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Domestic medical tourists from north-east to south India: An ethnographic investigation

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Abstract---The practice of travelling from one country to another in need of healthcare has existed in the world since the ancient period. The nature, trend, and dimension of healthcare travel have been changing in the 21st century with the influence of dynamic advanced technology and this phenomenon popular as medical tourism. Domestic medical tourism is a part of medical tourism, where the activities of intra-regional medical tourists are bounded within their country. Domestic medical tourism is apparent in a large country like India. North Eastern Region (NER) is an important part of India which is made up of eight small states. Residents of NER flock to different parts of the country as domestic medical tourists due to the scarcity of healthcare infrastructure and services. This study focused on those NER residents who visited three major hospitals in Tamil Nadu. We try to analyze push and pull healthcare motivation factors and simultaneously evaluate the travel experience of north eastern domestic medical tourists. The study was adopted as cross-sectional where 110 respondents were conducted for face-to-face interviews from May 2019 to June 2019.

Keywords---medical tourism, motivation, push pull, experience, NER.

Introduction

Travelling from one destination to another destination in need of healthcare is a very common trend of practices in every country around the world (Goodrich & Goodrich, 1987). In the ancient periods, healthcare travel was popular for spiritual and therapeutic purposes from one nation to another nation and even one continent to other continents (Hunter, 2007). In modern times with the influence of globalization, the impact of this emerging phenomenon has been

spreading rapidly all over the world (Pocock &Phua, 2011). Regional disparities are a general attribute of any nation where healthcare disparities force their people to move far away distance from home regions to access healthcare facilities (Gan & Frederick, 2011). People who spend at least a minimum of one night to access better healthcare services without engaging in any emolument activities at healthcare destinations are recognized medical tourists and when the activities of these people have been bounded within their country then they are categorized as domestic or intra-bound healthcare consumers or domestic medical tourists (Jaapar, Musa, Moghavvem, & Saub, 2017). In this context, it is important to note that patients transfer (via doctor's referral/ bed-to-bed transfer) from one hospital to other hospital for critical emergency requirement cannot be included under the umbrella of domestic medical tourism. Domestic medical tourists are only considered those people who travelling from one location to another and partially or fully participating in the domestic medical tourism resources of the destination (Sobo, 2009).

Most of the scientific works of literature and research articles found about medical tourism focus mainly on international medical tourists. However, international and domestic medical tourists both are sharing equal impact on the economic growth of the medical tourism industry. Domestic medical tourism, as well as tourists, has been highlighted more in the western developed world. The potential impacts on the regional economy by domestic medical tourists in the USA have been evaluated by Hudson & Li, (2012). Interestingly, a study was conducted about the development of domestic medical tourism in Australia's Sunshine Coast (Tham, 2018). Most (91%) of the Italian medical tourists were travelled within their country where most (68.8%) of domestic medical tourists bounded the northern region in Italy (Manna, Mauro, Ciasullo, & Palumbo, 2019). The diversity of socio-cultural characteristics has been found in the different parts of India. The disparity in healthcare infrastructure and demand for accessible healthcare has strongly raised an issue between different states across the country. This difference is especially evident in rural and urban regions in the country. The dimension of intra-regional travel for health care is highly demanding aspects in the Indian subcontinent. 90 persons from the rural area and 51 persons from the urban area per 100 persons have been involved in overnight trips for medical purposes during one year (NSS, 2016).

The North East Region (NER) of India consists of eight small states such as Assam, Arunachal Pradesh, Manipur, Mizoram, Meghalaya, Nagaland Sikkim, and Tripura. NER is one of the traditional, ethical, and cultural diversity-prone regions in India. A total of 4.55 billion people have been living, where 81.6% of the populations are belonging to rural residents (Census of India, 2011). The regional disparities and geographical impassiveness make the wretchedness of the states of NER. These states are neglected and backward in various fields, especially in healthcare infrastructure. The NER has multiple hindrances for healthcare. The most terrifying matter in healthcare in NER is the unavailability of a sufficient number of doctors, specialists, lack of proper rural public healthcare services, and shortage of nurses (Saikia & Das, 2014). The residents of this region are depending and moving to other major cities of the country to access healthcare needs that are unavailable in their cities. Over 50% of the residents from the states of Sikkim, Arunachal Pradesh, and Meghalaya reported travelling out of

state in urban areas whereas more than 80% of the rural residents from the states of Arunachal Pradesh, Tripura and Sikkim reported out-of-state destination choices for health and medical care purposes in the year 2014-2015 (Chakrabarti & Tatavarthy, 2019).

