Nurses Emigration from Kerala, trends and implications

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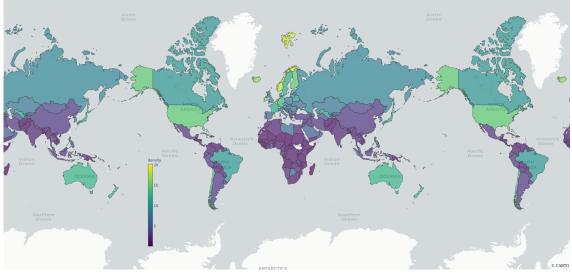
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1 Distribution of nurses across the world

Below are two plots that would help in understanding the inequality in distribution of nurses between countries of the world, and implications of such distribution.

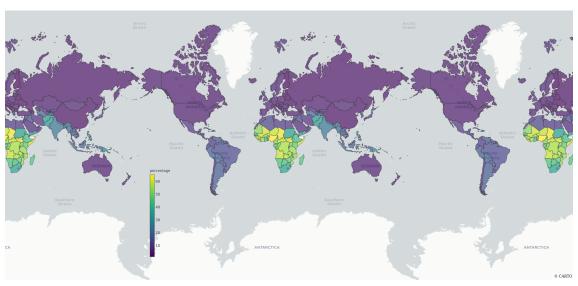
Fig. 1: Density of nurses and midwives per 1000 people, latest of years between 2010 and 2020 (World)



Source: World Bank Data

Inequality in distribution of nurses between the developed nations and the under-developed and developing nations in evident in figure 1. This can be complemented by a plot of prevalence of diseases in countries of the world to show that nurses are not available in countries where they are most required (figure 2).

Fig. 2: Cause of death, by communicable diseases and maternal, prenatal and nutrition conditions (% of total) for year 2019 (World)



Source: World Bank Data

2 Nurses' emigration from India

Tab. 1: Number of emigration clearances received in India for the job of nurse

2018 (Rank)	2019 (Rank)
5974 (19)	9015 (12)

 $Source:\ Lok\ Sabha\ Unstarred\ Question\ No.\ 1255,\ dated\ on\ 19.09.2020,\ accessed\ from\ indiastat.com$

As can be seen in table 1, nurses are one of the major services exported by India.

2.1 Where do the nurses migrate to?

Figures 3 and 4 show the trends in emigration flows and stocks of nurses from India in top ten destination countries.

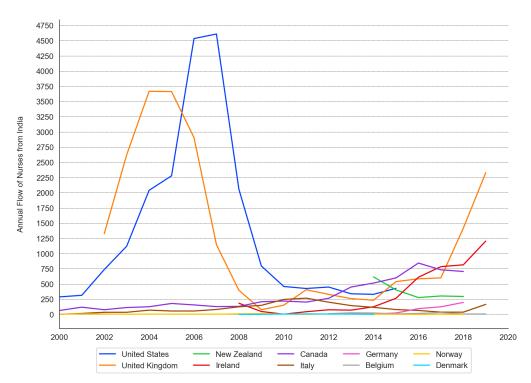


Fig. 3: Annual flow of nurses from India (top 10 destinations)

Source: OECD Migration Database

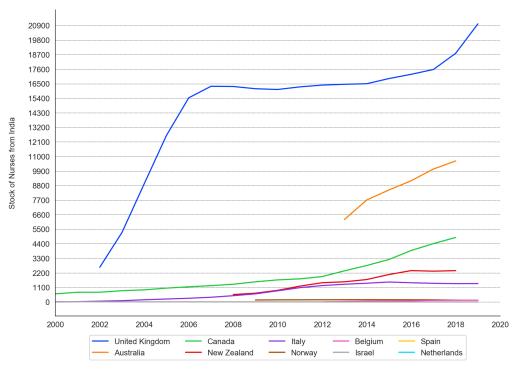


Fig. 4: Stock of nurses from India (in top 10 destinations)

Source: OECD Migration Database

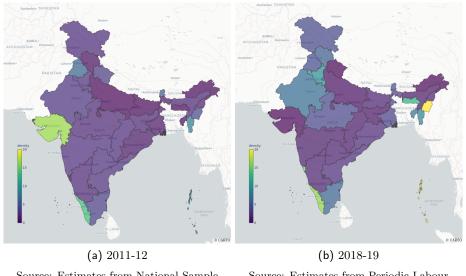
The destination countries were ranked according to mean figures over the years 2000 to 2020.

