



DOES INCOME OF PEOPLE AND TECHNOLOGY INFLUENCE MEDICAL TOURISM POTENTIALITIES? AN EMPIRICAL STUDY ON PERCEPTION OF PEOPLE IN SILIGURI (W.B., INDIA)

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ABSTRACT :

Medical Tourism sector is considered to lead the Indian success story after Information Technology. Medical Tourism is new format of tourism market. A travel industry that has remained unaffected irrespective of global economic slowdown is Medical Tourism. Today only Thailand precedes India in world ranking as medical tourism destination. India's share in the global medical tourism industry was around 3 per cent by the end of 2013 and has reached to 18% by the end of 2017. The Indian health care industry is destined to grow rapidly following the mammoth Indian population growth, reduced mortality rate and the feature of low cost quality services with a repository of tourist destinations. According to Josef Woodman, the CEO of U.S. based medical travel consumer guide 'Patients Beyond Borders (PBB)', the world medical tourism market is accounting a growth rate of 25-35 percent per year. It is expected to become a USD 280 billion industry by 2022 with an annual growth rate of average 30 per cent which currently accounting for 13 per cent. Further, globalization and resulting trade liberalization in health services have caused an upsurge in cross-border flows of health care professionals creating scope for Indian players in abroad too. The General Agreement on Trade in Services (GATS) signed as a part of World Trade Organisation (WTO) agreement also paved the opportunities for member countries like India to explore new markets in health services by further liberalizing trade in services. Siliguri is the gateway to north-eastern India and shares its border with Bangladesh, Bhutan, China, and Nepal. It is a very important trading hub of North-Bengal and popularly known as Chicken-Neck of India. The Tea, Timber, and Tourism are three main sources of income for the people in Siliguri. Thus, there are two implications of this research, one being economic implication whereby the concerned hospitals and auxiliary institutions get economically benefitted by the tourist which put impact also on the tourism sector. The other social implication is that whether the accessibility and affordability of medical services in Siliguri are satisfactory from the consumers' point of view. This paper seek to explore the perception of Siliguri people about Medical Tourism potentialities in Siliguri and also to suggest some measures to policy makers for augmenting the growth rate of this industry on a sustainable basis.

KEYWORDS : Indian health care industry, mammoth population growth, reduced mortality rate, trade liberalisation in services, chicken neck of India, hospitals and auxiliary institutions, sustainable growth.

INTRODUCTION

In the era of globalisation when men, materials and money are flowing freely across the border, the optimal utilization of resources to combat global competition has become an essence for every economy, irrespective of its nature. It does not claim any prudence to mention the service sector after technology, as the driving force of global cooperation as well as competition. Within the service sector

tourism has evolved into as an ever encompassing socio-economic phenomenon, including in the countries like India. Medical Tourism is a new form of a niche tourism market in service sector. A travel industry that has remained unaffected irrespective of global economic slowdown is Medical Tourism.

The words "Medical Tourism" include both, a travel activity as well as a medical procedure focusing on wellbeing of the tourists. Bookman & Bookman (2007) have proposed the medical tourism as an outbound travel activity to improve health condition and also creating economic trading activity and thus, representing two sectors: medicine and tourism. Connel (2006) has described medical tourism as an overseas travel mass culture with the aim to avail health care services and the opportunity to visit the tourist spots of that country. Many authors have defined 'medical tourism' in different terms and from different perspectives which have been supported by their research objectives. Since tourism is associated with 'mobility', the term 'medical tourism' is essentially comprised of both, medical treatment and mobility. Accordingly, medical tourism may be defined as **the outbound mobility of people seeking health improvement and creating economic activities of services.**

Why Medical Tourism is gaining momentum in India?