Patients from north-eastern states of India consider being the perfect example for the intraregional medical traveler or domestic medical tourist in India. This study focused on these domestic medical tourists who have been visited three major hospitals i.e., Apollo Hospitals Chennai, Christian Medical College, Vellore, Sri Narayani Hospital & Research Centre in Tamil Nadu from NER. This study tried to examine the push and pull motivation factors for determine travel destination choice among the NER domestic medical tourists. We also tried to evaluate the travel experience as well as the satisfaction level of these domestic medical tourists in Tamil Nadu. Geographical proximity is an important push motivation factor which play a major role in attracting medical tourists, but these travelers are moving far away from the nearest medical tourism hub of Kolkata (Rai 2019) as identified in Table: 1. Accordingly, we aim to identify the exclusive pull factors of Tamil Nadu in attracting medical tourists for such a longer route.

Table 1: Time and Distance (Flight & Road) need to reach Kolkata and Chennai from the NER states

NER States	Kolkata		Chennai	
	Flight distance & time to reach	Road distance & time to reach	Flight distance & time to reach	Road distance & time to reach
Arunachal Pradesh	729 km (6 hours 41 minutes)	1636.4 km (37 hours via NH-15)	2085 km (8 hours 20 minutes)	3,242.4 km (67 hours via NH-16)
Assam	524 km (1 hour 5 minutes)	1200.20 km (27 hours via NH-27)	1882 Km (3 hours)	2,799.2 km (59 hours via NH-16)
Manipur	620 km (1 hour 15 minutes)	1535.6 km (37 hours via NH-27)	1938 km (5 hours 30 minutes)	3,134.5 km (66 hours via NH-16)
Meghalaya	492 km (1 hour 45 minutes)	1108.2 km (27 hours via NH-12).	1,797 km (9 hours 55 minutes)	2,702.9 km (58 hours via NH-16)
Mizoram	463 km (1 hour 10 minutes)	1620.9 km (41 hours via NH-27)	1766 Km (10 hours 15 minutes)	3,240.4 km (75 hours via NH-16)
Nagaland	743 km (1 hour 30 minutes)	1292 km (30 hours 5 minutes)	2012 km (7 hours 50 minutes)	3028 km (62 hours 21 minutes)
Sikkim	531 km (1 hour 10 minutes)	710.20 km (19 hours 26 minutes via NH-12)	1807 km (7 hours 5 minutes)	2,326.3 km (50 hours via NH-16)
Tripura	463 km (1 hour 10 minutes)	1485.1 km (36 hours via NH-27)	1665 Km (10 hours 20 minutes)	3,086.5 km (66 hours via NH-16)

			minutes)	NH-16)
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Literature Review

Medical tourism in developing countries

Medical tourism is a phenomenon where healthcare consumers travel to another healthcare destination seeking to access better medical services (Kecley, 2008). Medical tourism refers to people who migrate to another country to access better treatment facilities (Connel, 2013). Spatial disparities in terms of regional inequalities have a significant impact on healthcare as well as the overall well-being of the people (poor & marginal) of a region (Chakrabarti & Tatavarthy, 2019). There have been several instances in history that healthcare migration used to happen from developing countries to developed countries (Chanda, 2002 & Wachter, 2006). In the 21st century, the medical tourism industry has been seen a huge influx of inbound medical tourists from developed countries to developing countries, especially in Asian developing countries (Behrmann & Smith, 2010). The government of India officially declared the economic potentiality of the medical tourism industry in 2002 and recognized India as a 'global health destination' (Medhekar, 2014). India is belonging 2nd largest developing country in the medical tourism industry after Thailand. In 2015, the growth rate of this industry in India was 30% and 2.8 million inbound medical tourists were arrived (Kumar & Raj, 2015). Quality of treatment, low-cost treatment facilities, English speaking ability of doctors and medical staff were the major attributes of the medical tourism industry in India which attracts foreign medical tourists (Moghavvem, et al., 2017). Medical tourism has been spread rapidly in Southeast Asia and has established itself as a lucrative business. Thailand is positing the 1st in the medical tourism around the world which is famous for sex change and cosmetic surgery. Singapore is attracting by stem cell therapy, neurological, cardiovascular surgery and treatment to foreign inbound medical tourists (UNESCAP, 2007). The governments have been making efforts to popularize medical tourism in developing countries such as Malaysia, Indonesia, the Philippines, and Vietnam (Pocock & Phua, 2011). (Jin, Cheng, Lu, Huang, & Cao, 2015) discussed the differences in healthcare accessibility between rural and urban areas in China. The major healthcare services were concentrated only in the capital of the country. They also found a strong negative co-relationship between aged people and access to healthcare services. Domestic or intra-bound medical tourism denotes a situation where the healthcare consumers of a country cross the border of states within their country to access better healthcare facilities. The domestic or intra-bound medical tourism has been expanding since ancient times in third-world countries like India, Malaysia, China and Thailand, (Cohen, 2010). This deportment of patients, within their jurisdictional territory, is often cited as domestic medical tourism. Domestic medical tourist constitutes the major segment of medical travel of developing countries which is shadowed under limelight of international medical tourism. This segment of tourists ate most neglected dimensions of medical tourism research (Hudson & Li, 2012).

