

# Asia Research Institute

## Working Paper Series

### No. 68

---

# International Recruitment of Nurses in India: Implications of Stakeholder Perspectives on Overseas Labour Markets, Migration, and Return

---

**Binod Khadria**

Asia Research Institute  
National University of Singapore

[arikb@nus.edu.sg](mailto:arikb@nus.edu.sg)

**June 2006**



The **ARI Working Paper Series** is published electronically by the Asia Research Institute of the National University of Singapore.

© Copyright is held by the author or authors of each Working Paper.

ARI Working Papers cannot be republished, reprinted, or reproduced in any format without the permission of the paper's author or authors.

**Note:** The views expressed in each paper are those of the author or authors of the paper. They do not necessarily represent or reflect the views of the Asia Research Institute, its Editorial Committee or of the National University of Singapore.

Citations of this electronic publication should be made in the following manner: Author, "Title," ARI Working Paper, No. #, Date, [www.nus.ari.edu.sg/pub/wps.htm](http://www.nus.ari.edu.sg/pub/wps.htm). For instance, Smith, John, "Ethnic Relations in Singapore," ARI Working Paper, No. 1, June 2003, [www.ari.nus.edu.sg/pub/wps.htm](http://www.ari.nus.edu.sg/pub/wps.htm).

#### **Asia Research Institute Editorial Committee**

Geoffrey Wade

Tim Winter

Shen Hsiu-Hua

Manjit Kaur

#### **Asia Research Institute**

National University of Singapore

Shaw Foundation Building, Block AS7, Level 4

5 Arts Link, Singapore 117570

Tel: (65) 6874 3810

Fax: (65) 6779 1428

Website: [www.ari.nus.edu.sg](http://www.ari.nus.edu.sg)

Email: [arisec@nus.edu.sg](mailto:arisec@nus.edu.sg)

**The Asia Research Institute (ARI)** was established as a university-level institute in July 2001 as one of the strategic initiatives of the National University of Singapore (NUS). The mission of the Institute is to provide a world-class focus and resource for research on the Asian region, located at one of its communications hubs. ARI engages the social sciences broadly defined, and especially interdisciplinary frontiers between and beyond disciplines. Through frequent provision of short-term research appointments it seeks to be a place of encounters between the region and the world. Within NUS it works particularly with the Faculty of Arts and Social Sciences, Business, Law and Design, to support conferences, lectures, and graduate study at the highest level.

**International Recruitment of Nurses in India:  
Implications of Stakeholder Perspectives on Overseas Labour Markets, Migration, and  
Return**

**Binod Khadria**

**Introduction**

India is an overpopulated large country with the potential to supply English speaking workers in many different fields to developed countries whose demands for workers exceed their domestic supply. As the demand for nurses rises worldwide, commercial recruiters have become increasingly interested in the potential for exporting nurses from India to these countries. However, while India has a large potential labour pool that could be trained as nurses, at present India does not have enough professional nurses to meet its own domestic health services needs. This paper examines current trends in nurse education and migration in India, and explores the possible consequences of these trends for various stakeholders in India in the short run and for policy-making in future. Section one is an overview of nursing education and migration through the backdrop of health sector indices in India. This is followed by a description and analysis of the current environment for international recruitment of nurses in India. The section includes estimates of the number of the major recruiting agencies in Delhi, and of nurses undergoing training at different recruitment hubs in India, and looks into the dynamics of the business process outsourcing involved. It includes a survey of the stakeholder perspectives in Delhi and a summary profile of the sample data from thirty aspiring nurses. The third section of the paper reflects on the policy implications of our findings. Conclusions are drawn at the end of the paper.

## 1. An Overview of Nursing Education and Migration in India

Table 1 shows the stocks of registered nursing personnel in India, as of 2004, at 865,135 General Nursing and Midwifery (GNM) diploma holders; 506,924 Auxiliary Nurse Midwife (ANM) holders; and 50,393 Health Visitor & Health Supervisors (HV & HS), respectively the three main categories, by the state registering bodies. Of the three categories of nurses, the first one, viz. GNM and the small number of B.Sc. (Nursing) degree holding nurses qualify to migrate abroad as they are educated and trained to international standards of 'registered nurses' (RNs). ANM and HV&HS are basically assisting nurses with a lower level of expertise. Each state or group of states has its own organization for the registration of nurses called the State Nursing Council. After the successful completion of training, a nurse must register with the State's Nursing Council to be eligible for employment as a registered nurse.