Medical Tourism sector is considered to lead the Indian success story after Information Technology. Today only Thailand precedes India in world ranking as medical tourism destination. The top ten destinations for medical tourism include Thailand, India, Singapore, Turkey, Brazil, Israel, Costa Rica, Taiwan, Korea and Mexico. According to a report by The Federation of Indian Chambers of Commerce and Industry (FICCI) and IMS Health (IMS Health is an American company that provides information, services and technology for the healthcare industry), India has nearly 18% of the global medical tourism market. In the sense, the medical value travel (MVT) was pegged at \$ 3 billion in the year 2015 and is estimated to grow at a CAGR (Compound Annual Growth rate) of 15%. Keeping in line, the IMS Health expects the India's medical tourism industry to be worth \$9 billion by 2020 sharing 20% of the global market share. The report even pointed out that India enjoyed high credibility in wellness, prevention, and alternative medicines.

Cost Comparison of Medical Treatments: India Vs the World

Treatment Cost Comparison							
Procedures	US (\$)	Costa Rica (\$)	India (\$)	Korea (\$)	Mexico (\$)	Thailand (\$)	Malaysia (\$)
Heart Bypass	\$144,000	\$25,000	\$5,200	\$28,900	\$27,000	\$15,121	\$11,430
Angioplasty	\$57,000	\$13,000	\$3,300	\$15,200	\$12,500	\$3,788	\$5,430
Heart Valve Replacement	\$170,000	\$30,000	\$5,500	\$43,500	\$18,000	\$21,212	\$10,580
Hip Replacement	\$50,000	\$12,500	\$7,000	\$14,120	\$13,000	\$7,879	\$7,500
Hip Resurfacing	\$50,000	\$12,500	\$7,000	\$15,600	\$15,000	\$15,152	\$12,350
Knee Replacement	\$50,000	\$11,500	\$6,200	\$19,800	\$12,000	\$12,297	\$7,000
Spinal Fusion	\$100,000	\$11,500	\$6,500	\$15,400	\$12,000	\$9,091	\$6,000
Dental Implant	\$2,800	\$900	\$1,000	\$4,200	\$1,800	\$3,636	\$345
Lap Band	\$30,000	\$8,500	\$3,000	N/A	\$6,500	\$11,515	N/A
Breast Implants	\$10,000	\$3,800	\$3,500	\$12,500	\$3,500	\$2,727	N/A
Rhinoplasty	\$8,000	\$4,500	\$4,000	\$5,000	\$3,500	\$3,901	\$1,293
Face Lift	\$15,000	\$6,000	\$4,000	\$15,300	\$4,900	\$3,697	\$3,440
Hysterectomy	\$15,000	\$5,700	\$2,500	\$11,000	\$5,800	\$2,727	\$5,250
Gastric Sleeve	\$28,700	\$10,500	\$5,000	N/A	\$9,995	\$13,636	N/A
Gastric Bypass	\$32,972	\$12,500	\$5,000	N/A	\$10,950	\$16,667	\$9,450

Liposuction	\$9,000	\$3,900	\$2,800	N/A	\$2,800	\$2,303	\$2,299
Tummy Tuck	\$9,750	\$5,300	\$3,000	N/A	\$4,025	\$5,000	N/A
Lasik (both eyes)	\$4,400	\$1,800	\$500	\$6,000	\$1,995	\$1,818	\$477
Cornea (both eyes)	N/A	\$4,200	N/A	\$7,000	N/A	\$1,800	N/A
Retina	N/A	\$4,500	\$850	\$10,200	\$3,500	\$4,242	\$3,000
IVF Treatment	N/A	\$2,800	\$3,250	\$2,180	\$3,950	\$9,091	\$3,819

Source: <http://www.indiaprofile.com/medical-tourism/cost-comparison.html>, 2017

When we talk about cost effective treatments in comparison with other countries, India is unparalleled. Especially the differences are remarkable among US, UK and South Asian Countries. Besides, the waiting time is almost nil in Indian case. According to the statistics released by The American Medical Association (AMA), a knee replacement surgery would cost \$50,000 in US, \$12,297 in Thailand and \$19,800 in Korea, while the same surgery would cost the person \$6200 in India. That gives India a certain brink in terms of reasonable medical treatments. In addition, Indian doctors are renowned all over the world for their prowess and skills.