Travel motivations

In link with the international medical tourism, several studies have been conducted to identify and interpret the travel motivation driving international medical tourism, for instances, (Glinos, Baeten, Helble, & Maarse, 2010) identified that people from any country travel to other countries by checking the quality of treatment, advanced medical types of equipment and technology, the reputation of hospitals, specialist doctors which have been adequately unavailable in their own regions. Ye, Qiu & Yuen (2011) conducted a study for analyzing the reason for the migration of inbound Chinese patients in Hong Kong. Qualitative techniques have been used for this research. The rigidity of the 'one child' rule in China, good fame in quality of treatment, and opportunities of living in Hong Kong were the major attractive factors for moving inbound Chinese patients to Hong Kong. The study also identified some negative and positive feedback of involvement from the migrating patients. Yu & Ko (2012) tried to identify the major motivating factors for patients on medical tourism of three Asian neighboring countries and analysis the prospects of medical tourism based on comparing these different nations. Data was collected by a head-on interview from migrant patients of three countries. Total respondents were around one thousand and the duration of the survey was two months. The major segment of data was collected from patients from Korea than Japan and China. In the end, the study suggested that this view may be applied only in micro-scale studies. Yeoh, Othman & Ahmad (2013) were measure the statistical characterizing of outbound medical tourists in Malaysia. Group samples have been used from some important hospitals in the country. The respondents' age more than eighteen has only been included in the sample. This study found most of the patients were from Indonesia and Singapore and they spend one week with accompany. The migrants were attracted to this country for mainly bone, eye, and heart treatment. (Jaapar, Musa, Moghavvem, & Saub, 2017) attempted to measure the motivation and satisfaction of inbound dental medical tourists in Malaysia. Most of the inbound medical tourists arrived from Europe, Australia, Southeast Asia and New Zealand. They found that quality of healthcare, information access, and cost-effective treatments were the major motivating factors for the inbound dental medical tourists. Tham (2018) evaluated the role and influence of numerous stakeholders in intra-bound healthcare tourism in the Sunshine Coast in Australia. The study found some obstructions to the improvement of the tourism industry. These were inaccessibility of health care facilities for inhabitants, poor understanding, and aggressive behavior of medical staff. Push and pull theory are a very popular and applicable models for medical tourists to choose a travel destination (John & Larke, 2016). Push factors have been driven by the psychological strength of medical tourists. But, pull factors have been controlled by the external attractive features of the destination place (Walker & Walker, 2010). A very few studies have been applied by the push-pull model in domestic medical tourism research; especially no such studies are available on Southeast Asian developing countries. This study aims to test the suitability of the push and pull model of medical tourists on domestic medical tourist travel motivation.

Research Aim and Objectives

The main aim and objective of this study are to understand the nature of domestic medical tourism in India. To achieve this great purpose, we have framed the main thing separately for three objectives. First, to examine the socio-demographic characteristics of north-eastern domestic medical tourists visited in Tamil Nadu. Second to analyze the push and pull motivation factors for determine travel destination choice among the NER domestic medical tourist. Third, to evaluate the travel experience of NER domestic medical tourists visited in Tamil Nadu.

Methodology

Sample Points

In this study, we have selected three major hospitals i.e. Apollo Hospitals Chennai, Christian Medical College, Vellore, and Sri Narayani Hospital & Research Centre, Vellore as the sample points where patients visit for access better treatment opportunities from NER.

