

Original Article

FACTORS AFFECTING WILLINGNESS OF DOCTORS TO WORK IN RURAL AREAS OF PAKISTAN

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Abstract

Background: The objective of this study was to assess the willingness of medical doctors to work in rural areas. The study also aimed to elucidate the factors influencing the decision of doctors to work in rural versus urban location of clinical practice.

Methods: It is a cross-sectional study that was conducted from 8th January 2016 to 18th January, 2016 including randomly selected House officers (Hos), Postgraduate Trainees (PGTs) and Medical Officers (MOs) working in various departments of Holy Family Hospital, Rawalpindi using a self-administered semi-structured questionnaire. The questions related to demographic details, future plans and willingness of doctors. Factors facilitating or preventing them from accepting a rural position were also enquired about.

Results: Thirty (30%) of the respondents were found willing to work in rural areas while 45% were neutral and 25% had a negative attitude towards practice in rural areas. Factors significantly related to rural choice of practice included rural place of birth (p value=.001), previous experience of having lived in rural settings (p value=.001) payment of fees by parents rather than by family or loans (p value=.001) and with the doctors' expectations of whether they are likely to work in rural/urban/foreign locations (p value=.001).

Conclusion: The study shows that most of the doctors who have a rural birthplace/ experience of living are more willing to work in rural areas. Therefore, if the government wants to fill the vacant posts in rural locales, scholarship schemes for students from rural areas should be increased.

Keywords: Health care worker, incentives, rural areas, retention.

Introduction

Countries all over the world are facing a growing shortage of health workforce. According to the World Health Report, 2006 there are as many as 57 countries facing critical shortage of health professionals including doctors, nurses and midwives. This shortage is combined with urban concentration and rural deficiency of both human and material resources (1). The imbalance is caused by migration of workforce not only internationally from poorer to richer countries but also internally from rural to urban areas leading to a greater financial burden on the health systems of developing countries (1, 2).

Despite the fact that half of the world population resides in rural areas, yet only a quarter of the world's physicians serve in these areas (3). Even in Canada, rural areas comprise 99.8% of the country, are inhabited by 24% of the population but served by only 9% of the registered physicians (4). In Vietnam, where four health service providers are available for 1000 population in

urban areas, the country wide distribution is just over one health service provider per 1000 inhabitants (1).

The Economic Survey of Pakistan 2015 documents the fact that only one doctor is serving 1073 persons and health infrastructure is clustered mostly in urban areas (5). In Punjab Health Sector Strategy, it was recognized that one of the major challenges in achieving health equity in the province is the unequal distribution of the health workforce. Staff shortages are particularly stark outside large cities especially in rural areas (6).

Worldwide studies indicate that many factors dictate the choice of area for a job including financial, social and environmental issues. In Germany, the three most important factors influencing the decision to work in a rural practice were family friendly surroundings, the rural village itself and cooperative colleagues (7). In our neighboring country India, the preference for working in an urban setting was attributed to better prospects for career development and opportunity for higher education in cities (8). In Pakistan, a study in district

Abbottabad in 2004 found that doctors complained about poor service structure and facilities in rural areas and found life difficult due to disruptions in professional, social and family pursuits (9).

World Health Organization(WHO) has outlined recommendations to improve retention of health workers in rural areas (10). Several countries have introduced incentives to retain doctors in rural settings. In India, doctors are being offered financial incentives, accommodation, life insurance, and extra marks during PG admission for retention of doctors in under-served localities (11). Similarly, in Bangladesh, a provision for rotation in rural areas is in place alongwith a financial incentive of an additional 33% of the basic salary (12). Indonesia offers special placement schemes for doctors and dentists which increase their opportunities to be employed as civil servants in lieu of service in hard-to-reach areas from 6 months to 3 years (13). In Pakistan, the Government of Punjab recognizes that the shortage of health workers in rural areas, particularly of WMOs, is due to the difficulty in retaining doctors in rural and remote areas. In order to retain doctors in rural areas, they are offered financial incentives and recently extra marks to be awarded to postgraduate trainees with work experience in primary healthcare settings for securing paid seats in teaching hospitals (7).

