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# Tourisme médical : comprendre les comportements de consommation des voyageurs et enjeux stratégiques pour le Liban

Samar Billi Noaman

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École doctorale de management Panthéon-Sorbonne (ED 565)  
E<sub>I</sub>REST - Equipe interdisciplinaire de recherches sur le tourisme (EA 7337)

**Thèse pour l'obtention du grade de docteur de l'Université de Paris 1 Panthéon-Sorbonne**  
Discipline: tourisme

**TOURISME MÉDICAL  
COMPRENDRE LES COMPORTEMENTS DE  
CONSOMMATIONS DES VOYAGEURS ET ENJEUX  
STRATÉGIQUES POUR LE LIBAN**

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## **Dedication**

This thesis is wholeheartedly dedicated to my beloved parents and husband without whom this journey would not have been possible. This thesis is as well dedicated to the Almighty God, I am grateful for the good health and wellbeing that were given to me to complete this thesis.

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## Abstrait

Une littérature de fond sur le tourisme médical a été attribuée aux motivations des touristes médicaux. Des académiciens ont étudié les expériences des touristes médicaux et leur niveau de satisfaction. Néanmoins, le lien entre ces deux concepts a rarement été examiné dans la littérature sur le tourisme médical. Ainsi, cette étude examine les motivations des touristes médicaux destinées pour le tourisme médical et l'effet de ces motivations sur leur perception de la qualité, de la satisfaction, et de l'intention de revisiter. En outre, l'étude vise à explorer les différentes caractéristiques des touristes médicaux qui rendent à des classements différents. L'objectif est d'étudier les caractéristiques qui attirent les touristes médicaux vers la destination, pour améliorer leurs expériences et leurs satisfactions en matière de tourisme médical. De manière empirique, cette étude privilégie la destination touristique médicale, au niveau commercial et national pour un niveau mondial, en abordant les motivations et les perceptions des touristes médicaux. Les fondements théoriques sont tirés de la théorie « push » et « pull », du processus de prise de décision en cinq étapes, en plus des théories issues de la qualité de perception des services et la satisfaction de la littérature. Un cadre conceptuel a été développé pour illustrer la relation entre les variables de l'étude. Les motivations ont été classées en attirer « push » et pousser « pull ». Les motivations d'attirer ont été classées en motivations associées à la destination, aux attributs médicaux, à la commodité et au prix. La qualité perçue a été classée en médecine et touristique. Méthodologiquement, l'étude incorpore une approche de triangulation où les données primaires ont été collectées auprès de fournisseurs impliqués dans le tourisme médical via des entretiens et auprès de touristes médicaux via une enquête. Huit entretiens ont été menés avec des fournisseurs de tourisme médical dans les pays d'étude, afin d'obtenir des informations approfondies sur le sujet et de procéder à une vérification plus approfondie du développement des connaissances quantitatives. Au total, 212 réponses ont été obtenues à partir de l'enquête pour vérifier le modèle quantitatif en utilisant le modèle d'équation structurel. D'autres techniques d'analyse des données ont été utilisées, principalement l'Analyse Factorielle Exploratoire et l'Analyse Factorielle Confirmatoire. Les résultats apportent un soutien à certaines relations hypothétiques. Les motivations d'attraction associées aux attributs médicaux affectent la qualité médicale perçue et les motivations d'attraction associées à la destination, aux attributs médicaux et à la commodité affectent la qualité touristique perçue. La qualité perçue à la fois médicale et touristique influe sur la satisfaction, tandis que la satisfaction affecte l'intention de la visite. Les constatations étendent également les applications des théories sous-jacentes pour expliquer le comportement des consommateurs dans le tourisme médical. Les principales théories comprennent un processus de prise de décision en cinq étapes et une théorie de la qualité du service de désaccord. Les implications de la recherche s'étendent au niveau de l'entreprise et au niveau national. Les résultats peuvent aider les gestionnaires impliqués dans les entreprises de tourisme médical, notamment les cliniques, les centres médicaux, les hôtels et les agences de voyages, à réaffecter leurs ressources et à mettre en œuvre les pratiques recommandées susceptibles d'améliorer leurs performances et d'attirer d'autres touristes. Au niveau national, les conclusions sont importantes pour les décideurs clés dans les domaines du tourisme et de la santé. Les résultats et les recommandations peuvent aider à accroître

l'attractivité de la destination et à améliorer l'expérience du tourisme médical, ce qui se traduirait par des avantages économiques pour la destination dans son ensemble.

## Abstract

A substantive literature of medical tourism has been attributed to medical tourists' motivations. Academicians have studied medical tourists' experiences and resulting satisfaction level. Nevertheless, the link between these two concepts has seldom been examined in medical tourism literature. Thus, this study examines medical tourists' motivations for medical tourism destination, the effect of those motivations on their perception of quality, satisfaction and intention to revisit. In addition, the study aims to explore the various characteristics of medical tourists which yields in classifying them into different segments. The objective is to investigate the attributes that attract medical tourists to the destination as well as possible ways to enhance their medical tourism experience and satisfaction. Empirically, the study aims to promote the medical tourism destination at business and national levels to a world-class level by addressing the motivations and perceptions of medical tourists. Theoretical foundations are drawn from push-pull theory, five steps decision-making process, in addition to theories from service perceived quality and satisfaction literature. A conceptual framework was developed to illustrate the relationship between the study variables. The motivations were classified into push and pull. Pull motivations were classified into motivations associated with the destination, medical attributes, convenience and with price. Perceived quality was classified into medical and touristic. Methodologically, the study incorporates a triangulation approach where primary data were collected from suppliers involved in medical tourism via interviews and from medical tourists via survey. Eight interviews were conducted with suppliers of medical tourism in destination of study to obtain an in-depth insight into the subject matter as well as for further verification of quantitative knowledge development. A total of 212 responses were obtained from the survey for verification of the quantitative model using Structural Equation Modeling. Other data analysis techniques were employed, primarily Exploratory Factor Analysis and Confirmatory Factor Analysis. The findings provide support to some hypothesized relationships. The pull motivations associated with medical attributes affect perceived medical quality and the pull motivations associated with destination, medical attributes and convenience affect perceived touristic quality. Both medical and touristic perceived quality affect satisfaction while satisfaction affected intention to revisit. The findings as well extend the applications of the underpinned theories in explaining consumer behavior in medical tourism. The main theories include five steps decision-making process and disconfirmation service quality theory. The implications of the research extend to business level and national level. The results can help managers involved in medical tourism businesses including clinics, medical centers, hotels and travel agencies to reallocate their resources and implement the recommended practices that can improve their performance and attract additional medical tourists. On a national level, the findings are significant to key decision makers in the fields of tourism and healthcare. The outcomes and recommendations can assist in increasing the attractiveness of the destination and improving the medical tourism experience which would result in economic benefit to the destination as a whole.

**Keywords:** medical tourism, medical tourist, destination, push motivation, pull motivation, perceived quality, satisfaction.



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## Chapter 1 : Introduction

### 1.1. Overview

More than ten million patients nowadays travel abroad every year for affordable, high-quality healthcare. From Thailand's Bumrungrad International Hospital to Eric Clapton's Crossroads Center in Antigua to Johns Hopkins International Medical Center in Singapore, health travelers currently have access to a full array of the world's safest, best choices in healthcare facilities and physicians (Woodman, 2015).

Medical tourism phenomenon has acquired several definitions. Up to this date, there is no universal consensus regarding an "appropriate" definition of medical tourism (Hoz-Correa et al., 2018). Nevertheless, it can be described as “travel with the aim of improving one’s health, and also an economic activity that entails trade in services and represents two sectors: medicine and tourism” (Bookman and Bookman, 2007, p. 1). It is a non-seasonal activity with benefits that feed the economy year-round via channels of tourism sector, healthcare sector and other related sectors.

Previously medical tourism has been characterized by traveling from developing countries to leading medical centers in developed countries seeking improved and more advanced healthcare. Recently, the trend has transformed from one-way movement to developed countries into two-way movement with the direction towards developing countries.

The trend of medical tourism has acquired criticism by many medical writers since it contradicts with the medical systems of several developed countries (Brun, Deau and Roffe, 2009). However, medical tourism can and has created an axis of development to many developing countries. It has been a major contributor to the economic growth of many countries as it is composed of two of the world’s fastest growing services industries; tourism and healthcare.



Nowadays, medical tourism has been gaining increased attention by many governments. Several countries such as Singapore, Malaysia, Thailand and Brazil have developed their healthcare sector and worked on elevating it to match International Standards. Consequently, medical tourism has achieved lucrative results in such destinations with significant growth factors making it a leading service sector industry. The total contribution of medical tourism to world GDP is about nine percent and is expected to grow by an average of four percent a year. For many destinations, medical tourism has been a prosperous sector with high annual growth rates. For example, the tourism sector in Malaysia is the 6<sup>th</sup> largest contributor to GDP of which medical tourism constitute a significant share.

## **1.2. The research objectives**

Building on previous studies and theories, the research aims to identify what matters to medical tourists in the destination of choice and how such elements can be developed and improved towards obtaining a rewarding and satisfying medical tourism journey that can result in retaining existing medical tourists and attracting new ones. From a destination management perspective, the study aims to arrive at outcomes that can be utilized to develop and elevate potential destinations to a world-class medical tourism destination.

From a methodological perspective, this research delves into medical tourism from a supply – demand perspective. Accordingly, it employs more than one methodology to attain satisfactory results and outcomes. Theoretically, it aims to integrate several theories in order to establish a more inclusive and solid foundation for addressing the subject matter.

The chosen geographic location for the research implementation was Beirut, which is the capital of Lebanon. Being located in the Middle East, at a crossroad in terms of tourism opportunities between Europe, Africa and Asia; Lebanon has the potential for being a proximate destination to

many populations. Furthermore, Lebanon acquires a regional position as a center for medical excellence in the Middle East. In addition, it is a country that relies heavily on tourism since it enjoys a warm climate and a variety of landscapes ranging from Mediterranean seaside to green mountains and valleys. The combined attributes advocate a potential scope for the empirical objective of the study, which is the development of a promising niche segment of medical tourism in Lebanon.

### **1.3. Scope of the study**

The recent review of Hoz-Correa et al. (2018) on the evolution of medical tourism research between the years 1931 and 2016 argues that despite the increasing number of publications, there remains a lack of formal literature in medical tourism. A main objective of this research work is to contribute towards building formal literature in medical tourism. Theoretically, this study can be described as a melting pot for several previous studies in this field. The buildup of the research is based on theoretical knowledge from a hybrid of marketing and tourism domains and its contributions to the outcomes are applicable to developing both disciplines of study. The model realized in the study is a synthesis of several previous researches and can be considered a milestone in medical tourism literature upon which future researches can resume. The findings form a perception of consumer behavior in medical tourism as well as an insight into the medical tourist's motivation, perception of quality and satisfaction. The study is valuable to various stakeholders involved in the medical tourism domain.

This study has investigated medical tourism phenomenon from both the supply side and the demand side. It has incorporated the push-pull theory from the tourism field with the five steps decision-making process in the marketing field. It launches from exploration of motivations paving its way to satisfaction and intention to revisit, all embedded in the consumer decision-

making process. Moreover, the study views medical tourism as a bundle with respect to decision-making process. Therefore, in addition to the medical tourism field of knowledge, the theoretical implications of this research are set into several areas including supply and demand, push-pull theory, consumer behavior, consumer satisfaction, bundle decision-making process, bundling, demand segmentation, destination attractiveness as well as others.

Furthermore, the study aims to classify the Middle Eastern medical tourists into a range of segments based on demographic factors and factors related to their medical journey. The original method of segmentation can be adopted or benchmarked in further parallel researches. Additionally, the outcomes of the segmentation process have implications in researches with cultural connotation as they provide an insight into the Middle Eastern medical tourist and how cultural factors can influence preferences, motivations and behavior.

Empirically, this study unearths invaluable information to assist suppliers actively involved in medical tourism as well as the local healthcare industry to forecast the behaviour and requirements of medical tourists. The recommendations concluded from this study assist both suppliers and local authorities in fulfilling such requests in a targeted and beneficial manner. The strategies and work plans enthused from the research outcomes target the various segments of medical tourism supply chain in the destination aiming to enhance their course of work and increase their revenue.

From a business development perspective, involved organizations including medical centres, travel agencies and lodging operators can correctly identify key dimensions that influence medical tourists' motivations and can accordingly direct their resources on developing areas in order to increase medical tourists' experience and satisfaction. The study outcomes can also

direct the way for businesses as well as public-private initiatives to establish more focused and customer-driven ventures.

From a marketing perspective, the outcomes of the research can be utilized to develop successful marketing strategies which can be adopted by various suppliers involved in medical tourism, specifically medical centres, travel agencies and hotels. In addition, the study findings classify medical tourists into segments with different characteristics and spending patterns. The segmentation assists involved business organizations in identifying the target segment and thus focusing their marketing efforts to attract the target segment. Moreover, the enthused recommendations are crafted to help draw the marketing efforts toward specific channels and are tailored for the different suppliers in the healthcare sector and the tourism sector. On a governmental level, the results of the study can be used to develop successful destination marketing strategies that further promote Lebanon as a desirable destination for medical tourism. The strategies can be benchmarked by other destinations that share similar attributes.

Since medical tourism is composed of two of the world's fastest growing services industries; tourism and healthcare, both industries are high-touch and are heavily reliant on human service. Therefore, this study is essential for human resource managers in both industries since it unveils the medical tourists' requirements and expectations from personnel working in the healthcare field and tourism field. Accordingly, human resource managers can utilize the study findings to first, develop motivational strategies that sustain their valuable human assets and second, to enhance the staff service performance through special training and development programs that target the developing areas. Thus, to transfer service providers into customer-driven professionals.

This study is of specific value to consumers and potential consumers of medical tourism. It paves a way for a better understanding of their motivations to travel, attributes to consider in choosing a destination abroad and what to expect from their medical journey. Furthermore, the study assists them in planning a successful medical journey and enhancing evaluation of the services offered by the international healthcare community. It is perceptible that the study projects an emphasis on medical tourists' motivations to better identify their requests and select a medical journey that meets their expectations and yields in satisfying results.