The table also shows the number of institutes that provide training and education in the field of nursing, by qualification types and levels of diplomas and degrees. There are over 500 recognized nurse training centers in India, mostly attached to teaching hospitals, which together admit nearly 10,000 students every year. Entry level eligibility for nursing education is a pass in the Senior Secondary School Leaving Certificate Examination or equivalent 12-year schooling, preferably with Physics, Chemistry and Biology as chosen subjects, and a minimum age of seventeen years. The courses are a four-year B.Sc (Nursing) Degree, and three-year General Nursing and Midwifery (GNM) Diploma, the latter being the minimum requirement for an entry level job of staff nurse. Females candidates who are unmarried, divorced, legally separated, or widows without encumbrances may opt for the four-year B.Sc (Nursing) or the three-year Probationary Nursing courses conducted at various armed forces hospitals in India. Those selected to the course execute a bond to serve in the Military Nursing Services (MNS) for five and four years respectively as they are fully sponsored by the government. It is the Indian

Nursing Council, an autonomous statutory body constituted under the Indian Nursing Council Act, 1947, which is responsible for regulation and maintenance of a uniform standard of education and training for Nurses and Midwives, Auxiliary Nurse-Midwives and Health Visitors. The Council prescribes the syllabus and regulations for various nursing courses. Amongst higher level courses in nursing that have been started in the country in more recent times are an M.Phil in Nursing – one-year for Full-time and two-years duration for Part-time; a Diploma course in Nursing Education and Administration - of 10-months duration; a Ph.D. in Nursing; Clinical Specialization in Master of Nursing; Clinical Specialization in Community Health Nursing, etc. No data is available on the numbers of these advanced graduates although, given the recent launch of such programs, they are still likely to be quite low.

India's population is estimated by the U.S. Population Reference Bureau (PRB) as having been 1.086 billion in 2004, with a per capita income estimate at US\$2,650. Life expectancy is 61 for males and 63 for females. The crude birth rate was 25 per 1000 population in 2002, down from 40 in 1951. The number of hospitals (private and public) was over 38,000 in 2004, although these aggregate figures do not reflect the regional variations that are usually large within the country. The total number of hospital beds was reported to be 915,000 in 2004.

Data on health human resources vary across sources though not by wide margins. Whereas the recommended international norm for the Nurse-Physician Ratio is between 2:1 and 3:1, according to *World Health Statistics 2005*, for India it was a lower ratio of 1.3:1 in 2003, with 79 nurses and midwives per 100,000 population and 59 physicians per 100,000 population, and 90 hospital beds per 100,000 population (WHO 2005). The comparable physician number recorded by the *Human Development Report 2005* was 51 per 100,000 population, but this may have been for a year prior to 2003 as the exact year of data is not specified (UNDP 2005). In 2002, the Government of India sources recorded the stock of modern allopathic doctors as

625,000. Similarly, the stock of all registered nursing personnel (GNM, ANM and HV&HS together) crossed the mark of 1.3 million in 2004. The Indian data for doctors and nurses are net of attrition due to retirement, migration, and death.

As of 2003, a total number of 836,000 GNM nurses, the category which is comparable to 'registered nurse' internationally, were serving a total population of 1.027 billion, averaging a population 1,228 per registered nurse. To look at this figure differently, in 2003, for every 100,000 population there were only 81 registered nurses, a number that was around 45 a decade earlier. In comparison to major destination-countries, and even some source-countries, this ratio is very low. For instance, nurse-to-population ratios in most developed destination-countries are around ten times higher than in India. Even in leading source countries like South Africa and the Philippines, these ratios are over five times higher. India's ratio in 1992 was lowest amongst the source countries, lower than even Nigeria. With an improvement in 2003, India still lags behind many countries by wide margins. In rural areas in 2001, whereas sanctioned positions were 32,723, the required positions were estimated to be 44,143. Of the sanctioned numbers, only 27,336 were in position, leaving 5,495 vacant. The shortfall between required and filled positions was 20,842 (GOI, 2004a). Any assessment of supply and demand, as well as stakeholders' analysis in the context of overseas nurse recruitment and migration from India must keep this kind of general scenario in perspective.