According to the WHO recommendations, the strategies to retain workers in rural areas includes addressing factors affecting choices of health workers to accept, stay in or depart from rural underserved and remote areas (10). Shortage of health professionals in rural areas cannot be overcome unless the reservations and expectations of health workforce are addressed. We know little about the preferences of doctors and factors affecting their decision to work in rural settings since few studies have been conducted on this topic in Pakistan. This study aims to understand the approach of young doctors in the city of Rawalpindi towards serving in rural areas.

Methodology

This was a cross-sectional study conducted at the Holy Family Hospital, Rawalpindi. Data were collected from doctors working as House Officers, Medical Officers and Postgraduate Trainees working in the various departments of Holy Family Hospital, Rawalpindi. The objective of the study was to assess the willingness of doctors to work in rural/remote areas and to elucidate the factors that influence the decision to accept a position in rural areas.

A questionnaire was developed that included questions regarding 1) demographic characteristics, 2) degree of willingness 3) concerns about getting a job 4) facilitating / inhibiting factors that influence the choice of rural versus urban areas. At the end, an open-ended question was included regarding the opinion of the respondent about what single action the government should take to improve retention of doctors in rural posts. Sample size was calculated using Raosoft Sample size

the sample size calculated was 120 with significance level 95% and margin of error 5%.

Attitude towards working in rural areas was defined by the response of the participant. If a respondent declared that he/she was willing or very willing to work in a rural area, he/she was said to have a positive attitude regarding employment in rural areas. If the respondent said that he/she was willing to work in a rural facility if he/she could not find a job in the city, then he/she has a neutral attitude towards working in a rural area. If the respondent says he/she will not go to a rural area for practice even if he/she could not find a job in the city, he/she has a negative attitude.

Results

A total of 120 questionnaires were returned. 52.5% were male doctors while 47.5 % were lady doctors. The demographic characteristics are given in table 1.

Table 1: Demographic characteristics of the participants

Demographic Characteristics of Participants		Number (n)	Percentage (%)
Designation	House Officers	61	50.8%
	Medical Officers	29	24.2%
	Postgraduate Trainees	30	25%
Age of respondents	21-25 years	59	49.2%
	26-30 years	57	47.5%
	31-35 years	3	2.5%
Place of Birth	City	100	83.3%
	Village	20	16.7%
Monthly Household Income	<Rs. 50,000	27	22.5%
	Rs. 50-100,000	62	51.7%
	>Rs. 100,000	31	25.8%
Source of Financing	Parents	89.2%	107
	Family	9.2%	11
	Loans	1.7%	2
Experience of Rural living	Yes	38	31.7%
	No	82	68.3%

Very few (10.8%) of the doctors in the sample expected to go abroad in search of a job. Majority of respondents had some knowledge of the rural health system (40%), whereas 25% reported sufficient knowledge and 35% confessed little knowledge.

Regarding perceived difficulty in finding a job, majority (52.5%) of the participants reported that it would be difficult to find a job in future, 29.2% said that it would be very difficult and 18.3% thought that it would be easy.

The most important factor discouraging doctors from moving to rural areas turned out to be lack of personal career development in rural settings followed by low salary, poor benefits and poor living conditions (Figures 1 & 2). The most important factor in determining the willingness of a lady doctor in the opinion of majority of respondents was willingness of the spouse (38%).

Overall, 30% (n=36) respondents showed a positive attitude regarding practice in a remote area. 45% (n=54) were neutral and 24% (n=30) displayed a negative attitude.