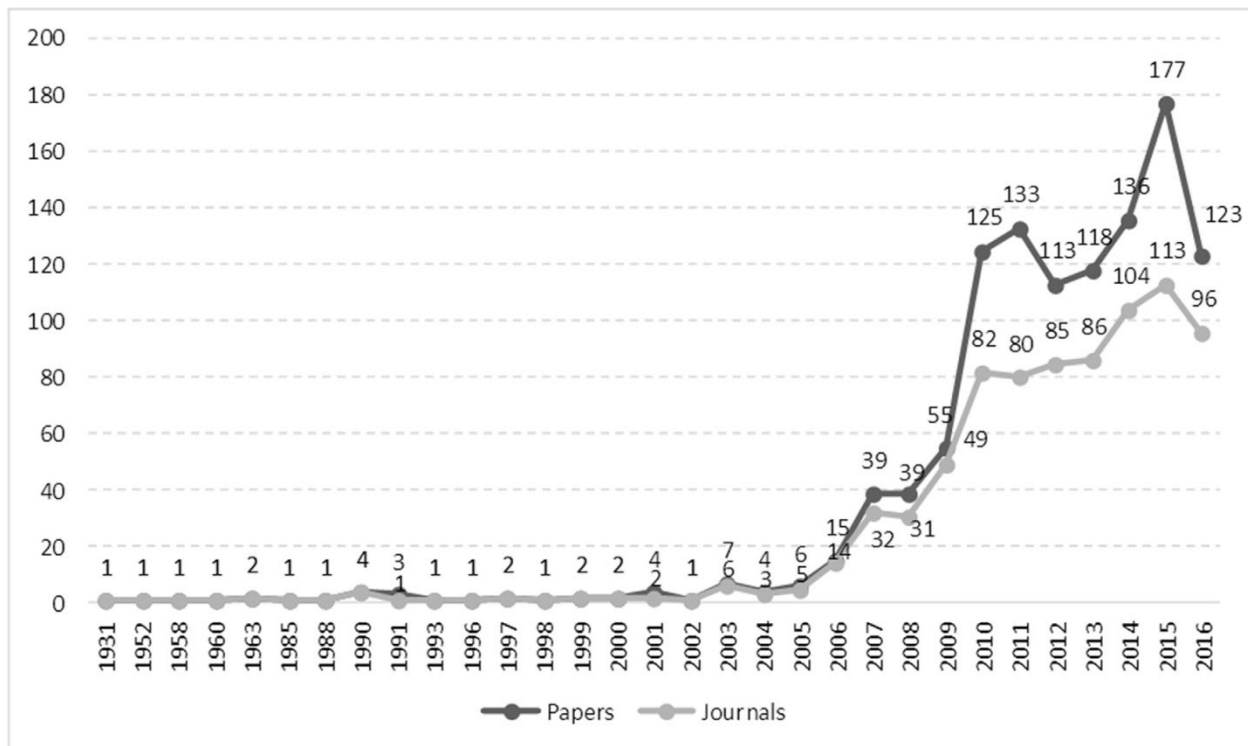
In determining the streams of medical tourism research and future contributions, Hoz-Correa et al. (2018) findings suggest that studies on "medical tourism destinations" will continue to be one of the most relevant themes in the future years of medical tourism research. From this point, the role of the study being conducted in Lebanon stems. The study is one of very few choosing a Middle Eastern destination as an experimental ground for the research. Therefore, its findings represent a cornerstone for research work in the field of medical tourism in this region. This fact as well paves a way for examining the phenomenon from a cultural perspective and for future cross-cultural studies in medical tourism.

On a destination management level, the research outcomes and recommendations (i.e. from strategies and work plans) can contribute invaluablely to the Lebanese Ministry of Health and Ministry of Tourism. The results can be utilized for potential benefits to various shareholders and stakeholders of medical tourism in the destination of study; particularly, the concerned decision makers. The developed strategies and work plans can lead to maximizing the medical tourists' welfare, the value added of medical tourism to the economy as well as elevating the destination to a world-class medical tourism destination.

#### 1.4. Background of the study

Although "Medical tourism" as a topic is recent, it has gained an ascending trend and a rapid growth among scholars. Figure 1.1 shows the evolution of published documents on the topic of medical tourism from year 1931 to year 2016. The steady growth of publications began in 2004 while years 2010 and 2011 witnessed an escalation in the published papers and journals, which is explained in the emergence of numerous special issues in several journals.

**Figure 1.1 Quantification of papers and journals on the topic in the sources consulted from 1931 to 2016**



Source: Hoz-Correa et al., 2018, P. 204

Tourists motivation for international travel has been a core topic among the medical tourism academic community. Horowitz, Rosensweig and Jones (2007) discussed the reasons for increasing popularity of medical tourism from the perspective of patients from highly industrialized countries. Connell (2006) introduced medical tourism development in Asian countries and considered cost as the main driver for health travelling to such countries. Cortez

(2008) discussed the reasons for traveling abroad for medical care; they are mainly accessibility to specialized medical treatment and cost discrepancies. Turner (2010) portrayed medical tourism as an attractive option and discussed factors that attract international patients such as quality, competence and international standards. Cormany (2008) presented the motivating factors that would attract towards a destination. The factors were addressed based on the types of medical tourists and what they desire from their medical trip. Peters and Sauer (2011) is another work that investigated the influencing factors for seeking medical treatment abroad and the influencing factors for choosing a specific medical provider from the perception of medical tourism agencies and brokers. Moreover, Gill and Singh (2011) discussed the factors that affect the choice of destination for medical tourism. The study was conducted on potential US medical tourists. Similarly, Henson, Guy and Dotson (2015) conducted an exploratory study on decision to seek medical care abroad for US potential medical tourists. The study included the motivations to seek medical care abroad, the decision factors relevant to medical tourism and the information sources considered while searching medical tourism options.

From the perspective of push-pull theory, Hallab (1999) was among the pioneers who investigated wellness travel with respect to this theory. Ye, Yuen, Qiu and Zhang (2008) also examined medical tourism in Hong Kong using push and pull motivation factors. Boulay, Hritz and Ashton (2013) utilized the push-pull theory to explore the wellness motivation factors differing between U.S. and non-U.S. travelers. Moreover, in their review on published work of medical tourism, Crooks et al. (2010) classified the most discussed topics with regards to medical tourism decision making, which were push factors (i.e. drove patients away from their local medical system) and pull factors (i.e. attracted them to a specific destination).

### **1.5. Significance of the study**

In consideration of the foregoing, the topic of this research has been addressed by several scholars. While some previous studies focused on motivations, others focused on the medical tourist's experience and resulting satisfaction. The inclusive experience of medical tourism from the beginning till the end has not been addressed in a single analysis. The incorporation of the push-pull theory from the tourism discipline with the five steps decision-making process from the marketing discipline demonstrates an interconnection that has not been addressed yet in medical tourism and displays a more inclusive theoretical framework for the base of research.

Therefore, this study examines the practice of medical tourism from an inclusive spectrum. The model that stems from the results starts with initial motivations to travel abroad for medical care and ends with a potential return to the destination. Thus, it is a model that encompasses the travelers experience from initiation to conclusion.

Moreover, the academic trend of studying the phenomenon of medical tourism has mainly focused on examining medical tourism from the medical tourists' point of view and their motivation to travel abroad for medical care. The topic has been methodologically investigated from the demand side, the supply side including the facilitators side. However, very few studies if any have investigated the phenomenon of medical tourism from both the supply side and the demand side. Carrera and Bridges (2006), for example, mentioned supply perspective and demand perspective, yet this was to display each side's definition of medical tourism. Therefore, the inclusion of primary data from both sides adds to the comprehensive methodological approach adopted by this research work.

Furthermore, the study aims to classify medical tourists into segments. The classification serves toward a better understanding of the "consumer" investigated in the study. In addition, this



classification has advantageous implications in the empirical and managerial outcomes of the research. Prior studies such as Cormany (2008) and Al-Lamki (2011) have attempted to segment medical tourists. Nevertheless, this study incorporates several attributes for the purpose of classification, not only types of pursued treatment, prior experience or mere demographic data. It incorporates a combination of segmentation factors considered reflective and original in identifying medical tourists.

### **1.6. The research problem and the research question**

Until today, there is no comprehensive model that attends to the medical tourism experience from initiation to end. A significant portion of the literature discussed the motivations of medical tourists and a smaller portion discussed their satisfaction. Therefore, the inclusive approach of studying the medical tourism experience from initiation to conclusion is still missing. This has left a gap in attaining a thorough understanding of the medical tourist experience and accordingly in offering what this particular tourist is looking for in every phase of this particular journey. Hence, the study that focuses on travel motivations would overlook during-the-visit experience and vice versa. Accordingly, governments and involved businesses do not have yet a comprehensive picture that encompasses pre-purchase motivation with post-purchase satisfaction. Therefore, the research question of this study starts with initial motivations to travel abroad for medical care and ends with a potential return to the destination. And, the resulting model can be valuable to governments and involved businesses as it provides a reference for developing harmonious strategies that walk along the phases of the medical tourist journey.

Moreover, previous researches have addressed the topic from the perspective of either suppliers, consumers or facilitators. This singular approach has led to an understanding of the phenomenon from one angle instead of forming a comprehensive perception that encompasses involved social

players. Accordingly, the outcomes of previous studies that addressed the topic from a single side may have overlooked some involved social players who could be affected positively or negatively by such outcomes. This incomplete picture and resulting outcomes may have led to a creation of a short-sighted vision to suppliers and governments as their strategies would be crafted based on an incomplete picture.

Until today, there is no in-depth research on the characteristics of medical tourists. Some studies have focused on demographic characteristics. However, to better understand the medical tourist, additional behavioral characteristics are to be addressed. Understanding the characteristics of the medical tourist is of importance to businesses as this will provide an idea of what would be important and what would be trivial in the eye of the medical tourist. Moreover, it is important to governments as it will indicate what types of medical tourists are visiting the country in terms of nationality, trip budget, spending pattern, medical and touristic choices as well as other aspects. This will assist governments to focus on the segments that are more beneficial and impactful on the economy.

The mainstream medical tourism literature has focused on a trend that is taking off from developed countries and landing in developing countries, some of these destinations have become medical tourism hubs. Until today, medical tourism research that analyses patients coming from developing countries is still limited. In addition, the Middle East region has had a small share of medical tourism literature despite the fact that some of its destinations have gained high global rankings in this field. This leaves governments and businesses in the Middle East in need of information on what would be relevant and applicable in their region as what has been successful in a certain destination may not yield in similar results in another destination. Although Lebanon encompasses the potential of medical tourism destination, the consumer in

this industry is not yet formally researched. The characteristics, needs, wants, expectations and consumption behavior of these medical tourists are all areas that have not been addressed academically and in need of an answer.

This is of particular importance to the suppliers of medical tourism in Lebanon as the industry is still lacking the marketing concept in their strategies and rather focusing on selling what is already existent in terms of services, assuming that the international/regional patient will come and buy them. Such an existing strategy will result in failure to compete with thriving destinations which are basing their empirical performance with scientific research, a problem that will be faced sooner rather than later. Thus, this study will unveil valuable information to the Lebanese suppliers and government in what can be utilized to transfer the marketing approach and strategies to become more of marketing oriented rather than sales oriented.

In view of the aforementioned, the central research question of this study is posited to understand medical tourists' motivations for medical tourism destination, the effect of those motivations on their perception of quality, satisfaction and intention to revisit. Additionally, the study aims to explore the various characteristics of medical tourists which yields in classifying them into different segments.

### **1.7. The mission of research**

This study aims to obtain an answer that covers various angles of the research question (i.e. the diverse perceptions of the concerned social players in the experienced phenomenon). Previous researches in medical tourism obtained data from either the consumers of medical tourism, suppliers involved in medical tourism or facilitators of medical tourism. To be able to examine the perceptions of the concerned social players jointly, the need to determine the appropriate method for involving them in the study arises.

The research question itself involves motivation, quality perception, satisfaction and intention to revisit. Despite the fact that medical tourism literature has a considerable segment on motivations, it would be fairly limited to rely solely on previous literature in exploring the motivating factors particularly that most of the studies were conducted in parts of the world where patients were coming from developed countries. Moreover, the majority of the studies that discussed motivations of medical tourists did not incorporate the element of actual experience feedback, at least not from the same study sample. Therefore, the quest was to obtain a comprehensive and holistic answer to all the questioned relationships.

Additionally, the study aims to acquire an in-depth understanding of the medical tourist, which will allow for improved understanding of their requirements and desires and finding ways to fulfill these fundamental elements. However, the adopted method for understanding medical tourists is imperative as it needs to result in effective theoretical and managerial implications.

### **1.8. The research methods and analysis**

The posited research question and the nature of the examined topic in view of the existing literature, implied adopting a pragmatist position in this research by which the research methodology can be built from the context of the research question, which is the most important consideration. The philosophy also allowed for flexibility in the approaches, methods and techniques of data collection.

The quest for examining the phenomenon from the perception of the various social players; that is mutually from supply (including facilitators) and demand sides, implied that using a single method, being qualitative or quantitative would not suffice in fulfilling the purpose. Since each side plays a different social role that connotes a method of being approached for data collection, triangulation was adopted as the methodology of the research. In that view, suppliers involved in

medical tourism were interviewed while consumers of medical tourism were surveyed through a questionnaire that was distributed at various collection points.

In order to understand medical tourism phenomenon in Lebanon, the commencement point was qualitative exploration through interviewing suppliers who were involved practically and routinely, ranging from medical centres, travel agencies, hotels and other service and service-related providers from the medical field and tourism field. The qualitative interviews allowed for improved extortion and identification of variables that were adopted in the questionnaire.

The posited effects and relationships in the research question, call for quantitative testing. The questionnaire comprised the instrument that unveiled the relationships of the research question. The questionnaire sections were developed in line with the sequencing questioned relationships of the research question; they are push motivations, pull motivations, perceived quality, satisfaction and intention to revisit.

In order to attain a comprehensive and holistic answer to all the questioned relationships, there needs to be a statistical method that provides an inclusive answer. Mere correlation and regression testing will provide an answer to the questioned relationships yet will not suffice in presenting a comprehensive model that answers the research question as a whole. After researching the possible statistical techniques, confirmatory factor analysis (CFA) and structural equation modeling (SEM) were two techniques that present a confirmatory answer for a hypothesized model of successive relationships.

An understanding of medical tourists that can yield in effective theoretical and managerial implications, calls for finding a method of identification, characterization and categorization. Segmentation is a common method originated from the marketing field that groups consumers

with common characteristics into one segment. It can be utilized to focus the marketing efforts on segments with significant market share. Accordingly, it can result in effective empirical implications. Nevertheless, there is a call to identify the method of segmentation that is appropriate and applicable in medical tourism. Considering demographic characteristics solely will provide valuable information yet, it might be generic in application. Therefore, additional behavioral factors specific to the medical tourist and his/her trip were added to the segmentation characteristics. Such additions will contribute uniquely to the segments identification and deemed to result in implications with better and more effective results.

### **1.9. Research structure**

In line with the previous section, this paper displays a sequential process that results in outcomes, recommendations and conclusions. The course of work is divided into nine chapters. Chapter one is an introductory chapter. It presents the topic of study, the research question and a general depiction of how the research question was addressed and study mission was tackled.

Chapter two is a descriptive chapter. It portrays medical tourism as a phenomenon and a trend that has acquired increasing popularity. The chapter represents a range of definitions for medical tourism, classifications of medical tourists and a historical review of medical tourism evolution. It also discusses the globalization of healthcare and the various international markets that have been created accordingly. The chapter examines the economic effect of medical tourism in different countries and it concludes with real world ventures that portrays the essence of medical tourism, which is the synergy of healthcare and tourism.

Chapter three presents the theoretical framework of the study. It provides a depiction of the adopted theories and their application in the research; theories related to motivation, decision

making and satisfaction. Moreover, it analyzes the hypothesized model and the associated hypothesis that are to be tested further on in the research.

Chapter four represents the adopted research methodology that were employed to (1) identify the study variables, (2) test the hypothesized relationships and (3) obtain a deeper understanding of the medical tourism phenomenon. The chapter discusses the research philosophy, research design and the employed qualitative and quantitative methods in data analysis.

