

## Chapter 2

### An Analysis of Indian Nurses' Intention to Migrate Abroad

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#### **Abstract**

India has been facing a severe shortage of domestic nurses. There is an estimated shortfall of 2.4 million nurses in India. The shortage is partly explained by international migration of Indian nurses. It is reported that more than 640,000 Indian nurses are working abroad. From a policy perspective, it is important to understand how the situation evolved and to identify factors that influence the intention of international migration among nurses. This paper examines the relationship between nurses' intentions to migrate and their characteristics based on our survey data from Tamil Nadu, which is located in South India where nursing education is active. Around 18% of sample nurses have an intention to migrate overseas. Most of them are nurses working in private hospitals. Because of the gap in salaries between public medical facilities and private hospitals, nurses in private hospitals have incentives to go abroad for higher wages. Nurses who are young, single and belong to SC caste group also have intentions to migrate. In order to mitigate the shortage of domestic nurses, the government's policy intervention, such as the introduction of a scheme that raises the wage level of nurses in private hospitals, is absolutely necessary.

#### **Keywords**

Nurses, international migration, Tamil Nadu, intention to migrate, government hospitals, private hospitals

## 1. Introduction

India is known as the second largest nurse-sending country after the Philippines. Many Indian nurses work in the Gulf countries, OECD countries, and some of Asian countries such as Singapore and Malaysia. It was reported that the number of overseas Indian nurses was a little bit more than 640,000 in 2011 (Irudaya Rajan & Nair 2013). As the globalization progresses and the demand for nurses continues, this number should increase by now.

There are three factors that contribute to the rapidly growing global demand for nurses (see Figure 1). The traditional demand comes from the Gulf countries, such as Saudi Arabia, where local women do not choose nursing profession because of Islamic culture in these region<sup>1</sup>. The mass migration to the Gulf countries including nurses from developing countries started in 1970s after the first oil shock and the subsequent economic boom by higher oil prices. In India, many nurses, mainly Malayali nurses from Kerala, migrated to the Gulf countries to work in the growing numbers of hospitals constructed by the oil boom (Healy 2013)<sup>2</sup>.

The second demand comes from developed countries where the demand for nurses has been rapidly increasing due to ageing while younger population has been declining in these countries (Grignon et al. 2012; Buchan and Calman 2013). OECD countries actively recruited nurses from developing countries. Roughly 570,000 foreign-trained nurses worked in 23 OECD countries in 2013<sup>3</sup>. The United States has the largest number of foreign-trained nurses with around 246,000 foreign nurses (2012), which is around 6% of total nurses in the U.S. The United Kingdom is the second largest employer of foreign nurses. It recorded 86,000 nurses in 2014.

The third demand arises from the growth of popularity in medical tourism. Not only developed countries but also developing countries are promoting this new line of tourism. The size of the global medical tourism was US\$19.7billion in 2016 and it is

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<sup>1</sup> Among Muslim countries, Malaysia and Indonesia seem to be different where local Muslim women are taking up nursing profession. Also in the Gulf countries such as the United Arab Emirates (UAE), the government has been making efforts to train local people to be a nurse as part of the Emiratization of the healthcare workers (Hannawi and Al-Salmi 2013, Brownie et al. 2015).

<sup>2</sup> The migration of nurses from India dates back to the 1940s and 1950s when newly established oil companies in the Gulf recruited small groups of nurses (Healy 2013).

<sup>3</sup> Figures were extracted from the Health Workforce Migration section of OECD. Stat. <http://stats.oecd.org/> (Data extracted on March 10, 2016).

forecasted to reach US\$46.6billion by 2021<sup>4</sup>.

