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Brain drain of House Officers and Associated Factors at Public Sector Hospitals of Peshawar.

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Abstract

Introduction: The international migration and emigration of doctors from underdeveloped and developing countries to more developed countries, a phenomenon known as "brain drain", is a global public health problem. Causes inequities in provision of health care in the sense that it lacks the staff in health care facilities and also have limited services available in the countries from which doctors are migrating. Pakistan being the third leading country of IMGs for developed countries. Although migration of doctors has very significant impact on all source countries but for country like Pakistan where the projected shortfall of doctors in the year 2020 being 58,000 to 451,000 doctors will cause a serious problem Because of the this increase in international migration among medical graduates; the doctor patient ratio that is recommended by the World Health Organization (WHO) is 6 patient per doctor per hour whereas it is about 1700 patients per doctor in Pakistan in 2012 survey which was published in express tribune.

Objectives: To determine the frequency of junior doctors (house officers) with intension to migrate abroad and its associated factors.

Study design: Cross sectional study

Setting: Tertiary care hospitals (Lady Reading Hospital, Khyber Teaching Hospital, Hayatabad Medical Complex), Peshawar.

Methods: Using a self administered structured questionnaire, data was collected from 300 house officers of three Tertiary Care Hospitals (i.e. Lady Reading Hospital (LRH), Khyber Teaching Hospital (KTH), and Hayatabad Medical Complex (HMC), Peshawar. Personal data and reasons of migrating from Pakistan and also factors that might make change of mind of doctors to stay back in Pakistan were recorded. Also preferred destination and planning after migration and intention to come back to Pakistan was asked. House officers were directly interviewed by the researcher (myself). The duration of study was four months. SPSS version 24.0 was used for data analysis.

Results: Of 300 eligible respondents, all did responded, the response percentage being 100%. 85 % had intension to go abroad. The most preferred distention being USA (23%) followed by UK (21.3%). 12.3% % responded wished to return back directly to Pakistan but 28.7% % stated that they will never return back. 24% said that reason of going abroad is desire to settle abroad followed by the impact of residency on future career (21%). The most common reason because of which plan to go abroad may be cancelled is family ties (45.3%) and visa problems (18.3%).

Conclusions: A huge number of medical graduates are having intentions to migrate from Peshawar, Pakistan mainly to USA. Significant number also wished to stay either permanently or temporarily abroad. Motivating factors being the desire to settle abroad and impact of residency on future career.

KEY WORDS:
Hose officers, migration, emigration, abroad, medical graduates, future career, family ties.

Introduction

The international migration and emigration of doctors from under developed and developing countries to more developed countries, a phenomenon known as "brain drain", is a global public health problem[1,2,3,4]. This unplanned and rapid migration of doctors, which is the need of the day as well as core dimension of globalization, increased the shortage of doctors in the countries who provide them in the last 2 decades and thus puts the health of population at risk as it causes inequities in provision of health care in the sense that it lacks the staff in health care facilities and also have limited services available in the countries from which doctors are migrating. Due to number of epidemiological and demographic condition and changes that is been taking place due to change in environmental condition , there is increase in demand of human resources , especially of those who are belonging to medical professional ,both serving in health care facilities and doing research work.

Work is done on consequences the low income countries faces after migration of such potential workforce but less work is been done in middle income countries regarding this problem because they are not affected by it to that extent which low income countries do face. In low income country like Sub-Sahara Africa, different diseases are not reduced or delayed because of migration of doctors from their homeland. The economy of this country is not that much affected because usually they are sponsored by international organization. But middle income country is affected because they lose capital that they do invest in producing the potential human resource. So the impact of migration of doctors from middle income countries is very much different from the effect shown in low income country as in middle income country there is direct impact on the health system and research and development in the source country.

Many of the developed countries' health care system depend on doctors from low income developing countries [5]. USA depends on International Medical Graduates (IMGs) for its various policies such as Medicare's financial support as the residency positions are more than the total number of domestic medical graduates [5].

Hagopian, et al: stated in their study that above 23% of doctor working in America got their medical education outside the USA and out of these 64% of doctors belong to low income and middle income countries [12]. Similarly country like Canada is also increasing the number of residency to accommodate IMGs [5]. The positive point of open emigration to Canada is also playing an important role in attracting doctors from developing country to Canada. The recipient country and immigrating doctors do benefit from this immigration but less developing countries gets deprived of its health care capacity as they loss their doctors. Because of this fact, the misdistribution in health care provision is universal phenomena in developing countries [5]. Statistics of IMGs shows that the leading countries of IMGs are India, Philippines and Pakistan respectively [5]. Usually, the reason being the training and residency impact on the future career of the doctors. In fact about 23 to 28% of doctors working in the four major recipient countries (namely United States, United Kingdom, Australia and Canada) are International Medical Graduates (IMG) and 40-75% of them being from lower income countries. [1,3,5,6]. If the supplying country is well of in term of producing health professionals then there is no need to worry. But if developing countries like Pakistan is also at risk of losing a huge number of trained doctors to developed countries.

Pakistan being the third leading country of IMGs for developed countries [3]. It ranks 129th in 174 nations of the world on Human Development Index(HDI) ,which shows achievement of country regarding education ,health, longevity and standards of life[3].It is estimated that that emigration ratio in Pakistan (the number of doctors working abroad as a percent of total pool of doctors) is as high as 13.5%-17.6%.[3, 11].

Although migration of doctors has very significant impact on all source countries but for country like Pakistan where the projected shortfall of doctors in the year 2020 being 58,000 to 451,000 doctors will cause a serious problem [3,11,12]. as Pakistan is still struggling with double burden of diseases ; on one hand there is burden of infectious diseases and malnourishment while on the other hand diseases like cardiovascular diseases , cancer, HIV/AIDS etc., are also on the rise.[3].

Large capital and educational investments of Pakistan is lost because of rising trends of international migration. Thus because of international migration the people who can play active role of leader to reform and stabilize the health system and produce changes in both academic and research are lost putting more burden on already weak health system.

Because of the this increase in international migration among medical graduates; the doctor patient ratio that is recommended by the World Health Organization (WHO) [7] is 6 patient per doctor per hour whereas it is about 1700 patients per doctor in Pakistan in 2012 survey which was published in express tribune [8].

Many studies have been conducted on migration of doctors from many low and middle income [1, 6, 9, 10, 11] countries but little work is done on it in Pakistan. Many of the reasons that doctors are having intention to migrate are the fact that there is high level of bullying of young doctors by the senior doctors [13]. However, the factors causing such a huge migration among doctors of Pakistan are not properly evaluated yet [5].

Also the developed countries are taking the potential cadre away from the developing countries by providing them with the developed research centers and providing the new doctors with more opportunities to learn [14]. This taking away doctors from developing countries will cause serious consequences in the form of inequity in health care provision [15].

In present time the trend of migration and recruiting the workforce from developing countries has increased [16, 17, 18, 19]. Understanding the adverse impact of such huge workforce migration, some of the developing countries have asked the developed countries to compensate the financial loss that they are facing because of losing their potential workforce [21,22]. Thus the financial compensation given by the developed and receiving countries will limit the “brain drain” and thus the movement of doctors from their country of origin. Although the doctors’ brain drain is phenomenon that has been recognized but intervention and proper strategies is not been implemented because of lack of data. This is the reason that government is not interested in constructing new medical colleges and not providing funds for research purposes.

