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**PREDICTORS OF OVERALL SERVICE QUALITY IN
MEDICAL TOURISM IN KERALA STATE**

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Abstract

Medical Tourism is an emerging industry in India and Kerala State has been found to be a favourable destination. Limited studies have been conducted, to assess the quality of services, rendered by the medical tourism facilitators and healthcare providers. This study was undertaken to establish relationship between the five service quality factors and the overall service quality. The measurement model of service quality was first tested by using Confirmatory Factor Analysis (CFA). Results indicated that the model was fit and all the variables were significantly loaded. Thereafter, the structural model, consisting of the five service quality factors and overall service quality, was tested by using multiple regression. Regression results reported significant relationship between the five service quality factors and the overall service quality. The authors have discussed the result and presented the implications for the healthcare and service providers in this study.

Key Words: *Medical tourism, Kerala State, Service quality.*

JEL Codes: *M1*

1. Introduction

Tourism is primarily traveling for recreational or leisure purposes or the provision of services to support this leisure travel. India is considered a major destination for foreign tourists. Business Standard, in its January 7, 2015 edition, reported that the year 2014 had

witnessed an accelerated growth of 7.1% at 74.62 lakhs as compared to 69.68 lakhs, with a growth of 5.9% during the year 2013. Foreign exchange earnings from tourism, during the year 2014 was 1,20,083 crores, with a growth of 11.5%, as compared to the year 2013. In other words, tourism is on the rise and it is

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estimated to attract more visitors to the country. However, during the last few decades, a paradigm shift has taken place where tourists from abroad visit India not for recreational or leisure purposes alone but for medical value too, measured in cost, quality, and access (**Helble, 2011; Hopkins, Labonte, Runnels, & Packer, 2010**). These qualities prompt tourists to look to India, besides social expectations. Medical Tourism or the practice of people travelling beyond their home country, seeking medical help, has been in existence for many years (**Pafford, 2009; Rajagopal, Guo, & Edvardsson, 2013**). Medical Tourism is defined as the organized travel outside one's natural healthcare jurisdiction, for the enhancement or restoration of the individual's health, through medical intervention (**Carrera and Bridges, 2006**). With increase in use and access to world-wide information thanks to the advent of internet, Medical Tourism has been facilitated to a great extent.

According to a **Mckinsey-CII** Study, the industry's earning potential was estimated at Rs.5000-10000 crores by 2012. Medical Tourism (also called medical travel or health tourism) is a term initially coined by travel agencies and the mass media to describe the rapidly growing practice of traveling to another country to obtain health care. Medical Tourism can contribute Rs 5,000-10,000 crores of additional revenue for up-market tertiary hospitals by 2012 and will account for 3-5% of the total healthcare delivery market, as per the study by the Confederation of Indian Industry (CII)-McKinsey on healthcare. Medical Tourism Industry, according to CII, is expected to be worth US\$ four billion by 2017. India has a potential to attract one million health tourists per annum, which will contribute US\$ five billion to the economy.

Horowitz and Rosenweig (2007) have identified the following countries as being medical tourism destination: China, India, Israel,

Singapore, Malaysia, Philippines, United Arab Emirates, Argentina, Bolivia, Brazil, Colombia, Costa Rica, Cuba, Jamaica, Mexico, United States, Belgium, Germany, Hungary, South Africa and Australia. Medical Tourism Industry in India is expected to reach close to Rs.36,000 crores in the next three years, ending 2018. According to a report by industry lobby, Punjab - Haryana - Delhi (PHD) Chamber of Commerce, the number of tourists arriving in the country for medical treatment is set to double, in the next four years. Currently, the size of the medical tourism industry in India is estimated at a little over 18,000 crores, with tourist arrivals estimated at 2,30,000. It is increasingly becoming a dynamic subset of global healthcare that incorporates a variety of services, procedures and venues of care. Going by these figures, India sees a huge potential for Medical Tourism in the next couple of years.

Further, several characteristics make India an appealing destination for tourists. They include well-trained health practitioners, a large populace of good English-speaking medical staff, a good mix of allopathic and alternative systems of medicine, the availability of superspecialty centres, use of technologically advanced diagnostic equipment, and finally and more importantly, the availability of these premium services at competitive cost (**Hazarika, 2010**).