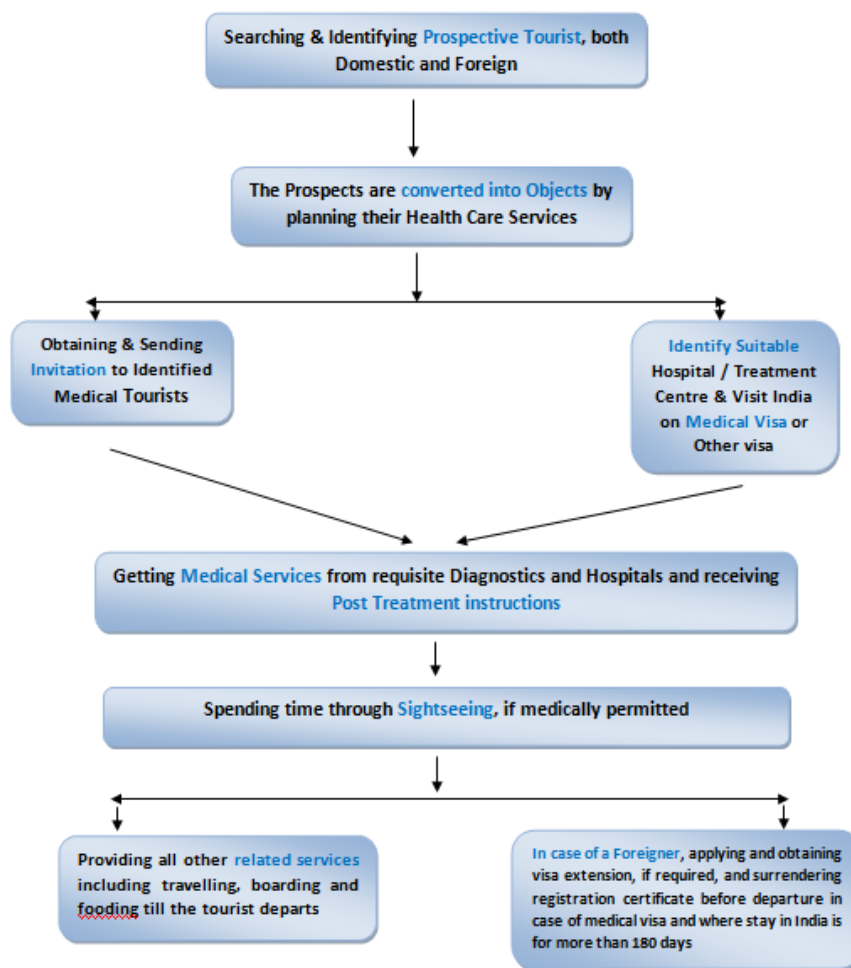
India is the repository of almost all types of medical treatments which is either not available or people cannot afford it in their home station or country. The major factors which make India an ideal medical tourism spot may be summarized as:

- The cost of treatment is low as compared to the developed countries like US and UK.
- Obtaining medical visas has become much easier than before.
- Foreign medical tourists are mainly attracted for immediate services. Surgeries are done almost immediately.
- World-class and standardized medical services with updated technology are the USP of Indian medical tourism sector.
- Post re-treatment recovery provided to the patients with therapies like Ayurveda, Naturopathy and Yoga.
- Besides world standard medical services, India provides the most captivating tourist spots to medical tourists.
- Qualified and skilled doctors with good number of English speaking guides and medical staff are the added advantages for Indian medical tourism sector.

The Medical Tourism Process:

Medical tourism usually refers to the idea of middle-class or wealthy individuals going outstation or abroad in search of effective and low cost treatment. The medical tourism industry falls under the tertiary sector and it starts with searching and identifying the prospective tourists, both domestic and foreign, to get medical service in India. At the second stage prospects are converted into objects by planning their healthcare services. In the third stage, the invitation goes to the identified medical tourists. In case the tourist is a foreign patient, then helping hands are extended to get medical visa or other visa to visit India, only after identifying the suitable hospital or treatment centre. Getting medical services from requisite diagnostics and hospital, receiving post treatment instructions are elements of next stage in the process. Spending time through sightseeing, if medically permitted and providing all other related services including travelling, boarding and fooding till the tourist departs are included in the next stage. If the tourist is a foreigner then applying and obtaining visa extension, if required, surrendering registration certificate before departure in the case of medical visa and where stay in India is for more than 180 days.