Mullan has collected information from the medical registers in individual countries to assess quantitatively the migration magnitude using “emigration factors”- that is ratio between the migrated physician number to the total number of registered doctors in their origin country [6]. Developing countries, like Pakistan, needs to understand and explore and identify the reasons that compel the doctors to migrate abroad so that strategies are developed to prevent loss of doctors because of migration and emigration. Although work has been done on this topic in Pakistan in cities like Lahore or Karachi, but up to my knowledge there has been no study conducted in KPK on this topic till now. In my study that I conducted in Lady Reading Hospital, Khyber Teaching hospital and Hayatabad Medical Complex, Peshawar, which are tertiary care hospital of Peshawar. I tried to find out if the fresh graduates are having

intentions to migrate abroad, what percentage are interested in migration and what are reasons of migration or what factors might affect their decision and compel them to stay in Pakistan.

Methods and materials:

Study design: Cross sectional study

Study population: House officers of tertiary care hospitals of Peshawar.

Study Setting: Tertiary care hospitals (Lady Reading Hospital, Khyber Teaching Hospital, Hayatabad Medical Complex), Peshawar.

Duration: 1st September 2023 to 31st December 2023

Sample size: 300 sample size was obtained through sample size calculation formula.

$$n = \frac{(1.96)^2 * (100-p)}{d^2}$$

Sampling technique: List of house officers was obtained from the administration of the tertiary care hospital and sample was drawn through simple random method.

Inclusion criteria: All house officers of tertiary care hospitals graduated from public sector medical colleges of Khyber Pakhtoon Khawa that are affiliated with Khyber Medical University Peshawar.

Exclusion criteria: Non-willing house officers,

Non-Paid house officers. Junior Doctors (House Officers) absent or on leave from duty.

Data collection procedure: 300 structured questionnaires were given to the above mention inclusion criteria fulfilling doctors in different wards of the three Tertiary Care Hospitals i.e. Lady Reading Hospital, Khyber Teaching Hospital and Hayatabad Medical Complex, Peshawar. The data was collected on structured Performa (Annexure-1). The Performa was designed to record doctor's personal data as well as their intensions and factors causing them to think for the international migration. During the data collection, married/committed included both who were married or engaged and un-married were those who were un-married/non-committed and un-engaged.

During data collection, socioeconomic condition was taken as satisfied when the monthly income of the family was more than 80,000 PKR and considered as unsatisfied when the monthly income of the family was less than 80,000 PKR.

Data analysis: Data was analyzed using SPSS version 16.0 for windows. Results expressed as mean + SD for respondents age and as frequencies i.e. number (percentages) of all other variables.

Results

300 structured questionnaires were distributed in house officers of the three Tertiary Care Hospitals i.e. KRH, KTH and HMC, Peshawar and all of them responded. So the response percentage is 100%.

Table 1: mean age + SD of responded age

Total of 300 doctors with mean age of 26.26 + 0.920 years were included in the study.

age of responded

N	Valid	300
	Missing	0
Mean		26.26

age of responded

N	Valid	300
	Missing	0
Mean		26.26
Std. Deviation		.920

Table 2: age of respondents

Data shows that all of the respondents are below the age of 30years. The highest percentage is in the age of 26 years (49%) followed by the age of 25 years (19.3%). whereas in age of 27 years 18.3% responded were present and 13.3% being in age group of 28 years.(Table-1 and 2).

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	25	58	19.3	19.3	19.3
	26	147	49.0	49.0	68.3
	27	55	18.3	18.3	86.7
	28	40	13.3	13.3	100.0
	Total	300	100.0	100.0	

Figure :1

Table 3: percentage of Gender of respondents

About 54.7% of the respondents were males where as the female respondents were only 45.3%. (Table-3).

gender of responded

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	164	54.7	54.7	54.7
	Female	136	45.3	45.3	100.0
	Total	300	100.0	100.0	

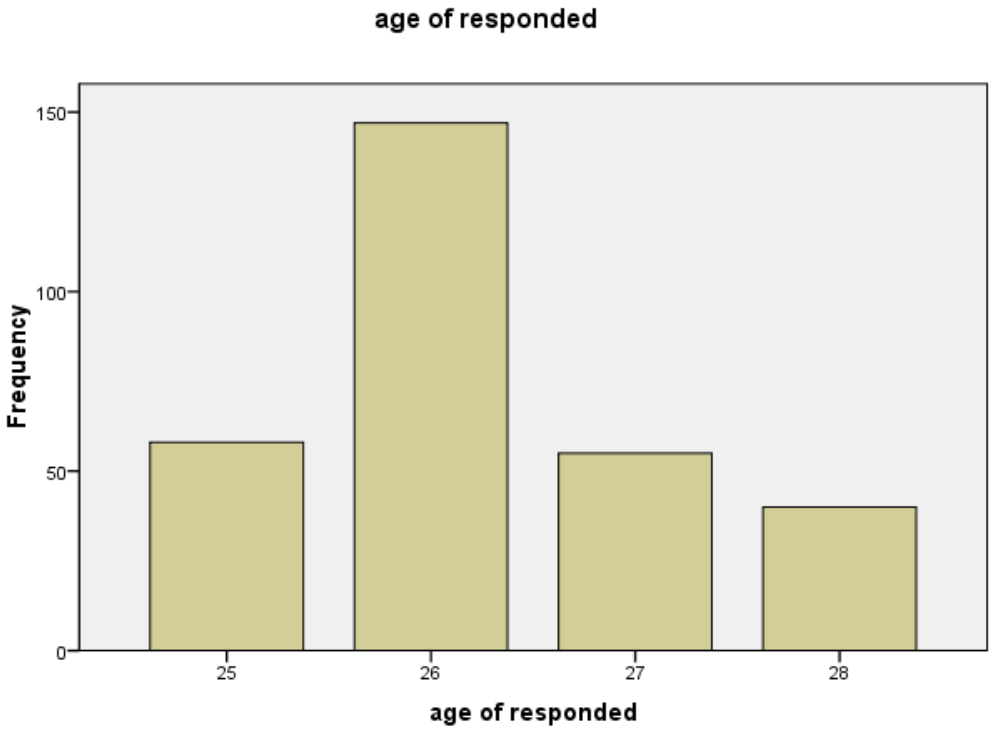
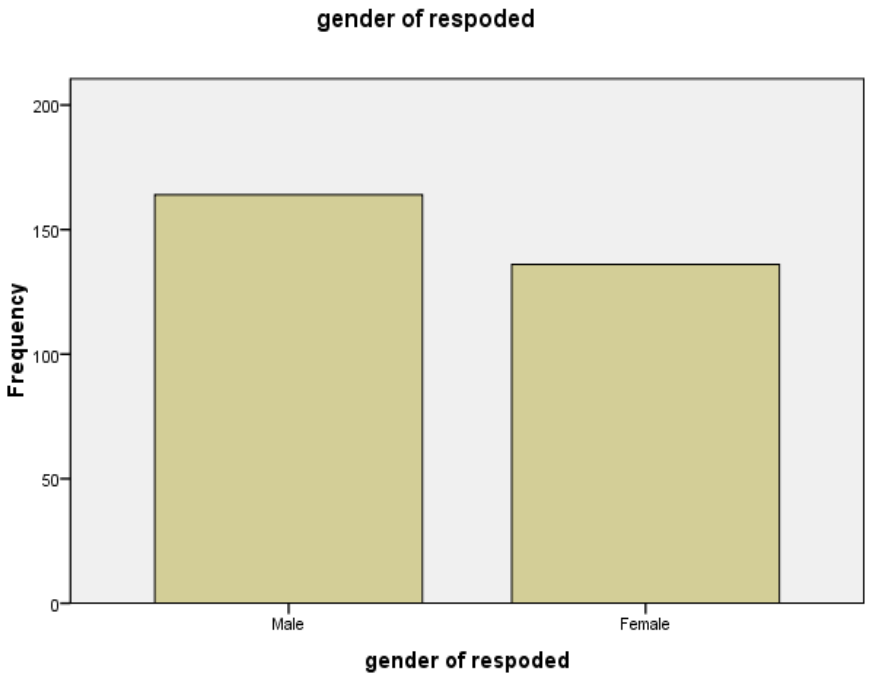