2. Review of Literature

Hazarika (2010) reported that in India, health care is one of the largest sectors, in terms of revenue and employment and this sector is expanding rapidly. During the 1990s, the Indian health care sector grew at a compound annual rate of 16%. A major proportion of this growth was predicted to be attributable to the growth in the business of Medical Tourism. **Vijaya, (2010)** focused on the new conduit, for the transfer of medical tourism services, from the developed to the developing economies. He viewed that patients patronizing developing countries for treatment, should not be characterized

completely in monetary terms of transnational trade but in terms of service quality and transfer of healthcare problems of the developed world to the developing world. Thailand is widely regarded as the 'global leader' in terms of number of patients/tourists, followed by India (**Whittaker, 2008; Connell, 2011; Medhekar, 2011**). **Dawn & Pal, (2011)** reported that the key concerns, facing the medical tourism industry, are the absence of government initiative, lack of a coordinated effort to promote the industry, no accreditation mechanism for hospitals and the lack of uniform pricing policies and service quality standards across hospitals.

However, on the other side, India possesses strengths that enhance the growth opportunity of this industry. **Martin, Ramamonjarivelo & Martin, (2011)** developed a theoretical model to create a scale to predict Medical Tourism (MT) Intentions. The researchers used the Theory of Planned Behavior (TPB) to characterize MT intentions and used a 49-item questionnaire to collect data from a convenience sample of 453 undergraduate students enrolled in a university, located in the USA. The model explained around 35 percent of the variance in intentions and the prediction was positive. **Sultana, Haque, Momen & Yasmin, (2014)** found that medical tourists to India considered service quality and cost as important factors that attracted them to India. This implied that steps should be taken to control cost and ensure quality of services. **Debata, Patnaik, Mahapatra & Sree, (2015)** identified the dimensions of service quality as well as service loyalty in the context of medical tourism. The authors developed eight-factor construct to measure medical tourism service quality and three-factor construct to measure medical tourism service loyalty. This was the first article to introduce the concept of service quality and service loyalty in medical tourism. On conceptualization, the

authors proposed an integrated model, consisting of behavioral measures, attitudinal measures and cognitive measures. It was found that medical tourism service quality exercised positive impact on medical tourism service loyalty.

The review suggests that Medical Tourism in India has become an industry too big to be ignored. Changes in global economy and pattern of travel indicate positive trend for growth and accordingly, service quality has become the crux of the issue. Hence the need to assess the service quality in the Indian Medical Tourism industry, especially in Kerala that attracts sizeable tourists.

3. Statement of the Problem

It is quite evident that Medical Tourism in India is a sunrise sector and the mushrooming of firms, organizing such tours, is an eloquent testimony. In as much as this sector is in the nascent stage of growth and getting organized being the current mantra, an empirical study to this end was deemed vital. The current study lays emphasis on the State of Kerala as this State has several destination-attractiveness. These factors include the use of traditional systems of medicines such as Ayurveda and Siddha medicines, ease and affordability of international travel, improved technology and standards of care, moderate weather throughout the year, higher hygienic standards of Kerala, renowned doctors specialized in almost all major areas, higher English-speaking community etc., Moreover, it has the advantage of worldwide recognition, as it has been included in the list of 10 must-see destinations by the National Geographic Traveler. The popularity of Ayurvedic treatments and the manner in which Kerala markets the Ayurvedic treatment, also make it a good destination for Medical Tourism (**Jisana, 2014**). However, the efficacy of medical tourism and its potential impact on the health workforce and health systems in India is still to be nurtured and improved (**Hazarika,**

2010). It may be noted that there are potential threats, brought about by Medical Tourism such as inequity in the health system, shortages of skilled health professionals and issues related to quality of care and accreditation - these measures are suggestive of potential threats. These issues pose a challenge to the quality of service and hence this article attempts to study the quality of services, rendered by the health care providers in the State of Kerala, as it has been recognized as an important destination for Medical Tourism.

4. Objectives of the Study

1. To identify the factors contributing to medical tourism quality service offerings
2. To analyse the overall service quality perception of medical tourism in Kerala State.
3. To determine the relationship between service quality factors and the overall service quality in the chosen field.