Chapter five is dedicated to the questionnaire development. The initial design of the questionnaire, its main sections and the measurement scales applied in the questionnaire are included. The chapter presents the developmental stages that the questionnaire passed through to reach the final formation in addition to a detailed narration of each variable in the questionnaire and its affiliation with previous studies. Moreover, the chapter presents the data collection processes and procedures as well as applications to obtain an enhanced representative sample.

Chapter six is concerned with the descriptive findings of the study. They are of two sources; the interviews and the questionnaire. The qualitative interviews findings represent the suppliers' perception and constitute an exploratory insight into medical tourism in Lebanon. Additionally, the findings compose a foundation for the quantitative testing of the research via shaping the study variables that were applied further in the questionnaire. The descriptive data inferred from the questionnaire is mainly utilized in the segmentation process. It presents a description of the surveyed sample in terms of their demographic characteristics as well as an identification of the various medical tourists' segments resulting from the cross-tabulation process.

Chapter seven is dedicated to the examination and analysis of the confirmatory findings of the survey data. It analyses the results of EFA testing followed by a detailed and thorough

application and analysis of CFA and SEM testing. The chapter follows several steps before obtaining the results of hypothesis testing and reaching the final model.

Chapter eight is a discussion of the findings considering the research question. It commences from the results of hypothesis testing and expands broader to discuss the theoretical and empirical implications of the study findings. In addition, the chapter identifies the segments of medical tourists based on the adopted characteristics. The theoretical discussion is carried out in line with the causality sequence of the attained model. As for the empirical discussion, it is presented on a business level and a national level. The business level focuses mainly on medical centers, travel agencies and lodging establishments while the national level is addressed to concerned key decision makers in the tourism and healthcare sectors. The addressed recommendations fall in harmony with the study's model and mainly target pre-visit motivations and on-visit perceived medical and touristic quality experience.

Chapter nine is the concluding chapter of the study. It provides a highlight of what has been conducted throughout the research work. It encapsulates the work into study highlights of the results and recommendations. Further it displays the limitations faced during the study conducted and leaves the reader with a range of research venues that can be commenced and elaborated from this piece of work.

#### **1.10. Addressing the research question**

A reflection on the chapters' content designate that the research question was addressed theoretically via chronological steps and empirically via directing the research findings to what benefit the concerned social players in line with the steps of the research question.

Hence, the research question was theoretically addressed in stages. First, the theoretical grounds for the research was crafted and the hypothesized model along with the set of hypotheses were



developed. In parallel, the factual variables that represent motivations, perceived quality, satisfaction and intention to revisit were precisely determined from interviews and previous studies, and a questionnaire was developed. Second, a representative sample was identified and methods for approaching it were determined. Third, the statistical tests and applications that would respond to the posed relationships were decided. Fourth, the data was subjected to the statistical tests, findings were obtained and analyzed resulting in accepting some hypothesized relationships and refuting others. Finally, the resultant model was attained as an answer to the main quest of the study.

Empirically, the research question was addressed through identifying the important motivational factors in the perception of medical tourists and recommending ways to enhance and utilize them to market the destination and attract more medical tourists. Furthermore, the study identifies the high-scoring and low-scoring medical and touristic perceived quality variables and provides recommendations to enhance developing areas to provide a more rewarding medical tourism experience. The study also identifies the significant segments of medical tourists and recommends ways to attract these segments and to provide according to their requirements and desires. To attain the objective of a comprehensive picture that covers the various angles of the subject matter, the recommendations were addressed on business suppliers level (medical centers, travel agencies and lodging establishment) as well as on a destination level that is to the Lebanese government.

### **1.11. Enlightenment**

The findings of this study are of invaluable nature. They contribute to several fields of knowledge and represent a hybrid influence of diverse foundations. The findings are also unique in that they are an outcome of a form of medical tourism that is not necessarily similar to the

mainstream medical tourism literature. It is apparent that the medical tourists are not citizens of highly industrialized countries. The destination of study is not a mass popular medical tourism country and is not discussed in the medical tourism literature, such as Singapore, India, Thailand or other previously researched destinations. Thus, the findings can be beneficial to other destinations that encompass potential success factors towards elevating them to become a world-class medical tourism destination.

Although this chapter describes the dynamic mechanisms that drove the work and the sequence of the research journey, yet there are numerous valuable details gemmed in each chapter throughout the course of the study. Mining those details unveils invaluable information and the enthusiastic character of the study. It also projects the spirit of the work and conveys a portrayal for the reader to become an involved player in this exploratory journey.

### **1.12. Summary**

The introduction provides an insight into the research area and the reasons why this research deserves to be accomplished. The chapter provides a summary of the literature review. It proceeds with an elaboration on the significance of the study for the academic society and the corporate world. The main research question is addressed along with the research problem and the employed methods for conducting the current study. The chapter provides a narration of the thesis outline and the contribution of each chapter corresponds to the research question. The chapter concludes with an inspiring enlightenment of what this research still has to offer in future developments.

## Chapter 2 : Descriptive Literature

### 2.1. Introduction

This chapter represents the descriptive literature of medical tourism. It commences with definitions of the phenomenon cited from several previous literatures as well as a description of the medical tourist. Furthermore, it moves to a narration on the history and evolution of medical tourism and the various formations taken to reach today's concept of medical tourism.

Next, the chapter discusses the globalization of healthcare and the various international markets that have been created accordingly. It also discusses the economic effect of medical tourism and how different governments envisioned and supported this sector.

Lastly, the chapter ends with a section on the synergy between healthcare and hospitality for they both jointly compose the depiction of medical tourism. This section is supported with empirical representation of this synergy from both sides.

### 2.2. Definitions

Many authors have attempted to define the phenomenon of healthcare utilization in foreign countries. Some have differentiated between medical tourism and health tourism. According to Connell (2006), medical tourism or health tourism has been defined as a “popular mass-culture where people travel often long distances to other destinations such as India, Thailand, and Malaysia to obtain medical services such as dental, cosmetic and non-cosmetic care and at the same time enjoying their holidays”. (Connell, 2006, p. 2)

Bookman and Bookman (2007) have defined Medical Tourism as “travel with the aim of improving one’s health, and also an economic activity that entails trade in services and represents two sectors: medicine and tourism” (Bookman and Bookman, 2007, p. 1). Horowitz,

Rosensweig and Jones (2007) stated that medical tourism is when “citizens of highly developed nations bypass services offered in their own communities and travel to less developed areas of the world for medical care” (Horowitz, Rosensweig and Jones, 2007, p. 36).

The term Medical Tourism according to Awadzi and Panda (2005) refers to “the offshore provision of medical services in combination with the other tourism opportunities by using comparative cost advantage as the leverage point”. (Awadzi and Panda, 2005) According to Wongkit and McKercher (2013) medical tourism is defined as “The travel of people to a specific destination to seek medical help that forms the primary purpose of their trip” (Wongkit and McKercher, 2013, p. 5). Thus, there are various proposed definitions for medical tourism throughout the course of academic literature of this global phenomenon. A selection is presented in table 1.1.

Empirically, medical tourism is a term that portrays the growing phenomenon of travelling across international borders, utilizing internet, travel agencies packages, and low airlines fares in developing countries for the purpose of seeking high-tech and specialized medical services for low prices (Reddy and Qadeer, 2010).

**Table 2.1 Definitions Regarding Medical Tourism**

<b>Construct</b>	<b>Definition</b>	<b>Source of definition</b>
<b>Medical tourism</b>	As a niche industry within the tourism domain, medical tourism is generally understood to occur when people travel often long distances to overseas countries to obtain medical, dental and surgical care while simultaneously being holidaymakers, in a more conventional sense.	Connell, 2006
<b>Medical tourism</b>	Medical tourism is commonly used to describe the practice of patients traveling outside of established cross-border care arrangements to access medical services abroad, which are typically paid for out-of-pocket.	Crooks, et al., 2010 Ramirez de Arellano, 2007
<b>Medical tourism</b>	In its broadest conceptualization, medical tourism refers to travel with the express purpose of obtaining health services abroad.	Ramirez de Arellano, 2007
<b>Medical tourism</b>	From a destination perspective, medical tourism can be defined as the offshore provision of medical services, in combination with other conventional tourism products, by leveraging a comparative cost advantage.	Awadzi and Panda, 2005

<b>Medical tourism</b>	Travel activity that involves a medical procedure or activities that promote the wellbeing of the tourist.	Lee and Spisto, 2007
<b>Medical tourism</b>	Medical industry practitioners have defined medical tourism as the act of travelling beyond a home country to receive a health care treatment that is either less expensive or more accessible.	Kim, Leong, Heob, Anderson, and Gaitz, 2009
<b>Medical tourism</b>	An economic activity that entails trade in services and represents the splicing of at least two sectors: medicine and tourism.	Bookman and Bookman's ,2007
<b>Medical tourism</b>	Set of activities in which a person travels often long distances or across the border, to avail medical services with direct or indirect engagement in leisure, business or other purposes.	Jagyasi, 2009
<b>Medical tourism</b>	Countries that intend to provide medical care restoring or promoting personal health by medical intervention.	Carrera and Bridges, 2006
<b>Medical tourism</b>	Medical tourism is understood as foreign travel for the purpose of seeking medical treatment with or without the consumption of tourism services.	Balaban and Marano, 2010 Connell, 2006
<b>Medical tourism</b>	Described medical tourism as the activity of patients who go abroad to seek healthcare because of some relative disadvantage in their own national healthcare system.	Glinos and Baeten, 2006
		Goodrich and

<b>Medical tourism</b>	Vertical development for some tourism products by tour operators who contain health care services.	Goodrich, 1987, P. 217
<b>Medical tourism</b>	Medical tourism refers to travel for the purpose of obtaining medical services in a foreign country where medical technology is advanced as well as affordable. It also encompasses activities such as the intentional marketing of medical services and facilities to foreign patients.	Bies and Zacharia, 2007
<b>Medical tourism</b>	The travel of people to a specific destination to seek medical help that forms the primary purpose of their trip.	Wongkit and McKercher, 2013, p. 5
<b>Medical tourism</b>	Medical tourism as tourism where a person chooses to seek disease prevention or treatment, or to enhance physical and psychological well-being in a country other than their own.	Hong, Lim, and Kim, 2007
<b>Medical tourism</b>	Is typically paid for 'out-of-pocket' and is motivated by an interest in cost savings and/or avoiding waiting times for care in the patient's home country.	Snyder, Crooks, and Turner, 2011, P. 3

*Source:* Lajevardi, 2016, P.11

In some writings, there has been a distinction between wellness tourism, health tourism and medical tourism. While wellness tourism refers to the act of travelling for relaxation, meditation and recreation in spa and health resorts where no medical procedure is involved (Caballero-Danell and Mugomba, 2006); Medical Tourism involves the intervention of a specific medical procedure (Connell, 2006). Nevertheless, health tourism comprises both wellness tourism and

medical tourism. In essence, it embraces all treatments from traditional and alternative therapy and healing techniques to essential surgery such as heart transplant, elective and cosmetic surgery, remedy of injuries, illness treatment and other bio-medical procedures (Caballero-Danell and Mugomba, 2006). Health Tourism was defined by Carrera and Bridges (2006) as “the organized travel outside one’s local environment for the maintenance, enhancement or restoration of an individual’s well-being in mind and body” (Carrera and Bridges. 2006, p. 449). Therefore, as health tourism is linked to someone’s travel for relaxation, restoration and for the wellbeing of mind and body, medical tourism is a more organized form of travel outside the local health system and is usually combined with leisure, business or other tourism aspects (Al-Lamki, 2011).

In 1987, Goodrich and Goodrich defined health-care tourism as “the attempt on the part of a tourist facility (e.g. a hotel) or destination (i.e. Baden, Switzerland) to attract tourists by deliberately promoting its health-care services and facilities, in addition to its regular tourist amenities” (Goodrich and Goodrich, 1987).

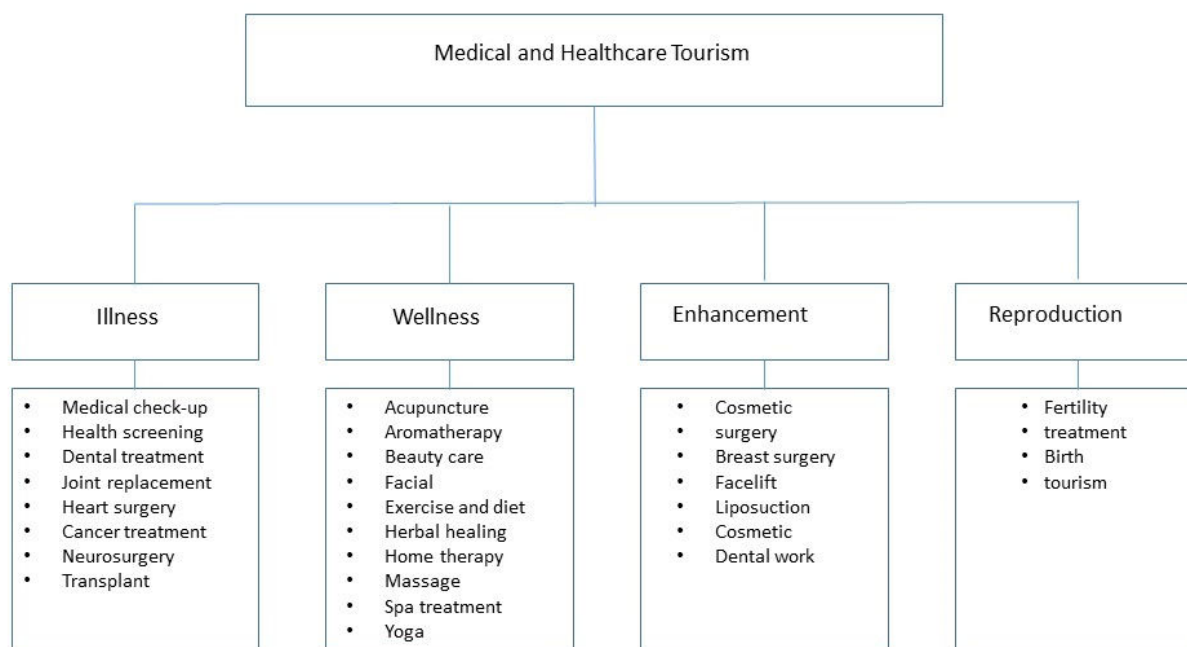
World Tourism Organization (WTO) has defined health tourism as “the services that leads to improve health and enhance the morale of the individual (i.e. using mineral water, weather, or medical interventions) and is in the place of residence which takes more than 24 hours and less than a year” (Taleghani, Larghani and Mousavian, 2011, P. 545).

The overlap between health tourism, wellness tourism and medical tourism was discussed by many researchers. Some have classified medical tourism and wellness tourism under the umbrella of health tourism (Connell, 2006; Carrera and Bridges, 2006; Smith and Puczko, 2009). Nevertheless, to depict segments within medical and healthcare tourism according to the type of



healthcare, classifications specified are illness, wellness, enhancement and reproduction (Tourism Research and Marketing, 2006). (see figure 1.1)

**Figure 2.1 Medical and Healthcare Tourism Segments**



*Source:* Tourism Research and Marketing, (2006), P. 14.