These robust demands have attracted a substantial number of nurses from the Philippines, India and other developing countries. On the supply side, many schools and colleges of nursing have been mushrooming to cater to the growing demand. For example, there has been rapid growth of the number of nursing education institutions after the year 2000 in India. The total number of both schools and colleges of nursing was 315 (285 schools and only 30 colleges) in 2000, but it jump-increased to 4648 institutions (2958 schools and 1690 colleges) in 2015. The large salary gap between developed and developing countries, better working environments and higher living standards are luring nurses from developing countries (Kline 2003; Kingma 2006; Nair and Webster 2012).

While many nurses work in foreign countries, India has been suffering the shortage of nurses (Gill 2016; Walton-Roberts et al. 2017). This is a critical issue in India where the number of doctors is not sufficient and access to basic health facilities is limited. To maintain the standard of public health, nurses can play important roles in a country like India. According to a WHO report, there is an estimated shortfall of 2.4 million nurses in India (WHO 2010). In order to fill this gap, India needs to double the number of domestic nurses. Even if all overseas Indian nurses came back, the shortage problem would still remain; however, it is important to examine how the situation evolved and to identify factors that influence the intention of international migration among nurses.

<Figure 1. Demand for and supply of nurses and care-workers>

## 2. Data

### *Data Collection*

This study uses part of the data from the survey on nurse migration in Tamil Nadu, which started in June 2016 and was completed in December 2017. The survey was carried out as a joint survey of the Institute of Developing Economies, JETRO Japan, and LISSTAR, Loyola College, Tamil Nadu, India. Tamil Nadu is one of two southernmost states in India. The location is shown on the map below in red (Figure 2). As in other states in South India, nursing education is active in Tamil Nadu. Chennai, capital city of Tamil Nadu, is an important place for nursing education in India as it is home to the first nursing school

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<sup>4</sup> These figures are from “Global Medical Tourism Market Size, Share, Trends and Forecast by 2021 – Market Research Report 2017” (<https://www.reuters.com/brandfeatures/venture-capital/article?id=11869>, accessed on March 12, 2018).

on the Indian subcontinent, which was established in 1871. According to the Indian Nurse Council, the number of nursing education institutions in 2015 in Tamil Nadu was 382 (210 schools of nursing for general nursing and midwifery, and 172 colleges of nursing for BSc degree) (Nair and Irudaya Rajan 2017). This is the fourth largest in India and accounts for around 9% of total nursing institutions.

<Figure 2. The location of Tamil Nadu>

For our study, alumni from two nursing school were chosen as the sample. One is Madras Medical College School of Nursing, which is a government-run school (MMC hereafter), and the other is St. Isabel's School of Nursing, a private school established by a Christian group. Both nursing schools are located in Chennai, Tamil Nadu. Madras Medical College is one of the oldest medical colleges in India. The government general hospital was established in 1664 and it started MMC, the medical school in 1835. The school of nursing attached to MMC was opened in 1963 by firstly offering a general nursing course (diploma). St. Isabel's school of nursing opened in 1983. Its funding body, St. Isabel's Hospital came into existence in Chennai in 1949 by the congregation of the Franciscan Hospitalier sisters of the Immaculate conception. Both schools are well-reputed, premier institutions in nursing education in Tamil Nadu. Both institutions started by offering a diploma in nursing and currently they are offering both diploma and BSc.

For sample data collection, we relied on a snowballing sampling method. Firstly, we approached several alumni nurses living in Chennai area. We visited and interviewed them using a questionnaire<sup>5</sup>. Then we asked them to introduce their juniors and seniors both in India and overseas. We originally interviewed 400 nurses (288 nurses from MMC and 112 nurses from St. Isabel's). The sample is not random; however, we made an effort to obtain samples to represent all four decades (1980s, 1990s, 2000s and 2010s). The year of graduation ranged from 1981–2011 for the MMC alumni and from 1986–2012 for the St. Isabel's alumni.