5. Hypotheses of the Study

The Researchers hypothesized as follows:

- H1: Empathy is positively related to overall service quality
- H2: Assurance is positively related to overall service quality
- H3: Responsiveness is positively related to overall service quality
- H4: Reliability is positively related to overall service quality
- H5: Tangibility is positively related to overall service quality

6. Need of the Study

A list of many medical tourists, who had visited Kerala, was prepared. The list was generated from the medical tourism facilitators. From this list, only those who had given their

email id and of recent visit in the last one year, had been chosen. A total of 702 tourists were identified. After identifying the tourists, an introductory letter was sent to them through email. The email explained the purpose and solicited their willingness to take part in the study. This was done to ensure that the right person was identified in order to capture adequate and accurate information on Medical Tourism.

7. Methodology of the Study

The data were collected by using a questionnaire, containing items consistent with past research in this area (**Guiry, Scott & Vequist, 2011**). This was validated by eight experts and items that scored more than 0.50 on the content validity ratio index (**Lawshe, 1975**), were considered to have adequate validity. A pilot study was conducted, with 40 respondents, to assess the reliability of the research instrument constructed and to ascertain the time taken to complete the questionnaire by the respondents. The data, collected from the pilot study, were subjected to reliability check. It was found that all factors scored more than 60 on the reliability coefficients. In short, the items, constituting each variable under study, displayed reasonable internal consistency.

7.1. Sample Selection

The questionnaire was administered to all the 702 tourists identified. Almost all the questionnaires were administered through email and the remaining routed through the medical tourism facilitators. However, the Researchers also contacted them over phone and solicited their kind cooperation in filling up the questionnaire. To instill confidence in the minds of the respondents, the questionnaire was attached with a covering letter, describing the purpose for which the data would be collected. The respondents were assured that their responses would be used only for academic purpose and absolute confidentiality and anonymity would be maintained on the

information sought. A thorough follow-up was done over telephone to expedite the process of filling up the questionnaire. Yet few questionnaires were not returned and few were unusable and incomplete, yielding only a response rate of 47% (330 usable questionnaires).

7.2. Period of the Study

The data were collected from December, 2014 to May, 2015.

7.3. Tools used for the Analysis

Primary data were used for the analysis. The mean of the items, under each dimension, was used as a composite measure of the respective dimensions of this study. To validate the construct developed, Confirmatory Factor Analysis was used to study the combined effect of the observed service quality measures such as empathy, assurance, responsiveness, reliability and tangibility on the latent service quality construct.

8. Data Analysis and Results

Before establishing the relationship between the service quality variables and the overall service quality, the fitness of the measurement model was established by using the Confirmatory Factor Analysis (CFA). The *a priori model*, consisting of the latent variable Service Quality, with the observed variables, was tested to determine if it fitted the data, based on the estimates of the population covariance matrix and compared with the observed covariance matrix. The measurement model, with the parameter estimates, is given in **Figure - 1**. To get the best assessment of the goodness of fit, several fit indexes were used. Chi-square statistics was 49.538 ($p = .000$) and Chi-square $\chi^2/df = 9.908$. This indicates bad fit. However, other major indices such as RMR = .023, GFI = .947, AGFI = .840, NFI = .948, RFI = .896 indicated goodness of fit. On examination of the estimates, it was evident that all variables were significantly loaded on the latent variable,

‘Service Quality’. Hence the measurement model, developed by the Researchers, was found to be a fit model.

Figure-2, shows the Structural Model. This model predicts the relationship between service quality factors and overall service quality. This model was tested by using multiple regression analysis. Factors such as tangibility, reliability, responsiveness, assurance and empathy entered the regression model as independent variables and overall service quality entered as the dependent variable. Enter method was used to predict overall service quality.

The results of regression, predicting overall service quality, are presented in **Table-1**. It was found that adjusted $R^2 = .755$, $F = 203.914$; $p = 0.000$. ANOVA results indicated the model to be a fit model. β values were significant for tangibles ($\beta = .201$; $p = 0.000$); reliability ($\beta = .215$; $p = 0.000$); responsiveness ($\beta = .126$; $p = 0.000$); assurance ($\beta = .211$; $p = 0.000$); and empathy ($\beta = .293$; $p = 0.000$). Hence hypotheses H1, H2, H3, H4 and H5 are supported. On the examination of the magnitude of the β values, it is seen that empathy was the strongest predictor of overall service quality, followed by reliability, assurance, tangibles and responsiveness.

9. Discussion and Implication

Results indicated positive relationship with overall service quality. These findings reflect the opinion of the medical tourists, on the services provided by the healthcare providers. It suggests that in healthcare setting, patients received better tangible service and care and the procedures followed by the tourism facilitators were simple and free of any encumbrance. The tangibles were realistic rather than aesthetic.