## **2. Indian Nurses for Overseas Labour Markets**

### **2.1 The Recruitment Hubs in India**

Notwithstanding the short-supply of nurses in India, in recent years, healthcare institutions in the developed and prosperous countries have discovered India as a new source

country for recruiting well-trained and English-speaking nurses towards meeting their own shortages. Reputed Indian hospitals have engaged in ‘business process outsourcing’ (BPO) to recruit and train Indian nurses for taking the examinations these countries conduct for the entry of foreign nurses into their territories as professionals. Though India, so far, has not drawn equal attention as a major source country like South Africa or the Philippines, there are noticeable implications for a variety of stakeholders in the country, viz., the individuals, the families, the hospitals, the recruiting agencies, the government and so on. While looking into these implications of migration of nurses in India - actual as well as potential - it is important to keep in mind that the core stakeholders fully aware of the situation are still the migrating nurse and members of the household on the supply side, and the recruiting agencies and the affected hospitals in India on the demand side. The government policy-making agencies like the Ministry of Health and Family Welfare (MHFW) or the Ministry of Overseas Indians Affairs (MOIA) are by and large still oblivious of the long-term implications of large-scale emigration of nurses from India.

Demand for nurses in the developed countries and the globalization process have together encouraged the private recruitment agencies to capitalize on the service potential of ‘exporting’ the nurses from India on a large scale, thus siphoning off vital human resources from the health care institutions in India – some of the best hospitals in India reportedly experiencing mass resignation and exodus of nurses to hospitals abroad (CHAUS 2005). The process includes facilitation of training/coaching, placement, and migration for jobs abroad. Since 2001, the agencies have started investing noticeably in this venture, with New Delhi in north India, and Bangalore and Kochi in the south emerging as the three main hubs. While Delhi-based agencies focus on the US market, those in Kochi and Bangalore are mainly facilitating migration of nurses to other destinations like the Gulf countries, Australia, New Zealand, Singapore, Ireland, and the

UK. The licensing and visa processes to these different countries vary markedly and require significant knowledge of the system. For example, the waiting period for migrating to the U.K. was a short six months, whereas for the United States it was up to two years. In Bangalore, the numbers of aspiring nurses range from 5,000 to 6,000, and in Kochi they number between 3,000 and 4,000. In Delhi, the number is higher at 10,000, but here too, 60 to 70 percent of the nurses, numbering between 6000 and 7000, actually belong to the south Indian states. Thus, the majority of Indian nurses aspiring to migrate abroad come from south India.

In Delhi, the recruiting agencies have mushroomed since 2003. The big ones are the Max Hospitals, Western International University (Mody Private group), Escorts Heart Institute, the Apollo Hospitals, and Jaipur Golden Hospital. The hospitals, well-known for catering not merely to Delhi but also to patients from all over India, are now diversifying investment into training and recruitment of nurses for placement overseas. The agencies, on an average invest an equivalent of US\$4700-7000, and in turn earn about US\$47,000 per nurse. In some states, like Uttar Pradesh, Andhra Pradesh, Kerala, Punjab, Tamil Nadu, Karnataka, Himachal Pradesh, Haryana and Delhi, even the government has now established State Manpower Export Corporations, and some of them have started taking an interest in facilitating international migration of nurses to safeguard them against exploitation from the private recruitment agents. For example, the Overseas Manpower Corporation Limited, a Government of Tamil Nadu undertaking is specifically coordinating the international migration of health professionals, mainly nurses.

