	2 (1.6%)	11 (8.9%)	17 (13.7%)	59 (47.6%)	35 (28.2%)	3.92	0.96	High Perception
Government's incentives providing policies for rural doctors	10 (8.1%)	12 (9.7%)	30 (24.2%)	49 (39.5%)	23 (18.5%)	3.51	1.14	Low Perception
Satisfaction of serving the underserved people	2 (1.6%)	2 (1.6%)	15 (12.1%)	63 (50.8%)	35 (28.2%)	4.06	0.83	High Perception
Higher respect level in community	3 (2.4%)	10 (8.1%)	19 (15.3%)	55 (44.4%)	30 (24.2%)	3.82	0.99	High Perception
Government policy of reservation for PG seats for in-service candidate	5 (4.0%)	5 (4.0%)	16 (12.9%)	54 (43.5%)	37 (29.8%)	3.98	1.00	High Perception
Feeling of giving back to the society	4 (3.2%)	3 (2.4%)	12 (9.7%)	60 (48.4%)	38 (30.6%)	4.02	0.96	High Perception
More study time for pursuing PG entrance examination	13 (10.5%)	14 (11.3%)	24 (19.4%)	47 (37.9%)	19 (15.3%)	3.39	1.21	Low Perception
Better nature landscaping	3 (2.4%)	7 (5.6%)	18 (14.5%)	68 (54.8%)	21 (16.9%)	3.80	0.89	High Perception
Greater autonomy in decision making	3 (2.4%)	7 (5.6%)	18 (14.5%)	68 (54.8%)	21 (16.9%)	3.83	0.87	High Perception
Less travelling	9 (7.3%)	18 (14.5%)	23 (18.5%)	50 (40.3%)	17 (13.7%)	3.40	1.15	Low Perception
More opportunity for research	15 (12.1%)	20 (16.1%)	25 (20.2%)	42 (33.9%)	15 (12.1%)	3.18	1.25	Low Perception
Feeling of working towards equality	6 (4.8%)	12 (9.7%)	22 (17.7%)	56 (45.2%)	21 (16.9%)	3.63	1.07	Low Perception
To contribute towards health of community	2 (1.6%)	6 (4.8%)	15 (12.1%)	62 (50.0%)	32 (25.8%)	3.94	0.94	High Perception

Decision weighted average = 3.73

education trends towards higher levels, with most fathers (46.8%) and mothers (37.1%) being graduates, reflecting the emphasis on education in their families. Diverse socio-economic backgrounds are represented, with parents working in sectors like business, teaching, farming and government. The students are predominantly single (99.2%), aligning with their educational phase.

The Table 2 analyzes medical student's perceived barriers to rural practice. Notable issues with High Perception include inadequate residential facilities (mean 4.40), schooling for children, family isolation, lack of amenities and political interference, signifying these as significant concerns. In contrast, factors like limited professional growth, cultural differences and post-graduation opportunities received Low Perception scores, indicating lesser concern. This data underscores the student's focus on professional, personal and infrastructural factors, providing valuable insights for policy makers and educators addressing healthcare distribution challenges between urban and rural areas.

The Table 3 assesses medical student's attitudes towards rural practice, using Likert scale ratings to gauge perceptions of various influencing factors. Key findings include the recognition of a greater need for medical professionals in rural areas (mean 4.08, High Perception), suggesting students are aware of the demand for their services. Additionally, the lower cost of living in rural areas is viewed positively (mean 3.84, High Perception'), indicating that students acknowledge the economic advantages.

Conversely, less professional competition and the potential for a better work-life balance are less motivating for students, both categorized as Low Perception. This may highlight concerns about professional development and lifestyle quality in rural settings. Environmental benefits, like a pollution-free environment, are highly valued (High Perception), reflecting student's preferences for a healthy living and working environment.

Government incentives for rural doctors received a "Low Perception" rating, possibly due to perceived inadequacies in current policies. However, factors like the opportunity to serve under served populations and gaining higher respect in the community are highly regarded ("High Perception"), emphasizing altruistic motives and the importance of community esteem.

Furthermore, aspects such as favorable policies for postgraduate seats for in-service candidates, better natural surroundings and greater decision-making autonomy are seen positively, indicating student's preference for professional and environmental quality in rural areas. December 11, 2023In contrast, less travel time and research opportunities are viewed as less compelling ("Low Perception"), possibly due to concerns about isolation and limited research access in rural settings. This comprehensive analysis reveals the complex considerations of medical students regarding rural practice, highlighting areas of appeal and concern.

