Chapter 3
Research Methodology

3.1 Introduction

Tourism is a highly competitive industry; travelers have a wide range of choices and look available for good value of money (Sahoo & Patra, 2011). Lack of quality infrastructure, uncompetitive rates, difficulty in getting access to information on tourist destinations have an enormously negative effect on the competitiveness of tourism product (Uma, 2011). For establishing best approach during cyclical variations, it is necessary for medical tourism industry to formulate marketing strategies which should include the overall business objectives (Bookman & Bookman, 2007; Rerkrujipimol & Assenov, 2009). Implementing best combination of 7 P’s (product, price, place, promotion, people, process and physical evidence) for each segment and choosing a suitable marketing budget is the need of the hour (Goel & Jaiswal, 2008; Suthin et al., 2007). So, this chapter discusses in detail the methodology used in this study.

Research methodology is the predetermined way to carry out a study. Research methodology defines methods and techniques for accomplishing the research objectives. The present chapter encompasses research design, problem statement, research objectives, hypotheses tested, sample design, data collection instrument, statistical techniques, limitations and chapter plan of the study.

3.2 Research Design

The study is exploratory cum descriptive in nature. Exploratory research is concerned with the identification of problem thoroughly. It helps in defining the problem more clearly and determining the research design, data collection instrument and objectives of the study. Descriptive research is conclusive and concerned with the analysis of data for examining the marketing practices of sample units in this study.

3.3 Problem Statement

Among Indian service sector, Medical tourism is the fastest emerging segment with a combination of healthcare and tourism across the world. Medical tourism is a niche market that has caught the attention of patients from industrialized nations. Health
services are also source of foreign exchange earnings and magnetizing more foreign patients’ because of competitive advantage offered by developing nations. India has emerged as a most popular destination for foreign patients. There are various driving forces behind the growth of medical tourism in India specifically less waiting time, high quality and low cost. Review specified that Indian service sector remains unaffected from recession 2008. Although, this sector, increases number of foreign patients in the country. The study is based upon the idea what type of marketing practices has been opted by healthcare units to remain in marketplace.

Research gap suggested that for medical tourism sector, impact of cyclical variations have not been analyzed with the help of primary data. Medical tourism sector has three main participants i.e. hospitals, facilitators and foreign patients. To investigate the role of medical units in boosting medical tourism over cyclical variations, present study has been taken. Besides, cyclical sensitivity is also considered as indispensable to scrutinize the effectiveness of marketing practices during recession and upswing.

The study has tried to discuss the role of effective marketing practices during recession and upswing to position them in the marketplace. Indian medical tourism is attracting maximum number of patients from Middle East and African countries. Main motive behind selecting India as a medical destination is availability of treatment and low cost with high quality. So the study aims to derive the factors affecting the opinion of foreign patients’ regarding marketing practices of healthcare units which exert a pull on them while selecting India for treatment. After adjudicating these major aspects, the study entitled “Marketing Practices Over Cyclical Variations: A Strategic Approach for Medical Tourism in India” has been taken for present research.

3.4 Objectives of the Study

The main objective of the study is to evaluate when does marketing in a recession makes sense. To achieve this objective followings are sub-objectives:

- To find out the marketing mix factors affecting medical tourism in India.
- To examine the role of marketing practices adopted by medical units over cyclical variations.
To examine the cyclical sensitivity due to variations in marketing strategies of medical tourism.

To evaluate results of marketing strategies adopted in the study for the growth of medical tourism in India.

To work out a model to establish a marketing strategic approach over cyclical variations.

3.5 Hypotheses

To achieve the objectives of the study, the following hypotheses are framed:

- **H1: Marketing practices of hospitals differ significantly during recession.**
  - H1a: Product related practices of hospitals differ significantly during recession.
  - H1b: Price related practices of hospitals differ significantly during recession.
  - H1c: Place related practices of hospitals differ significantly during recession.
  - H1d: Promotion related practices of hospitals differ significantly during recession.
  - H1e: People related practices of hospitals differ significantly during recession.
  - H1f: Process & Physical Evidence related practices of hospitals differ significantly during recession.

- **H2: Marketing practices of hospitals differ significantly during upswing.**
  - H2a: Product related practices of hospitals differ significantly during upswing.
  - H2b: Price related practices of hospitals differ significantly during upswing.
  - H2c: Place related practices of hospitals differ significantly during upswing.
  - H2d: Promotion related practices of hospitals differ significantly during upswing.
  - H2e: People related practices of hospitals differ significantly during upswing.
  - H2f: Process & Physical Evidence related practices of hospitals differ significantly during upswing.