Table2: Sample points of NER domestic medical tourists in Tamil Nadu

	Christian Medical College, Vellore	Apollo Hospital, Chennai	Sri Narayani Hospital & Research Centre, Sripuram
Website	https://clin.cmcvellore.ac.in	https://chennai.apollohospitals.com	https://www.narayanihospital.com
Establishment year	1900	1983	2005
Beds	3000	560	300
Accreditation	NABH	JCI	NABH

Survey Instrument

Being an ethnographic study, we adopted quantitative questionnaire survey items from John & Larke, (2016) to develop a better measuring of push and pull motivation factors of north-eastern domestic medical tourists visiting Tamil Nadu. We have divided our measures of motivation into two groups as suggested by the Push and Pull theory. In this regard, the motivation and experience items were measured on 10 points Likert scale where 1 was mentioned as very low and 10 was mentioned as extremely high satisfaction value. The survey instrument has been developed by a three-round Delphi study. Consent letters, questionnaires were emailed to various medical tourism experts in three stages to verify and examine the motivation and satisfaction items of domestic medical tourists. From the recommendation of the experts, some items were removed and some were added. Finally, seven push and ten pull motivation items have been considered to

the questionnaire for collecting responses (Table 3). The questionnaire has been prepared in English only.

Table 3: Push and Pull motivation factors for NER domestic medical tourists in Tamil Nadu

Push motivation factors	Pull motivation factors
Referred and recommended by doctors/ relatives.	Cost-effective treatment
Medical insurance	Service quality access from hospitals
Expertise of doctors	Quality of non-clinical services
Quality of medical treatment care	Accommodation near hospitals
Consultation before treatments	Hospital accreditation
Consultation after treatments	Short waiting time for treatment
Geographical proximity	Websites of Hospitals
	Cultural characteristics of the destination place
	Patients rights
	Quick reply by hospital workers

Sample

The study has adopted a cross-sectional observation study design where a total of 110 responses were face-to-face interviews from May 2019 to June 2019. The responses were recorded from three major hospitals i.e. Apollo Hospitals Chennai, Christian Medical College, Vellore, Sri Narayani Hospital & Research Centre in Tamil Nadu. The survey was conducted in hospital premises, restaurants, medicine shops, tea stalls, cafeteria, hotels, guest houses, and local market places. Data coded and analysis has been done by SPSS, version 24. Descriptive statistics and Exploratory Factors Analysis (EFA) techniques have been applied for this quantitative study.

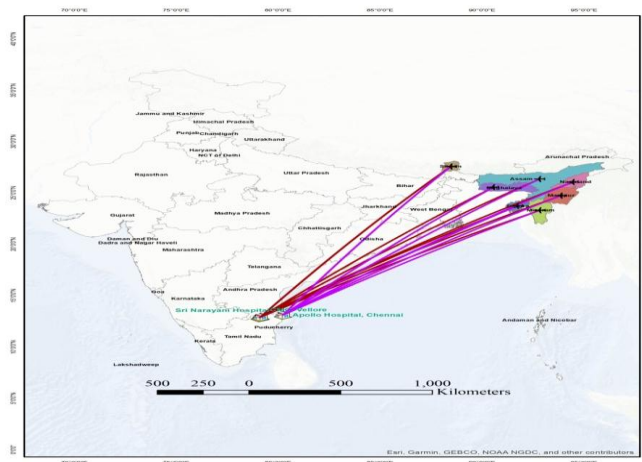


Figure 1: Domestic medical tourists flow from North-East states to south India.

Findings

Socio-Demographic Characteristics

Descriptive statistics from north-eastern medical (Table-4) states that, during the time of May 2019 to June 2019, these three hospitals in Tamil Nadu received domestic healthcare consumers from seven states of North East India (except Arunachal Pradesh). Most of the patients from NER visiting from Tripura states (29.1%) and minimum (3.6%) found from Meghalaya state, where 56.4% of patients arrange their trip with accompany and 43.6% of respondents have organized self trip. The mean age of this population was 41 years where male respondents were 63.6% and females were 36.34%. The middle-aged (age group 31-45) and upper-middle- aged (age group 46-59) respondents have occupied the major share of this study. Hence, 62% of graduate and postgraduate literate persons have been engaged in this activity. It is also found that 30.9% of government employees among the maximum of male respondents and 19% of housewives among the female respondents have been attached to this medical trip. The north-eastern medical tourists have a good ability to understand and speak English and Hindi but were not very comfortable with the local Tamil language.