Since medical tourism has several connotations and its structure is based on more than a discipline, its interpretation can be more complex. A recent review of the evolution of medical tourism research by Hoz-Correa, Muñoz-Leiva and Mårta Bakucz (2018) concluded that there remains a lack of formal literature as well as a lack of consensus regarding a definition and consistent terminology of medical tourism (Hoz-Correa et al., 2018).

### 2.3. Classifications of Medical Tourists

Along the line of the aforementioned definitions, a medical tourist is a person who has travelled for the purpose of enhancing or maintaining health (Woodman, 2008). According to Al-Hinai (2011), “there are several types of medical tourism, and they are classified in many ways. One such classification includes: 1) “Temporary visitors abroad” who go for either check-up or

treatment; 2) “Long-term residents” e.g. people who move to a location better for their health like many Americans who go to Florida or the Caribbean; 3) “Medical tourist, from two adjacent countries who share common borders” and have agreed upon sharing health care, and 4) “Outsourced patients”—these are patients who are sent abroad by their government, as neither the necessary treatment nor the specialist is available locally. This last definition fits many Omani patients” (Al-Lamki, 2011, p. 444).

Medical tourists are also classified by Diethelm Travel’s (2005) into two categories; the first is the leisure tourists who incorporate minor procedure or medical service during their stay and the second is the tourists who are travelling specifically for the purpose of obtaining medical care abroad (Diethelm Travel’s, 2005).

Another classification of medical tourists which comprises the various dimensions of medical tourism was presented by Cormany (2008) and published by the Medical Tourism Association. Medical tourists can be classified into six occasionally overlapping categories: 1) Necessary Minor Surgery, 2) Necessary Major Surgery, 3) Diagnostic Services, 4) Alternative Therapy Treatment, 5) Lifestyle/wellness, and 6) Cosmetic Surgery. The categories can be further divided into subcategories such as dental or bariatric treatments for minor surgeries, heart care, cancer and joint-replacement for major surgery and acupuncture, Ayurveda and herbal therapy for alternative therapies among other subcategories (Cormany, 2008).

Cormany (2008) classification of medical tourists can better serve the purpose of this study for it can be used in destination planning to meet the priorities of its targeted segment. According to such classification, medical tourists’ priorities differ based on the medical/health treatment pursued. Therefore, the priorities and expectations of the classified medical tourists will vary. For example, patients traveling for necessary major surgery will extend less priority to tourism

aspects in comparison with patients travelling for minor or wellness purposes. In addition, patients seeking alternative therapy may be more flexible waiting for the visa in comparison with major and emergency surgery patients (Cormany, 2008). Hence and according to such classification, medical tourism destinations can shape their advantages and offerings according to the priorities of their targeted segments. Such advantages can be implemented in the destinations' marketing and advertising efforts as well.

#### **2.4. History of Medical Tourism**

The term “Medical Tourism” is a recent terminology, however travelling is an age-old tradition and the act of travelling in pursuit for better health and cures from diseases has been rooted in history from many centuries ago. It is one of the earliest and most ancient types of tourism. By mid-first millennium B.C., people were travelling for health reasons (Smith and Kelly, 2006, p. 1).

The temple of healing god or goddess at Tell Brak in Syria is by archaeological evidence deemed to be the earliest destination visited for the health and curing purposes. The pilgrimage to Tell Brak dates from the mid-third millennium B.C. By then, it was thought that pilgrims travelled to this temple in hopes of finding cures to eye problems. Some possibilities suggest that the pilgrims were subject to cure by the atmosphere and the environment (Kevan, 1993; Drower and Bottero 1971).

As early as 4,000 B.C., The Sumerians were the first to build the earliest forms of healthcare complexes which were constructed around hot springs and were characterized by majestic elevated temples with flowing waters (Poli Real Estate, 2010).

Throughout history, the incidence of diseases spread seasonally and there was a belief among the physicians that ill health is strongly linked to meteorological events (Kevan, 1993; Majno, 1975).

The Elite people travelled towards places that provide climatic cures. Cyrus the Great the founder of the Achaemenid Empire is known to have been the first king who shifted his residence seasonally in accordance with climate conditions from Babylon to Susa and Ecbatana in pursuit for living in perpetual Middle Eastern spring conditions (Kevan, 1993).

Moreover, early Mediterranean settler, thousands of years ago, used to travel to Epidauria, a small territory in Greece to visit the healing God Asklepios as Epidauria was considered the sanctuary of Asklepios. Bath also, was well known and visited by Roman citizens for its restorative waters and therapeutic spas (Al-Lamki, 2011).

The Asclepia Temples were some of the world's first health centers. According to the Greek mythology, some Gods in the Greek Pantheon were jealous of Asklepios's increasing fame and healing power and expressed their complaints to the great Zeus, compelling Zeus to punish Asklepios with a thunderbolt. As a result, Greek people affinity towards Asklepios the healing God grew stronger over the years and many Asclepian healing temples were built across the Greek land from Epidaurus to Tricca and from Corinth to Pergamon. Their peak was in the fourth century A.D. after which medicine became less ritual and more clinical with the advent of herbal medicine and alchemy. Epidaurus remains the most preserved Asclepian temple with its bathing springs, dream temple, exercise area and the significant snake farm. Less popular than Asclepian temples, there were other flourishing spas such as the Sanctuary of Zeus at Olympia and the spa complex at the Temple of Delphi (Poli Real Estate, 2010).

The Romans are considered to have fervently practiced health tourism. They headed south to the seaside Campania where the access to hot mineral springs was a primary reason for their travel. During spring, the Elite of the Roman Empire deserted Rome moving south and only the poor

who could not afford the travel remained in Rome where the air in the height of the summer was considered unhealthy (Kevan, 1993; Friedlander 1908).

Health tourism has a well-known history in Asia as well. As early as 5,000 years ago, alternative healing of Yoga and Ayurveda acquired a reputation in India that attracted flocks of continuous spiritual and health seekers. In Japan, the rituals of visiting hot springs called “Onsen” has a long history that goes back thousands of years ago. For example, the Dogo Onsen in Matsuyama, Shikoku Prefecture has a history of 3,000 years. Visiting Onsen became more popular with the arrival of Buddhism to Japan in 552 A.D. where bathing in hot springs became a ritual of purification in Buddhism (Japanzine, 2005).

Water has acquired the symbol of purity and rejuvenation across various cultures. Many pilgrimage sites have links to water and springs. While many civilizations appraised the healing effect of water; it was the Sumerians around 4000 B.C. who established the first health centers along mineral-rich water springs which also included temples. The Greeks were later the first to have established a structure for health tourism.

Hippocrates, the ‘Father of Medicine’, valued water for healing and claimed that ‘water is still, after all, the best’ (Smith and Puczko, 2009, P. 22). Around 1700 BC, the culture of bathing became popular among Greeks and Romans. One of the earliest forms of water-inspired health travel existed in ancient Roman times and it took the form of pilgrimage to Epidaurus in Greece. The cure was a merge of physical and spiritual healing. Pilgrims consulted oracles, engaged in spiritual rituals and immersed in the holy waters.

The early Medical Tourism was therapeutic and recuperative where the concentration of medical travel was to visit spas and convalescent resorts. Documents from the 13<sup>th</sup> and 15<sup>th</sup> centuries

report the importance of thermal springs in the middle ages and their frequent usages (Husovska and Takatsova, 2002).

Afterwards, visiting “therapeutic bathing” – a term derived from empirical knowledge- became a summer retreat for many Europeans who often travelled long distances for such activity (Husovska and Takatsova, 2002). In the 16<sup>th</sup> and 17<sup>th</sup> centuries, spa towns became more popular in Europe and were more frequented by the European elite for healing purposes such as St. Moritz and Bath (UK Essays, 2013). By the 18<sup>th</sup> century, health spas were the common feature of Medical Tourism (Al-Lamki, 2011).

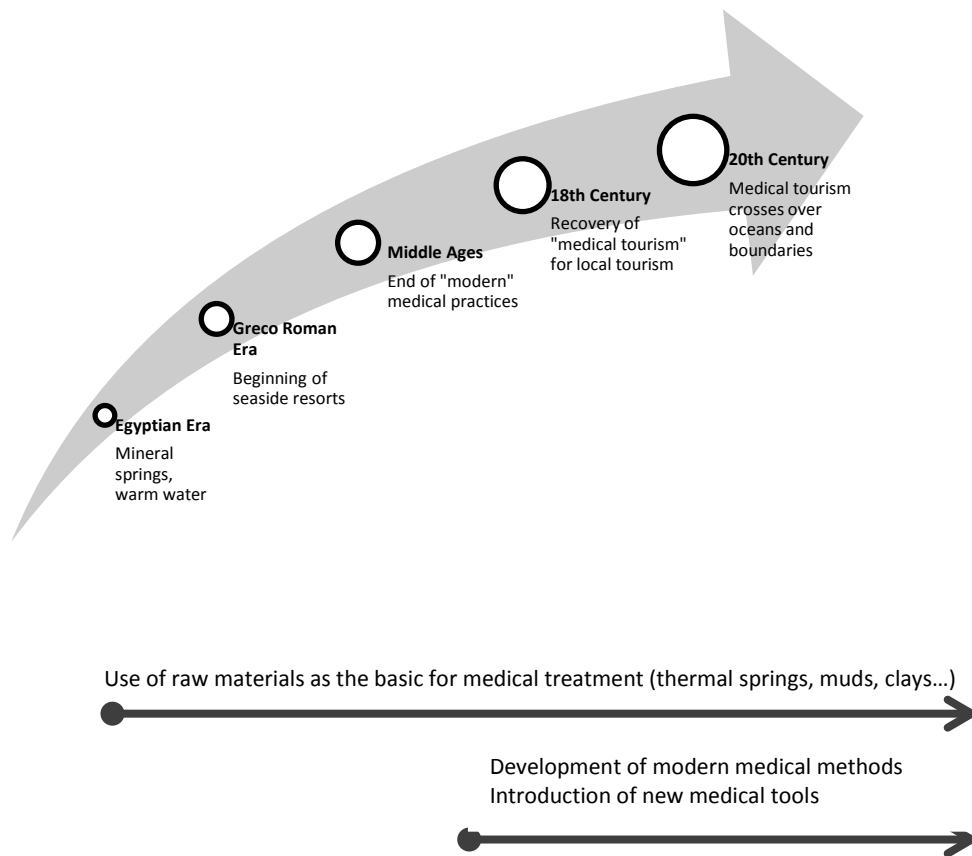
Gradually and with the advent of medicine and medical technology in developed European countries and the United States of America, medical travel became concentrated in such destinations. In the 19<sup>th</sup> century, the international healthcare marketplace emerged, and a new scenario came forward. Citizens of developing countries journeyed to developed countries seeking the technological advancement and medical expertise in leading medical establishments of such countries (Horowitz, Rosensweig and Jones, 2007). It was the wealthy and prosperous of developing countries who could afford to travel to such developed destinations seeking medical service that was not available in their home country (Morgan 2003).

Thus historically, the travel for medical purposes was taking a specific direction. Travelers from developing countries used to travel to developed countries seeking better technology and medical knowhow (Eissler, 2010).

Nevertheless, in the recent past, the trend started taking a new direction and the travel for medical purposes was taking off from developed countries and landing in developing countries. Contemporary “medical tourism” was produced by travel agencies, medical brokers and the mass

media to describe the rapidly growing practice of travelling across international borders to obtain health care (Puri, Singh and Yashik, 2010). Citizens of developed countries bypass the medical services offered in their communities and travel across borders to benefit from the healthcare offered by other less developed countries. This model, contrary to the traditional medical tourism trend, captured the attention of both media and academic research (Horowitz, Rosensweig and Jones, 2007).

**Figure 2.2 The Evolution of Medical Tourism Over Time**



*Source:* Menvielle and Menvielle, 2010, P. 110

## 2.5. Globalization of healthcare

By nature, health service industry is labor-intensive, information-based, highly transparent and/or codifiable. According to new research on the concept of offshoring, industries with such characteristics are suitable for global outsourcing and for transferring from local to global (Mackie and Oss, 2008).

Outsourcing in the health service market can be classified as on-site “functional” outsourcing and off-site outsourcing represented by “medical tourism” which involves the movement of consumers rather than providers of service. Such off-site outsourcing can be the through expansion of a ‘brand’ of health service providers to another market. An example of such is Mayo Clinic establishing an operation in Dubai and John Hopkins Healthcare System expanding in Lebanon, Dubai, Portugal, Singapore, Tokyo, Mexico, Chile, Panama and Trinidad. Off-site outsourcing can also be in the form of promoting foreign health service providers for local people. Today’s medical tourism thrived through travel agencies and consumer service brokers and facilitators (Mackie and Oss, 2008).

First attempts for globalization of healthcare was through private ventures in the 1970s and 1980s and through bringing foreign management to developing countries such as collaboration between western medical centers and local private hospitals. Such endeavors created a commencing step in elevating the healthcare industry to a global scale.

Nowadays, medical technology has crossed borders to facilitate health professionals and the flow of patients. International accreditations have made the healthcare service industry internationally standardized. The free movement of goods and services under the patronages of the World Trade Organization and its General Agreement on Trade in Services has accelerated the liberalization



of the trade in health services, as have developments with regards to the use of regional and bilateral trade agreements.

In the context of regulating the globalized scope of medical tourism as a service industry, the General Agreement on Trade in Services (GATS) presents four modes for this industry (Cormany, 2010).

Mode one: Virtual and electronic services across borders

The market implication of such mode allows for the delivery of core and non-core healthcare services through technology-enabled platforms. The platforms can be represented by telepathology, electronic and virtual psychotherapy, remote pathologists, electronic transmission of diagnosis tests (MRI, CAT scan and other lab test), IntellCare ‘nurse line’ as well as remote customer service call centers. (Cormany, 2010; Mackie and Oss, 2008) This mode can be executed solely or prior to the act of travelling for medical care or upon return to the home country as after-care follow up.

Mode two: Patients travelling to a country providing care

The physical mobility of patients from their home countries to other destinations is the form of this mode. Typically represented by “medical tourism”.