Figure :2

Table 4: percentage of marital state of respondents

Almost 16.0 % of respondents were married or committed with someone where the remaining 84.0% were unmarried or non-committed doctors (Table-4).

marital state

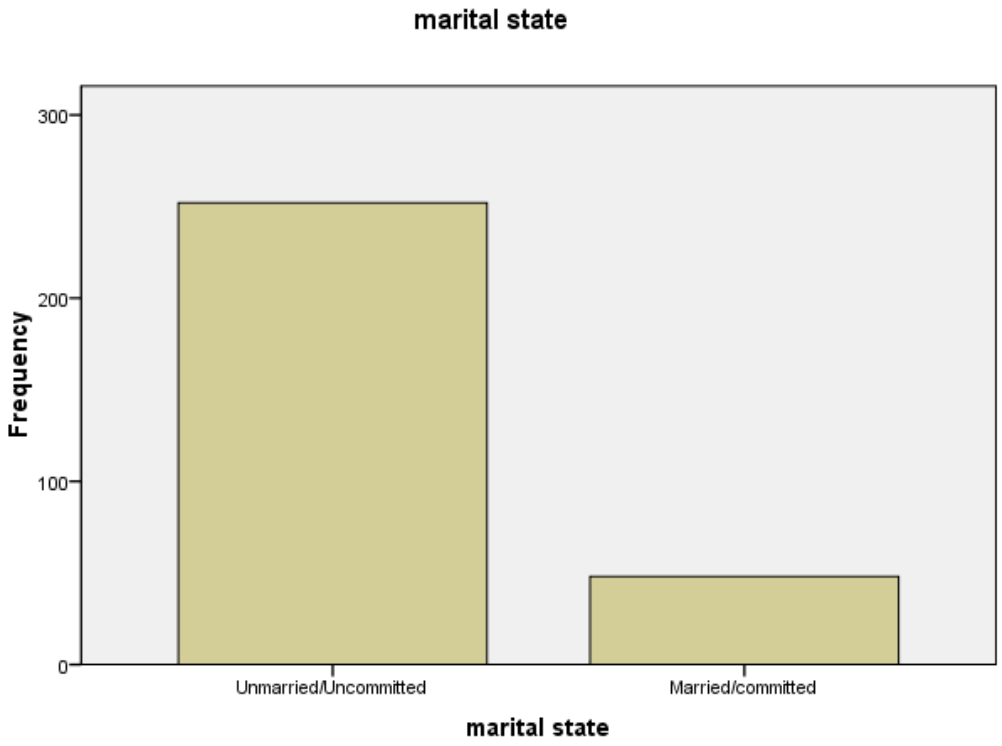


		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Unmarried/Uncommitted	252	84.0	84.0	84.0
	Married/committed	48	16.0	16.0	100.0
	Total	300	100.0	100.0	

Figure :3

Table 5: socioeconomic condition of the respondents

67.7% of the respondents included themselves in satisfied families i.e. belong to the families whose income is more than 80,000PKR per month whereas 32.3% doctors were of low income families. (Table - 5).



socioeconomic condition

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Satisfied	203	67.7	67.7	67.7
	Unsatisfied	97	32.3	32.3	100.0
	Total	300	100.0	100.0	

Figure : 4

Table 6: any intention of responded to migrate to abroad

When asked about any intentions to go abroad in future 85 % said they have intention to migrate abroad whereas 15.0% did not have any intension to go abroad (Table-6).

anv intention to migrate abroad

Figure :5

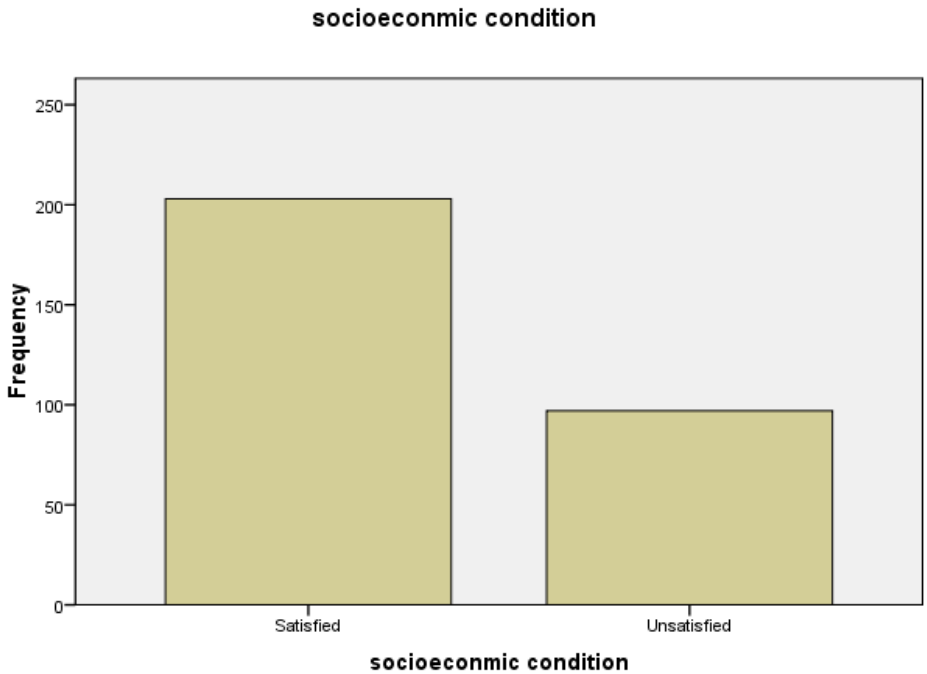


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Table 7: respondent's preferred country to migrate to

The most preferred country of respondents was US (23.0%) followed by UK (21.3%) and gulf countries (19.7%). Only 12.3% wanted to go to Canada and 8.7 % wanted to go to Australia. (Table-7).

preferred country for migration

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	United States of America	69	23.0	27.1	27.1
	United Kingdom	64	21.3	25.1	52.2
	Australia	26	8.7	10.2	62.4
	Gulf Countries	59	19.7	23.1	85.5
	Canada	37	12.3	14.5	100.0
	Total	255	85.0	100.0	
Missing	System	45	15.0		
Total		300	100.0		