DISCUSSIONS

This study offers an in-depth examination of the attitudes and preferences of medical interns regarding rural healthcare practice in Western India. The results highlight a complex interplay of factors influencing these future medical professional's willingness to serve in rural areas.

In our study, a majority of participants are in their early twenties, with 41.9% being 23 years old and a gender split of 56.5% male and 43.5% female. This is

similar to the Mohapatra *et al*.[13] study, where the average age was 23.7 years with a slight male majority (52%). Perceptions of rural healthcare highlight two main areas. Firstly, there are high perception scores regarding inadequate residential facilities and a lack of health infrastructure, which is a significant barrier to rural healthcare service. This finding aligns with existing literature and is echoed in studies by Mohapatra *et al*.[13] indicating that this issue is widespread across different regions of India. Secondly, the perception that professional growth is limited in rural areas was rated lower, suggesting that students have a nuanced understanding of career development prospects in rural settings. This finding is a slight contrast to other studies, such as those by Nallala *et al*.[14] where the concern over limited professional growth in rural areas was more pronounced. The study by Dutt *et al*.[15] identified that incentives such as the assurance of postgraduation seats and improved monetary benefits might motivate students to consider rural service, although possibly for a limited time. In our study, factors like a lower cost of living and a pollution-free environment were noted as potential attractors for students to rural areas.

Influencing factors in the reluctance of medical students towards rural practice include socio-demographic background and parental education and occupation. The predominance of students from urban backgrounds (77.4%) might influence their reluctance towards rural practice, as observed in studies by Anne *et al*.[16] and Dutt *et al*.[15]. Furthermore, with a majority of male students (56.5%), this demographic trend aligns with those noted in these studies. On the other hand the diverse educational backgrounds and occupations of parents indicate a broad socio-economic spectrum among medical students. This diversity may impact students' perceptions and career choices, a phenomenon also seen in the study by Mohapatra *et al*.[13].

Attraction to rural service among medical students is primarily driven by altruistic motives and the appeal of certain environmental and economic factors. High scores in areas like serving the underserved and gaining community respect suggest that altruistic motives and social recognition are significant attractors to rural practice, aligning with findings from Anne *et al*.[16] where a sense of social responsibility was evident. Additionally, the high rating of factors like a pollution-free environment and lower cost of living indicates that lifestyle factors also play a role in attracting medical interns to rural areas, a point that is less emphasized in studies such as Nallala *et al*.[14].

Barriers to rural practice for medical interns are primarily centered around work-life balance and cultural differences. Concerns about maintaining a work-life balance, particularly issues related to isolation and excessive workload, were prominent. However, cultural differences were rated lower as a concern. This indicates that while medical interns are adaptable to cultural variations the quality of life and the intensity of professional workload are significant deterrents to choosing rural practice.

The policy implications for encouraging medical interns to practice in rural areas focus on improving infrastructure and facilities, addressing professional growth concerns and fostering altruistic values. The significant concern over inadequate facilities in rural areas underscores the necessity for enhanced infrastructure, aligning with WHO recommendations to make rural healthcare more attractive. Addressing the issue of limited professional growth opportunities in rural areas is also crucial, and this can be done through targeted policies and interventions like creating more opportunities for advancement and continuous education. Lastly, the high scores for altruistic motives among medical interns suggest that emphasizing the societal impact of rural healthcare in medical education could be effective in encouraging more students to consider rural practice.

CONCLUSION

This study provides a nuanced understanding of the factors influencing medical intern's attitudes towards rural healthcare in Western India. The findings reveal that while there are significant barriers to rural practice, such as concerns about inadequate residential facilities and limited professional growth opportunities, there are also notable attractors. These include the altruistic satisfaction of serving underserved populations the appeal of a pollution-free environment and the prospect of a lower cost of living. The study underscores the complexity of decision-making processes for medical interns when considering rural practice, highlighting the need for comprehensive strategies that address both the deterrents and motivators.