Mode three: Foreign capital investments and franchises

This could range from merger and acquisition to partnership, specialty niches, management contracts, franchises, or fully-owned startups. For example, Magrabi in Saudi Arabia has expanded to establish 24 hospitals and eye centers in Middle East and Africa (Magrabi Hospitals, 2012). Bumrungrad Hospital in Thailand has expanded in Dubai through partnering with Dubai

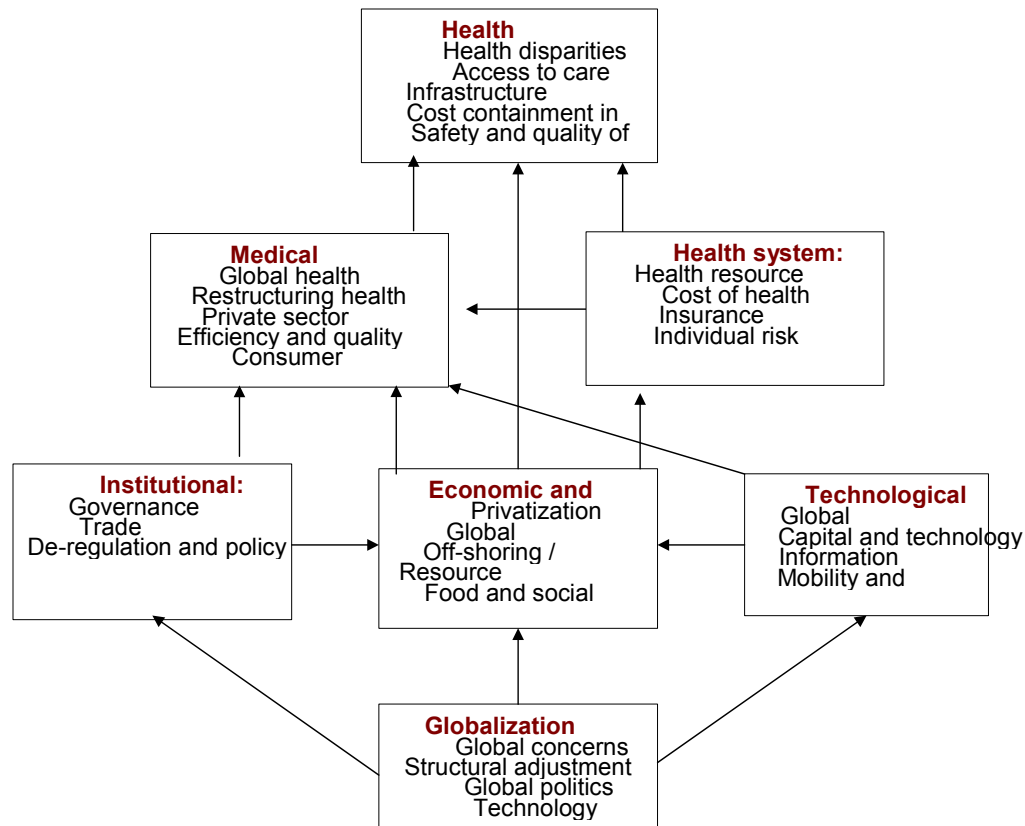
World. The Medical University of Vienna extended in Malaysia through operating Prince Court Medical Center in Kuala Lumpur (Cormany, 2010).

Mode four: Labor relocating across borders to provide care

This mode ranges from the medical labor with international training to medical doctors and specialists travelling to provide treatments and/or collaborate with local medical doctors in special treatments and surgeries abroad to immigration and relocation of medical staff and doctors from one country to another. An example is the international staffing and recruitment agencies specialized for nurses and physical therapists. Establishing clinics or branches of clinics in foreign countries are another form of this mode (Cormany, 2010).

In essence, today's medical tourism is an outcome of globalization and the global demand and supply of healthcare services. Countries with globalized-led economies have been restructured through privatization, global competition, outsourcing and offshoring among other variations. The technological structure of the country as well as the institutional and governance structure have been affected as well. Consequently, such impact has been conveyed to various segments and sub segments of the economy among which medical tourism which is affected directly and indirectly through changes in the healthcare system. This process altogether has led to new outcomes in healthcare as patients nowadays have wider choices in various markets for lower cost and compatible medical quality (Hadi, 2009).

**Figure 2.3 Conceptual framework of globalization and medical tourism**



Source: Hadi, 2009, P. 7

### 2.5.1. International Medical Tourism Markets

Different geographical areas are becoming well-known for niche medical tourism. Many Asian countries such as Thailand and India are pioneering in providing comprehensive health care such as health maintenance and health promotion activities as well as traditional healing methods (Bookman and Bookman, 2007; Woodman 2008). Thailand has targeted European countries by providing plastic surgeries like liposuction for prices that would reach fifth the price in Germany and has been well-known for cosmetic surgeries. Singapore, on the other hand stressed on quality and high technology and has been known for complex surgeries (Connell, 2006). Asian countries nowadays are well known for orthopedics and cardiac surgeries (Guy, Nevins Henson and Dotson, 2015). South America has gained its reputation on plastic, cosmetic and aesthetic procedures while Eastern European countries such as Poland are being visited frequently by

medical tourists for dental care, assistive fertility procedures and health resorts (Woodman, 2007).

Horowitz, Rosenweig and Jones (2007) have identified several countries as being medical tourism destination. The countries are as follows: 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. (Horowitz, Rosenweig and Jones, 2007, p. 40). Table 1.2. by Horowitz, Rosenweig and Jones (2007) lists the identified Medical Tourism destinations.

**Table 2.2 Medical tourism destinations**

Medical Tourism Destinations*				
Asia/Middle East	The Americas	Europe	Africa	Other
China	Argentina	Belgium	South Africa	Australia
India	Brazil	Czech Republic	Tunisia	Barbados
Israel	Canada	Germany		Cuba
Jordan	Colombia	Hungary		Jamaica
Malaysia	Costa Rica	Italy		
Singapore	Ecuador	Latvia		
South Korea	Mexico	Lithuania		
Philippines	United States[18]	Poland		

Source: Horowitz, Rosenweig and Jones, 2007, p. 40

According to Mckinsey-CII study (2002), the number of medical tourists to Asian countries is increasing by about 20% to 30% each year. The four main countries involved in this trade are India, Singapore, Thailand and Malaysia (CII-McKinsey, 2002).

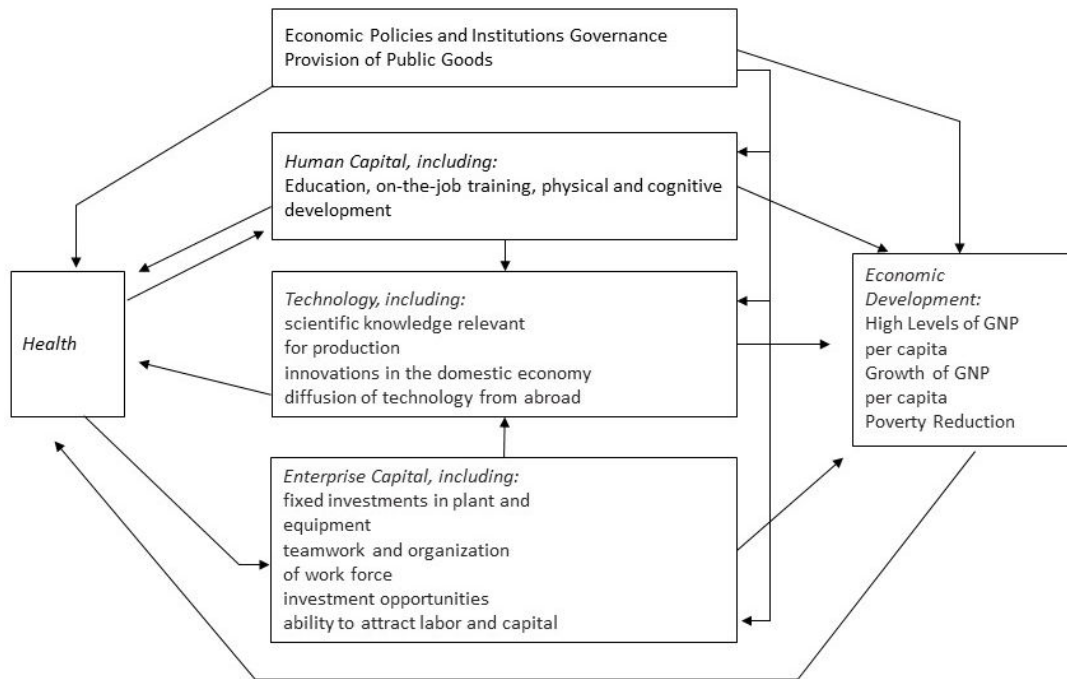
## **2.6. Investing in Medical Tourism for Economic Development**

Medical tourism has been evolving in developing and emerging countries such as Latin American countries, East European countries, India, Thailand, Malaysia, and Jordan among others. Since it is a combination of two sectors; healthcare and tourism, its contribution to the economy can be derived from both sectors.

From the tourism perspective; investment in tourism sector can contribute positively to the economy, decrease unemployment and reduce poverty level. From a healthcare perspective; investment in health as part of the overall development strategy leads to growth of GNP per capita and poverty reduction as well.

Good healthcare policies and regulations in addition to good health institutions contribute to economic development through human capital and enterprise capital. Both in terms contribute to medical and technological advance through applicable scientific knowledge and export of technology from abroad. All collectively lead to increasing economic development (Sachs, 2001).

**Figure 2.4 Health as an Input into Economic Development**



*Source:* Sachs, 2001, p. 26

Globalization of healthcare has opened borders to internationalized human capital, ease of transport of technology and patients' mobility (Bookman and Bookman, 2007). The revenue generation from this sector has been significant to several developing countries such as Malaysia, Thailand, India, Cuba, and Brazil among others. The importance of this tourism segment has been recognized as it was suggested as a means for revenue generation.

Investing in medical tourism will entail bringing cutting edge technology. This will upgrade the healthcare system and create a positive impact on tourists as well as locals. Governments that have recognized the importance of medical tourism to their economy have strived to please the satisfaction of their medical tourists by bringing in the latest medical technology to their hospitals and healthcare centers.

Cost differentiation is highly considered as a main reason for the rise of medical tourism in developing countries. Lower cost can be contributed mainly to the difference in salaries and wages for doctors, nurses and medical staff between developed and developing countries. In addition to the overhead costs, operating costs, infrastructural costs, investment costs and insurance costs which are typically lower in developing countries (Altin, Singal and Kara, 2011).

#### **2.6.1: Attributes of destinations and government support**

There are some similarities and other differences in the way the medical tourism has developed in each country and the way governments have envisioned and supported this industry. Several destinations have marked their names on the medical tourism world map. A number of success stories belong to developed countries with stable economies and healthcare systems. For example, Canada, UK and Israel, all developed countries, won the top three global rankings consecutively by the 2016 Medical Tourism Index. On the other hand, some developing and less developed countries crafted their own success stories in medical tourism. It is worth investigating the success factors of these less developed destinations and the reasons behind their international recognition. From a destination management perspective, some success stories could formulate a platform for benchmarking opportunities. Malaysia and India are two selected destinations to shed the light on with an objective of possible benchmarking opportunities.

Malaysia was awarded the title of "Health and Medical Tourism Destination of the Year" by the International Medical Travel Journal (IMTJ) in 2015 and 2016 (Stephano, 2018). Moreover, it has gained the third ranking by Healthy Travel Media, publishers of Patients Beyond Borders in 2016. India is a well-reputed destination in medical tourism. It was awarded the top rank by Healthy Travel Media in 2016. It has also gained the fifth global ranking and second in Asia by the Medical Tourism Index in 2016 (Medical Tourism Index, 2016).

## **Malaysia**

Medical tourism is not stated as a health aim in Malaysia's national health plans, however Malaysia is a leading country and of the top three in medical tourism. In 2003, the Malaysian ministry of health formed an inter-ministerial committee for the promotion of medical and health tourism (MNCPTH) (Pocock and Hong Phua, 2011).

The Asian financial crisis and the rapid drop of the Malaysian ringgit in 1997, affected heavily the private healthcare sector and its purchasing power. The prices of imported materials were rising high and patients were moving towards the public sector. This was when the vision was directed on attracting foreign patients. As a response, the National Committee for the Promotion of Medical and Health Tourism was established in 1998 with the main purpose of attracting medical tourists (Heng Leng, 2007).

Under this committee, there are five subcommittees that specialized in different aspects of medical tourism. Major achievements were accomplished through the subcommittees as they worked hard on promoting Malaysian healthcare in different countries. This was in addition to the government's tax incentives for investing in the medical sector, the use of information technology, pre-work trainings, increased medical advertising and other policies that aimed towards enhancing Malaysian medical tourism (Heng Leng, 2007).

Today, Malaysia is a world leader in medical tourism. Its growth rate of medical travelers from 2011 to 2012 has been approximately 15 percent which makes it a leading medical hub (medicaltourism.com, 2014).



## **India**

India and through the economic reforms gradually started applying the macroeconomic principle by the Commission of Macroeconomic and Health that investment in health was a route to economic development (World Health Organization, 2001).

Medical tourism in India emerged under this government's vision where health care was no longer viewed as welfare; it was rather a healthcare supply system for market expansion, financial gain and economic reform. In 2003, the Indian Finance Minister Jaswant Singh in his annual budget speech called for "India becoming a global health destination" (p 4). Since then, the emphasis has been on promoting India as a global health destination through the joint efforts of the Ministry of Tourism (MoT) and the Ministry of Health and Family Welfare. Significant credit goes to the infrastructure and healthcare expertise of the country (Mochi, Shetty and Vahoniya, 2013).

The ministries and various tourism boards and stakeholders from the tourism sector and the healthcare sector were aware of the importance of medical tourism and its futuristic potential. (Puri, Singh and Yashik, 2010) India has also introduced a medical travel classification of visa, the M-visa as a new visa category which allows a medical tourist and companion to stay in India up to one year for medical care. (Chinai and Goswami, 2007) This is in addition to the various policies and practices ranging from promotional strategies for medical tourism, building partnerships with other countries, working on medical certifications and accreditations, stressing on low-cost treatments, integrating Indian traditional holistic medication in the medical centers, hosting more medical exhibitions and conferences and many others all aimed towards enhancing medical tourism in India (Reddy and Qadeer, 2010).

At present, medical tourism is a prosperous sector in India with an expected annual growth rate of 30% making it a \$2 billion industry by 2015 (The Economic Times, 2009).

### **2.7. Partnership between hospitality and tourism sectors and healthcare sector**

As early as 1990, Bywater wrote, “Opinion is mixed on whether this sector represents medicine or tourism, and whether and to what extent the two can meet...” (Bywater, 1990, p. 52).

The medical tourism sector is a combination of healthcare and tourism sectors as Yu and Ko (2012, p. 81) argue, it is a “combination of medical services and the tourism industry”. Synchronizing these two sectors can lead to productive and progressive results in medical tourism.

The absence of knowledge about resources can influence the decision of the medical tourist. This aspect was realized by travel agencies as many agencies started providing services to offshore patients assisting them with planning and executing their medical trip, choosing the destination and medical provider, assessing prices, arranging travel and accommodation as well as other services. Moreover, the medical tourism agencies and broker have been widely available on the internet (Horowitz and Rosensweig, 2007).

Medical travel agencies act as brokers and expand their network of destinations and medical suppliers to meet the diversifying needs of medical travelers. In addition, they collaborate with medical providers and specialists to enable their customers to make informed treatment decision and trip planning options (Iordache, Ciochina and Roxana, 2013). The partnerships between travel agencies and worldwide hospitals are giving them a platform for new global marketing methods (Smith and Forgione, 2007). In 2005, Medical Tours International, a medical travel agency, facilitated the travel of 1,300 patients to various destinations in addition to the option of medical personnel’s assistance and advice in trip planning and decision. MedRetreat is another

specialized medical travel agency that provides its customers with 183 medical treatment in seven different countries (Gill and Singh, 2011).

Medical facilities have attempted to implement hospitality services and operating procedures in their operations. Some have implemented concierge services, hotel-like room service with a variety of food and beverage options, hotel-like check-in and check-out, transportation arrangement as well as personal translators. Some medical centers have incorporated the hotels physical design in their facilities to have hotel-like and resort-like lobby and guest rooms. For example, the Barbados Fertility Center have designed the facility to have seaside view from all its patients' rooms (Cormany, 2008).