The Medical Tourism Process in India



REVIEW OF LITERATURE:

The term Medical Tourism manifest the activity of travelling outside from the home town, may be abroad, to obtain medical, dental, surgical, and wellness care. Perhaps Lefever (1926) was has applied mechanical and mathematical tools to solve social problems regarding geographical location on health services for the first time in history. Though many scholars from different field have addressed the problems related to health services in different time arena, since 1970, social and medical anthropologists applied their knowledge and concentrated to patients' relative position and perceptions about illness and medicine to study how patients consume the sick role, how they perceive the causes of their condition and make choices regarding different kind of health care (Herzlich and Pierret, 1985). In addition to its regular tourist amenities, when a country attempt to attract tourists by deliberately promoting its health care services and facilities, it is said that the country has resorted to medical tourism (Goodrich & Goodrich, 1987). Laws (1996) has explained how the different form of other tourism services encompasses the medical tourism. Connell (2006) Carrera and Bridges (2006) have emphasized on the concept of travelling outside the home town to avail both physical and mental health services and facilities while defining the term medical tourism. Bookman & Bookman (2007), in their book have pointed out that the western patients increasingly travelling to developing countries for medical services at economic costs with best skills. Billie Ann Brotman (2010) has classified three types of medical tourism- Outbound, Inbound and Intrabound while examining demand factors for sophisticated medical treatments offered by private hospitals operating in India. He has concluded that the increased profitability and positive growth trends by private hospital chains can be attributed to

rising domestic income levels within India. Sack, C., Scherag A., Lütkes, P., Günther, W., Jöckel, K., H., & Holtmann, G., (2011) in their article have established relationship between patient satisfaction and accreditation status. Their article reveals that the countries believe a positive influence of accreditation on quality of care and patients satisfaction, are making the accreditation compulsory for hospitals. Their research work sustained the notion that hospital accreditation may represent a step towards total quality management, but may not be a key factor to influence the patient's willingness to recommend.

IMPORTANCE OF THE STUDY:

Asia itself generates revenues in billions and consists of 12.7 per cent of the global market. The Indian health care industry is destined to grow rapidly following mammoth Indian population growth and is expected to become a USD 280 billion industry by 2022. The world medical tourism market is growing at a rate of 25-35 per cent. Further, globalization and resulting trade liberalisation in health services have caused an upsurge in cross-border flows of health care professionals in recent years. Greater openness has created new opportunities for these professionals. The General Agreement on Trade in Services (GATS) signed as a part of World Trade Organisation (WTO) agreement has also paved the opportunities for member countries to explore new markets in health services by further liberalizing trade in services. The advantages according to industry analysts, for India in this sector, are numerous and still remain to be tapped. According to Varsha Lafargue, the founder of IMTCA, the medical tourism industry in India has a potential to contribute around 25 per cent in the country's GDP over the next five years if the potential will be fully tapped. She pointed out that medical tourism has become a major source of national income in many countries such as Israel and Jordan, where Jordan gets 5 per cent of its GDP from medical tourism and Israel gets in a double-digit number.

Tourism in the hills of Darjeeling and Siliguri is expected to get a leg up with the Gorkhaland Territorial Administration (GTA) planning to spend more than Rs 200 crore to build tourism-related infrastructure in the area. The GTA administers the Darjeeling Sadar subdivision, Kalimpong subdivision, Kurseong subdivision and parts of Siliguri. However, to churn the best return out of this positive trend, all the retardants must be kept out of way. Road connectivity to Darjeeling as well as Sikkim, both are now in difficult status due to landslides. At the same time, gradually thickening of fresh political clouds over Darjeeling on separate statehood demand is another concern. Siliguri is the gateway to north-eastern India and shares its border with Bangladesh, Bhutan, China, and Nepal. It is a very important trading hub of North-Bengal and popularly known as Chicken-Neck of India. Thus, this research is expected to contribute significantly to the socio-economic condition of the trading hub of North-Bengal as well as to the niche tourism market of north-eastern India.