figure :6

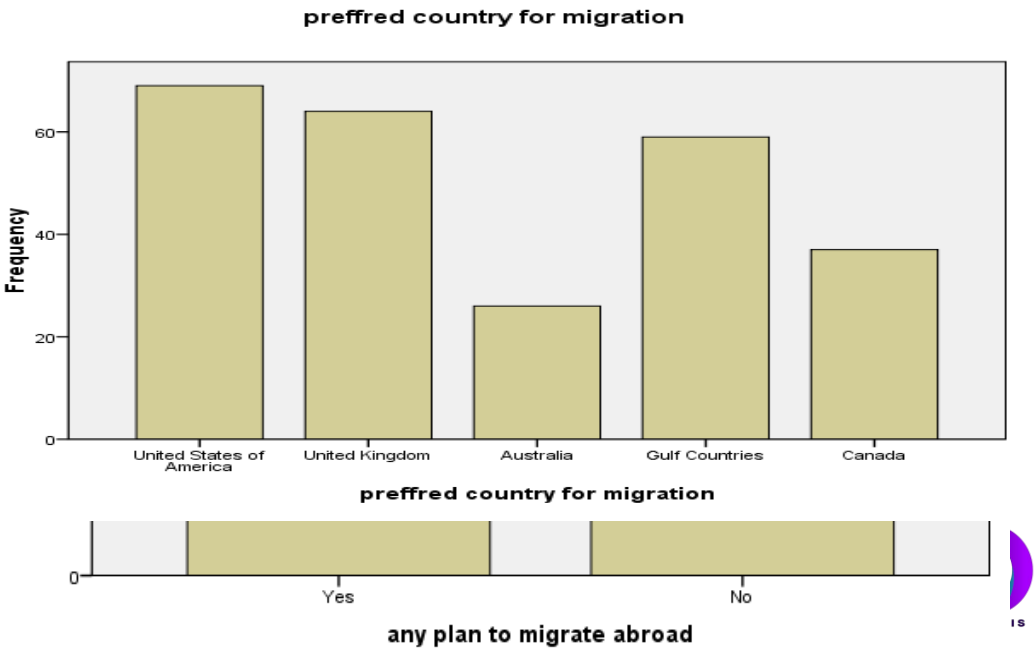


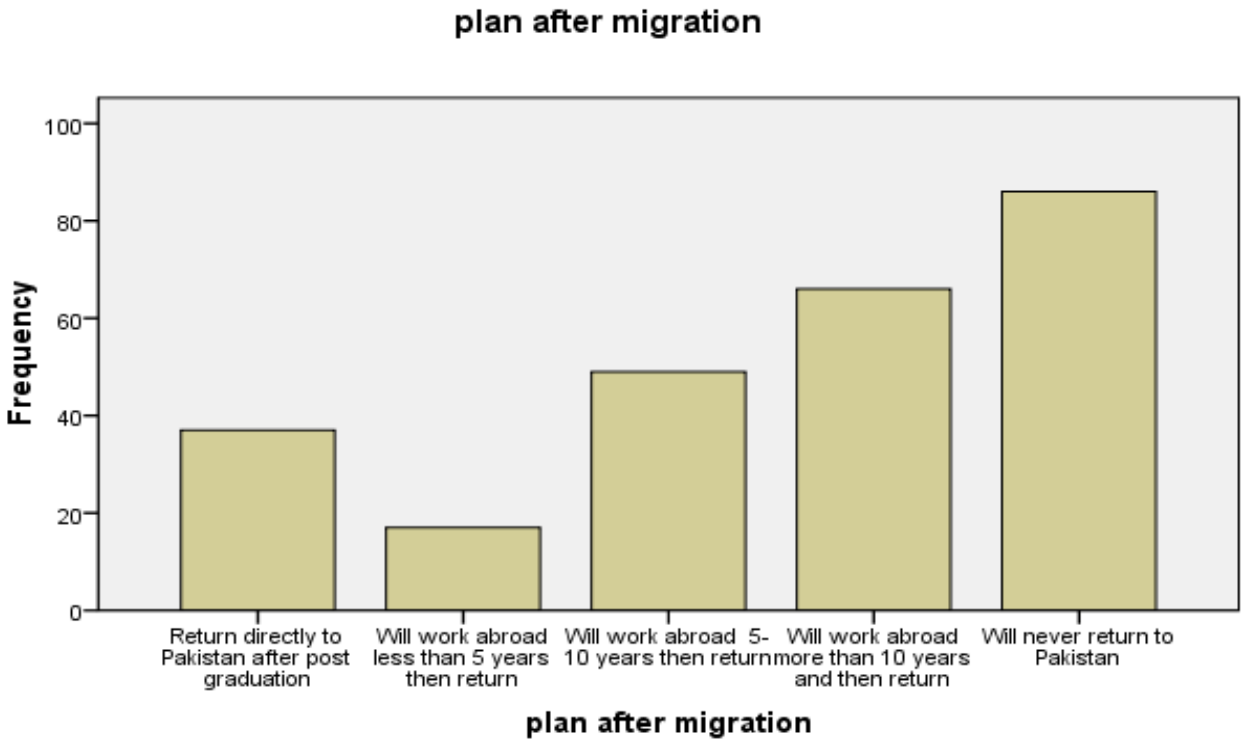
Table 8: respondents' plan after migration

Most of respondents (28.7%) said they would never come to Pakistan. 22.0% said that they would like to come to Pakistan after working more than 10 years abroad. 16.3% wanted to work at least 5-10 years wherea5.7% wanted to come within 5 years. 12.3 % said they would come directly to their homeland after completion of their post graduation study. (Table- 8)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Return directly to Pakistan after post graduation	37	12.3	14.5	14.5
	Will work abroad less than 5 years then return	17	5.7	6.7	21.2
	Will work abroad 5-10 years then return	49	16.3	19.2	40.4
	Will work abroad more than 10 years and then return	66	22.0	25.9	66.3
	Will never return to Pakistan	86	28.7	33.7	100.0
	Total	255	85.0	100.0	
Missing	System	45	15.0		
Total		300	100.0		

Figure: 7

Table 9: reason for migration



When asked about the reason of migration 24.0 % stated their desire to get settled abroad. 21.0% said that residency in abroad will have impact on their future career. 19.0% were not satisfied with the financial condition of doctors in Pakistan whereas 12.3% wanted to migrate because unsatisfactory working condition of doctors. Only 8.7% were going because of peer pressure. (Table-9).

reason for migration

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		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Impact of residency on future career	63	21.0	24.7	24.7
	Financial conditions of doctors	57	19.0	22.4	47.1
	Working conditions of doctors	37	12.3	14.5	61.6
	Desire to settle abroad	72	24.0	28.2	89.8
	Peer pressure	26	8.7	10.2	100.0
	Total	255	85.0	100.0	
Missing	System	45	15.0		
Total		300	100.0		