It is observed that nurses majorily migrate to developed countries in the west. These migratory trends from India and the values in table 1, fit the narrative depicted by figure 1.

3 Distribution of nurses in India

The following figures 5a and 5b show the distribution of qualified nurses across states in India for 2011-12 and 2018-19. (Details of how the data was extracted need to be added)

Fig. 5: Density of qualified nurses and midwives per 10,000 people in India



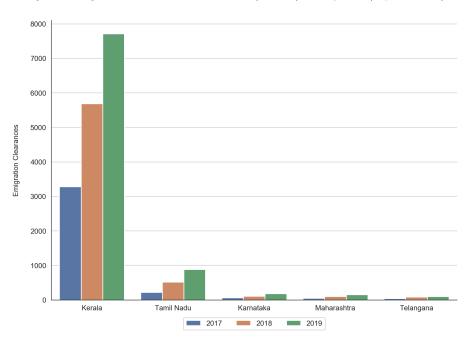
Source: Estimates from National Sample Survey 2011-12

Source: Estimates from Periodic Labour Force Survey 2018-19

As can be observed, Kerala is a state that has relatively higher density of qualified nurses among other states in India.

3.1 State wise distribution of migratory nurses

Fig. 6: Emigration clearances for nurse (female) over years (top 5 states)



 $Source:\ Lok\ Sabha\ Unstarred\ Question\ No.\ 4279,\ dated\ on\ 13.12.2019,\ accessed\ from\ indiastat.com$

The states were ranked according to average figures over the years considered.

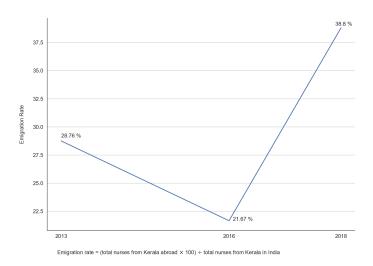
The available datasource provided emigration clearance data for female nurses only. However since the profession of nursing is majorily composed of women, (as confirmed by figure 9 and table 6) the picture depicted by figure 6 is believed to be representative for the total trend.

It is observed that the state of Kerala is a major contributor to migratory nurses.

4 Emigration of Nurses from Kerala

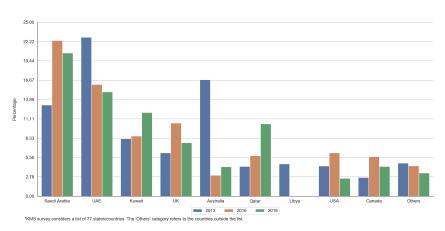
In figures 7, 8, 9, 10 and 11, word *nurses* imply *qualified nurses*, i.e. nurses who possess at least a diploma. (Details of data extraction process to be added)

Fig. 7: Rate of emigration



Source: Estimated from Kerala Migration Survey 2013, 2016, 2018

Fig. 8: Top 10 destination countries for nurses from Kerala

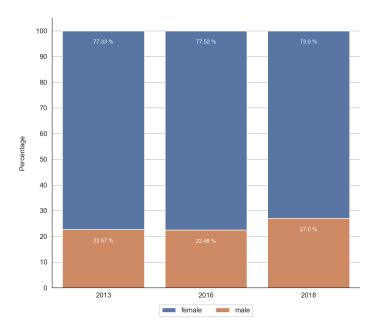


Source: Estimated from Kerala Migration Survey 2013, 2016, 2018

As shown in figure 8, more than half of the migrant nurses are in the Gulf region. This is different from the trends observed at national level, where Gulf regions do even feature in the top 10 destination countries for migrant nurses (figure 3). Is this trend part of the larger pattern of migration towards the Gulf that exists in the Kerala? Or is Gulf only the first step of emigrating to the West?