Our study focuses on nurses who have never migrated and examines their intentions to migrate. Among 400 sample nurses, 160 nurses had no migration experience,

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<sup>5</sup> Face-to-face interviews were conducted with most of the nurses when they lived in India. For nurses living outside of India, nurses were approached by telephone, email, text message and Skype. The questionnaire was originally made for our parallel study on nurse migration in Kerala and was revised in a manner that was appropriate for Tamil Nadu. It was pre-tested at both MMC and St. Isabel's in early 2016 and revised before the formal investigations began.

29 nurses out of which had intentions to migrate (Table 1), which is equivalent to around 18% of sample nurses. Since two nurses had intentions to migrate within India, these were dropped from our analysis as we only consider the case of international migration. Finally, 158 nurses from two schools who had never migrated at the time of the survey were selected for the analysis (7 males and 151 females). 137 nurses are alumni of MMC and 21 nurses are alumni of St. Isabel's.

<Table 1. Nurses' intentions to migrate>

### ***Profiles of Sample Nurses***

Table 2 displays profiles of sample nurses. The majority of sample nurses are married (87.3%). By religion, the sample is largely divided into Hindu and Christian. Among 158 nurses, 83 are Hindu, and 72 are Christian, and only 3 are Muslim. By caste, nurses from OBC (Other backward caste) is the largest (72 nurses), followed by nurses from MBC (Most backward caste: 48 nurses), SC (Scheduled caste: 29 nurses), and Hindu general (9 nurses). Hindu general's social status is considered highest and SC's status is lowest. OBC and MBC, which are the two most voluminous groups, are in the middle of the social ladder. A little bit more than one-fourth of sample nurses has nurse(s) in their family or relatives. 41 nurses took loan to finance their nursing education (25.6%).

As for the type of hospital, 126 nurses work in government hospitals while 32 nurses work in private hospitals. As for the type of hospital, 137 nurses graduated from the government school and 21 nurses from the private school. As Table 3 shows, all 21 nurses from the private school and only 11 out of 137 nurses work in private hospitals. None of nurses who graduated from the private school don't work in government hospitals. This clear division is the product of Tamil Nadu government's discriminative policy. In Tamil Nadu, nurses in government medical facilities such as government hospitals were recruited only from those who graduated from government-run schools under the Madras Medical Code until 2012.

<Table 2. Profiles of sample nurses>

<Table 3. Cross tabulation of nurses by types of school and hospital>

### **3. Nurses' Intentions to Migrate and Influencing Factors**

In this section, relationships between nurses' intentions to migrate and nurses' characteristics are examined. The Fisher's exact test was used for statistical analyses.

### ***Age***

Age is one of the significant factors to affect one's mobility. Usually the young are more mobile than the old. We divide the sample into two parts: one group that consists of nurses below 30 years old and the other that consists of nurses more than 31 years old. The ratio of nurses' having intentions to migrate abroad is 64.7% among the former group while it is just 11.3% among the latter group (Table 4). The difference is statistically significant at the 1% level. This result confirms that younger nurses tend to be more mobile and have intentions to migrate overseas.

<Table 4. Age and intentions to migrate>

### ***Gender***

Table 5 shows nurses' intentions to migrate by gender. The ratio of nurses' having intentions to migrate abroad is 28.6% among male nurses while it is 16.6% among female nurses. As the Fisher's exact test indicates, the difference is not statistically significant. However, since the sample includes only 7 male nurses, a caution is necessary to interpret this result.

<Table 5. Gender and intentions to migrate>

### ***Marital status***

The marital status is also one factor that constrains one's mobility. Nurses who are single (including divorced and widows) tend to have a higher motivation to migrate. A single person is more mobile than a married person as the latter needs to take care of her family, limiting their mobility. Family matters discourage nurses to go abroad. 70% of single nurses and only 9.4% of married nurses indicate their intention to migrate (Table 6). The gap is statistically significant at the 1% level.