- **H3: Marketing practices of public and private hospitals differ significantly during recession and upswing.**
  - H3a: Product related practices of public and private hospitals differ significantly during recession and upswing.
• H3b: Price related practices of public and private hospitals differ significantly during recession and upswing.

• H3c: Place related practices of public and private Hospitals differ significantly during recession and upswing.

• H3d: Promotion related practices of public and private hospitals differ significantly during recession and upswing.

• H3e: People related practices of public and private hospitals differ significantly during recession and upswing.

• H3f: Process & Physical Evidence related practices of public and private hospitals differ significantly during recession and upswing.

➢ H4: Marketing practices of hospitals differ significantly during recession and upswing

• H4a: Product related practices of hospitals differ significantly during recession and upswing.

• H4b: Price related practices of hospitals differ significantly during recession and upswing.

• H4c: Place related practices of hospitals differ significantly during recession and upswing.

• H4d: Promotion related practices of hospitals differ significantly during recession and upswing.

• H4e: People related practices of hospitals differ significantly during recession and upswing.

• H4f: Process & Physical Evidence related practices of hospitals differ significantly during recession and upswing.

➢ H5: Marketing practices significantly affects marketing strategies for recession.

• H5a: Product related practices significantly affect marketing strategies for recession.

• H5b: Price related practices significantly affect marketing strategies for recession.

• H5c: Place related practices significantly affect marketing strategies for recession.
• H5d: Promotion related practices significantly affect marketing strategies for recession.
• H5e: People related practices significantly affect marketing strategies for recession.
• H5f: Process & Physical Evidence related significantly affects marketing strategies for recession.

➢ H6: Marketing practices significantly affects marketing strategies for upswing.
• H6a: Product related practices significantly affect marketing strategies for upswing.
• H6b: Price related practices significantly affect marketing strategies for upswing.
• H6c: Place related practices significantly affect marketing strategies for upswing.
• H6d: Promotion related practices significantly affect marketing strategies for upswing.
• H6e: People related practices significantly affect marketing strategies for upswing.
• H6f: Process & Physical Evidence related significantly affects marketing strategies for upswing.

➢ H7: Opinion of hospitals’ marketer and medical tourists differ significantly about marketing practices of hospitals they admitted.
• H7a: Opinion of hospitals’ marketer and medical tourists differ significantly about product related practices in Apollo/Fortis/Max hospitals.
• H7b: Opinion of hospitals’ marketer and medical tourists differ significantly about price related practices in Apollo/Fortis/Max hospitals.
• H7c: Opinion of hospitals’ marketer and medical tourists differ significantly about place related practices in Apollo/Fortis/Max hospitals.
• H7d: Opinion of hospitals’ marketer and medical tourists differ significantly about promotion related practices in Apollo/Fortis/Max hospitals.
• H7e: Opinion of hospitals’ marketer and medical tourists differ significantly about people related practices in Apollo/Fortis/Max hospitals.
• H7f: Opinion of hospitals’ marketer and medical tourists differ significantly about process & physical evidence related practices in Apollo/Fortis/Max hospitals.
3.6 Sampling Design

The study is based on the marketing practices adopted by the hospitals during the phases of cyclical variations for medical tourism, so first of all population of the study was defined. The population comprises of all those individuals who are of interest for any particular study and about whom the research is being carried out (Lavrakas, 2008).

3.6.1 Sample Unit and Sample Size

This study has taken into account those hospitals in NCR which are responsible for attracting medical tourists for healthcare and sample units covered 6 super specialty hospitals fallen under the list of CGHS, Delhi. Under sample unit, three hospitals belong to public sector and rests three are from private sector. After pretest it is observed that in case of private hospitals key informants are marketing executives operating at middle level and top level. But in public hospitals, respondents are the persons from administrative staff and junior doctors who are engaged indirectly in marketing practices of hospital in some way. So, on the basis of this criteria population for the study has been calculated as 500 which will further used to derive sample size for the study. Sample size of 217 has taken for the study which is calculated using following formula given by Cocharn in 1963.

\[ n = \frac{Z^2 N p(1-p)}{ME^2 (N - 1) + [Z^2 p(1 - p)]} \]