4.1 Characteristics of migrant nurses from Kerala

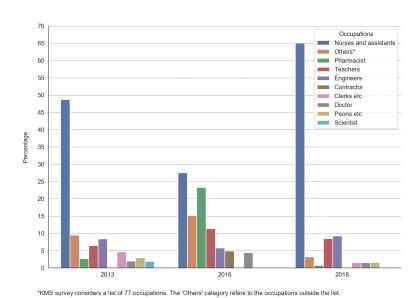
Fig. 9: Gender Composition of migrant Nurses from Kerala



Source: Estimated from Kerala Migration Survey 2013, 2016, 2018

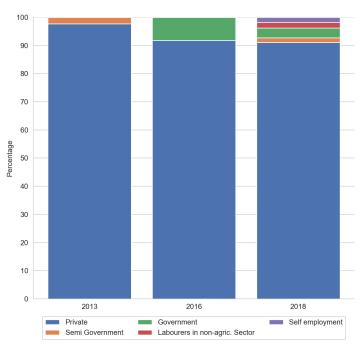
Figure 9 shows that majority of the migrating nurses are women. Figure 10 shown below plots the top ten occupations of female migrants from Kerala. Not surprisingly, most migrating women are nurses. Why is this so? What are the reasons?

Fig. 10: Occupations of female migrants from Kerala (Top 10)

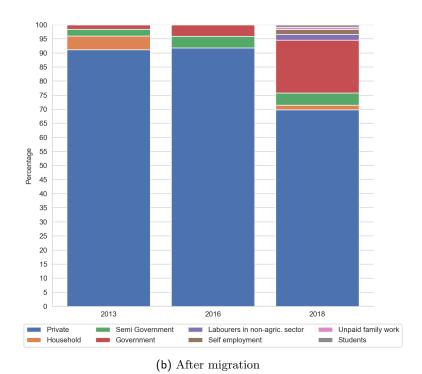


Source: Estimated from Kerala Migration Survey 2013, 2016, 2018

Fig. 11: Kinds of employment of migrant nurses



(a) Before migration



Source: Estimated from Kerala Migration Survey 2013, 2016, 2018

Figure 11 shows us that majority of the nurses who migrated were employed in the private sector. Majority of nurses continued to work in private sector after migration as well. The reasons for this trend need to be explored further.

Additionally it was found that mean age of nurses at the time of migration remained more or less the same for the years 2013 (26.39), 2016 (27.21) and 2018 (27.75).

5 Nursing Education in India

5.1 Nursing institutes in India

General Nursing and Midwivery (GNM) and B.Sc nursing institutes alone are considered in the tables/figures in this section. The reason for limiting to these two types of institutes is that these form the basic certifications most destination countries recognize, and thereby, courses most demanded by those who aspire to migrate.

Tab. 2: State wise distribution of nursing institutes

(a) According to number of institutes (Top 8)

State	2000	2005	2010	2015	2019
Karnataka	142	423	831	845	794
Andhra Pradesh	79	187	455	484	299
Madhya Pradesh	15	41	149	482	578
Tamil Nadu	55	104	295	387	385
Rajasthan	-	60	250	332	318
Kerala	65	103	315	338	308
Uttar Pradesh	-	36	130	304	379
Maharashtra	48	69	173	363	369

(b) According to share of institutes within India (Top 8)

State	2000	2005	2010	2015	2019
Karnataka	26.35	32.59	25.4	17.62	15.53
Andhra Pradesh	14.66	14.41	13.91	10.09	5.85
Tamil Nadu	10.2	8.01	9.02	8.07	7.53
Kerala	12.06	7.94	9.63	7.05	6.02
Maharashtra	8.91	5.32	5.29	7.57	7.22
Madhya Pradesh	2.78	3.16	4.55	10.05	11.3
Rajasthan	-	4.62	7.64	6.92	6.22
Punjab	3.53	7.24	6.82	6.55	6.3