Recommendations: Based on the study's findings, several recommendations can be made for improving rural healthcare practices. Firstly, it is crucial to improve residential facilities and health infrastructure in rural areas, which aligns with WHO recommendations and could alleviate primary concerns of medical interns. Secondly, developing clear pathways for career advancement and continuous education in rural healthcare settings could help mitigate concerns about professional stagnation. Thirdly, emphasizing the societal impact and intrinsic rewards of serving in rural areas during medical training could foster a more positive attitude towards rural practice. Fourthly, policymakers should consider introducing more robust financial incentives and supportive policies, such as reserving postgraduate seats for in-service candidates, to make rural service more attractive. Lastly, efforts should be made to ensure manageable workloads and support systems in rural healthcare settings to improve the work-life balance for medical professionals.

Limitations: The study's limitations are primarily related to its scope and sampling. Being conducted in

a single medical college the findings may not fully represent the diversity of perspectives across different regions and types of medical institutions in India. Additionally, the focus on interns from a predominantly urban background might have influenced the results, particularly regarding perceptions of rural practice. Future research should aim to include a more diverse participant pool from various geographical and educational backgrounds to enhance the generalizability of the findings.

REFERENCES

1. Sharma, D.C., 2015. India still struggles with rural doctor shortages. Lancet, 386: 2381-2382.
2. Sawatsky, A.P., N. Parekh, A.S. Muula and T. Bui, 2014. Specialization training in malawi: A qualitative study on the perspectives of medical students graduating from the university of malawi college of medicine. BMC Med. Educ., Vol. 14. 10.1186/1472-6920-14-2
3. WHO., 2010. Increasing access to health workers in remote and rural areas through improved retention: Global policy recommendations. World Health Organization, https://www.who.int/publications/i/item/increasing-access-to-health-workers-in-remote-and-rural-areas-through-improved-retention
4. Smitz, M.F., S. Witter, C. Lemiere, P.H.V. Eozenou and T. Lievens *et al*., 2016. Understanding health workers' job preferences to improve rural retention in timor-leste: Findings from a discrete choice experiment. PLOS One., Vol. 11. 10.1371/journal.pone.0165940
5. Sahu, P.C., I.I. F and A.C. Sahu, 2022. Medical student's attitude towards serving rural areas: A cross sectional study in maharashtra, India. Panacea J. Med. Sci., 12: 387-392.
6. PIB., 2022. Press Information Bureau, Government of India, Ministry of Health and Family Welfare. Government has taken multiple steps to further increase availability of doctors in the country. Available from, https://pib.gov.in/Pressreleaseshare.aspx?PRID=1845081
7. WHO., 2010. Medical doctors (per 10,000 population) global health observatory (GHO) data., https://www.who.int/data/gho/data/indicators/indicator-details/GHO/medical-doctors-(per-10-000-population)
8. Basu, J., 2022. Research on disparities in primary health care in rural versus urban areas: Select perspectives. Int. J. Environ. Res. Public Health, Vol. 19 .10.3390/ijerph19127110
9. DeJonckheere, M. and L.M. Vaughn, 2019. Semistructured interviewing in primary care research: A balance of relationship and rigour. Family Med. Community Health, Vol. 7. 10.1136/fmch-2018-000057
10. URP., 2011. India census 2011. Urban and rural population in India 2011: Analysis and Data. Available from, https://indiafacts.in/urban-rural-population-o-india/
11. Kulkarni, A.P. and J.P. Baride, 2006. Textbook of Community Medicine. 4Ed Edn., Vora Medical, Pages: 32.
12. Leo, G.D. and F. Sardanelli, 2020. Statistical significance: P-value, 0.05 threshold, and applications to radiomics reasons for a conservative approach. Eur. Radiol. Exp., Vol. 4. 10.1186/s41747-020-0145-y
13. Mohapatra, P.S., S. Nayak, K. Mishra, A. Roy and B. Sarkar, 2021. Attitude and perception of medical interns towards rural healthcare services in India: A cross-sectional study. Available from, https://www.iaimjournal.com/wp-content/uploads/2021/01/iaim_2021_0801_06.pdf
14. Pati, S., S. Swain, S. Nallala, S. Das and S. Kasam, 2015. Why medical students do not like to join rural health service? an exploratory study in India. J. Family Community Med., 22: 111-117.
15. Dutt, R., S. Shivalli, M. Bhat and J. Padubidri, 2014. Attitudes and perceptions toward rural health care service among medical students. Med. J. Dr. D.Y. Patil Uni., 7: 703-708.
16. Elias, C., C. Anne, N. Ekene, M. Nneka and E. Chukwuebuka, 2019. Perception and willingness of medical students towards working in rural communities. Niger. J. Med., Vol. 28. 10.4103/1115-2613.278597