Where,  
\( n \) - Sample size  
\( N \) - Population size (500)  
\( Z^2 \) - Z value at 95% confidence interval at 1% degree of freedom (3.84)  
\( ME \) - Desired margin of error (0.05)  
\( p \) - Percentage for sample size (0.5)

With a view to increase the generalizabilty of the findings of research instrument developed for the hospitals, responses from the foreign patients are also recorded. During the period of data collection, researcher was not able to find out medical tourists in public hospitals. Hence, responses are collected from foreign patients of private hospitals only. On the basis of pretest it is observed that in a year on an average 320 patients come for treatment in medical units, so a sample of 153
respondents has been collected from the three private hospitals. Responses are collected from the patients and their companions as hospital staff did not allow communicating with patients personally.

3.6.2 Sampling Techniques

Judgment sampling, a form of non-probability sampling, has been used to collect the samples from the hospitals chosen for study. Stratification of hospitals has been done on the basis of ownership and according to ownership hospitals are segmented in three groups as

1. Government Hospitals- Public Hospitals
2. Non-Government Hospitals – Private Hospitals
3. Corporation Hospitals- Profitable, Non-profitable, Partnership Hospital

Therefore, public and private hospitals are considered for the study. Public hospitals selected for study are Safadarjung hospital, Ram Manohar Lohia hospital & All India Institute of Medical Science (AIIMS) and private hospitals are Apollo Hospital, Fortis Hospital and Max hospital.

Personal interview has been conducted to record the responses of the hospital personnel. Moreover, a mailing list of marketing personnel of sample units is also acquired from the LinkedIn and on the basis of their agreeableness; questionnaire was e-mailed to 34 persons. 23 online questionnaires were received out of 34. From 23 online questionnaires, 15 completed questionnaires were received from the marketing executives of Apollo hospitals only. So personal interview and online survey have been prove very valuable to obtain desired sample size.

In case of medical tourists, responses were collected on the basis of convenient sampling. Foreign patients and their companions available in hospital premises, hospital cafeteria, hospital waiting hall were contacted personally.

3.7 Data Collection Instrument

As scales of key constructs regarding marketing practices of medical tourism were not available in the literature, so constructs were developed by using marketing mix model in context of medical tourism using a modification procedure (Churchill, 1979). Constructs were pretested with 24 middle level executives of two private hospitals of NCR which are part of this study namely Max and Fortis. To develop the
items of measure, practices related to product, price, place, promotion, people, process and physical evidence were considered on five point likert scale ranging from strongly disagree(1) to strongly agree (5). Consistent with the definition of the seven P’s of marketing mix, a questionnaire having 49 items based on the practices of hospitals during recession and upswing phases of cyclical variations pertaining to the seven P’s was developed. For product, promotion, people and physical evidence related practices, a scale developed by Heung, Kucukusta and Song (2010) and Ramanujam (2009) was examined and some items of scale was adapted for the study. For price and promotion related practices scale developed by Yu and Ko (2011) and Ramanujam (2009) at five point Likert scale was adapted. For place related practices scale developed by Ramanujam (2009) for hospitals was adapted.

During pretest, demographics were not recorded because the aim was to develop measure for the study. Further, Measures were refined on the basis of results and responses provided by the respondents of pre-test. So final questionnaire used for study contains 52 items. Measure of the study was amended after pre test by keeping in mind the role of marketing practices over cyclical variations. Further, on the basis of per test and recommendations and suggestions of experts, a questionnaire for recording the opinion of foreign patients was also developed to generalize the implications of the study. Questionnaire for foreign patients contains items similar to the questionnaire developed for marketing staff of hospitals.

3.8 Profile of Sample Units

On the basis of personal interview with CMO (Delhi), six hospitals in NCR are chosen for the study. Differentiation has been done on the basis of public and private ownership. Three hospitals belong to public sector and rests three are private hospitals. A letter of authority was obtained from Ministry of Health and Family Welfare for collecting data from private hospitals. All six hospitals are earliest established hospitals and hospitals are offering super-specialty medical care services. A brief profile of each hospital is mentioned herein.