OBJECTIVES OF THE STUDY:

The aim of this empirical study is to explore opportunities, discuss the issues and contributing in designing the suitable strategies for developing medical tourism in Siliguri (West Bengal, India). Broadly the objectives of this study are:

1. To explore the potential of Medical Tourism industry in Siliguri (West Bengal, India).
2. To know whether the income level of medical tourists influence the affordability of medical treatments in Siliguri.
3. To know whether the technology used for medical treatments in Siliguri are satisfactory from the respondents' point of view.
4. To examine the role of Government in promoting medical tourism and medical tourist inflow.

RESEARCH METHODOLOGY:

The research work is a descriptive study based on literature reviewed, secondary data available and the first hand data collected by the researcher himself through scheduling through a well designed questionnaire. Given the Siliguri population 7, 05, 579 (Census India 2011) with 95% confidence level and confidence interval of 8, the total number of people interviewed were 150. But excluding

insignificant responses the sample size stuck to 101. Simple non-parametric and descriptive statistics like chi-square tests are used to draw inferences from tabulated data.

RESEARCH HYPOTHESES:

H₀₁: There is no association between income level of respondents and affordability of medical treatments in Siliguri.

H₀₂: There is no association between the technology used for medical treatment and respondents' satisfaction towards the quality of treatments they are getting in Siliguri.

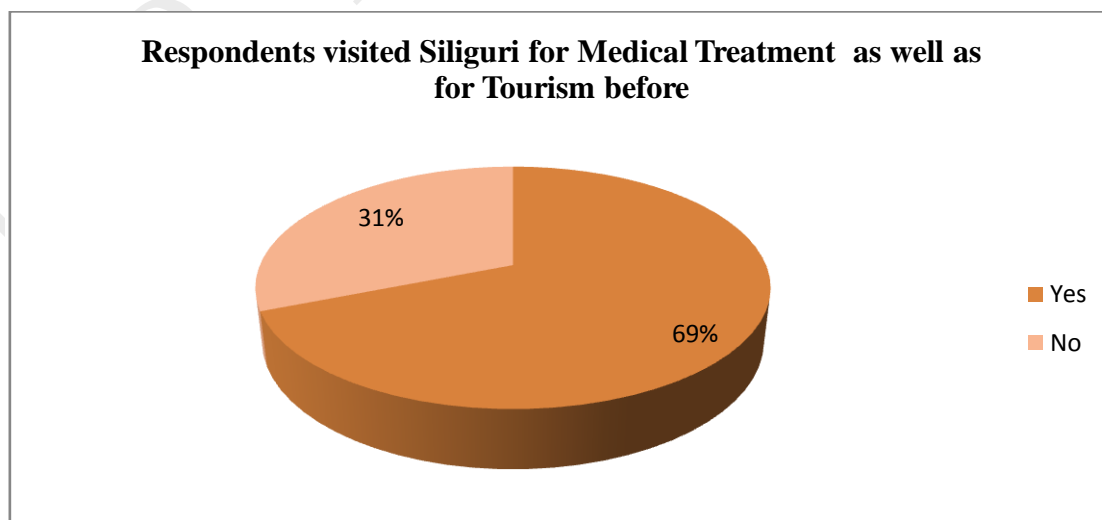
LIMITATIONS OF THE STUDY:

Like any research this project is also not free from limitations. However, the worthwhile impediments are as follows:

- The sample size is only 101.
- The reliability of responses collected is not tested.
- Only a single descriptive statistical test like chi-square test may not be sufficient to draw inferences.
- Findings of this pilot survey are place, case and sample size sensitive which may change over time and place.

FINDINGS:

- ✓ Following the Darwinian evolutionary theory, when people are confronted with a choice between survival and growth, the natural selection is always survival. This minor research too has attested that there is no association between income levels of people visiting Siliguri for medical treatment with their affordability of medical treatments in Siliguri (Annexure-I). Few of the respondents even resorted to sale of homeland to finance their treatments. This ample scope of business in the absence of proper monitoring from government part has led to many accouchements of new medical service providers in Siliguri and its surroundings.
- ✓ Interestingly significant people visiting Siliguri or surroundings for medical treatments do not bother whether the best technologies are used in their treatments (Annexure-II). The medical service seekers believe that good quality medical services are available in Siliguri at an affordable cost though there is heterogeneous cost structure for the same treatment among service providers.
- ✓ Beside the medical treatments almost 69% respondents visited Siliguri for tourism purposes before and they think Siliguri has a great potentiality for medical tourism. Language barrier is not at all significant in case of Siliguri but transport facilities have emerged to be a concerned factor for medical tourism in Siliguri.