For practicing in the United States, Indian nurses are required to go through two phases of processing before they obtain their US Registered Nurse license. In the first phase, the Commission on Graduates of Foreign Nursing Schools (CGFNS) screens them through two examinations: first, the CGFNS examination, and the second, the International English Language



Testing System (IELTS) examination. These two examinations assess them for the US National Council Licensure Examination (NCLEX-RN), which is required in the second phase. Through coaching, orientation, discussions, seminars, visa screening and consultation, etc., the agencies prepare the aspiring nurses for these examinations and subsequent migration. In the 1990s, India's ranking in terms of the number of registered nurse applicants aspiring for the US licensure was sixth after the Philippines, Canada, South Africa, Nigeria, and Korea, whereas in 2004 it jumped to the second position, next only to the Philippines, partly because the CGFNS has been expanding its operation in India by opening up more examination centers in more recent times (CGFNS 2004).

## **2.2 A Survey of Stakeholder Perspectives in Delhi**

For this study, we interviewed six categories of stakeholders in Delhi: The aspiring nurse, the motivating spouse or parents, the tutors, the recruiting agency, the affected public-sector hospitals, and the policy-making government agencies. Thirty selected nurses - the main category of stakeholder - were interviewed through pre-tested questionnaire in early 2005 at one of the premier recruiting agencies in New Delhi. They comprised 10 percent of the 300-odd registered nurses enrolled at this institute. Other stakeholders were covered only through open-ended interview; at different times stretching up to mid-October 2005. These included the spouse of an aspiring nurse and parents of another nurse; two tutors at the recruiting institute; its Principal, and the Head of Resources Department. The Chief Medical Superintendent of the All India Institute of Medical Sciences (AIIMS); a Deputy Nursing Superintendent of the Safdarjung Hospital; and an official of the Ministry of Overseas Indian Affairs, the Registrar of the Delhi Nursing Council, the Secretary of the Indian Nursing Council, and the Advisor (Nursing) to the

Ministry of Health & Family Welfare, Government of India were included in the survey as respondents.

The primary objective of this perspectives survey was to analyze the international recruitment of nurses from India leading to their migration to health-sector labour markets abroad, and the possibility of their eventual return back to India, all in terms of the implications for the stakeholders' roles and decisions in optimizing the phenomenon of nurse migration to India's advantage in the long run.

### **2.3 Profile of the Sample Data from Thirty Aspiring Nurses**

To capture the gender-bias in nursing career, our selection of thirty aspiring nurses comprised 90 percent females. Age-wise, most were in the early phase of their career. Only 17 percent of the respondent nurses had a B.Sc. (Nursing Honors) Degree because such degree holders were less likely to aspire to migrate as hospitals in India gave them priority in employment.<sup>1</sup> The majority of the sample had a three-year diploma in General Nursing and Midwifery (GNM), but the numbers with work experience suggested that while an educational qualification was a necessary condition, the sufficient condition for being eligible to migrate was work experience within India. As revealed by the fact that over 63 percent of the nurses were born outside the four metropolitan cities of Delhi, Mumbai, Kolkata and Chennai, nurses from small towns and villages in India had a stronger desire to migrate abroad. Unmarried nurses comprised 43 percent; and 53 percent were married, although one nurse did not reveal this information, which was some kind of an indication that family decision-making about migration being not always transparent within the household. Most of the spouses of married nurses were working at clerical or supervisory levels in the private or informal sector, and all were graduate degree holders. Family size-wise, most married nurses had one or two children. Forty-three

percent of the nurses were earning a salary equivalent of US\$233 and above per month. At least 63 percent had computer skills.

A predominance of nurses registered in the State Nursing Councils of two south Indian states, viz., Kerala, closely followed by Tamil Nadu was visible. More than half of our sample had entered the nursing career because they *thought* it earned a lot of social respect. Others had opted for it to ‘serve the nation’ and/or because they thought they had a special aptitude for it. What is most significant was the fact that 13 percent of the nurses had consciously decided to opt for the nursing career primarily because they knew *ex ante* that it would help them migrate to a developed or more prosperous country.<sup>ii</sup> For 25 nurses, this was their first ever attempt to migrate, and most of the nurses were still in the preparatory stages of recruitment for the US hospitals.