3.8.1 Indraprastha Apollo Hospital

Indraprastha Apollo hospital, Delhi was established in 1996 by Apollo Hospital Group. Apollo hospital is one of the leading healthcare providers in country. Dr. Partap Reddy was the founder of Apollo hospital group. It is the first JCI accredited
hospital in India. Apollo hospital has capacity of approximately 700 beds. Apollo hospital has great contribution in clinical excellence. Apollo hospital has offered super special healthcare services like liver transplant, cold blood transplant, and hip & knee replacement. Indraprastha Apollo hospital has a world class infrastructure. Apollo hospital has also integrated with the insurance companies, pharmacy and many clinics in India and world.

3.8.2 Fortis Healthcare

Like Apollo hospital group, Fortis healthcare is also a leading chain of super-specialty hospitals in India. Fortis healthcare was established by Malvinder Mohan Singh and Shivinder Mohan Singh in 2001 in Delhi. Healthcare chain of Fortis healthcare consists of diagnostic centers, hospitals and day care centers. Fortis provide world class healthcare services in India, Dubai and in Sri Lanka with the alliance of diagnostic centers. Fortis hospital has approximately 260 diagnostic centers. Fortis has opened its unit in Singapore also with the collaboration of Parkway Holdings Ltd. Fortis provide global and advanced healthcare services and got accreditation from JCI for high quality medical treatment. In NCR Fortis healthcare have 8 super specialty hospitals which are taken for the study.

3.8.3 Max Healthcare

Max India ltd was established in 1985 by Analjit Singh. Max healthcare is privately owned health care network of Max India group which opened first healthcare center in Panchsheel Park Delhi in 2000. Max healthcare has operated 11 medical centers in NCR. Vision of max healthcare is to deliver world class healthcare services with the help of highest standards of service excellence, patient care, scientific knowledge and medical education. Max healthcare has joined hands with Life healthcare Group in South Africa in 2014 for achieving heights of medical care services.

3.8.4 Safdarjang Hospital

Safdarjang Hospital was established in 1942 during the world war II for US army forces. In 1954, hospital was renamed as Safdarjang hospitals by central government. Like AIIMS, hospital also has a medical college (Vardhman Mahavir Medical College) for post graduate and post doctoral medical education. Hospital has widespread infrastructure and spread over 47 acre land. Hospital have large patient
load and provides multispecialty medical care at very low prices and free of cost also for some diseases.

3.8.5 Ram Manohar Lohia Hospital

Dr. Ram Manohar Lohia Hospital was founded by British and known as Willingdon Hospital. Formerly hospital has only 54 beds. In 1954, central government took control of hospital. Hospital is spread over 30 acres land. It comes under the purview of ministry of health and family welfare. RML hospital provides low cost and quality medical treatment to the patients. Emergency patients can get immediate treatment in this hospital as hospital has round the clock emergency services.

3.8.6 AIIMS Hospital

All India Institute of Medical Science was commenced its operation (AIIMS) in 1956 to provide excellence medical care in country. AIIMS is an autonomous body operated under Ministry of family and Healthcare. AIIMS was created for keeping three objectives in mind that are patients’ care, teaching and research. Undergraduate and post graduate medical education is provided by AIIMS to demonstrate high standards of medical education. AIIMS is among top institute of India in providing medical education. Being a public hospital AIIMS has provided medical care at very low cost so that extreme poor can also avail treatment.

3.9 Statistical Techniques

Use of appropriate tools and techniques are important part of any study. On the basis of objectives framed, relevant statistical techniques are incorporated. In this study, descriptive techniques, paired sample t –test, one way ANOVA, two way ANOVA, exploratory factor analysis and confirmatory factor analysis (first order and second order) are used to fulfill the objectives.

3.9.1 Reliability and Validity of Data

Reliability of data refers to the extent to which constructs are consistent with each other. To evaluate the internal consistency of the data, Cronabach’s alpha coefficient for each construct is calculated. Nunnaly and Bernstein (1994) have recommended that cut off point for alpha coefficient must be 0.6. Reliability of scale is based on the higher value of Cronabach’s alpha. As higher the value of alpha, more reliable the scale is (Cronbach, 1951). In this study structured questionnaire is used. So
Cronabach’s alpha is applied to check the reliability of each item one by one. Further, it is also ensured which item is not consistent with the others and deleted from the study to improve the reliability. Cronabach’s alpha also facilitates with a check named “if item deleted” to verify the same (Arbuckle, 2011).

Validity of data refers to the accuracy of the assessment that constructs measure what it claims to measure. Estimation of construct validity signifies whether items explain construct very well or not. Construct validity can be verified in two ways one is convergent validity and other is discriminant validity. For convergent validity three conditions must be fulfilled (Hair, Black, Babin, & Anderson, 2015).