Table 4: Socio-Demographic profile of North-Eastern medical tourist in Tamil Nadu (N=110)

State of Origin	N	Share in %
Tripura	32	29.1
Sikkim	23	20.9
Mizoram	18	16.4
Manipur	13	11.8
Nagaland	13	11.8
Assam	7	6.4
Meghalaya	4	3.6
Respondents (N=110)	N	Share in %
Patient	48	43.6
Accompanied with patients	62	56.4
Total	110	100.00
Age Group (N=110; Mean= 41.45 years; SD= 13.21 years.	Male (N=70, 63.6%)	Female (N=40, 36.4%)
Young Aged (19-30)	16 (22.86)	13 (32.5)
Middle Aged (31-45)	26 (37.14)	15 (37.5)
Upper Middle-Aged (46-59)	16 (22.86)	10 (25.0)
Senior Aged (Above 60)	12 (17.14)	2 (5.0)
Level of Education	N	Share in %
Primary	2	1.8
Junior Secondary	4	3.6
Secondary	11	10.0
Higher Secondary	21	19.1
Graduation	45	40.9

Post-Graduation	23	20.9
M.Phil/Ph.D	4	3.6
Occupation	N	Share in %
Government Employee	34	30.9
House Wife	21	19.1
Business	12	10.9
Private Sector Employee	9	8.2
Student	9	8.2
Farmer	7	6.4
Others	18	16.4
Lingual Capacity	N	Share in %
Cannot speak or understand Hindi	9	8.2
Can speak or understand Hindi	101	91.8
Cannot speak or understand English	32	29.1
Can speak or understand English	78	70.9
Cannot speak or understand local language Tamil	105	95.5
Can speak or understand local language Tamil	5	4.5

Trip Profile

Referring to Table-5, the study found that 60% of north-eastern medical tourists have first visitors and 40% of them repeated visitors where most of them (58.2%) spend less than 14 days in Tamil Nadu. The major reasons to select these hospitals were the word of mouth recommendation by friends, family, colleagues (40.9%), referred by doctors in home residence (29.1%), and information found from the internet (26.4%). About 75.5% of self-financial where 20% of insurance covered, 2.7% of charitable agencies, and 1.8% of government-sponsored medical trips arranged by NER medical tourists in Tamil Nadu. We found 57.3% of Patients from Christian Medical College, Vellore, and 30.9% from Apollo Hospital, Chennai, and 11.8% from Sri Narayani Hospital & Research Centre from May 2019 to June 2019. (Table-6) The mean expenditure was INR 270663.64 (SD=INR 369030.848) ranging from INR 15000.00 to INR 1500000.00 for NER medical consumers in Tamil Nadu. Cardiac treatment sought by 20% of north-eastern medical consumers was charged from INR 0.00 to INR 1000000.00. The highest expenditure mean value was INR 527307.69 (SD = INR 652286.413) found from Gastroenterology departments where an expensive liver transplant case was associated in Apollo Hospital, Chennai. 14.55% of NER medical tourists claimed by cancer patients, mean expenditure was INR 505312.50 (SD = INR 326473.423). More than 7% of north-eastern medical tourists sought renal care treatment, kidney transplant, pre, and post nephrology care treatment procedures and spent around INR 0.00 to more than INR 1000000.00. A wide variation expenditure pattern was identified among the north-eastern medical tourists based on their states of origin (Table-7). A one-way analysis of variance (ANOVA) test between groups has been conducted to explore the nature of the difference in north-eastern domestic medical tourists based on their states of origin. Statistically, a significant result found differences at $p < 0.001$ level in expenditure based on NER medical tourists state of origin [$F(6,103) = 6.925$, $p < 0.001$]. The mean north eastern domestic tourists expenditure by the state of Meghalaya (M= INR 565000.00, SD= INR 498898.787), Sikkim (M= INR 493478.26, SD= INR

453778.167) and Mizoram (M= INR 427777.78, SD= INR 403069.919) were significantly high compared with other NER states (Table-8).