figure :8

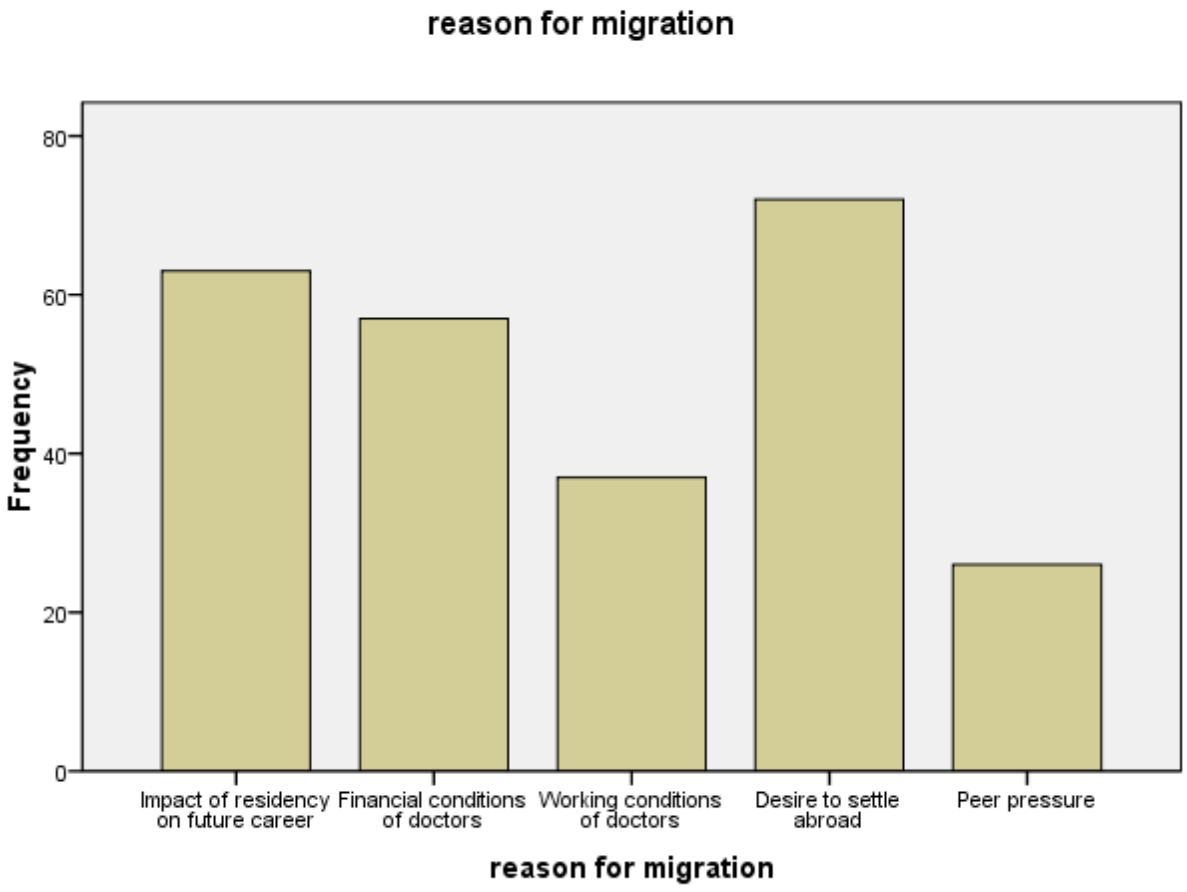


Table 10: reason of staying back in Pakistan

When asked about what might affect their decision regarding migration and compel them to stay back in Pakistan about 45.3% said its family ties in Pakistan. 18.3% pointed out of visa problem.14.0% did not want to go because of religious factors. 12.7% had alternative financial support whereas 9.7% were lacking necessary resources (Table-10).

reason of saying back in Pakistan

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Family ties in Pakistan	136	45.3	45.3	45.3
	Religious factors	42	14.0	14.0	59.3
	Adequate / alternative financial support	38	12.7	12.7	72.0
	Lack of necessary resources	29	9.7	9.7	81.7
	Visa problem	55	18.3	18.3	100.0
	Total	300	100.0	100.0	

Figure 9

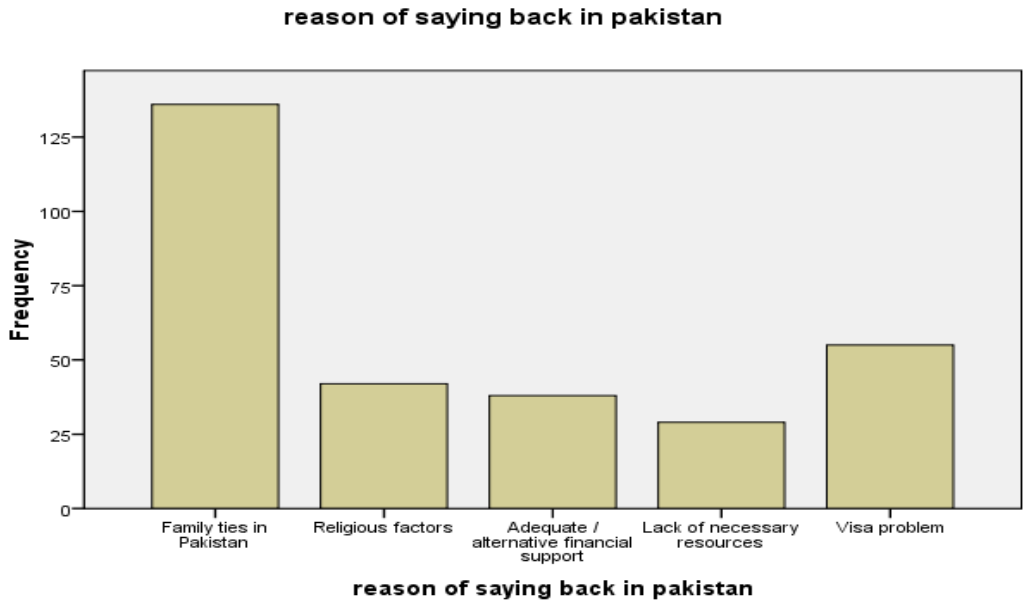


Table 11: cross tabulation of gender of responded and any intention to migration

After doing cross tabulation between gender of responded and any intention to migrate the following results were obtained:

P-value = 0.002 that shows significant association between intention of migration and males.

Odds ratio= 2.811 that shows positive association between the males and their intention to migrate.

gender of responded * any intention to migrate abroad Cross tabulation

Count				
		any intention to migrate abroad		
		Yes	No	Total
gender of respoded	Male	149	15	164
	Female	106	30	136
Total		255	45	300

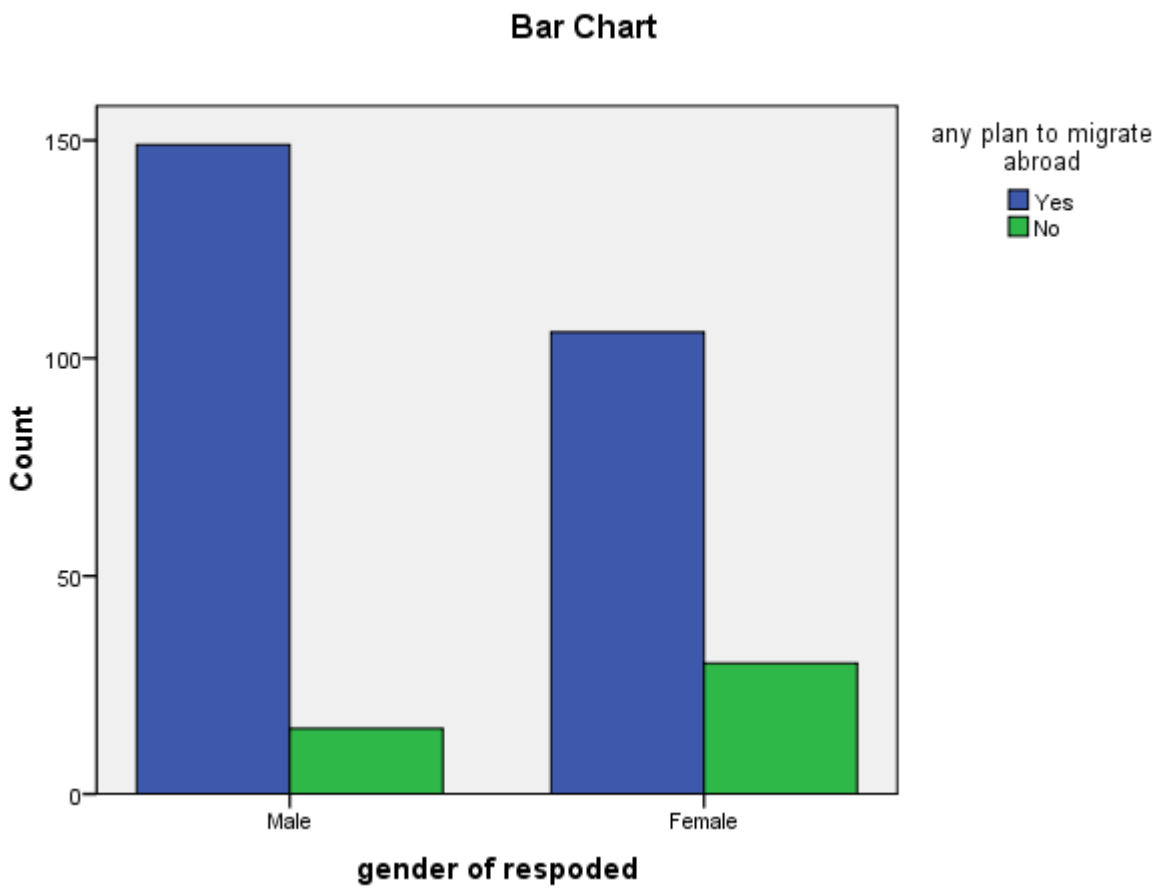
Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	9.722[a]	1	.002		
Continuity Correction[b]	8.736	1	.003		
Likelihood Ratio	9.766	1	.002		
Fisher's Exact Test				.002	.002
Linear-by-Linear Association	9.690	1	.002		
N of Valid Cases[b]	300				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 20.40.