The nurses’ decision to migrate abroad have been influenced both by push-and-pull factors (GCIM 2005). The low income of nursing professionals in Indian health care system was a significant push factor for nurse migration. The following two important push factors were the poor working conditions, and low social status, the latter being a late realization after entering the occupation in most cases. Over half the nurses expressed their awareness about shortage of nurses in developed countries, which contributed significantly to making the pull factors in destination country effective and operational. In terms of ‘gaining work experience’ and/or ‘further education’ abroad, the nurses considered migration as an opportunity for substantially enhancing their human capital. Another finding of this study has been that the migration decision of the aspiring nurses was mainly influenced either by a friend/relative overseas, or an immediate family member based within India,<sup>iii</sup> and not significantly by any doctor/mentor in the health care profession.

Amongst the applicant nurses representing various source countries for the United States Registered Nurse Licensure in the latter half of the 1990s, India's ranking is likely to have risen from the 5<sup>th</sup> position it held then because the CGFNS has expanded its operation in India by opening up more examination centers in more recent times. In 2004–2005 alone, a recorded total of 10,000 Indian nurses were gearing up for migration to the US through the help of recruiting agencies in Delhi. The principal of the agency whom we interviewed had mentioned that the agency's own target was to export 100,000 Indian nurses to the US by the year of 2010.

### **3. The Policy Implications**

For a more comprehensive understanding of the training, placement, and migration of Indian nurses abroad from different perspectives and to derive the policy implications of our findings, narratives from ten interviewees in five different categories of stakeholders were recorded and analyzed: In the first category were two of the thirty sample nurses and their relatives, the spouse of one and the parents of another, to get the householder's view. Next, two teachers from the recruitment agency were included in order to understand the nurse-agency interface of the recruitment process. The teachers were part-time tutors at the agency, and were also pursuing their own M.Sc course in Nursing at a College of Nursing. In the third category, the Principal of the agency, and a Head of its Resources Department represented the agency-level management-business interface of training and overseas placement of the trained nurses. Fourthly, two top managers of two different government-sector hospitals, one a teaching-hospital of international standing and the other a non-teaching hospital were interviewed: The Chief Medical Superintendent of the All India Institute of Medical Sciences (AIIMS), the premier public-sector teaching hospital in India; and a Deputy Nursing Superintendent of the Safdarjung Hospital, a well-known government hospital in Delhi respectively. In the fifth category, the final

narratives were the interviews of an official of the Ministry of Overseas Indians Affairs, the Registrar of the Delhi Nursing Council, the Secretary of the Indian Nursing Council, and the Advisor (Nursing) to the Ministry of Health & Family Welfare, Government of India.<sup>iv</sup> All the narratives only confirmed our hunch that while there was a great deal of apathy on the part of the public-sector bodies to recognize the problem that was likely to arise from the international recruitment of nurses in India. In sharp contrast, there was an equal degree of enthusiasm on the part of the private commercial agencies to engage in the profitable BPO (Business Process Outsourcing) and make hay while the sun shone. The prime stakeholders, the nurses, were caught between the dilemma of serving the nation and serving the self, and there was no easy solution in view.

The low nurse-to-population ratio in a country poses a big problem of human-resource shortage in its health care system. What is ironical is that despite a shortage of nurses in their own society, developing countries like India are sending nurses to developed countries where the ratios are higher. In experiencing this phenomenon of globalization, India is thus faced with the double challenge of producing more nurses for emigration and for meeting its own requirement of sustaining the domestic health care system. In dealing with such a double challenge posed by international migration of nurses, there are opportunities for India to harness and benefit from the phenomenon. However, any long-term benefit will be reaped and sustained only if the policy-makers in India can ensure and enhance the probability of return migration of nurses to India. For all this, a lot remains to be done at the home-front within India. First, the professional status of nursing has to be upgraded in the Indian societies and polity as well. Next, establishment of networking channels abroad would encourage them to return, not necessarily permanently, but at least as temporary returnees to India on a rotational basis. Promotion of medical tourism with imaginative innovations would be an opportunity to experiment with this kind of return.

Secondly, reliable data sources on stocks of nurses and their flows through the education and training institutions in India have to be systematically created and sustained. From the existing data sources it is not clear what the total numbers of diploma holders, graduates, postgraduates and PhD holders in nursing are, and what is their regional distribution in India at this point in time. No proper estimates of the number of nurse training institutions by capacity and certification levels are available. Nursing education in India has stagnated at the basic levels, and not enough emphasis is given to the Masters and Doctorate level programs in nursing, which are the potential areas for any holistic development of nursing education as well as nursing services.