Examples of synergies between hospitality and medical services are several and spread in a range of hospitality and tourism segments. Many hotel spas offer lifestyle treatments as well as traditional and alternative treatments. Some resorts such as Palace of the Golden Horses, Kula Lumpur include medical facilities for treatment within the facility. Emirates Airlines provide early diagnosis onboard of some of their aircrafts and communicate it to the concerned hospital to expedite medical process upon arrival of the patient. In addition, Renaissance Cruises offer treatment options onboard of some of its cruise ships (Cormany, 2008).

Medical hotels are an example of synchronizing tourism sector with healthcare sector. "Medical hotels" as a term has been used by the medical community since 2000 or even before (Leibrock, 2000). Several advantages pertaining to medical hotel packages can be exemplified in more physical convenience, proximity to medical assistance, better quality care, and continuity of care and personalized post-care service with higher nurse-patient ratio, anonymity and privacy, communicating with staff that is trained for receiving medical tourists, physical surrounding tailored for medical tourists. Additionally, the accompanying family/friends can enjoy all the

services of a regular hotel (i.e. such as valet, room service, concierge, and hotel facilities) without worrying about their patient-traveler (Han and Hyun, 2014; Docrates, 2012; Hume and DeMicco, 2007).

Another advantage of staying in a medical hotel is the follow-up care which can be inadequate in regular clinics and medical centers. Medical hotel rooms can be equipped with special amenities such as medical gases like oxygen and other medical supplies in addition to the availability of nursing support during this follow-up care phase (Cormany, 2008). Medical tourists usually return home or enjoy the tourism part of the destination once their hospital stay is concluded. If complications ensue, the chances of adequate follow-up are limited and can become the responsibility of the medical tourist. While staying in a medical hotel, such follow-up care can be sustained through receiving in-room continuous treatment (Hume and DeMicco, 2007).

Medical tourism packages represent an attractive option for many medical tourists. South Korea launched some VIP medical tourism packages that include certain healthcare programs and aesthetic programs along with luxury accommodations and superior meal services (Lee, 2012; Yoon, 2012). Producing such packages will add a group of advantages to medical travelers which will result in encouraging them to choose the destination/medical service provider for medical/aesthetic purposes.

The advantages of designing attractive packages can result in increasing the number of international medical tourists to the destination. In a study done by Han and Hyun, 2014, international medical tourists viewed the perceived advantages of such packages by reducing the time and effort costs of searching for suitable accommodation and healthcare clinics, reducing the total cost of the medical trip by offering a range of prices for packages, enjoying higher privacy, confidentiality and anonymity than regular clinics, receiving personalized in-room

treatment, providing more convenience to the accompanying family and friends of the patient-traveler among others (Han and Hyun, 2014).

From a tourism perspective, the destination's attractiveness from culture, climate, tourism activities and attractions contribute to the level of satisfaction for medical tourists. Ease of accessibility such as airport access, availability of transportation, friendliness of local people all could contribute in creating an overall pleasant appeal for the destination and contributes to its attraction and accessibility as a medical destination.

## **2.8. Medical tourism businesses and the global competitive market**

As medical tourism is becoming more attractive to various countries, international competition and rivalry is increasing. The global competition in medical tourism compelled involved businesses to provide more than quality healthcare. Patients are looking for quality care with lower prices or quality care with enjoyable vacations. India, once competing on lower price basis, is now focusing on improving infrastructure, technology, branding and the total experience of the medical tourist. The reason for such steps is the increasing global competition according to Jonathan Edelheit, CEO, Medical Tourism Association, USA (Medical Tourism Index, 2016).

The increasing competition has entailed the providers to take a holistic approach when providing services to the medical tourist. Thus, focusing on the overall experience to attain high customer satisfaction which is key to stay in business. Therefore, all elements of the trip are to be perceived positively. Such approach would be applicable on several levels.

To be able to compete internationally, the medical provider needs to have International standards. Attaining accreditation is an indication that this particular healthcare facility is operating on an internationally accepted level which can be a source of trust for potential

consumers who are coming from other country with different healthcare systems. A common and trusted accreditation in medical tourism is the Joint Commission International (JCI).

To attract international patients and be able to compete in international markets, medical centers need to invest in bringing cutting-edge technology. According to Fetscherin and Stephano (2015) "State-of-the-art medical equipment" is one of the items that developed the Medical Tourism Index scale.

Increased rivalry has induced business to expand their network and establish strategic alliances. The alliances can be local, international and across industries. Many medical tourism facilitators form partnerships and alliances with key industry players such as well-known and accredited medical provider, insurance companies and employers (Gan and Frederick, 2011). Strategic alliances take place with other medical tourism brokers and travel agents in the medical tourism destination. Such alliances would provide a better experience to the tourists particularly when it comes to the touristic and cultural part of the trip.

Consumers nowadays are becoming more aware on what to look for when searching the web and reviewing consumers reviews is becoming a common practice. Therefore, providers nowadays developing interesting and interactive websites that provide needed information for the potential customer before going to another website. Moreover, real customers comments and reviews need to be recent and monitored (Youngman, 2010).

Focusing on target segment is a priority to compete in today's expanding market. Since medical tourists have many options to choose and several directions to take, mass marketing is no longer an effective tool to address the different needs and expectations of the various segments. Therefore, mass marketing which focuses on price only or quality only can be a waste in today's

market (Youngman, 2010). While segmentation and identification of target segment are important in order to address the specific needs and desires of this segment.

Moreover, intense competition has stipulated employing multilingual staff that is trained on cultural differences and attitudes. Identifying the target market and would assist in determining the linguistic and cultural requirements for the staff.

Setting a differentiation strategy with the objective of finding a position in the industry or selected market. One way is to differentiate the services offered to potential buyer. This typically applies for medical tourism brokers by focusing on their strengths and promoting them. Some brokers concentrated their deals in a single country, others specialized in certain types of medical procedures, while other offered a wide variety of counties and medical providers (Gan and Frederick, 2011).

## **2.9. Conclusion**

This chapter makes an interpretation of the phenomenon of medical tourism and how it is defined, envisioned and perceived in today's literature. Several authors including Connell (2006), Bookman and Bookman (2007), Horowitz, Rosensweig and Jones (2007), Crooks et al. (2010) have attempted to define and explain medical tourism. Moreover, there are several classifications of medical tourism forms as well as medical tourists. One of the classification segments of medical and Healthcare tourism is "illness", "wellness", "enhancement" and "reproduction". As for medical tourists, a classification which fits the purpose of the study is by Cormany (2008). Accordingly, medical tourists can be classified into six occasionally overlapping categories: 1) Necessary Minor Surgery, 2) Necessary Major Surgery, 3) Diagnostic Services, 4) Alternative Therapy Treatment, 5) Lifestyle/wellness, and 6) Cosmetic Surgery.

In the historical review, it is worth mentioning that the act of traveling for medical care is one of the earliest forms of travel and it began as early as mid-first millennium B.C. (Smith and Kelly, 2006, p. 1). In the twentieth century, medical tourism took its contemporary shape and the travel for medical purposes was taking off from developed countries and landing in developing countries.

Next, the chapter discussed the globalized aspect of the healthcare industry as different geographical areas are becoming well-known for niche medical tourism such as Thailand and India. Moreover, due to the economic effect of this sector, the governments of such countries have promoted and enhanced medical tourism through enforcing constructive policies and regulations as well as encouraging investing in the medical and tourism sectors.

The chapter concluded with empirical applications on the synergy between hospitality and healthcare sectors such as medical packages and medical hotels followed by a depiction on the global competitive market and its effects on medical tourism businesses.



## Chapter 3 : Theoretical Framework

### 3.1. Introduction

This chapter is composed of the theoretical foundation and structure of the study. It displays a step-by-step elaboration of the adopted theory, starting with general medical tourism travel motivation. Next, a section is dedicated to the push-pull theory of motivations. The section begins with an introduction to the theory and its evolution in tourism literature as well as its application in previous studies in health tourism. Furthermore, the section discusses the previous studies that constituted an inspiration in the formation of the push and pull factors applied in the study.

In addition, the chapter discusses the theory of satisfaction by introducing its origin as the field of study and its diverse application in tourism research. The chapter then moves forward to discuss the features of the medical tourism product and portrays it as a bundle particularly when it comes to the decision-making process of purchasing.

The examination of push-pull motivation theory, satisfaction, and bundle purchase paved the way for the following section which is the five-step decision making process. The five-step decision making process model constitutes the grand theoretical model upon which the study is built. It was presented and narrated from the context of a medical tourist. It was then compared as a theory against the push-pull theory to highlight the interface of both theories.

Having presented the major theories that this research work is built on, the chapter shifts towards discussing the contribution of the research to existing literature in the disciplines of marketing and tourism. The discussion of the study contribution leads to presenting the main research

question and the hypothesized relationships proposed by the study. Finally, an illustrated model of the hypothesized relationships is presented at the conclusion of the chapter.

### **3.2. Medical tourism travel motivations**

People travel distances and cross borders seeking medical treatment being urgent or elective.

There are several reasons for the motivation behind their travel and they vary according to tourists, destinations where they come from and to the destination where they intend to travel.

The economic status of a country directly affects its services costs and prices charged for its community. This applies to the healthcare service sector. For example, a knee-replacement surgery in India would cost 40% to 60% less than the cost in US including all related expenses (Puri, Singh and Yashik, 2010). Therefore, middle income citizens from developed countries such as the United States choose the offshore healthcare option for the lower prices. The reason being either they are price conscious or because they are not covered by the healthcare insurance or their medical procedures are not covered by the healthcare insurance, such as cosmetic surgeries and dental reconstruction (Horowitz, Rosensweig and Jones, 2007). According to Patients beyond Borders (2014), US medical tourist can save up to 65% in Costa Rica, Mexico and Turkey, 75% in Thailand, 80% in Malaysia and 90% in India over a range of medical procedures and treatments.

Lack of medical insurance in a person's home country plays a role in pushing patients to travel abroad for medical care. According to the U.S. Census Bureau, the number of uninsured reached up to 46 million in 2009. Of this figure, some cannot afford the cost of simple surgery in the US. In addition, around 120 million do not have dental insurance (Altin, Singal and Kara, 2011). For those uninsured and the option for travelling and seeking medical care is more feasible and affordable. Therefore, to decrease their costs, many insurance companies such as Blue Cross

Blue Shield in South Carolina and Wellpoint in Wisconsin started offering foreign medical procedures and programs. In cooperation with Bumrungrad Hospital in Thailand, both insurance companies have developed plans where the patient can be fully reimbursed for all medical expenses along with the airfare cost (Pafford, 2009; Delloite, 2009).

In addition to the economic reasons offered by international healthcare markets, some patients travel abroad to evade the long waiting lists and delays in their home country's medical system. This is typical for countries such as Canada and the United Kingdom where the government is a major regulator of the healthcare system and its associated services and citizens usually await their turn for a medical procedure (Horowitz, Rosensweig and Jones, 2007).

Some patients travel to a destination to undergo a medical procedure that is not available or even restricted in their home countries. This could apply to particular cases of stem cell therapy which may be unavailable or even restricted in some industrialized countries (Horowitz, Rosensweig and Jones, 2007).

Another reason is the anonymity and privacy offered by the Medical Tourism destination. Patients can undergo medical procedures such as plastic surgery in private and anonymous surroundings.

Finally, the pleasure of combining a medical procedure with leisure and recreation in an exotic location is a main driver for many patients. Especially that many countries have developed their medical centres to look like top and luxurious hotel properties. This reason has been a promotion and marketing tool for many travel agents who sell medical tourism packages (Horowitz, Rosensweig and Jones, 2007).

Some EU citizens benefit from the healthcare services of other EU countries. The current European Commission's proposal for a Directive on Patients' Rights in Cross-border Health Care arose as the result of several European Justice Court rulings over patient mobility and the rights of patients to be reimbursed for treatments received in another EU country (Lunt, Hardey and Mannion, 2010).

Other main drivers worth mentioning and initiators of modern medical tourism are globalization, web-based health information and their impact on patients seeking healthcare knowledge. The internet has created a podium for patients to access healthcare information and for medical service providers to advertise and promote their services. Consumers' visits to 'health-related' internet sites have increased as more patients are becoming knowledge-oriented about wellness and web-based medical information is effortlessly accessible (Lunt, Hardey and Mannion, 2010).

Guy, Nevins Henson and Dotson (2015) studied the characteristics of US consumers who would choose medical tourism and concluded with a cluster analysis that combined the most significant factors for increasing the willingness of a consumer to choose medical tourism. The concluded factors were competence and expertise of the physicians, waiting time for procedures, cost, medical care quality, accreditation and reputation of medical facilities, availability of treatment and ease of travel. Staff friendliness and attitude, up-to-date technology, nurse-to-patient ratio were additional factors that create favorable wiliness to travel (Guy, Nevins Henson and Dotson, 2015).

### **3.3. Push-Pull Theory**

It is argued that the origin of push-pull theory goes back to the former behaviorist Tolman's (1932) interpretation of the sign-gestalt paradigm in which a dichotomy of internal motivations or drive-based emotions and external motivations or cognition exists. The concept was evolved

in the tourism discipline by Dann (1977) into tourism motivation theory. Accordingly, the motivational factors behind traveling can be categorized into two factors; “push factors” and “pull factors” as the motivational concept of “push” and “pull” factors have been examined by numerous researchers (Dann, 1977; Kim, Lee, and Klenosky, 2003; Klenosky, 2002; Lam and Hsu, 2006; Yuan and McDonald, 1990). Table 3.1 provides a means-end investigation on the development of push-pull theory in tourism literature.

Literature concludes that “push factors” are related to the cognitive process regarding internal socio-psychological motivation of the individual to travel. (Cha, McCleary and Uysal, 1995; Dan, 1981; Uysal and Jurowski, 1994) They stem from the intrinsic desires of human beings such as the desire for escape, prestige, self-exploration, rest and relaxation, sports, and socialization (Cha, McCleary, and Uysal, 1995; Crompton, 1979; Klenosky, 2002; Oh, Uysal, and Weaver, 1995; Turnbull and Uysal, 1995; Yuan and McDonalds, 1990).

While “pull factors” are external forces that emerge from the attributes that attract the individual to a specific destination and establish actual destination choice. (Cha, McCleary and Uysal, 1995; Dann, 1981; Uysal and Jurowski, 1994). Pull factors are characteristics of the destination such as the destination image, natural and historical attractions, local hospitality and service that pull people to choose that particular destination (Cha, McCleary, and Uysal, 1995; Kim, Lee and Klenosky, 2003; Klenosky, 2002).

The pull factors of destination selection have been discussed in tourism literature such as Dann, 1977; Cha, McCleary and Uysal, 1995; Dann, 1981; Uysal and Jurowski, 1994.