Table 5: Trip profile of North-Eastern medical tourist in Tamil Nadu (N=110)

Number of days spent	N	Share in %
Less than 14 days	64	58.2
15-30 days	43	39.1
31-180 days	3	2.7
Visit Tamil Nadu for the medical trip	N	Share in %
Repeat visitation	44	40.0
First visit to the destination hospital	66	60.0
Source of Information about a particular hospital	N	Share in %
Friends/Family members/Colleagues	45	40.9
Doctors or Hospitals of the Home State	32	29.1
State Government	4	3.6
Internet	29	26.4
Source of Finance	N	Share in %
Self Financed	83	75.5
Government-Sponsored	2	1.8
Insurance Cover	22	20.0
Charitable Agency	3	2.7
Enjoyed local sight-seeing or tourism	N	Share in %
No	55	50.0
Yes	55	50.0
Medical Destination	N	Share in %
Christian Medical College	63	57.3
Apollo Hospitals Chennai	34	30.9
Sri Narayani Hospital & Research Centre	13	11.8
Medical treatment	N	Share in %
Cardiology	22	20.0
Oncology	16	14.5
Orthopaedics	16	14.5
Gastroenterologist	13	11.8
Neurology	9	8.2
Nephrology	8	7.3
General Medicine	7	6.4
Gynaecology	6	5.5
Urology	5	4.5
Dental	3	2.7
Ophthalmology	3	2.7
Paediatrics	1	0.9
Others	1	0.9

Table 6: NER domestic medical tourists expenditure (Treatment wise expenditure in INR and share in (%) within treatment group)

Medical Treatments	INR 0.00-50000 (%)	INR 50001-100000 (%)	INR 100001-250000 (%)	INR 250001-500000 (%)	INR 500001-1000000 (%)	Above INR 1000001 (%)	Mean (INR)	SD (INR)
Cardiology (N=22, 20%)	6 (27.27 %)	4 (18.18 %)	5 (22.73 %)	5 (22.73%)	2 (9.09%)	0	231590.91	233469.619
Orthopaedic (N=16, 14.55%)	8 (50%)	4 (25%)	3 (18.75 %)	0	1 (6.25%)	0	132187.50	237311.109
Oncology (N=16, 14.55%)	1 (6.25%)	2 (12.5%)	1 (6.25%)	7 (43.75%)	4 (25%)	1 (6.25%)	505312.50	326473.423
Gastroenterology (N=13, 11.82%)	5 (38.46 %)	2 (15.38 %)	1 (7.69%)	0	1 (7.69%)	4 (30.77%)	527307.69	652286.413
Neurology (N=9, 8.18%)	3 (33.33 %)	2 (22.22 %)	1 (11.11 %)	3 (33.33%)	0	0	172222.22	160995.169
Nephrology (N=8, 7.27%)	2 (25%)	2 (25%)	1 (12.5%)	0	1 (12.5%)	2 (25%)	467500.00	580461.639
General Medicine (N=7, 6.36%)	6 (85.71 %)	1 (14.29 %)	0	0	0	0	36142.86	23111.531
Gynaecology (N=6, 5.45%)	2 (33.33 %)	1 (16.67 %)	2 (33.33 %)	1 (16.67%)	0	0	130833.33	106321.055
Urology (N=5, 4.55%)	3 (60%)	1 (20%)	0	1 (20%)	0	0	115000.00	160234.204
Dental (N=3, 2.73%)	2 (66.67 %)	0	1 (33.33 %)	0	0	0	73333.33	68068.593
Ophthalmology (N=3, 2.73%)	1 (33.33 %)	1 (33.33 %)	0	1 (33.33%)	0	0	143333.33	136503.968
Paediatrics (N=1, 0.91%)	1 (100%)	0	0	0	0	0	20000.00	
Others (N=1, 0.91%)	1 (100%)	0	0	0	0	0	50000.00	
Total (N=110, 100%)	41 (37.27 %)	20 (18.18 %)	15 (13.64 %)	18 (16.36%)	9 (8.18%)	7 (6.36%)	270663.64	369030.848
	N	Range	Minimum	Maximum	Sum	Mean	Std. Deviation	Variance
Expenditure (INR)	110	1485000	15000	1500000	29773000	270663.64	369030.848	136183766555.463

Table 7: Result of ANOVA test- North-eastern medical tourist spending on the state of residence (Dependent variable: Total expenditure in INR).