b. Computed only for a 2x2 table

Figure 10



Mantel-Haenszel Common Odds Ratio Estimate

Estimate			2.811
ln(Estimate)			1.034
Std. Error of ln(Estimate)			.341
Asymp. Sig. (2-sided)			.002
Asymp. 95% Confidence Interval	Common Odds Ratio	Lower Bound	1.442
		Upper Bound	5.483
	ln(Common Odds Ratio)	Lower Bound	.366
		Upper Bound	1.702

The Mantel-Haenszel common odds ratio estimate is asymptotically normally distributed under the common odds ratio of 1.000 assumption. So is the natural log of the estimate.

Table 12: cross tabulation of marital state of responded and any intention to migration

The cross tabulation between the marital state of the respondents and their intention to migration shows the following results:
P-value = 0.000 that shows that it is highly significant that unmarried/uncommitted intended to migrate.
Odd's ratio= 9.618 also shows association between the unmarried and uncommitted doctors and their intention to migrate is positive.

marital state * any intention to migrate abroad Cross tabulation

Count				
		any intention to migrate abroad		
		Yes	No	Total
marital state	Unmarried/Uncommitted	230	22	252
	Married/committed	25	23	48
Total		255	45	300

Chi-Square Tests

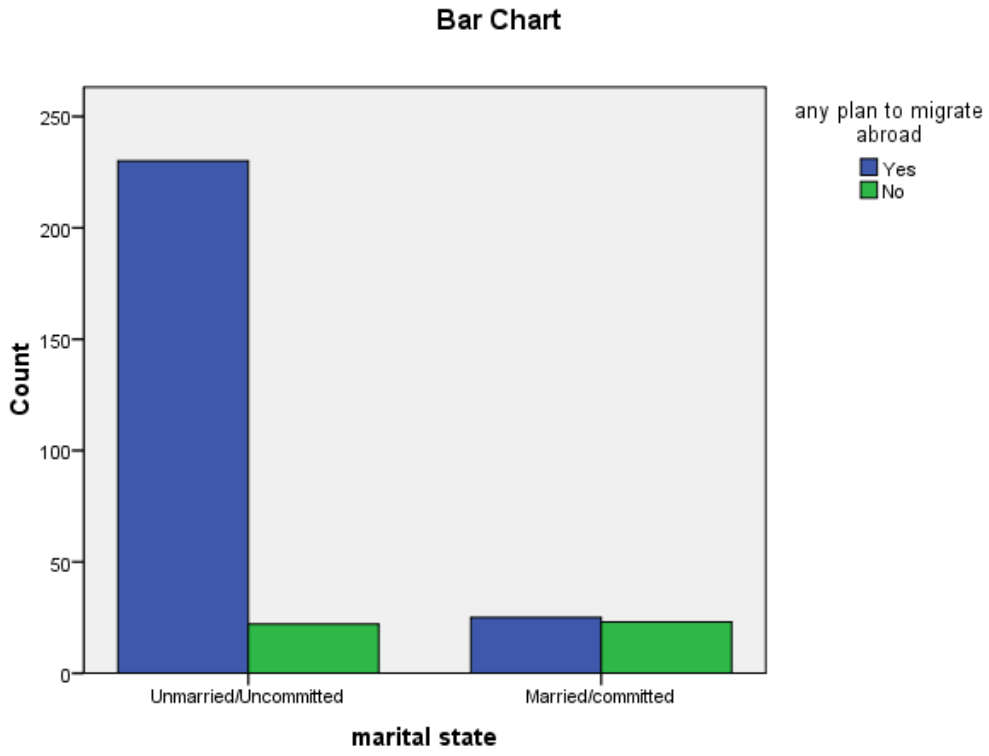
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	48.561[a]	1	.000		
Continuity Correction[b]	45.536	1	.000		

Likelihood Ratio	37.857	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	48.399	1	.000		
N of Valid Cases[b]	300				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 7.20.

b. Computed only for a 2x2 table

Figure 11



Mantel-Haenszel Common Odds Ratio Estimate

Estimate	9.618
ln(Estimate)	2.264

Std. Error of ln(Estimate)			.365
Asymp. Sig. (2-sided)			.000
Asymp. 95% Confidence Interval	Common Odds Ratio	Lower Bound	4.703
		Upper Bound	19.672
	ln(Common Odds Ratio)	Lower Bound	1.548
		Upper Bound	2.979

The Mantel-Haenszel common odds ratio estimate is asymptotically normally distributed under the common odds ratio of 1.000 assumption. So is the natural log of the estimate.

Table 13: cross tabulation between the socioeconomic condition of the respondents and any intention to migrate

The cross tabulation between the socioeconomic condition and intention to migration showed the following results:
P-value = 0.060 that shows that the socioeconomic status of respondents was not significant.
Odd's ratio = 1.849 shows that socioeconomic status do positive association with migration intentions.

socioeconomic condition * any intention to migrate abroad Cross tabulation

Count				
		any intention to migrate abroad		
		Yes	No	Total
socioeconmic condition	Satisfied	178	25	203
	Unsatisfied	77	20	97
Total		255	45	300