Thirdly, flow data on migration of nurses abroad and their return migration, and even on internal migration within India are not available. There are no specific data even on the remittances - from which countries, and how much money is being remitted by the Indian nurses abroad to their families in India. Estimation of remittances and their investment in nursing education in India is a potential policy issue. There is virtually no migration policy as such, not to speak of one specifically dealing with the issue of international migration of nurses.

#### **4. Conclusions**

A few concluding remarks are in order. First, the role of nurse recruiting agencies is looked at with suspicion rather than one of positive collaboration possibilities between the public and private sectors. The agencies can be turned into effective and accountable facilitators between the Indian government and the government of destination countries, the hospitals overseas, and the aspiring Indian nurses. This will also reduce and minimize malpractices and the exploitation of nurses, both at home and abroad. Secondly, the quality of nursing education and nursing personnel can be ascertained by following specific measures such as (i) Recurrent

accreditation and rating of institutions and nursing personnel by the Indian Nursing Council and its coordination with the International Nursing Council. (ii) Implementation of minimum-wage legislation for nurses in the private sector hospitals, (iii) Proper distribution of workload; it has been observed in the stakeholders' survey that there are many irregularities in the hospitals so far as workload distribution amongst nurses is concerned. (iv) Opening of counseling and consultancy cells in reputed private and large government hospitals for migration of nurses abroad and their eventual return as well. This will facilitate efficient migration management for nurses and easier and transparent access to information. Thirdly, south-south cooperation in the field of nursing services would be a major potential area for developing countries to collectively face the challenges arising from the international recruitment of nurses in their territories, and sharing with each other the complementarities by balancing supply and demand discrepancies through return of nurses to other developing countries, if not one's own country, for a limited contractual period. India has the advantage of a large population and a large educational infrastructure on its side to take the lead in this regard. What is required is a positive farsightedness and a sustained will to turn them both from liability to asset.

In short, India must recognize its own long-term stakes in the increasing migration of nurses overseas. The exodus is not a malaise rooted in the individual nurses who emigrate, but a symptom of a deeper malady elsewhere in the system of health human-resource planning in the country. The first step towards corrective action lies in systematic collection of data to inform policy-making. Introduction of innovative schemes that will attract large numbers of the youth in India's presently favourable age-cohorts of the population, female as well as male, into choosing nursing as a respectable and self-sustaining career is another challenge. More effective tools to supplement ethical recruitment practices and plug loopholes in them would need to follow.

---

**Notes:**

<sup>i</sup> There is a parallel example in the case of doctors in India. We observed elsewhere (Khadria 2004) that at AIIMS, most of the Bachelor's Degree holder doctors had a higher probability of gainfully migrating abroad because the high quality of medical education in this institution meant that these doctors were in high demand in the world labour market. As doctors were migrating immediately after completing their first medical degree (MBBS) from AIIMS, seats became available to non-AIIMS graduates competing from different states of India for admission to Masters in Surgery (MS) and Medicine (MD) programs at AIIMS, who would eventually be more inclined to stay within India as they grew older and started getting married and raising families.

<sup>ii</sup> See Khadria (1999, 2005), and NCAER (2005) on changing educational and career choices of students when migration prospects are known and when they are not.

<sup>iii</sup> Spouse in the case of a married nurse, and parents in the case of an unmarried nurse. This reflects the importance of the institution of family in individual decision-making in India.

<sup>iv</sup> Some of these interviews were conducted in July-October, 2005, although the major survey was carried out in early 2005.

**References:**

CGFNS, 2004. *Global Connections: 2004 Annual Report*, Philadelphia: Commission on Graduate Foreign Nursing Schools.

CHAUS, 2005. 'India is losing its nurses to the west', article by Edward David, *Health Progress*, Nov/Dec., Catholic Health Association of the United States, [accessed on March 9, 2006].

Available at:

[http://www.findarticles.com/p/articles/mi\\_qa3859/is\\_200511/ai\\_n15745214](http://www.findarticles.com/p/articles/mi_qa3859/is_200511/ai_n15745214)

GCIM, 2005. *Migration in an Interconnected World: New Directions for Action*, Report of the Global Commission on International Migration, Geneva: GCIM.