ANOVA					
Total Expenditure in INR					
	Sum of Squares	df	Mean Square	F	Si g.
Between Groups	4266826429578.630	6	711137738263.106	6.925	0.000
Within Groups	10577204124966.800	103	102691302184.144		
Total	14844030554545.500	109			

Table 8: Descriptive statistics of the NER domestic medical tourist spending on the state of residence (Dependent variable: Total expenditure in INR)

State	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Meghalaya	4	565000.00	498898.787	249449.394	-228859.30	1358859.30	60000	1200000
Sikkim	23	493478.26	453778.167	94619.289	297249.87	689706.66	60000	1500000
Mizoram	18	427777.78	403069.919	95004.491	227335.82	628219.73	50000	1500000
Nagaland	13	376923.08	431883.175	119782.841	115938.69	637907.47	40000	1500000
Assam	7	154285.71	182834.820	69105.066	-14808.29	323379.72	20000	500000
Manipur	13	67923.08	64886.390	17996.247	28712.62	107133.53	18000	250000
Tripura	32	50000.00	39797.876	7035.337	35651.34	64348.66	15000	200000
Total	110	270663.64	369030.848	35185.711	200926.70	340400.57	15000	1500000

Major Motivation factors for destination choice of NER patients in Tamil Nadu

A total of 17 motivation factors (Push-7 and Pull-10) have been tested for the reliability of variables by using Cronbach's Alpha and there was a significant result ($\alpha = 0.714$). Also, all travel motivation factors were measured above 0.50 (Except accommodation near hospitals and short waiting time for treatment). Quality of medical treatment care (Mean- 9.66, SD- 0.76), the expertise of doctors (Mean- 9.50, SD-0.91), referred and recommendation by doctors/ relatives (Mean- 9.33, SD-1.45), consultation before treatments (Mean-9.25, SD-1.04) and

consultation after treatments (Mean-8.89, SD-1.42) were scored high among the 7 push motivation factors. Surprisingly, medical insurance (Mean-4.69, SD-3.78) and geographical proximity (Mean-4.55, SD-1.96) have considered the very low push motivation factors for north-eastern domestic medical tourists in Tamil Nadu.

Conversely, among the 10 pull motivation factors, quick reply by hospital workers (Mean-8.43, SD-1.50), service quality access from hospitals (Mean-8.39, SD-1.55), websites of hospitals (Mean-8.26, SD-1.89), and hospital accreditation (Mean-8.25, SD-1.60) were scored the high pull motivation values. Short waiting time for treatment (Mean-7.90, SD-2.37), quality of non-clinical services (Mean-7.67, SD-1.52), cultural characteristics of destination place (Mean-7.57, SD-1.90), and accommodation near hospitals (Mean-7.44, SD-1.94) were considered for medium pull motivation factors. Cost-effective treatment (Mean-6.65, SD-2.81) and patient's rights (Mean-6.56, SD-2.66) were the lowest pull motivation factors for north-eastern domestic medical tourists in Tamil Nadu (Table 9).

Table 9: Major Motivation (Push & Pull) factors for destination choice of NER patients visited in Tamil Nadu.

Attributes of Motivation N=110, Cronbach's Alpha Based on Standardized Items=0.714	Mean	Std. Deviation	EFA Factor Loadings
Push motivation factors			
Referred and recommended by doctors/ relatives.	9.33	1.453	0.543
Medical insurance	4.69	3.775	0.561
Expertise of doctors	9.50	0.906	0.851
Quality of medical treatment care	9.66	0.758	0.747
Consultation before treatments	9.25	1.035	0.758
Consultation after treatments	8.89	1.423	0.787
Geographical proximity	4.55	1.985	0.806
Pull motivation factors	Mean	Std. Deviation	EFA Factor Loadings
Cost-effective treatment	6.65	2.814	0.797
Service quality access from hospitals	8.39	1.551	0.810
Quality of non-clinical services	7.67	1.521	0.573
Accommodation near hospitals	7.44	1.942	0.469
Hospital accreditation	8.25	1.604	0.753
Short waiting time for treatment	7.90	2.365	0.433
Websites of Hospitals	8.26	1.890	0.676
Cultural characteristics of the destination place	7.57	1.903	0.706
Patients rights	6.56	2.656	0.718
Quick reply by hospital workers	8.43	1.499	0.515

Measuring the experiences of NER medical tourists in Tamil Nadu

After running factor analysis, we have found four major satisfaction factors. These were experience with chief medical services, experience with culture and tourism, experience with non-clinical services, experience with communication skills. Experience with chief medical services (Mean- 42.37, SD-7.22) was the highest

satisfaction factor assigned with five satisfaction items, where the quality of medical procedure and expertise of doctors and paramedical staff were the major satisfaction value received from the NER respondents. Experience with culture and tourism (Mean- 38.19, SD-6.36) was positioning the second highest satisfaction factors which assigned with five satisfaction items, where comfortable and affordable accommodation facilities near hospitals, proper arrangement of whole treatment care by the provider and local culture, locals surrounding hospitals were the major satisfaction value. Non-clinical services (Mean-32.45, SD-3.91) were performing to the third-highest satisfaction factors which were associated with four satisfaction items, where additional healthcare facilities by hospitals and swift and transparent billing were the major satisfaction value. Communication skill (Mean- 38.19, SD-6.36) was the final and lowest satisfaction factor which was assigned with three satisfaction items, where linguist abilities of doctors and nurses and coordination between different wards and departments were the major satisfaction value (Table-10).