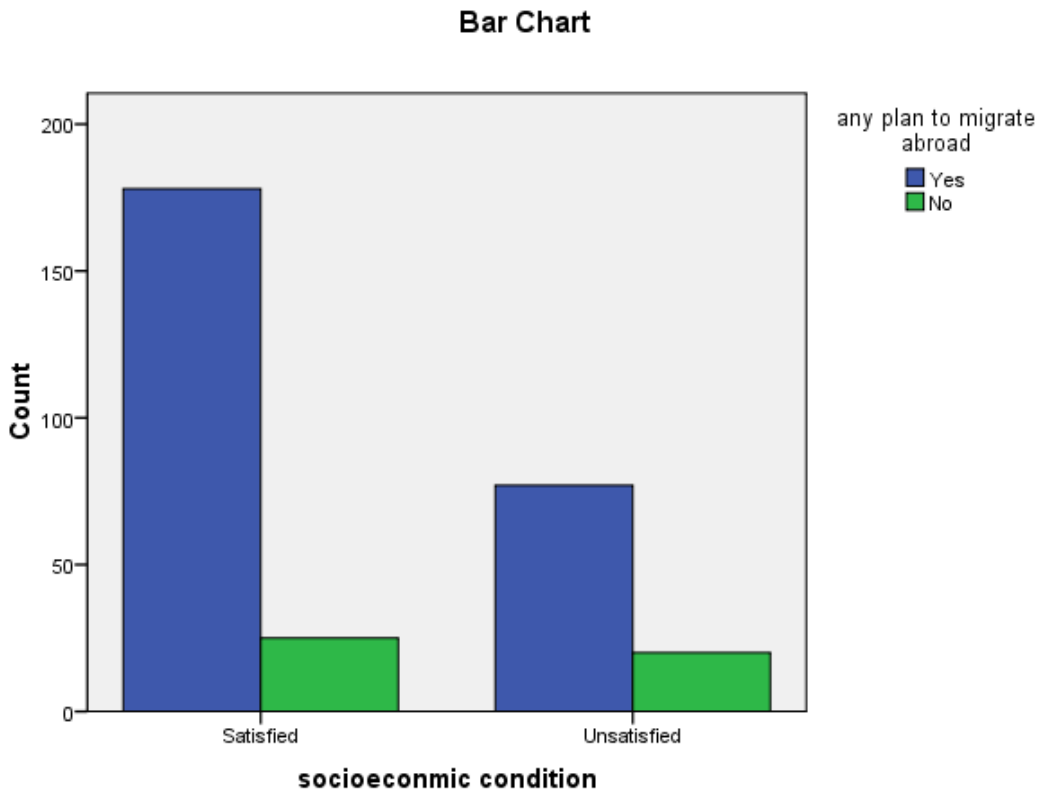
Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	3.549[a]	1	.060		
Continuity Correction[b]	2.928	1	.087		
Likelihood Ratio	3.404	1	.065		
Fisher's Exact Test				.083	.046
Linear-by-Linear Association	3.537	1	.060		
N of Valid Cases[b]	300				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 14.55.

b. Computed only for a 2x2 table

Figure 12



Mantel-Haenszel Common Odds Ratio Estimate

Estimate		1.849
ln(Estimate)		.615
Std. Error of ln(Estimate)		.330
Asymp. Sig. (2-sided)		.062
Asymp. 95% Confidence Interval	Common Odds Ratio Lower Bound	.969
	Upper Bound	3.528
	ln(Common Odds Ratio) Lower Bound	-.031

	Upper Bound	1.261

The Mantel-Haenszel common odds ratio estimate is asymptotically normally distributed under the common odds ratio of 1.000 assumption. So is the natural log of the estimate.

Table 14: cross tabulation between the reason of staying back in Pakistan and migration intention

This showed the following results:

p-value = 0.069 shows

reason of saying back in Pakistan * any intention to migrate abroad Cross tabulation

Count

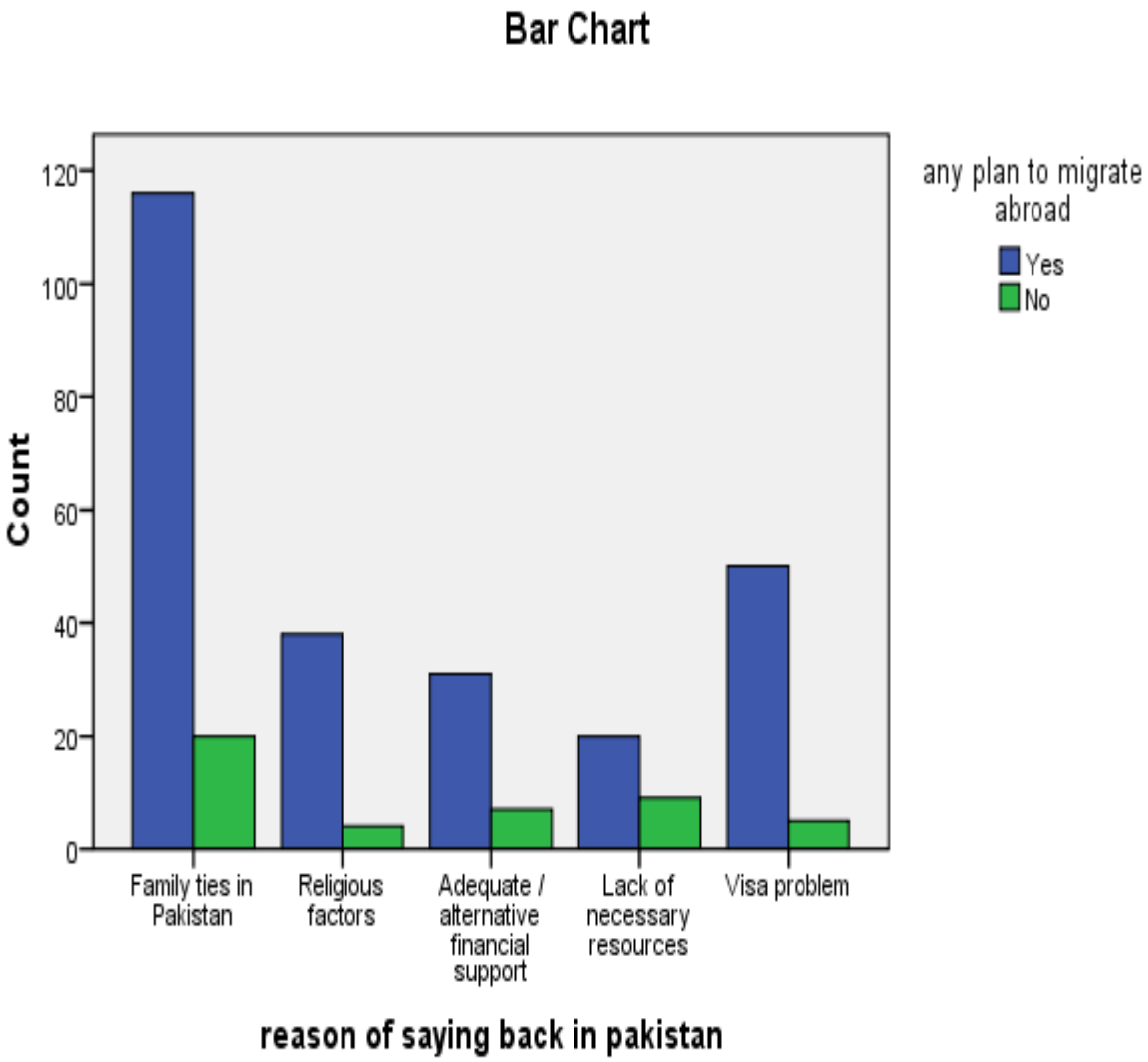
		any intention to migrate abroad		
		Yes	No	Total
reason of saying back in Pakistan	Family ties in Pakistan	116	20	136
	Religious factors	38	4	42
	Adequate / alternative financial support	31	7	38
	Lack of necessary resources	20	9	29
	Visa problem	50	5	55
Total		255	45	300

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.700[a]	4	.069
Likelihood Ratio	7.888	4	.096
Linear-by-Linear Association	.017	1	.897
N of Valid Cases	300		

a. 1 cells (10.0%) have expected count less than 5. The minimum expected count is 4.35.