The medical service providers and facilitators should ensure that the hospitals replenish their facilities with modern equipments, physical facilities and materials that are tangibly and visually appealing to the tourists. This result

also evidences that the tourists, who come from a foreign land, should be convinced of the facilities provided by the hospital. In addition, the hospital management must emphasize the importance of neat and hygienic presentation of the staff during working hours. From time to time, the hospital should invest on equipments, physical facilities and materials to ensure that those tangible factors are sufficient in terms of quantity.

Significant relationship between reliability and overall service quality suggests that the healthcare providers should deliver what they promise to deliver. This result is significant for the State as it helps in conducting and managing well the entire medical tourism process. Service providers should ensure that delivery of service is done accurately in a dependable and consistent manner. It is a universal expectation that the healthcare is provided at the promised time and quality. Hence hospitals may ensure that tourists are invited when they are sure that the service is delivered at the time specified. Tourists should be treated by competent authority so that adequate and accurate services are rendered. Staff should manage the time properly and be able to provide excellent service to customers.

Health care providers should ensure that the medical tourists receive the facility promised. This is of paramount importance because of the high degree of perceived risk emerging from the tourists' inability to evaluate the deliverables and outcomes of services. This could also help the providers to use it as a marketing strategy and maintain long term relationship with the tourists. Hence the skills of the employees of the health care providers and the tour operators should be improved through continuous training and facilitation of organizational learning. The front line employees and nurses should have formal communication skills and any complaint registered by the tourists, should be handled effectively by them. Very

importantly, delivery should comply with the promised standards. An assuring environment would definitely promote increased inflow of medical tourists.

Responsiveness is a significant predictor of overall service quality. It implies that the service providers should increase the capacity and supply of specialists at the required time so that the healthcare institutions could immediately respond to the need of the tourists. Excessive waiting period should be avoided by all means. Hospitals should ensure that complete details of the type, date and cost of treatment, travelling arrangement, days needed for recuperation, other tourism options available for post surgery, mode of payment, precautions to be followed, should be informed to the patient beforehand. Being responsive enables the hospital to win the tourists for a long term. The entire healthcare as well as facilitators should show willingness to help the patients, from the starting point till the patient leaves the country. A foreign patient would not be familiar with the systems and procedures and hence might entertain numerous doubts and anxieties. Efficient handling of the tourists would go a long way in retaining the tourists and promoting the industry at large.

It is acknowledged that any healthcare provider should be empathetic at all levels. Tourists from outside the geographical boundary of the country, come with few factors that would work against their natural stay because of differences in language, culture, colour, etc., Hence employees should be empathetic, which include individualizing the attention given to the needs of customers, providing convenient services, etc., The healthcare providers and facilitators should have access to detailed information on target markets, the preferences of the tourists, varying needs and expectations, and understand the tourists by putting oneself in their position in the best way to help them. This may require the employees go an extra mile for

the sake of the tourists in order to win over them so that they would recommend others to visit in the future.