Table 10: Measuring the experiences of NER medical tourists in Tamil Nadu.

Attributes of experience N=110, Cronbach's Alpha Based on Standardized Items=0.870	Mean	Std. Deviation	EFA Factor loadings
Experience with chief medical services	42.37	7.22	
Low cost of medical treatment received	7.48	2.643	0.784
Quality of medical procedures received	9.04	1.520	0.770
The expertise of doctors and paramedical staff	9.01	1.529	0.748
Helpful and delightful daily care staff	8.63	1.426	0.671
Overall satisfaction level	8.22	1.913	0.572
Experience with culture & tourism	38.19	6.36	
Comfortable and affordable accommodation facilities near hospitals	7.90	1.591	0.517
Proper arrangement of whole treatment care by provider	7.84	1.443	0.704
Experience with connectivity	7.23	1.821	0.636
Local culture, locals surrounding hospitals	7.80	1.531	0.738
Local sightseeing and tourism opportunities	7.43	2.332	0.681
Experienced with non-clinical services	32.45	3.91	
Good food quality	7.88	1.635	0.486
Additional healthcare facilities by hospitals	8.80	1.312	0.686
Well designed websites	7.78	1.644	0.693
Swift and transparent billing	7.99	1.351	0.366
Communication skill	25.21	3.20	
Coordination between different wards and department	8.55	1.325	0.506
Linguist abilities of doctors and nurses	8.65	1.379	0.703
Linguist abilities of non-medical staff for communication	8.02	1.574	0.822

Conclusion

The nature, trend, and demand of domestic medical tourists in India are differing from various states. Residents from north-eastern India, mainly travel to different parts in the country to seek healthcare accessibility. From the travel motivation analysis of north-eastern domestic medical tourists, it has been observed that geographical proximity (Rai, 2019) and medical insurance (Crooks et al., 2013) were not considered as major push motivation factors for choosing their medical destination. But, quality of medical treatment care (Wu & Li, 2016), expertise of doctors, referred and recommendation by doctors/ relatives (Yeoh, Othman, & Ahmad, 2013), consultation before and after treatments have been performed as the exclusive push factors for determine the medical care destination (Walker & Walker, 2010). The north-eastern domestic medical tourists were also attracted and motivated by the striking attributes of medical destinations. They were pulling highly motivated by a quick reply by hospital workers, service quality access from hospitals, websites of hospitals, and hospital accreditation (Singh, 2012). Minimum waiting time for treatment (Johnston, Crooks, & Snyder, 2012), quality of non-clinical services (Turner, 2013), cultural characteristics of the destination place, and accommodation near hospitals were considered for medium pull motivation factors. Cost-effective treatment (Wu & Li, 2016) and patient's rights were the lowest pull motivation factors for north-eastern domestic medical tourists in Tamil Nadu. The north-eastern intra-regional health consumers were more satisfied with chief medical services, culture and tourism, non-clinical services and less satisfied with communication skills at the three major hospitals in Tamil Nadu. Such incidents are severely influencing domestic tourism as well as the domestic medical tourism industry in India. But surprisingly, this important issue has not yet been highlighted in that way of academia (Hudson & Li, 2012). In this case, this study will be the first attempt to explore the hidden impact of this emerging issue and highlight its importance on healthcare sectors as well as the tourism industry. The study has some limitations; firstly, the samples were taken from only three hospitals. If samples were collected from some more hospitals in Tamil Nadu, then the significance of the study would have been more justified. Secondly, face-to-face patients' interviews have been taken in one-month duration only. Domestic medical tourists flow trend through annually (all season) could not be measured by this short time surveyed duration. Thirdly, the sample size was not so large. It was not adequate to evaluate any perception study accurately. This study has been recommended for further investigation to conduct a perception study in Kolkata which is close to their geographical location from NER and compare a study between these two medical destinations for north-eastern domestic medical tourists.

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