Figure 13



Discussion

Collection of information regarding the frequency of migration among young doctors especially the fresh graduate is important in the sense that Pakistan is losing its potential and active health care work force

each year. Also there is less work done on this topic in Pakistan whereas it is very hotly discussed in other countries. Losing of the potential workforce means losing of all investment that has been done in them to make them able to be useful and potential human resource. The middle income families usually affected by the potential migration trends because there is usually inequities in the provision of health care services. This, thus, weakens the existing health care system. Low income countries are not that much affected because of funds provided to them by the international organization. Pakistan ranks third in production of IMGs in the world [3] that serve in other countries. This is the reason that Pakistan is not getting the WHO recommended doctor to patient ratio, which is 6 patients per doctor per hour [7]. Little work has been done on the international migration of doctors in Pakistan in cities of Karachi and Lahore. And up to my knowledge and research no study has been conducted in Peshawar.
In the present study, total of 300 doctors of LRH, KTH and HMC were included of which about 54.7 % were males.(Table-3) The study was conducted in tertiary care Hospitals of Peshawar because it was accessible and easily approachable and due to time limit I only did study in one of the three tertiary care hospital of Peshawar. The study done in other countries like Poland (two-third of respondents) [16] and India (68%) [23] and cities of Lahore (51.3%) [3] And Karachi showed that number of the male respondents was far more than the number of the females. This is due to fact that more importance is given to the education of males than females all over the world (MDG2). So this means that in many other countries like Pakistan, males are the decision makers and have freedom to take any step whereas females have to depend on the males.

In the present study conducted in Tertiary Care Hospital of Peshawar, 16.0% of respondents were married or committed with someone whereas remaining 84.0% were unmarried or un-committed.(Table-4). Similarly the study which was conducted in Poland, there was no married person [16] , that indicates that majority of students does not like to take responsibility of family before completing their studies and as it is non-Muslim country, early marriages are not so common there. But the study that took place in Lebanon showed that about 1.4% of respondents were married of which 66.7% wanted to train abroad [1].
Being a Muslim country early marriage takes place there too. Being in the same region of the world, India showed that 93% of respondents of the study were single [23] whereas only 72% of respondents in study conducted in Lahore were single [3]. This is because of the fact that in this region the males are the potential source of income. So either they themselves or elders of the families do delay the marriage till the completion of their education so that can support their families.
In the present study conducted in Tertiary Care Hospital of Peshawar, about 67.7 % belonged to families that have satisfactory income while about 32.3% respondents were from unsatisfactory families. (Table-5) Similarly the respondents in study among students of Poland showed that 42.3% from large cities thus highly satisfactory conditions; 45.5% from medium and small sized cities who are also a satisfactory families but only 12.2 % come from rural areas [16].In study of Lebanese students 1.6% was of low socio-economic class whereas 4.0% were of upper socio-economic class [1].The study of India showed that 77% of respondents belonged to satisfied families [23].The study n Lahore showed that 64.7% respondents were from good socioeconomic background [3]. All this shows that the majority of health care work force in all over the world comes from well to do families who have satisfactory earning. In present study, Majority of respondents 85% were having intention to go abroad. 15 % although don't have any plan to go but still if provided with opportunity will definitely love to go. Only 3.5 % of the respondents said that they have never planned to go abroad. (Table-6)

In Poland 62.1 % of respondent planed to seek employment abroad; 17.2% planned to leave 3 to 5 years after graduation [16]. 96% of respondents in Lebanese students wanted to go to abroad either for specialty

(78%) or sub specialty (18%) [1]. In India's study in medical students, 59% were interested to go abroad for further training [23]. The study of the Lahore showed in the that 60.4% indented to go abroad while 10% were not clear about their future intensions [3]. This shows if there is sufficient resources available and there is no financial obstacle, all wish to go and either settle or live temporary in abroad.

In the present study, the most preferred country of respondents was US (27.1%) followed by UK (21.3%) and Gulf countries (19.7%). Only 12.3 % wanted to go to Canada and 8.7% to Australia. (Table-7). The polish students preferred to go and do their further study on USA and UK [16]. The desired country for migration of Lebanese students were US (74.1%), followed by France (12.1%), UK (7.6) and Canada (4.2%) [1]. A study conducted in India showed that the preferred country for migration was UK (43%) followed by USA (42%) [23]. UK was country of choice for many because of similarity in the training and education to India. Doctors of Lahore preferred USA and UK the most preferred destination [3]. US is country of choice for many as the impact of residency is great. Also Canada is also being the choice as it provides emigration and visas easily. But the Indian doctors prefer going to UK because of similarity in training and education to India. Most of respondents (28.7%) said they would never come back to Pakistan as they have strong desire to get settle abroad.22% said they will come after working for more than 10 years abraod. This may be because they want to make their quality of life better and make their family financially strong. 16.3% wanted to work at least 5-10 years whereas 5.7% wanted to come within 5 years. 14.5 % said they would come directly to their homeland after completion of their post graduation study. This percentage is that who has intention to serve their nation (Table- 8)

In Poland two-third of the respondent were females in which large percentage (77.2) were willing to work in hospital settings [16]. Three of every four respondent wished to go surely if get chance constituting about 70% [16]. 25.1% of Lebanese students wanted to come direct back to their own country whereas 63.8% wanted to work for sometime before coming back to homeland [1]. Of these 35.0% wanted to work for less than 5 years, 22.2% wanted to work for 5 to 10 years and 6.7 wanted to stay for more than 10 years [1]. While 10.6% said they will never return back to their country [1]. More Indian women wished to live abroad and never come back as compared to males [23]. 14.2% of doctors of Lahore stated that they will return immediately after post graduation, significant percentage 10% never indented to come back and 37% wished to have a temporary stay abroad [3].

All of the above mentioned countries are middle income countries where huge number of potential work force wish to stay abroad and never come back. This is lost of capital that is invested in producing this workforce. And these middle income countries are more affected than low income countries as majority of low income countries are sponsored by international organizations. In the present study, the reason of migration was desire to settle abroad (24%) followed by the impact of residency on future career (21 %). 22.4% said they are not satisfied with the financial condition of doctors in Pakistan. While 14.5% were not satisfied with the working condition of doctors in Pakistan.8.7% wanted to migrate because of peer pressure. (Table-9). The main factor doctors of Poland because of which wanted to go abroad was the high salary (78%) and 75 % liked the better working condition of doctors there [16]. The Lebanese students who wanted to do medical or surgical specialties were more likely to go and train abroad [1]. The reason given by Indians to stay abroad was more opportunities to make themselves financially strong [23]. The most common reason cited by the doctors of Lahore were impact of residency on future career and poor salary given was the second important issue followed by working conditions for doctors [3]. Job opportunity, quality of clinical & research training were also important reasons of migration. So in country like India and Pakistan which are in the same region the financial strength is more important whereas in country like Poland the most important s the impact that will be occurring on their careers.

In the present study majority of respondents' stated that family ties may affect their decision of going abroad i.e. 45.3%. 18% pointed out the visa problem while 14% said they might drop the idea because of

religious factors. 12.7% were having adequate financial support. 9.7% said that they are facing lack of adequate resources. (Table-10).

The reasons that Polish respondents pointed that might affect their decision and stay back in home land is the high pay (79.2%) and more chance to get specialty training (78.5%), followed by the desire to get post graduation position in Poland and family reasons [16].The reason that may affect the decision of going abroad among Indians was families ties [23]. So being Muslim countries family ties are the most important factor that might make change in decision to go abroad of Pakistani and Lebanese doctors. And being countries of same region the family ties in the sub-continent is considered very important. As till time many of the families' lives in combine systems. As far as Poland is concerned, being English country there is little effect of family on any decision made by children. The most important for them being high pay to have lavish lifestyle.

Conclusion

If we could provide specialty and subspecialty courses more frequently in our own country , than our young doctors will not go abroad for that. There showed is more vacancy for doctors so that they get opportunity to learn more. The standard of training and research needs to e improved more. The working environment for doctors needs to be improved. The doctors must be made financially strong. There must be professional satisfaction in doctors. Political stability is a must element.

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