Source: Indian Nursing Council, accessed from indiastat.com

Tab. 3: Growth Rates of Nursing Institutes

(a) in top 5 states

State	2000-2005	2005-2010	2010-2015	2015-2019	\mathbf{AGR}^*
Telangana	-	-	-	86	86
Chhattisgarh	-	6	2.69	0.14	2.94
Nagaland	-	-	4	0.2	2.1
Madhya Pradesh	1.73	2.63	2.23	0.2	1.7
Punjab	3.95	1.37	0.41	0.03	1.44
Uttar Pradesh	-	2.61	1.34	0.25	1.4

(b) comparison of Kerala and India as a whole

State	2000-2005	2005-2010	2010-2015	2015-2019	\mathbf{AGR}^*
Kerala (Rank: 23)	0.58	2.06	0.07	-0.09	0.66
India	1.41	1.52	0.47	0.07	0.87

^{*} Avergae Growth Rate

Source: Indian Nursing Council, accessed from indiastat.com

5.2 Enrollment in Nursing Institutes

Due to the nature of available data, enrollment figures shown here are not limited to General Nursing and Midwivery (GNM) and B.Sc nursing institutes, but to all degrees including Auxilliary Nursing and Midwifery (ANM), M.Sc Nursing and Ph.D in Nusring.

Tab. 4: State wise distribution of enrollment in nursing institutes

(a) According to enrollment numbers (Top 8)

State	2010-11	2016-17	2018-19
Karnataka	41732	39998	45160
Uttar Pradesh	275	49233	53237
Andhra Pradesh	23179	24870	21913
Telangana	-	16091	14012
Maharashtra	1148	9432	33545
Kerala	18288	11236	10867
Gujarat	-	11711	13550
Odisha	743	16400	15536

(b) According to enrollment shares within India (Top 8)

State	2010-11	2016-17	2018-19
Karnataka	42.82	16.05	16.02
Andhra Pradesh	23.78	9.98	7.77
Uttar Pradesh	0.28	19.76	18.89
Kerala	18.77	4.51	3.86
Telangana	-	6.46	4.97
Maharashtra	1.18	3.79	11.9
Gujarat	-	4.7	4.81
Odisha	0.76	6.58	5.51

Source: Ministry of Statistics and Programme Implementation, accessed from indiastat.com

Tab. 5: Growth Rates of enrollment in nursing institutes

(a) in top 8 states

State	2010-11 to 2016-17	2016-17 to 2018-19	\mathbf{AGR}^*
Uttar Pradesh	178.03	0.08	89.06
Punjab	25.51	-0.29	12.61
Odisha	21.07	-0.05	10.51
West Bengal	14.46	0.16	7.31
Maharashtra	7.22	2.56	4.89
Tamil Nadu	8.15	-0.12	4.01
Uttrakhand	3.98	1.05	2.51
Rajasthan	3.47	0.92	2.19

(b) Kerala relative to India as a whole

	2010-11 to 2016-17	2016-17 to 2018-19	\mathbf{AGR}^*
Kerala (Rank: 27)	-0.39	-0.03	-0.21
India	1.56	0.13	0.84

* Avergae Growth Rate

Source: Ministry of Statistics and Programme Implementation, accessed from indiastat.com

As can be observed from figures 3b and 5b, for Kerala the growth rates in number of institutes and in number of enrollments in them are among the least in India, despite the absolute numbers

and shares being high (figures 2b and 4b). What do these trends imply? Does it mean that states like Kerala have reached a saturation point? Maybe a quadrant analysis is appropriate here.

 ${\sf Tab.~6:~Share~of~women~in~enrollment~at~nursing~institutes}$

State	2010-11	2016-17	2018-19
Kerala	96	96.06	$95.62 \\ 86.10$
India	83.96	86.43	

Source: Ministry of Statistics and Programme Implementation, accessed from indiastat.com