<Table 6. Marital status and intentions to migrate>

### ***Caste***

Hindu general's social status is considered highest and SC's status is lowest. OBC and MBC, which are the two most voluminous groups in our sample, are in the middle of the social ladder. Because of socioeconomic backwardness of SC/ST group, nurses from this group may have a strong incentive to migrate to improve their social and economic status through overseas migration. As Table 7 shows, SC nurses' ratio of having intentions to

migrate is highest among four caste categories (31.0%). Then we divide sample nurses into two categories: nurses belonging to SC/ST and nurses belonging to other castes. Table 8 indicates that the ratio of nurses' intentions to migrate among SC/ST (31.0%) is higher than the ratio among other caste groups (14.0%), and the difference is statistically significant at the 10% level.

<Table 7. Caste and intentions to migrate>

<Table 8. Intentions to migrate among SC/ST caste and other caste group>

### ***Religion***

Christians have traditionally dominated the international migration of nurses from India (Percot 2006; Nair and Percot 2007). Our data shows that the ratio of those who would like to go abroad among Christian nurses is 18.1% and that of Hindu nurses is 15.7% (Table 9). The ratio of Christian nurses is slightly higher, but the Fisher's exact test indicates non-statistical difference among religious groups (Fisher's exact test= 0.596). The nursing profession was previously viewed as a stigmatised and low status job but such a perception has changed due to the improvement of socioeconomic status of nurses. It is now perceived to be a ticket to success because of a prospect of international migration (Percot and Irudaya Rajan 2007). Consequently, people, regardless of their religion, have pursued nursing jobs, thereby reducing differences between the religious groups.

<Table 9. Religion and intentions to migrate>

### ***Types of hospital and school***

There is a strong tendency that nurses working in private hospitals have intentions to migrate. Around 70% of nurses in private hospitals say that they have intentions to go abroad while that ratio of nurses in public hospitals is just 4.0% (Table 10). The difference is statistically significant at the 1% level. This result is consistent with Thomas (2006) who examined the intention of migration among Delhi-based nurses. It is also consistent with the findings of Timmons et al. (2016), Walton-Roberts et al. (2017), and Oda et al. (2018). The relationship between the type of nursing school (either government-run or private one) and the intention to migrate is similar to this. Close to 70% of nurses graduated from the private school have intentions to migrate and just 9.5% of alumni of the government-run nursing school have so (Table 11). The difference is statistically significant at the 1% level. As explained in the previous section, positions at the

government medical facilities were open for only nurses graduated from local government nursing schools under the Madras Medical Code until 2012 in Tamil Nadu. Nurses graduated from private schools, which consist of the majority of nurses, were not permitted to take a job in government facilities.

<Table 10. Type of hospital and intentions to migrate>

<Table 11. Type of school and intentions to migrate>

### ***Loan***

Many nurses took a loan to finance their nursing education. In our sample nurses, 41 out of 158 nurses (25.9%) took out a loan from various sources (Table 12). Since such a loan needs to be repaid, it is considered that the financial obligation compels nurses to migrate for higher wages (Walton-Roberts et al. 2017). Our data displays that the ratio of nurses who have intentions to migrate among loan takers (22.0%) seems to be higher than non-loan takers (15.4%); however, the difference is not statistically significant.

<Table 12. Loan-taker and intentions to migrate>

### ***Motivations to be a nurse***

We asked nurses their motivations to be a nurse at the time of school choice and respondents answered by yes or no (multiple answers). The following questions were asked: do you want to be a nurse (1) to work abroad?, (2) because of easiness to find a job?, (3) to earn higher salary?, (4) because of financial difficulties?, (4) owing to family necessities?, (5) owing to family encouragement?, (7) to find a better spouse?, (8) to achieve higher social status?, (9) to provide services to the sick?, (10) because parent(s)/relative(s) is/are a nurse (nurses)?, (11) to gain self-confidence?, and (12) to escape from social pressure at home?. Top 3 motivations to be a nurse are “easiness to find a job (128 nurses, 81.0%)”, “higher salary (116 nurses, 73.4%)” and “provision of services to the sick (113 nurses, 71.5%)”. Then we examine the impact of each motivation on the intention to migrate and see statistical differences in the ratios of having migration intentions between nurses who answered “yes” and “no”. The results are shown in Table 13-1 and Table 13-2. It is quite understandable that the ratio of having migration intentions among nurses who had a motivation to go abroad (27.3%) is statistically higher than that ratio of nurses who didn’t have a such motivation (11.7%). However, the interpretation becomes difficult in the following cases: the ratios of migration intention among those who became a nurse because of family necessities and family