**Table 3.1 A means-end investigation on the development of push-pull theory in tourism literature**

<b>Researchers</b>	<b>Push Factors</b>	<b>Pull Factors</b>
<b>Dann (1977)</b>	Anomie, ego enhancement	
<b>Crompton (1979)</b>	Escape, self-exploration and evaluation, relaxation, prestige, regression, enhancement of kinship relationships, social interaction	Novelty, education
<b>Yuan and McDonalds (1990)</b>	Escape, novelty, prestige, enhancement of kinship relationships, relaxation/hobbies	Budget, culture and history, wilderness, ease of travel, cosmopolitan environment, facilities, hunting
<b>Fodness (1994)</b>	Ego-defense, knowledge, reward maximization, punishment avoidance, value expression, social adjustive	
<b>Uysal and Jurowski (1994)</b>	Re-experiencing family togetherness, sports, cultural experience, escape	Entertainment/resort, outdoors/nature, heritage/culture,

		rural/inexpensive
<b>Turnbull and Uysal (1995)</b>	Cultural experiences, escape, re-experiencing family, sports, prestige	Heritage/culture, city enclave, comfort/relaxation, beach resort, outdoor resources, rural and Inexpensive
<b>Oh, Uysal, and Weaver (1995)</b>	Knowledge/intellectual, kinship/social interaction, novelty/adventure, entertainment/prestige, sports, escape/rest	Historical/cultural, sports/activity, safety/upscale, nature/outdoor, inexpensive/budget
<b>Cha, McCleary, and Uysal (1995)</b>	Relaxation, knowledge, adventure, travel bragging, family, sports	
<b>Baloglu and Uysal (1996)</b>	Four canonical variate pairs of push and pull items were identified but were not labeled. These varieties were used to identify four market segments	

	<p>labeled; sports/activity seekers,</p> <p>novelty seekers, urban-life seekers, beach/resort seekers.</p>	
<p><b>Sirakaya and McLellan (1997)</b></p>		<p>Local hospitality and services, trip cost and convenience, perceptions of a safe/secure environment, change in daily life environment, reaction of sporting activities, entertainment and drinking opportunities, personal and historical link, cultural and shopping services, unusual and distant vacation spot</p>
<p><b>Hanquin and Lam (1999)</b></p>	<p>Seeing something different.</p> <p>Facilitating family and kinship Ties.</p> <p>Visiting friends or relatives.</p>	<p>Positive attitude of Hong Kong residents and service staff to mainland China tourists.</p> <p>Convenience of transport.</p>



	<p>Increasing knowledge about a foreign destination.</p> <p>Being with family, physical resting/relaxing.</p> <p>Being able to share travel experiences after returning home.</p> <p>Experiencing a different lifestyle.</p> <p>Visiting cultural/historical attractions.</p> <p>Visiting a destination which most people value and/or appreciate.</p> <p>Going to places that friends want to visit.</p>	<p>Quality of local transportation system.</p> <p>International cosmopolitan city.</p> <p>Quality of tourist services.</p> <p>Shopping paradise.</p> <p>Ease of travel arrangement.</p> <p>Acceptable climate.</p> <p>Seven-day visa free policy for transit passengers from China.</p> <p>Capital of modern technology.</p>
<p><b>Klenosky (2002)</b></p>	<p>Outdoor recreation, Get sun/tan, Enjoy nature, New/novel experience, Escape, Rest/relax,</p>	<p>Beaches, Scenic/natural resources, Warm climate, Party atmosphere,</p>

	<p>Socialize/meet people, Look good/healthy, Learn more, Challenge/thrill, Get refreshed/renewed, Date more, Know more,</p> <p>Be more productive,</p> <p>Accomplishment, Fun and enjoyment, Excitement, Selfesteem</p>	<p>New/unique location, Skiing,</p> <p>Historical/cultural attractions</p>
<p><b>Kim, Lee, and Klenosky (2003)</b></p>	<p>Family togetherness and study.</p> <p>Appreciating natural resources and health.</p> <p>Escaping from everyday routine.</p> <p>Adventure and building friendship.</p>	<p>Key tourist resources.</p> <p>Information and convenience of facilities. Accessibility and transportation.</p>

Source: Klenosky, 2002, P. 387. The “Pull” of Tourism Destinations: A Means-End Investigation.

While some authors considered push and pull factors separate with push prior to pull, others considered push and pull factors complimentary to each other and should be viewed as related rather than independent from each other. Accordingly, the intrinsic and extrinsic psychological motivations are synergistically bonded and together they form the tourist perception. According to Baloglu and Uysal (1996), the internal push forces or 'needs' and the external pull forces or 'perceptions' form a reciprocal relationship. Moreover, Dann (1981) mentioned that “potential tourists in deciding where to go may also take into consideration various pull factors which correspond adequately to their motivational push” (Dann, 1981, p.206). Together as motivational factors both affect the decision of the tourist to travel and the psychological interpretation of the travel destination (Klenosky, 2002; Kim, Lee and Klenosky, 2003).

The academic studies on motivational factors in the field of medical tourism are relatively recent. Connell (2006) introduced medical tourism development in Asian countries and considered cost as the main driver for health travel to such countries. Cortez (2008) discussed the reasons for traveling abroad for medical care; they are mainly accessibility to particular medical treatment and cost discrepancies. Horowitz, Rosensweig and Jones (2007) discussed the reasons for increasing popularity of medical tourism from the perspective of patients from highly industrialized countries. Turner (2010) portrayed medical tourism as an attractive option and discussed factors that attract international patients such as quality, competence and international standards. Peters and Sauer (2011), discussed the motivating factors for medical travel from the perspective of medical tourism brokers and agencies.

Initial studies using push and pull factors were implemented in the field of wellness travel. The push factors used in such studies were related to individual's travel motivations such as escape, self-esteem, rest and relaxation. While pull factors were related to the destination's tangible

resources such as beaches and historical sites. Hallab (1999) conducted an empirical research in which the relationship between travelers healthy-living habits and wellness travel behaviors and motivations were examined using the push and pull model. The study used specific push and pull factors that were previously investigated (Dann, 1977) and explained them as part of wellness travel behavior. It concluded that there is mutual interaction between healthy-living behavior and wellness travel choices with respect to certain push and pull factors (Hallab, 1999).

Further on and building on Hallab's (1999) work, Boulay, Hritz and Ashton (2013) composed a study aimed to explore the wellness motivational factors differing between U.S. and non-U.S. travelers based on the push-pull model. The study concluded that push factors relating to the reasons behind traveling and benefits obtained from travelling are more important to both U.S. and non-U.S. travelers than the pull factors of the destinations and their attractions and attributes (Boulay, Hritz and Ashton, 2013).

The incorporation of push-pull theory in medical tourism is discernible in the work of Ye, Yuen, Qiu and Zhang (2008). Motivations as well as barriers to medical tourism in Hong Kong were examined using a case study approach. Accordingly, a framework was developed using medical tourists' push and pull motivation factors.

Another work by Cormany (2008) discussed motivation for medical tourists using push-and-pull motivation theory. The author considered medical tourism as a new area of research and thus the study was exploratory in nature and employed a qualitative research method. It aimed to identify the current state of research on motivations for medical travelers represented by push factors to travel and pull factors to choose the destination. Furthermore, it aimed to explore whether psychological school of thoughts dominate the consideration of the motivational explanations for medical tourists.

Crooks et al. (2010) conducted a review on the most discussed topics in medical tourism published work; push factors and pull factors were among the most discussed. Another analytical review by John and Larke (2016) of the medical tourism published research between years 2000 and 2016 aimed to identify the motivators mostly discussed in medical tourism literature and further classify them into push motivators and pull motivators. Moreover, Fetscherin and Stephano (2015) developed a medical tourism index which measures the attractiveness of a country as a medical tourism destination. The index was developed based on push factors representing demand side and pull factors representing supply side of medical tourism.

### **3.3.1. Application of push-pull theory**

The framework employed in this study relies on several studies on motivational factors for medical tourism. The “push” factors are inaugurated from the demand side of medical tourism and are represented by the decision to travel abroad for medical tourism. They are related to factors such as socio-demographic or health related that generated the demand for travelling abroad for medical care. While the “pull” factors are related to the supply side which is the destination and what it offers for medical tourism (Fetscherin and Stephano, 2015). Therefore, demand is represented by consumers of medical services in the destination, which is the medical tourists and supply is represented by the industry suppliers involved in medical tourism in the destination, and act for the external forces that pull the travelers for selecting the destination for medical care.

Based on Fetscherin and Stephano (2015), this study incorporates the push factors which focus on the demand side and pull factors which focus on the supply side. Pull factors are investigated from the perception of both demand and the supply sides of medical tourism. While push factors are investigated from the perception of the demand side, represented by medical tourists, being

the concerned and affected social players. This integrated approach provides a more comprehensive and embracing method in investigating the research question. Consequently, the study results would be more relevant and pertinent to various social players involved in medical tourism.

The question of what motivates the medical tourists to travel abroad have been addressed by many authors such as Bookman and Bookman, 2007; Connell, 2006; Gill and Singh, 2011; Heung, Kucukusta, and Song, 2010; Horowitz and Rosensweig, 2007; Lunt and Carrera, 2010; Peters and Sauer, 2011 as well as others discussed in section 3.3. Such studies constitute the base for shaping the push and pull factors employed in this research study.

The survey analyses two sets of influencing factors that affect the decision-making process of medical tourists. The first set is highlighted by the expected clients as being imperative when making the decision to seek medical tourism abroad.

In determining the “pull” factors of the destination, this study relied on data collected from qualitative interviews with the suppliers of medical tourism in the destination, in addition to previous studies including Heung, Kucukusta and Song (2010), Smith and Forgione (2007), Fetscherin and Stephano (2015) and Peters and Sauer (2011). Their studies assisted in forming the factors that were implemented in this research and the drivers that attracted tourists to the specific destination for medical care.

### **Heung, Kucukusta and Song (2010)**

Heung, Kucukusta and Song (2010) determined the barriers to medical tourism in Hong Kong. They based their work on a prior study by Ye, Yuen, Qiu, and Zhang (2008) that examined Hong Kong medical tourists’ motivation by employing the push and pull motivation theory. Ye et al.

(2008) factors included destination attributes, healthcare quality, promotions, companionships, costs and reputation. (Ye, Yuen, Qiu, and Zhang, 2008).

The study developed a framework of barriers based on employing the factors of economy, investment potential, promotion, language and communication, policies and restrictions, facilities and attractions, infrastructure and superstructure, government attitude and expertise/manpower.

The factors employed by Heung et al. (2010) constituted a base for examining the viewpoint of the supply side in this study and were considered the main themes around which the study variables were further inspired and developed.

### **Smith and Forgione (2007)**

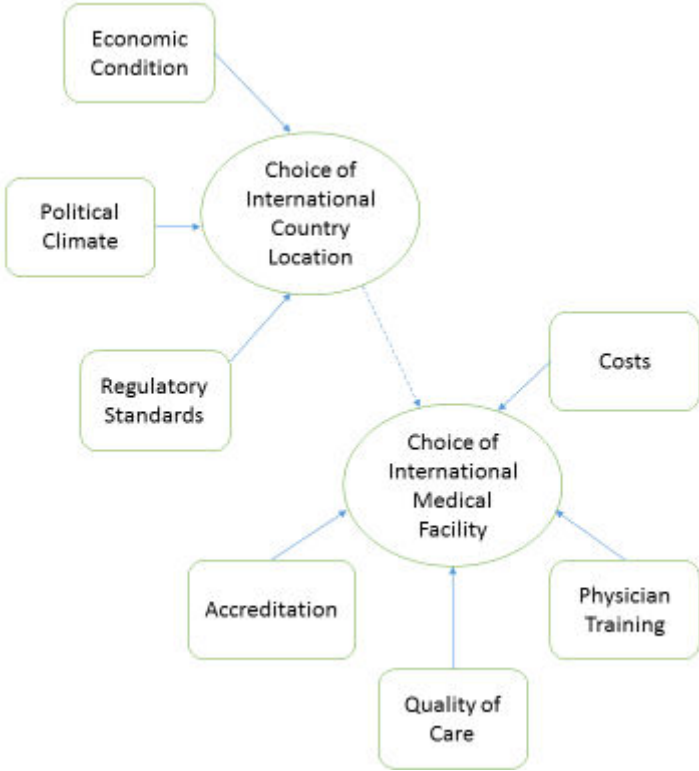
Building on motivational factors, various studies have stressed several or specific factors that influence the medical tourist's choice of international healthcare facility. The study of McKinsey and Company (2008) showed that the product is the essential driver for patients seeking medical services abroad. While price was considered the main driver for travelling to various destinations according to Deloitte (2008). Similarly, Connell (2006) argued that price as well as the increasing healthcare cost in the U.S. is the number one factor for Americans seeking healthcare abroad.

On the other hand, Smith and Forgione (2007), considered both price and product in addition to other factors combined composed the essential drivers for choosing medical facility offshore. In their two-staged model, Smith and Forgione (2007) developed factors that affect the decision of a medical tourist in determining the country of choice and the medical facility of choice. They argued that all considered factors are important in the decision making of the medical tourist and

no one factor is dominant over another. The model was based on the work of Palvia (2007) for choosing an IT vendor and country for outsourcing IT services.

The model is based on factors related to the choice of international country location and factors related to the choice of international medical facility. As for the factors related the choice of international country location, they are economic conditions, political climate and regulatory standards. Whereas the factors related to the choice of international medical facility are accreditation, costs, quality of care and physicians training. The model is illustrated in figure 3.1.

**Figure 3.1 Medical Tourism Factors Affecting Choice of Facility and Country**



*Source:* Smith and Forgione, 2007, P. 22. Global Outsourcing of Healthcare: A Medical Tourism Decision Model.



The economic conditions are characterized by economic stability of the host country as well as the medical facility. An indication of economic stability is the country's potential for growth for it can facilitate services rapidly and efficiently to a broader spectrum of medical tourists. Political climate is characterized by safety where government authority is applied, and corruption is low. This will reflect in travel safety as well as healthcare safety. Regulatory standards are reflected in the legal and regulatory environment of the host country where the laws are followed, and penalties are applied in cases of malpractices. Accordingly, the medical tourists are provided a compensation by law in case of malpractice.

Cost has been the main driver behind the increasing demand for medical tourism. The low cost of the host country can be traced to reasons such as lower labor costs, lower pharmaceutical costs and lower malpractice costs among other costs.

International healthcare facilities, particularly the facilities that target US patients, have opted to meet or exceed the quality of care provided at US hospitals. Accreditation standards such as Joint Commission International (JCI) came as a standard for evaluating the quality of care provided at international healthcare facilities and accordingly many facilities in various countries such as India, Thailand and Lebanon met the standards and received the JCI accreditation.

Quality of care is addressed by factors other than accreditation such as the spread of endemic and infectious diseases in a host country (Knapp, 2007). Patients would rather travel for treatment to countries where they are less likely to encounter infections during procedure, recovery or their stay in general.

Physician Training – the existence of physicians who are board certified as well as global networks of US-based hospitals have delivered a message to the patient that they can

communicate more comfortably with the US-trained physician and continue their post-care services in their home country. Thus, they would feel more at ease choosing such facilities. For example, Bumrungrad Hospital in Thailand advertises that more than 200 physicians are certified in the US (Smith and Forgione, 2007).

### **Fetscherin and Stephano (2015) - Medical Tourism Index (MTI)**

Previously, there has been a ranking of medical tourism destinations produced by Economist Intelligent Unit 2010, yet due to methodological issues, the ranking was discontinued. Consequently, Fetscherin and Stephano (2015) developed a Medical Tourism Index. “The Medical Tourism Index measures the attractiveness of a country as a medical tourism destination in terms of overall country environment; healthcare costs and tourism attractiveness, and quality of medical facilities and services” (Fetscherin and Stephano, 2015, p. 6). MTI assesses the attractiveness of a country based on four dimensions; country, tourism, medical costs and quality of facilities and services. The usefulness of MTI is that it can assess the attractiveness of the destination country, as well as each of the four dimensions separately.