1. Construct reliability (α) should be more than 0.7
2. Average Variance Extracted (AVE) should be more than 0.5
3. Cronabach’s alpha (α) should be more than AVE

Regarding discriminant validity average variance extracted (AVE) should be greater than average shared variance (ASV).

3.9.2 Descriptive Techniques

Descriptive statistical methods describe the basic features of the data and summarize the variables and constructs of the study in a simple manner (Malhotra & Dash, 2011; Pannerselvam, 2010). Descriptive statistics helps to manage the data in a rational way and reduced the large number of data into some sensible units like frequency, mean, percentile, standard deviation. In this study to check the normality of data skewness and kurtosis are also applied.

3.9.3 t-Test

t-test compares the difference between mean of two groups arises due to variations in data. It is a statistical hypothesis test used to check that difference between mean is significant or not (Anderson, Sweeney, & Williams, 2011; Malhotra & Dash, 2011). In this study paired sample test is used. Paired sample t-test is appropriate for matched sample of similar units and also called dependent t-test. Thus, to analyze the difference in marketing practices of hospitals during recession and upswing, paired sample t-test is applied. Independent t-test is applied on two separate sets of identically distributed samples (Anderson et al., 2011; Malhotra & Dash, 2011). So, to
compare the opinions of marketers and medical tourists regarding marketing practices of private hospitals, independent sample t-test is used.

3.9.4 Analysis of Variance (ANOVA)

Analysis of variance is used to analyze the difference in mean for two or more population (Anderson et al., 2011; Malhotra & Dash, 2011). t-test is not appropriate to analyze difference in different categories, so one way ANOVA was used in this study to evaluate overall difference in category means. To examine the role of marketing practices in public and private hospitals one way ANOVA has been used and two way ANOVA has applied to measure the combined effect of recession and upswing on hospitals.

3.9.5 Exploratory Factor Analysis

Exploratory Factor analysis uncovers a large number of variables into a few constructs in order to simplify the intercorrelated measures. Factor analysis examined the relationship among a set of variables reduced the data into smaller set of factors (Malhotra & Dash, 2011). Exploratory factor analysis is based on certain assumptions. First assumption is about the correlation of the variables. Those variables which show high correlation are correlated with the same factors in the data. So variables must be correlated highly for factor analysis. Second assumption for factor analysis is about sampling adequacy and sphericity of data (Field, 2015). For measuring adequacy of samples Kaiser-Mayer-Olkin (KMO) test is used and value of KMO should be lie between 0.5 to 1. Higher the value, better the sampling adequacy is. Sphericity of the sample explains that variables are uncorrelated in the population. So Bartlett test of Sphericity is used to prove the sphericity of population. Third assumption of factor analysis is about communality. Communality is the proportion of variance explained by the common factors. Value of communality must be higher than 0.5 for each variables. If not so, then specific variable must be deleted from the study (Hair et al., 2015; Pannerselvam, 2010).

After checking all these assumptions next step is to determine appropriate method for forming factors. Principal component analysis and common factor analysis is used for this purpose. But principal component analysis is preferred over common factor analysis as it gives minimum number of factors having high variance (Pannerselvam, 2010). On the other hand, common factor analysis considers common
variance only. Further, after deciding factor method it is important to decide how many factors should retain for the study. Retention of factors decided on the basis of eigen value that represents total variance explained by each factor and factor having value greater than 1.0 are retained (Tabachnick & Fidell, 2013; Ledesma & Valero-Mora, 2007). Sometime same variable is explained by other factors also and correlated with different factors; this state is called cross loading. Cross loading can be removed by rotating factors (Field, 2015). Different types of rotation are used for removing cross loadings like orthogonal rotation, varimax rotation, oblique rotation etc. Varimax rotation is most popular and used in this study (Anderson et al., 2011). On the basis of rotated matrix, factor structure is interpreted and naming of factors performed on the basis of items it incorporate. Theses representative factors are used for further analysis.

3.9.6 Confirmatory Factor Analysis

Exploratory factor analysis explores factors while confirmatory factor analysis is used to verify the underlying structure of factors. CFA is used to study the relationship between observed variables and latent variables (Ho, 2006). This relationship is illustrated with the help of graphical representation of latent variables and observed variables using AMOS, Lisrel etc. In this study AMOS 18 was used to perform CFA.