encouragements are statistically lower than the ratios of nurses who didn't have such motivations. Probably these nurses might not be willing to pursue nursing education at the time of school choice, but their family pressures made them to choose it. This attitude may influence the ratio of nurses' having intentions to migrate.

<Table 13-1. Motivations to be a nurse and intention to migrate 1>

<Table 13-2. Motivations to be a nurse and intention to migrate 2>

#### **4. Conclusion**

This paper examined the relationship between nurses' intentions to migrate and their characteristics based on our survey data from Tamil Nadu, which is located in South India where nursing education is active. Around 18% of sample nurses have an intention to migrate overseas. They tend to be young, single, working in private hospitals, and belong to SC caste. People are mobile when they are young and single. These factors encourage young and single nurses to go abroad. The socioeconomic backwardness of SC caste is also a factor that motivates nurses in that caste group to migrate overseas as a strategy to improve their social and economic statuses. Then a question is why nurses working in private hospitals have strong intentions to migrate. Several existing studies have pointed out that the major factors causing this tendency are low salaries and lack of job security at private hospitals (Thomas 2006; Timmons et al. 2016; Walton-Roberts et al. 2017; Oda et al. 2018). Oda et al. (2018) reports that in Tamil Nadu, junior nurses in state government hospitals receive around INR 32,000 to 35,000 (US\$492-\$538) per month while nurses in private hospitals get around INR 8,000 to 9,000 (US\$123-\$138) per month. (US\$1=INR65). Interestingly, in our sample data, 29 nurses out of 32 nurses working in private hospitals say that they would like to work in government hospitals. This high ratio is an indication of better payment and working environment at government hospitals compared to private hospitals. Since job opportunities in government hospitals are very limited and the salary gap between government and private hospitals is quite substantial, these create a greater incentive for nurses in private hospitals to migrate for higher wages.

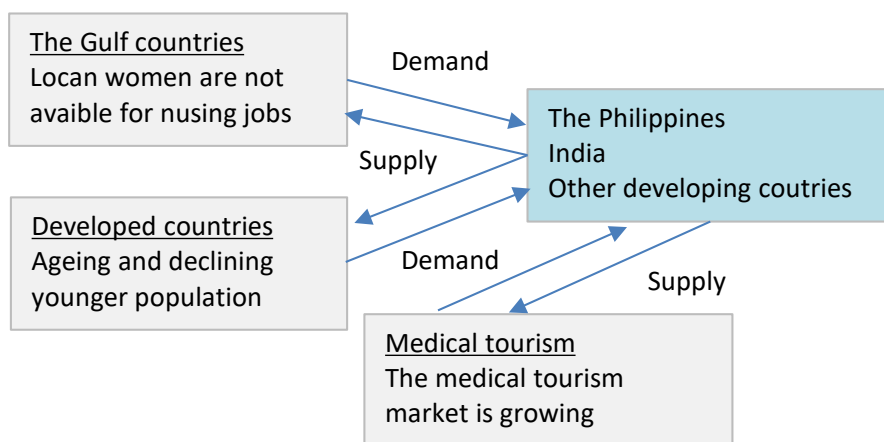
India has been facing a severe shortage of domestic nurses while more than 640,000 Indian nurses are working abroad. The estimated shortfall of nurses is reported to be 2.4 million in India. The shortage is not all but partly explained by international migration of Indian nurses. To mitigate the shortage of domestic nurses, the government's policy intervention, such as the introduction of a scheme that raises the wage level of nurses in private hospitals, is absolutely necessary.