Lacking of knowledge about tourist spots other than Darjeeling and absence of tourist helping desks in medical service providing centres are need to be addressed on priority basis according to the respondents. With the smart phones in hand respondents expect medical service providers to go virtual, at least in booking appointments with doctors and making tourism information available at a click. After all, no sector can avoid the revolution of information technology. Confining with the first objective of this minor research we may conclude that Siliguri has ample potentiality for Medical Tourism yet to be tapped in an organized manner.

SUGGESTIONS & JOB OPPORTUNITIES:

A psychological fear of unknown is an inevitable trait of medical tourists. An important strategic challenge for medical tourism sector is to reduce the psychological fear. In addition, India is a rising star in this industry because there is a ton of very well trained doctors just like there are ton of well trained engineers. Over the decade, many engineers have relocated to Silicon Valley, but for doctors it remained the case that barriers to entering the U.S. medical profession are still large. The scale and scope for diverse business associated with medical tourism is the most encouraging thing for any entrepreneur. Such as:

1. **Specialized Travel Intermediation Services:** The niche market with uniquely defined profiles created by medical tourists has created ample scope for dedicated travel agents and tour operators like patronizing a particular destination or country, chartering special flights for patients seeking to visit particular destinations, providing pre-consultation services like taking appointments with the doctors, registering at the hospitals, visa and foreign currency assistance, help with language interpreter, hotel room booking for the accompanying persons proximate to hospitals, arranging expeditions, managing wheelchairs etc. that best cater to the needs of medical tourists. Customers seeking packages for their treatments as well as spirituality, add further scope for intermediation services. Even the small time Ayurvedics tour operators in the states like Kerala in South India make impressive business in practice.
2. **Travel Desk in Hospitals:** Hospitals that want to sell medical tourism services may have a dedicated travel desk in the hospitals to act as a marketing wing for medical tourism with a link to tour operators.
3. **Staff Trainers:** Pre-eminent employee training programs and management development programs can be designed, developed and implemented to generate patient satisfaction and loyalty. Creating inclination for good customer relationship from doctors, nurses, pharmacists, technicians, hospital front office staffs and tour operators is vital in this regard.
4. **Medical Tourist Management Software Developers:** Facilitating online booking, automating administration for hospitals and tour operators, manifesting the alternatives for medical tourists and available services with required information are the demands from both buyers and sellers end in medical tourism industry. Thus, medical tourist management software developers have a great prospect.
5. **Medical Tourism Consultants:** Since, medical tourism is an emerging industry, many problems are not well defined and answers are not readily available. Thus, demand for trouble-shooters is growing and one who has creative insights and academic training with exposure to the industry can excel in the role of a consultant.
6. **Alternative Medical Care:** Relatively fewer investments are required to start an alternative healthcare centre for Ayurveda, Homeopathy, Yunani, Siddha, etc. The governmental regulations constraining the operations of healthcare centres are less for these compared to allopath healthcare centres.
7. **Joint Ventures or Strategic Alliances:** To counter increasing competition in medical tourism sector, Indian hospitals should go for strategic alliances with foreign institutions and insurance providers for assured supply of medical tourists.

8. **Standardization of Services:** The players of this industry should focus on establishing price parity for similar kinds of treatments in various hospitals and ensure high hygiene and quality standards to gain on a sustainable basis.
9. **Medical Tourism Brokers:** The conspicuous growth rate of medical tourism industry has created scope for medical brokers, who specialize in helping medical tourists in the process of negotiation to select the best available packages, given the budget.
10. **Medical Visas:** There is a need to simplify and speed up the procedures for obtaining medical visa, the subsequent registration and visa extension process to make India a more attractive medical tourism destination.
However, the industry has taken-off and many opportunities are yet to be explored.