CFA produce results in the form of fit indices. These fit indices are absolute fit indices, incremental fit indices, and parsimony fit indices. Absolute fit indices do not use an alternative model as a base for comparison (Fornell, & Larcker, 1981). They are simply derived from the fit of the obtained and implied covariance matrices. Chi-square is the original fit index for structural models because it is derived directly from the fit function (Bentler & Bonett, 1980). There are several other indices that fall into the category of absolute indices, including the Goodness-of-fit index (GFI), adjusted goodness of fit index (AGFI), $\chi^2$/df ratio, the root mean square residual (RMR), and the standardized root mean square residual (SRMR). Thresholds for different measures are depicted in 3.1.

Incremental fit indices are also called comparative fit indices as these compare the chi square value of hypothesized model with tested model. Comparative fit index (CFI), Normed fit index (NFI), Tucker Lewis index (TLI), Incremental fit index (IFI)
and relative fit index (RFI) are incremental fit indices (Bagozzi & Yi, 1988, Hu & Bentler, 1999). Although a saturated model generate a good model fit but depending upon sample data it produces less accurate results (Mulaik et al., 1989). So Parsimony fit indices developed by Mulaik et al. (1989) are used to conquer this problem. Parsimony normed fit indices (PNFI) and Akaike information criterion (AIC) are used in tandem with other measures. On the basis of fit indices it is decided that model is a good fit or poor fit. A poor fit model is not considered good for further analysis. That’s why modification indices are applied to improve the model fit by using co variances between the error terms of the same factor (MacCallum, Browne, & Sugawara, 1996; Mulaik, & Millsap, 2000; Preacher, 2006).

**Table 3.1: Threshold Limit for CFA Model**

<table>
<thead>
<tr>
<th>Fit Indices</th>
<th>Absolute Fit Measures</th>
<th>Incremental Fit Measures</th>
<th>Parsimony Fit Measure</th>
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<tbody>
<tr>
<td></td>
<td>CMIN/DF</td>
<td>RMR</td>
<td>RMSEA</td>
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<tr>
<td></td>
<td>&lt;3 good, 1-5 sometime</td>
<td>≤ 0.05 good, 0.05-0.10 moderate, more than 0.10 bad</td>
<td>≤ 0.05 good, 0.05-0.10 moderate, more than 0.10 bad</td>
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<tr>
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<tr>
<td></td>
<td>Absolute Fit Measures</td>
<td>CFI</td>
<td>GFI</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt;0.95 great, &gt;0.90 traditional, &gt; 0.80 sometime permissible</td>
<td>&gt;0.95 great, &gt;0.90 traditional, &gt; 0.80 sometime permissible</td>
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<td></td>
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<td>TLI</td>
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<td></td>
<td></td>
<td>&gt;0.95 great, &gt;0.90 traditional, &gt; 0.80 sometime permissible</td>
<td>&gt;0.95 great, &gt;0.90 traditional, &gt; 0.80 sometime permissible</td>
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<td></td>
<td></td>
<td></td>
<td>≥ 0.95 great, &gt;0.90 traditional, &gt; 0.80 sometime permissible</td>
</tr>
</tbody>
</table>

Source: Compiled from Literature

In this study first order and second order CFA has been used. Second order CFA is employed to confirm that hypothesized construct of the study consist of sub-constructs which are derived from the items of questionnaire. So the present study used both first and second order confirmatory factor analysis.
3.10 Approaches towards Objectives’ Fulfillment

- **First objective** - To find out the marketing environmental factors affecting medical tourism in India.

Using structured questionnaire, factors are explored by applying factor analysis technique. After exploring factors, first order CFA has been applied to verify the structure and validate the constructs. Validity and reliability of data has been checked by using correlation matrix and regression weights. On the basis of underlying items, factors are named for further analysis. After ensuring reliability of each construct, inter item correlation is checked and items having low reliability are deleted from the sample data. Under CFA, a modification indices are also applied to improve the model fit.

- **Second objective** - To examine the role of marketing practices adopted by medical units over cyclical variations.

One way ANOVA has been used to examine the role of marketing practices in public and private hospitals. One way ANOVA illustrated the role of different marketing practices in different medical units independently. Further, two way ANOVA was applied to analyze the interaction effect of recession and upswing on marketing practices of public and private hospitals.