Government of India, 2001, 'A Series – General Population Tables', *Census of India 2001*, New Delhi: Office of the Registrar General of India.

Government of India, 2004a. *Health Information of India 2002*, New Delhi: Central Bureau of Health Intelligence.



---

Government of India, 2004b. *Annual Report: Health Statistics*, New Delhi: Ministry of Health and Family Welfare.

Government of India, 2005. *Economic Survey 2004-2005*, New Delhi: Ministry of Finance.

Khadria, Binod, 1999. *The Migration of Knowledge Workers: Second-Generation Effects of India's Brain Drain*, New Delhi: Sage Publications.

Khadria, Binod, 2004. *Migration of Highly Skilled Indians: Case Studies of IT and Health Professionals*, STI Working Papers 2004/6, April, Paris: Organisation for Economic Cooperation and Development.

Khadria, Binod, 2005. *South and South-West Asia*, Regional Study No.6, Background Paper to the GCIM Report (2005).

NCAER, 2005. *India Science Report*, New Delhi: National Council of Applied Economic Research.

PRB, 2004. '2004 World Population Data Sheet', *Celebrating 75 Years: 1929-2004*, Washington DC: Population Reference Bureau.

UNDP (2005), *Human Development Report 2005*, New York: United Nations Development Programme.

WHO (2005), *World Health Statistics 2005*, Geneva: World Health Organisation.

**Table 1: Nursing Education Institutes and Registered GNM, ANM and HV/HS in India, by State Nursing Councils, up to 31<sup>st</sup> March 2004**

Registering State Council	Total Number of INC-recognized Nursing Education Institutes in India, by course level						Registered Nurses		
	GNM	ANM	DNEA	B.Sc (N)	P.B.B.Sc (N)	M.Sc (N)	GNM	ANM	HV/HS
India Total for All States	<b>769</b>	<b>236</b>	<b>6</b>	<b>165</b>	<b>30</b>	<b>29</b>	<b>865135</b>	<b>506924</b>	<b>50393</b>
Andhra Pradesh	103	31		27			84306	94395	2480
Assam	15	9		2			10321	12589	
Bihar	13	23					8883	7501	511
Chattisgarh	2						179	93	
Delhi	15	1					2594	355	
Gujarat	20	2		2			85796	35840	1352
Haryana	13	9					15821	13112	694
Himachal P.	5	1					7920	9087	411
Jharkhand							10	15	
Karnataka	170	4		56	14	12	54762	47407	6836
Kerala	78	14	1	5	1		71589	27612	7797
Mahakoshal	19	8	2	8	1	1	92331	25344	998
Maharashtra	50	16	1	11	4	2	81983	25690	551
Mizoram	4	2		1			1301	1441	
Orissa	7	15		1	1		46090	30213	110
Punjab	67	28	1	10	4	3	43470	17389	2584
Rajasthan	49	8		1			35482	22239	850
Tamil Nadu	55	8		37	4	8	159525	52819	11083
Tripura	3						641	969	79
UP&Uttra'al	28	30					17479	26956	2789
West Bengal	26	20		2		2	44652	55858	11294
MIB	4	4	1						
SIB	18	3		2	1	1			
AFMS									

**Notes:** (a) ANM: Auxiliary Nurse Midwives; GNM: General Nursing Midwives; HV: Health Visitor; HS: Health Supervisor; DNEA: Diploma in Nursing Education and Administration; B. Sc (N): Bachelor of Science in Nursing; M. Sc (N): Master of Science in Nursing; P.B. B.Sc (N): Post-Basic Bachelor of Science in Nursing. MIB: Mid-India Board; SIB: South India Board; and AFMC: Armed Forces Medical Services are only educational and examining bodies, not registering bodies.

(b) Assam includes Arunachal, Manipur, Meghalaya and Nagaland; Maharashtra includes Goa; Punjab includes J&K; TN includes A&N islands and Pondicherry; West Bengal includes Sikkim.

**Source:** Government of India (2004a, 2004b, 2005). *Courtesy, Advisor (Nursing), Government of India.*