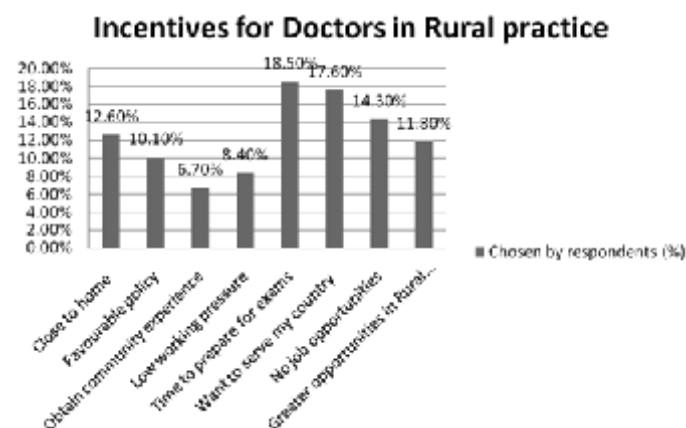


Figure1. Facilitating & Inhibiting Doctors to work in Rural Areas

Inhibiting Factors for Doctors in Rural Practice

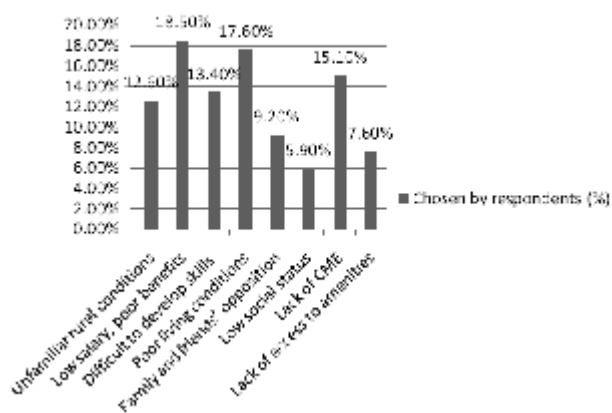


Figure 2. Inhibiting factors for Doctors in Rural Practice

The suggestion put forward by participants to attract doctors to work in rural areas was to improve the facilities (27%) and to increase the salary (21%).

Applying cross tabs, the factors found significant were place of birth (p value=.001), payment of fees by parents (p value=.001), experience of living in rural areas for more than 6 months (p=.001), expected place of employment (p value=.001) (Table 2 & 3).

Doctors with past experience of living in rural areas or having a rural place of birth have some previous

connection with the rural way of living and therefore are likely to risk moving into rural areas for better career options. Similarly, those whose fees have been paid by parents have a support system that can protect them financially in case their rural venture fails. Doctors who are expecting to find a job abroad would also be less inclined to take up rural practice.

However, factors like gender, age, socioeconomic status, knowledge about rural health system were not significantly related to willingness to work in rural areas.

Table 2. Factors having significant relationship with willingness to work in rural areas.

Count	Are you willing to work in a Rural Health Facility?				Total	X ² Value*	P Value
	Very willing n (%)	Willing n (%)	Willing if cannot find a job n (%)	Unwilling even if cannot find a job n (%)	N(%)		
Experience of residence in Rural Area	13(86.7%)	10(47.6%)	9(16.7%)	6(20%)	38(31.7%)	30.941*	.001
No experience of residence in Rural Area	2(13.3%)	11(52.4%)	45(83.3%)	24(80%)	82(68.3%)		
Total	15(100%)	21(100%)	54(100%)	30(100%)	120(100%)		
Fees paid by parents	10(66.7%)	17(81%)	53(98.1%)	27(90%)	107(89.2%)	23.561*	.001
Fees paid by Family	5(33.3%)	4(19%)	1(1.9%)	1(3.3%)	11(9.2%)		
Fees paid by Loans	0(0%)	0(0%)	0(0%)	2(6.7%)	2(1.7%)		
Total	15(100%)	21(100%)	54(100%)	30(100%)	120(100%)		

*Value of X² was replaced by Fischer's exact test because of the count in some cells being less than 5.

Table 3: Factors having significant relationship with willingness to work in rural areas.