- **Third objective** - To examine the cyclical sensitivity due to variations in marketing strategies of medical tourism.

Paired t-test has been applied to check the role of marketing practices during recession and upswing for assessing the level of sensitivity. Further, cyclical sensitivity due to recession and upswing is examined by using second order CFA. Second order CFA confirmed the relationship of marketing strategy with the sub-constructs of marketing practices (Product, Price, place, promotion, people, process and physical evidence). Furthermore, to measure sensitivity, regression has been applied to measure the impact of marketing practices on the overall marketing strategies during recession and upswing respectively.

- **Fourth objective** - To evaluate results of marketing strategies adopted in the study for the growth of medical tourism in India.

Results of marketing strategies adopted in the study are evaluated by collecting the responses from the foreign patients about the marketing strategies adopted by
sample units. Only patients from private hospitals are participated in this study. That’s why for this objectives, results are assessed for private hospitals. At first, reliability of data has been ensured and then independent t-test has been used to check the difference in mean of private hospitals regarding marketing practices opted for foreign patients.

- **Fifth objective**- To work out a model to establish a marketing strategic approach over cyclical variations.

  Using first order and second order confirmatory factor analysis, a theoretical model has developed on the basis of factors derived to establish a marketing strategic approach over cyclical variations.

### 3.11 Relevance of the Study

The present study entitled “Marketing Practices over Cyclical Variations: A Strategic Approach for Medical Tourism in India” focused on Indian medical tourism industry. Recession-2008 impacts tourism in a negative manner. Medical tourism industry of India has shown signs of maturity as various medical centers attracting the customers through creative marketing campaign. Developing the marketing strategies over the cyclical variations of health industry can help in the development of the country’s economy. So it is relevant to study when does marketing in recession make sense and what could be the best approaches in cyclical environment of the economy while marketing for the medical services.

### 3.12 Limitations of the Study

Research is an ongoing process and there is always a scope of improvement. The study encases the marketing practices in medical tourism by analyzing the recorded data with various statistical techniques. This study also suffered from limitations.

The study is carried out in NCR, thus without empirical support across India results of study could not be generalized.

Further, study is based on the primary data collected from hospitals. Medical tour operators are also engaged in attracting foreign patients and arrange tours of patients from selecting hospital to sending back to home after treatment. This study is limited to hospitals and foreign patients. Therefore, it would be worthwhile to explore how medical tour operators affect decision of medical tourists.
Study has investigated the cyclical sensitivity of the marketing practices for medical units. In primary data possibility of biasness of respondents could not be ignored. Also respondents were not ready to disclose some truthful information due to high level of sensitivity in case of few items. Most of the patients did not disclose their income status due to personal reasons.

The study includes 15 questionnaire received through online mode. Exact reactions of respondents are not scrutinized by researcher due to virtual interaction.

Due to time and money constraints, a small sample size is used for the study that covered medical units of NCR only. Chennai and Bangalore are also attracting huge medical tourists across the world. The sample size might not ample to propose the strategies for the entire Medical tourism industry.

3.13 Chapter Plan

Chapter-1: Introduction

This chapter introduces the concept of medical tourism and cyclical variations. This chapter provides a brief framework of marketing practices and enlightened the topic of research in a broad manner.

Chapter-2: Review of Literature

This chapter includes reviews related to medical tourism, marketing for medical tourism and effectiveness of marketing practices over the cyclical variations from online journals & books and outlines a research gap for the study.

Chapter-3: Research Methodology

This chapter outlines the materials and methods used in the conduct of this research. The chapter comprises research design, research objectives, hypothesis, sample unit, sample size and tools & techniques used for fulfillment of objectives.

Chapter-4: Marketing Practices of Hospitals over Cyclical Variations

This chapter comprises the results and discussions emanating from the analysis of data obtained from marketing staff of sample units. Statistical analysis includes exploratory factor analysis, confirmatory factor analysis, one way ANOVA, two way ANOVA and regression analysis.
Chapter-5: Marketing Practices Influencing Decision of Medical Tourists

This chapter encompasses the results obtaining from the data collected from foreign patients of sample units. Statistical analysis of this chapter includes exploratory factor analysis and independent t-test.

Chapter-6: Findings, Suggestions and Future Research Directions

The outcomes of analysis and interpretation of data leading to the results have been summarized and discussed in this chapter and the same are followed by conclusion proposed in the study.

References