CONCLUSION:

India has had a unique competitive advantage of deeper pool of technical knowledge and being a large country has a high population growth rate with a huge domestic market. Medical Tourism has briskly accounted itself as an impressive growing segment of Indian tourism industry combating global economic instability. India is offering very cost effective but quality treatments not only to Indians but also to the foreigners. Many researchers have attested that the Indian medical tourism industry is still at it's burgeon stage with huge future potentialities. India's medical tourism sector is expected to experience an annual growth rate of 30 per cent making it a USD 280 billion industry by 2022. Compared to developed countries, in India a health tourist has to spend less on different surgeries. In just few years of its emergence as an industry, Indian medical tourism has made a remarkable position in the world. However, the fact to be contemplated is the public interest associated with medical tourism services in India. The striking fact is that in London, medical tourism makes the front page of newspapers. The researcher in this paper has tried understand the perception of people whether income of medical patients and technology have any bearing over medical tourism potentialities in Siliguri. Interestingly the researcher has found that there is insignificant influence of income of the respondents and technology over medical tourism potentialities, at least in Siliguri. To conclude it may be said that this research is a small attempt to recognize the perception of Siliguri people about medical tourism potentiality in Siliguri and its surrounding areas and the researcher has found it positive.

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Annexure-I: Chi-square test:

- ✓ **H₀₁**: There is no association between *income level of respondents* and *affordability of medical treatments in Siliguri*.

Income level of respondents (monthly)	Affordable medical treatments in Siliguri.					
	HIGHLY AGREE	AGREE	DON'T KNOW	DISAGREE	HIGHLY DISAGREE	Total
BELOW 10,000	2(2.06)	7(4.89)	3(3.38)	4(5.64)	3(2.82)	19
10,001-20,000	4(4.24)	9(10.03)	11(6.95)	10(11.58)	5(5.79)	39
20,001-30,000	3(2.39)	4(5.66)	1(3.92)	13(6.53)	1(3.26)	22
30,001-40,000	0(0.87)	3(2.05)	2(1.42)	1(2.37)	2(1.18)	8
40,001 AND ABOVE	3(1.41)	3(3.34)	1(2.31)	2(3.86)	4(1.93)	13
Total	11	26	18	30	15	101

Note: The values in brackets are the expected values.

Analysis: The calculated value of χ^2 is 21.952. The table value of χ^2 at 5 % level of significance with 16 degree of freedom is 26.30.

Conclusion: The calculated value of χ^2 is lesser than table value of χ^2 . Therefore, **H_{01} is accepted**. Hence there is no association between income level of respondents and affordability of medical treatments in Siliguri.

Annexure-II: Chi-square test:

- ✓ **H_{02} :** There is no association between *the technology used for medical treatment* and *respondents' satisfaction* towards the quality of treatments they are getting in Siliguri.

Technology used for medical treatment	Satisfied with the Quality of treatment					Total
	HIGHLY AGREE	AGREE	DON'T KNOW	DISAGREE	HIGHLY DISAGREE	
HIGHLY AGREE	2(0.83)	6(6.41)	1(2.73)	3(1.18)	0(0.83)	12
AGREE	4(2.35)	20(18.17)	7(7.74)	2(3.36)	1(2.35)	34
DON'T KNOW	1(1.52)	13(11.76)	6(5.009)	2(2.17)	0(1.52)	22
DISAGREE	0(1.94)	11(14.97)	8(6.37)	3(2.77)	6(1.94)	28
HIGHLY DISAGREE	0(0.34)	4(2.67)	1(1.13)	0(0.49)	0(0.34)	5
Total	7	54	23	10	7	101

Note: The values in brackets are the expected values.

Analysis: The calculated value of χ^2 is 24.642. The table value of χ^2 at 5 % level of significance with 16 degree of freedom is 26.30.

Conclusion: The calculated value of χ^2 is lesser than table value of χ^2 . Therefore, **H_0 is accepted**. Hence there is no association between the technology used for medical treatment and respondents' satisfaction towards the quality of treatments they are getting in Siliguri.