Count	Are you willing to work in a Rural Health Facility?				Total	X ² Value*	P Value
	Very willing n(%)	Willing n (%)	Willing if cannot find a job n (%)	Unwilling even if cannot find a job n (%)	N(100%)		
Urban Place of Birth	9(60%)	13(16.9%)	50(92.6%)	28(93.3%)	100(83.3%)	30.941*	.001
Rural Place of Birth	6(40%)	8 (38.1%)	4 (7.4%)	2 (6.7%)	20(16.7%)		
Total	15 (100%)	21 (100%)	54 (100%)	30 (100%)	120 (100%)		
Expecting to find work in Pakistan (city)	6 (40%)	16 (76.2%)	45 (84.9%)	26 (86.7%)	93 (78.8%)	38.644*	.001
Expecting to find work in Pakistan (village)	8 (53.3%)	3 (14.3%)	1 (1.9%)	0 (0%)	12 (10.2%)		
Expecting to find work abroad	1 (6.7%)	2 (2.5%)	7 (13.2%)	3 (10.3%)	13 (11%)		
Total	15 (100%)	21 (100%)	53 (100%)	29 (100%)	118 (100%)		

*Value of χ^2 was replaced by Fischer's exact test because of the count in some cells being less than 5.

Discussion

In this study, 30 % of the participants showed positive attitude towards working in rural areas, 25% showed a negative attitude and 45% showed a neutral attitude towards employment in rural locations. In a study in India, 44% showed a positive attitude towards serving in rural areas (15). A similar study among students in Indonesia showed that 51.5% wanted to remain in metropolitan areas and only 8.7% wanted to work in rural communities (14). In a multi-country study about medical and nursing students' intentions to migrate abroad and to work in rural settings, Silvestri et al found that 18% students were willing to go to rural areas (16). This difference can be attributed to the regional differences observed in different countries with different incentives/ facilities being offered for working in hard-to-reach parts of the country.

Among the facilitating factors for which doctors found rural areas attractive were the prospect of increased time to prepare for exams (18.1%) and passion to serve the people (17.6%). The prospect of free time for exam preparation is a short-term motivating factor for most students who are opting for further specialization and they do not plan to stay on permanent basis in rural areas. However, intrinsic motivation (desire to serve/ pay back) is an important driving force that has also been observed in other countries and cultures (17).

The third factor pulling doctors to rural areas is the close proximity to home (12.6%). In Thailand, Thamatacharee found that 22% of the doctors were eager to work in rural areas in order to be closer to home (18). The reason for this inclination is the close-knit family structure in eastern societies that encourages young doctors to move closer to their roots.

In this study, personal career development was considered the most important factor (37%) in making a choice between rural and urban setting. An Indian study exhibited a similar trend where 44% considered career growth and 26.8% higher education prospects to be better in urban settings and consequently chose urban areas for employment (8).

In this study, 18.3% doctors considered low salary and poor benefits as the most important factor pushing them away from rural areas. In our neighboring countries, Bangladesh and India, financial benefits are the most attractive whereas in Australia and other western cultures, factors other than salary eg, living conditions, working environment, etc seem to have a greater decisive influence (7, 11, 12, 20). This is also highlighted in WHO publications (3) and in countries such as Indonesia (15) and Turkey (21).

In this study, in response to the open-ended enquiry about what the government could do, 58% of the respondents suggested that increasing the salary would be instrumental in improving retention in remote areas. In a study in Nepal, fresh medical graduates stressed the

importance of career development opportunities as well as incentives and improved salaries for those working in rural areas (22).

For female doctors willing to work in a rural environment, willingness of spouse (31%) was the most important issue. This is consistent with other researches that show that female health professionals are more likely to work where their husbands are deployed.²³

In this study the significant factor affecting the willingness of doctors to work in rural areas was the respondents' connection with rural areas as the place of birth (p value=0.001) or as a previous residence (p value=0.001). This bonding is the motivating factor that pulls and retains most doctors in rural locations. It has also been documented previously in a number of researches^{8, 11, 12, 14}

Although it is a unique study in that it has analyzed the hopes and fears of young doctors working in a government hospital about rural employment, its limitation is that the sample was picked from a single health facility. In future, multi-center studies that cover the entire province should be planned.

Conclusion

The study shows that most of the doctors who have a rural birthplace/ experience of living are more willing to work in rural areas. Among the factors that influence the choice of a rural career, lack of personal career advancement in rural settings is the most discouraging factor for young doctors.

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