10. Limitations and Direction for Future Research

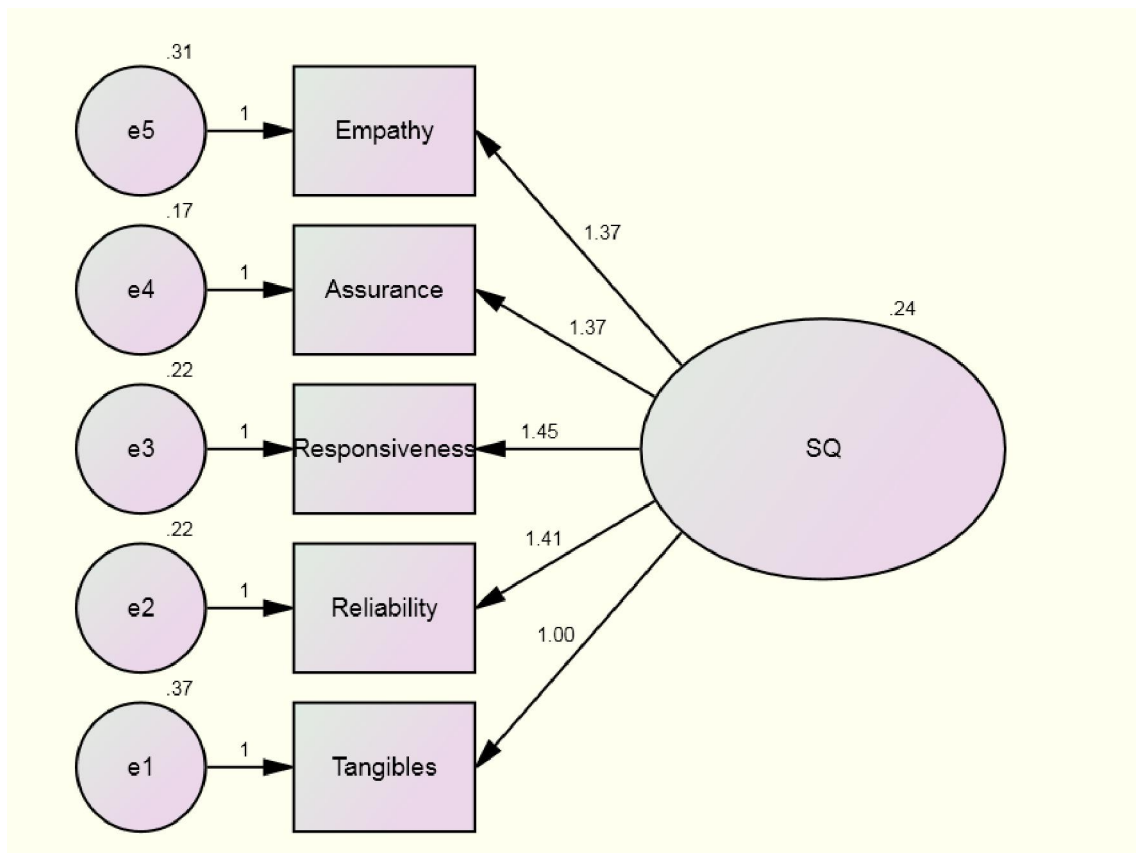
This study was conducted in the State of Kerala. Further studies may be done in other States such as Tamilnadu. A limited sample was used in this study and hence studies may be conducted, with increased sample size, cutting across all the Districts of the State. A district-specific stratified sampling technique may throw more light on the service quality rendered throughout the State. This study was restricted to five factors of service quality and hence an exhaustive list of factors may be identified after conducting an exploratory study. This study has established the relationship between service quality factors with overall service quality. Future studies may be conducted to establish the relationship between service quality factors and intent to recommend other medical tourists to visit Kerala.

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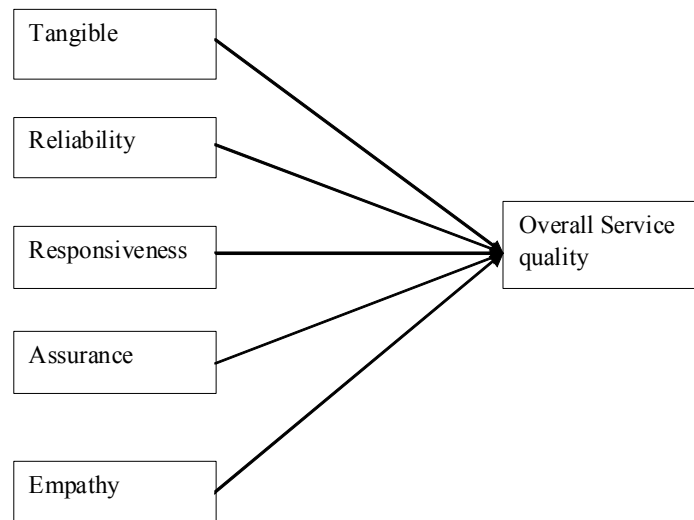
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Figure -1 : Measurement Model



Source: Computed by Authors

Figure - 2: The Structural Model



Source: Computed by Authors

Table - 1
Results of Regression Predicting Overall Service Quality

| Variables | Standardized Coefficients Beta | Sig. |
|------------------|---------------------------------------|-------------|
| (Constant) | | 0.000 |
| Tangibles | 0.201 | 0.000 |
| Reliability | 0.215 | 0.000 |
| Responsiveness | 0.126 | 0.006 |
| Assurance | 0.211 | 0.000 |
| Empathy | 0.293 | 0.000 |

Source: Computed by Author

Note: $R^2 = 0.755$; $F = 203.914$; $p = 0.000$