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<Figure 1. Demand for and supply of nurses and care-workers>



<Figure 2. The location of Tamil Nadu>



<Table 1. Sample nurses' intentions to migrate>

Yes	29	18.1%
Inside India	2	6.9%
Overseas	27	93.1%
No	131	81.9%
	160	100%

<Table 2. Profiles of sample nurses>

Age (years old)	38.08 (7.91) *	max: 58, min: 24
Gender		
Male	7	4.4%
Female	151	95.6%
Religion		
Hindu	83	52.5%
Christian	72	45.6%
Muslim	3	1.9%
Caste		
Hindu general	9	5.7%
OBC	72	45.6%
MBC	48	30.4%
ST/SC	29	18.4%
Marital status		
Single	17	10.8%
Married	138	87.3%
Divorced/separated	3	1.9%
Nurse(s) in family		
Yes	42	26.8%
No	115	73.2%
(1 missing response)		
Loan to finance education		
Yes	41	25.9%
No	117	74.1%
Hospital type		
Public	126	79.7%
Private	32	20.3%
School		
Government	137	86.7%
Private	21	13.3%

No. of obs.=158

\* standard deviation

<Table 3. Cross tabulation of nurses by type of school and hospital>

	Government hospitals	Private hospitals	Total
Government school alumni	126	11	137
Private school alumni	0	21	21
Total	126	32	158

<Table 4. Age and intentions to migrate>

	Age below 30	Age above 31	Total
Yes	11	16	27
No	6	125	131
Total	17	141	158
"Yes" ratio	64.7%	11.3%	17.1%

Fisher's exact=0.000\*\*\*

\*\*\*, \*\*, and \* indicate statistica significance at 1, 5, and 10% level.

<Table 5. Gender and intentions to migrate>

	Male	Female	Total
Yes	2	25	27
No	5	126	131
Total	7	151	158
"Yes" ratio	28.6%	16.6%	17.1%

Fisher's exact = 0.342

<Table 6. Marital status and intentions to migrate>

	Single+	Married	Total
Yes	14	13	27
No	6	125	131
Total	20	138	158
"Yes" ratio	70.0%	9.4%	17.1%

+includes divorced and widows.

Fisher's exact = 0.000\*\*\*

\*\*\*, \*\*, and \* indicate statistica significance at 1, 5, and 10% level.

<Table 7. Caste and intentions to migrate>

	Hindu general	OBC	MBC	ST/SC	Total
Yes	2	12	4	9	27
No	7	60	44	20	131
Total	9	72	48	29	158
"Yes" ratio	22.2%	16.7%	8.3%	31.0%	17.1%

Fisher's exact = 0.066\*

\*\*\*, \*\*, and \* indicate statistica significance at 1, 5, and 10% level.

<Table 8. Intentions to migrate between SC caste and others>

	SC/ST	Others+	Total
Yes	9	18	27
No	20	111	131
Total	29	129	158
"Yes" ratio	31.0%	14.0%	17.1%

+ includes Hindu general, OBC and MBC caste groups

Fisher's exact = 0.052\*

\*\*\*, \*\*, and \* indicate statistica significance at 1, 5, and 10% level.

<Table 9. Religion and intentions to migrate>

	Hindu	Christian	Muslim	Total
Yes	13	13	1	27
No	70	59	2	131
Total	83	72	3	158
"Yes" ratio	15.7%	18.1%	33.3%	17.1%

Fisher's exact = 0.596

<Table 10. Type of hospital and intentions to migrate>

	Public	Private	Total
Yes	5	22	27
No	121	10	131
Total	126	32	158
"Yes" ratio	4.0%	68.8%	17.1%

Fisher's exact =0.000\*\*\*

\*\*\*, \*\*, and \* indicate statistica significance at 1, 5, and 10% level.

<Table 11. Type of school and intentions to migrate>

	Government	Private	Total
Yes	13	14	27
No	124	7	131
Total	137	21	158
"Yes" ratio	9.5%	66.7%	17.1%

Fisher's exact = 0.000\*\*\*

\*\*\*, \*\*, and \* indicate statistical significance at 1, 5, and 10% level.

<Table 12. Loan-taker and intentions to migrate>

	Non-loan taker	loan-taker	Total
Yes	18	9	27
No	99	32	131
Total	117	41	158
"Yes" ratio	15.4%	22.0%	17.1%

Fisher's exact = 0.343



<Table 13-1. Motivations to be a nurse and intentions to migrate 1>

	To work overseas		Total	Fisher's exact
	Yes	No		
Yes	15	12	27	0.016 **
No	40	91	131	
Total	55	103	158	
"Yes" ratio	27.3%	11.7%	17.1%	

	Ease of finding a job		Total	Fisher's exact
	Yes	No		
Yes	22	5	27	1.000
No	106	25	131	
Total	128	30	158	
"Yes" ratio	17.2%	16.7%	17.1%	

	Higher salary		Total	Fisher's exact
	Yes	No		
Yes	19	8	27	0.811
No	97	34	131	
Total	116	42	158	
"Yes" ratio	16.4%	19.0%	17.1%	

	Owing to financial difficulties		Total	Fisher's exact
	Yes	No		
Yes	14	13	27	0.124
No	89	42	131	
Total	103	55	158	
"Yes" ratio	13.6%	23.6%	17.1%	

	Owing to family necessity		Total	Fisher's exact
	Yes	No		
Yes	9	18	27	0.000 ***
No	94	37	131	
Total	103	55	158	
"Yes" ratio	8.7%	32.7%	17.1%	

	Owing to family encouragement		Total	Fisher's exact
	Yes	No		
Yes	16	11	27	0.089 *
No	101	30	131	
Total	117	41	158	
"Yes" ratio	13.7%	26.8%	17.1%	

	To find a better spouse such as a		Total	Fisher's exact
	Yes	No		
Yes	0	27	27	0.591
No	6	125	131	
Total	6	152	158	
"Yes" ratio	0.0%	17.8%	17.1%	

\*\*\*, \*\*, \* statistical significance at 1, 5, and 10% levels

<Table 13-2. Motivations to be a nurse and intentions to migrate 2>

	To achieve better social status		Total	Fisher's exact
	Yes	No		
Yes	7	20	27	0.652
No	41	90	131	
Total	48	110	158	
"Yes" ratio	14.6%	18.2%	17.1%	

	To provide service to the sick		Total	Fisher's exact
	Yes	No		
Yes	17	10	27	0.349
No	96	35	131	
Total	113	45	158	
"Yes" ratio	15.0%	22.2%	17.1%	

	Parent(s) is a nurse		Total	Fisher's exact
	Yes	No		
Yes	1	26	27	1.000
No	6	125	131	
Total	7	151	158	
"Yes" ratio	14.3%	17.2%	17.1%	

	To gain self-confidence in decision-making		Total	Fisher's exact
	Yes	No		
Yes	9	18	27	0.828
No	48	83	131	
Total	57	101	158	
"Yes" ratio	15.8%	17.8%	17.1%	

	To escape from social pressure at home		Total	Fisher's exact
	Yes	No		
Yes	0	27	27	0.591
No	6	125	131	
Total	6	152	158	
"Yes" ratio	0.0%	17.8%	17.1%	

	Relatives are/ is nurse		Total	Fisher's exact
	Yes	No		
Yes	2	25	27	0.372
No	20	111	131	
Total	22	136	158	
"Yes" ratio	9.1%	18.4%	17.1%	

\*\*\*, \*\*, \* statistical significance at 1, 5, and 10% levels