As for the country or destination’s attractiveness, it is measured based on the most important factors; the country’s image, the political environment or stability, the economic condition of the country and the similarities or differences between the destination and the medical tourists’ home country in terms of language, cultural and religious similarity, and proximity and convenience to travel (Fetscherin and Stephano, 2015).

Tourism is an essential element in medical tourism which is a second element in MTI. As Moghimehfar and Nasr-Esfahani (2011) state, “Many try to find a popular tourism country in which they could enjoy their trip during the treatment period” (Moghimehfar and Nasr-Esfahani,

2011, p. 1432). Accordingly, MTI assesses the attractiveness of the country as a tourism destination in terms of the destination's tourism popularity, the cultural and natural attractiveness, the exoticness of the tourist destination as well as its weather.

Quality of medical facilities and services is a third element in MTI and it is assessed based on factors such as international accreditation, reputation and quality standards of medical facilities. Quality of service is also assessed through factors such as the expertise, education, training and reputation of doctors and medical staff.

A fourth element in MTI is price which has been referred to by several previous studies as the main driver for medical tourism. It is assessed by MTI in terms of treatment and healthcare cost, travel cost as well as accommodation cost.

### **Peters and Sauer (2011) - A Survey of Medical Tourism Service Providers**

The work of Peters and Sauer (2011) is another source for determining the medical tourism “push factors” and “pull factors” of destinations. The study surveyed 91 medical tourism agencies and brokers listed on the website [OnlineMedicalTourism.com](http://OnlineMedicalTourism.com) as “full service” medical tourism service providers. Collectively, they offer a total of 57 destinations for medical tourism. The targeted service providers in the survey were mainly serving U.S. medical travelers as well as 81% serving clients from other countries.

The survey analyses two sets of influencing factors that affect the decision-making process of medical tourists. The first set is highlighted by the respondents as important to their clients when making the decision to seek medical tourism abroad. Of the influencing factors is the experience and reputation of the overseas medical provider, the low cost of medical service abroad in comparison to home country, the length of waiting time for domestic care, inadequate domestic

health insurance, and client’s insurance coverage for treatment abroad among other factors. See table 3.2.

**Table 3.2 Influences on decision to seek medical treatment abroad, as reported by medical tourism service providers**

Experience and Reputation of a Particular Overseas Medical Provider
Medical Care Abroad is Cheaper than Domestic Care
Length of Waiting Time for Domestic Treatment
Client has Inadequate Domestic Health Insurance
Client's Health Insurance Covers Treatment Abroad, or Offers Incentives
Treatment is Available Abroad that is Unavailable Domestically
Anonymity of Treatment
Combining Medical Treatment with Vacation

*Source:* Peters and Sauer, 2011, P. 121. A Survey of Medical Tourism Service Providers.

The second set of influencing factors in the study highlights the influencing factors related to the specific decision in choosing a specific medical tourism provider and destination country. Once the client decides to seek medical care abroad, the respondents were asked to identify the important factors that affect their clients’ particular choices. Of the important factors is experience and reputation of medical provider, volume of medical tourists served, quality of medical and after-care, quality of facilities as well as other factors. See table 3.3.

**Table 3.3 Factors influencing specific medical tourism decision, as reported by medical tourism service providers**

JCI Accreditation
Trent Accreditation
CHSA Accreditation
ACHSI Accreditation
Any Nationally-Recognized Accreditation
Volume of Medical Tourists Served
Experience and Reputation of Medical Provider
Quality of Medical Care
Quality of After-Care
Quality of Facilities
Procedure Cost
Distance from Client's Home
Ease of Travel from Client's Home
Ability to Communicate in English
Recommendations from Acquaintances
Desire to Travel and Vacation in that Country

*Source:* Peters and Sauer, 2011, P. 122. A Survey of Medical Tourism Service Providers.

The factors of the first set are considered “push factors” since they motivate the individual to travel and seek healthcare abroad. While the second set factors are external, and they emerge from the attributes of the destination to attract the individual to the specific destination and thus are considered “pull factors”.

### **3.4. Perceived quality**

Since 'quality' is an abstract terminology, 'perceived quality' is more commonly applied in relevant researches. Perceived quality is defined as the consumer's judgment about an entity's (service's) overall excellence or superiority (Zeithaml, 1987). According to Oliver (1997), customers' are not able to judge quality before the service is performed. Consequently, customers' perceived quality is viewed as a service post-purchase perception. Since medical tourism is an activity that entails healthcare services and tourism services, the understanding of perceived quality in medical tourism entails an understanding of 'service perceived quality'.

Service quality has gained later attention in comparison with product quality, yet it has acquired major attention by scholars and practitioners. Regan (1963) is one of the pioneers who recognized the distinctive nature of service operations in his article "The service revolution".

Pragmatically, there are several perceptions for measuring service quality. Of the main service quality paradigms are technical and functional quality paradigm, disconfirmation diagram and performance-based diagram. The first being more 'attitude based' where service is measured technically and functionally based on the performance of the service provider (Grönroos, 1984).

The disconfirmation-based diagram views service perceived quality as an overall measure of perceptions against expectations (perceptions-expectations=perceived quality). That is how the level of delivered service adequately matches the customer's expectations (Parasuraman et al., 1985). Therefore, disconfirmation diagram views service perceived quality "as the level of

discrepancy between consumers' perceptions and expectations" (Parasuraman et al., 1988, p.17).

From this diagram, SERVQUAL, a very popular service quality measurement scale, was developed. The performance-based diagram builds on Parasuraman et al. (1985) and develops performance-only measurement of service quality called SERVPERF. Accordingly, service quality is a form of consumer attitude which can be more competently measured without expectations; that is by maintaining performance instead of performance-expectation (Cronin and Taylor, 1992).

Quality has gained considerable attention by scholars and practitioners of medical tourism where compliance with international quality standards is considered critical for the success of medical service providers targeting international patients.

Many of the studies that discussed the concept of international accreditation reported the JCI accreditation. The Joint Commission International (JCI) was founded in 1994. It is a non-profit organization with the purpose of setting international standards for healthcare facilities.

Accordingly, healthcare facilities in various countries such as India, Singapore and Thailand were checked for conformance with such international standards and were given the JCI accreditation. Such countries with JCI accredited healthcare facilities became internationally-recognized and trusted medical tourism destinations with various citizens from developed countries crossing borders to seek healthcare in such accredited healthcare facilities (Joint Commission International, 2018). In 2005, the number of JCI accredited foreign medical sites was 76. It has reached over 220 in 2008 (Deloitte, 2009) and more than 600 in 2014 (Patients Beyond Borders, 2014).

Other organizations that provide quality accreditation for healthcare facilities include the International organization for Standardization (ISO), the International Society for Quality in

Health Care (ISQUA) and the European Society for Quality in Healthcare (ESQH) (Deloitte, 2008).

Patients Beyond Borders is a group that surveys hospitals and healthcare facilities in various countries and provide recommendations targeted to US travelers seeking medical care abroad through series of published guides that identify most-traveled health destinations, most medical travel-friendly specialties as well as leading international healthcare facilities and medical cities that provide a standard of quality and medical value. Examples on special editions are Mexico edition, Korea edition, Malaysia edition, Turkey edition and Dubai edition among many others (Patients Beyond Borders, 2014). The author of Patients Beyond Borders is Joseph Woodman who has toured more than 200 healthcare facility in 35 countries and he is known for being an advocate of affordable, high-quality medical and preventative care worldwide (Patients Beyond Borders, 2016).

### **3.5. Satisfaction**

Customer satisfaction as a field of study has established its roots in the Marketing literature. (Cronin and Taylor, 1992; Oliver 1980) It has been defined as "a judgment that a product of service feature, or the product or service itself, provides a pleasurable level of consumption-related fulfillment" (Oliver, 1997, P: 13) From a psychological viewpoint, satisfaction is the "psychological outcome which emerges from experiencing the service" (MacKey and Crompton, 1990, P: 48).

The core concept of satisfaction which relates to this study is that it is a post consumption evaluation that is based on the overall experience, such evaluation meets, exceeds or disappoints expectations (Wang and Yang, 2004). Satisfaction has gained increased attention in corporate marketing activities because of the gains that can result from investing in it. A higher level of



customer satisfaction can increase customer loyalty (Flint et al., 2011; Qi et al., 2012), have a direct impact on customer retention (Rust et al., 1995), develop stronger reputation (Rust et al., 1995), improve the capability of attracting new customers (Uncles, East and Lomax, 2013) In tourism, satisfaction in previous travel experience yields in willingness to revisit the destination and recommend it to friends and family (Lee and Beeler, 2009; Kim and Brown, 2012) as well as positive word-of-mouth to friends and family (Bramwell, 1998; Oppermann, 2000). Therefore, satisfaction leads to what is referred to as tourism destination loyalty theory which is "the hypothesized causal relationships between satisfaction and destination loyalty". (Yoon and Uysal, 2005, P. 46).

Satisfaction has paved its way in tourism literature as well. Chon and Olsen (1991) and Kozak and Rimmington (2000) studied tourists' satisfaction with destinations. Toy, Kerstetter and Rager (2002) studied customer satisfaction in leisure activities. Ross and Iso-Ahola (1991) investigated satisfaction with cultural trips. Reisinger and Turner (2002) studied tourists' satisfaction with shopping experience.

Satisfaction has been considered a latent variable in previous literature (Fornell et al., 1996; Kaplan et al., 2007; Song et al., 2012). Fornell et al. (1996) studied the American Customer Satisfaction Index (ACSI) and discussed the nature and the purpose of the index in which customer satisfaction is subject to customization, customer expectation and quality. Kaplan et al. (2007) considered satisfaction a latent variable in the latent variable "base category" in their study on the factors that influence the adoption of mass consumption. Song et al. (2012) developed an "Aggregation Model of the Tourist Satisfaction Index at the Overall Level" based on the approach of Fornell et al. (1996), in which overall satisfaction with destination is influenced with other attributes. Song et al., (2012). Thus; to comprehend satisfaction, the

antecedents determining it, the consequences resulting from it as well as the relationships among all its components need to be considered.

Some studies have stressed that satisfaction is a result of the attributes and the actual performance of products and services and how customers perceive them. (Barsky 1992; Bojanic 1996; Bojanic and Rosen, 1994) On the other hand, other studies have embraced the conception that satisfaction is a function of customer's expectations (Oliver, 1980). Oliver's (1980) expectancy disconfirmation model which is referred to as the cognitive approach, is a commonly adopted approach in understanding customer satisfaction. (Hsu, Chiu and Ju, 2004; Montfort, Masurel and Rijin, 2006; Yen and Lu, 2008) The theory proposes that satisfaction is "a function of expectation and expectancy disconfirmation" (Oliver, 1980, P. 460).

Similarly, in tourism Tse and Wilton (1988) argue that tourists' satisfaction is associated to the actual performance of the destination and thus, satisfaction is not a result of pre-visit expectation but of actual performance. In destination management, destination attributes have been considered of primary importance to evaluation of experience (Alegre and Garau, 2010). However, Yoon and Uysal (2005) argued that Tse and Wilton (1988) model can only be applied when tourists do not have prior knowledge of the destination and such case does not always pertain (Yoon and Uysal, 2005). Along this line, tourist satisfaction was viewed and studied as a result of the variance between pre-visit expectations and post-visit perception in various tourism studies (Chen and Chen, 2010; Huh et al., 2006; J. Lee and Beeler, 2009; Pizam and Milman, 1993). Motivation was also comprehended as the positive expectation or desire before visiting a destination and represent a significant antecedent of satisfaction (Huh et al., 2006; Meng et al., 2008).

A later approach has been adopted in a growing number of tourist satisfaction studies which combines both actual experience and emotional response. This approach is referred to as cognitive-affective approach (Bosque and Martin, 2008). A comparable approach is presented by Homburg, Koschate, and Hoyer (2006). It indicates that the perceived value of the destination's attributes, referred to as "cognition", as well as the feelings acquired from travel experience, referred to as "affect" simultaneously influence travel satisfaction (Homburg, Koschate, and Hoyer, 2006). Consistent with this literature, Pizam, Neumann, and Reichel, (1978) proposed the concept of tourist satisfaction as having two dimensions; the instrumental "physical" level and the expressive "psychological" level of performance.

In this research, tourists' evaluation of destination's attribute performances as well as travel motivation, were investigated as the antecedents of experience satisfaction. The performance quality of the destination's attributes represents the physical level. The emotional motivation of tourists represents the psychological level.

Tourism literature has confirmed the positive association between destination attributes and satisfaction. As the performance of destination attributes enhances, an increase in overall satisfaction could be achieved. (Kozak and Rimington, 2000; Pizam et al., 1978) Correspondingly, tourism literature has confirmed the connection between motivation and experience satisfaction (Devesa et al., 2010). The study of Lee, Lee and Wicks (2004) concluded that a stronger motivation to visit a destination leads to higher satisfaction with travel experience. Yoon and Uysal (2005), having motivation divided into "push" and "pull", stated that push motivation has positive effect on overall satisfaction, while pull motivation have negative effect on overall satisfaction.

Pizam et al. (1978) argued that in order to calculate satisfaction, satisfaction levels for the various attributes of the destination needs to be defined. Accordingly, in this study, and particularly because satisfaction is measured in a quantitative manner, destination attributes were divided into medical and touristic. As for motivation, they were classified into "push" and "pull" as discussed in section 3.3.

### **3.6. Revisit intentions**

Revisit intentions refer to tourist willingness or plans to revisit the same destination again (Cole and Scott, 2004). Repeat visits and their determinants have been examined by tourism researchers (Baker and Crompton, 2000; Kozak and Rimmington, 2000; Milman and Pizam, 1995; Yoon and Uysal, 2005) as this topic reflects loyalty to the destination. The interests of previous tourists in revisiting a destination can be explained by various antecedents. Past behavior, perceived value, satisfaction are antecedents of revisit intentions (Um et al., 2006).

Kozak and Rimmington (2000) considered overall satisfaction with the destination an antecedent of repeat visitation, while Baker and Crompton (2000) considered perceived performance quality as having a stronger influence on revisit intentions than satisfaction. Milman and Pizam (1995) based their study on the theoretical basis of the consumer's buying process. Accordingly, they associated revisit intentions with having a more positive destination image which is formed from being familiar with the destination (i.e. having visited it).

Other than destination image, motivations factors are considered determinants for revisit intentions. Yoon and Uysal's (2005) developed model indicates that destination loyalty is determined by satisfaction as well as push motivational factors. Moreover, destination's loyalty was explained by attachment to place which is influenced by the destination's service quality dimensions (Alexandris, Kouthouris and Meligdis, 2006). Other study by Kil et al. (2012)

addressed attachment to place as well and considered it a determinant for revisit intention and a mediator between visitors' desired benefits and revisit intentions.

### **3.7. Medical Tourism as a Bundle**

Considering the pull factors as a whole, when choosing a specific destination for medical tourism, the traveler is actually purchasing different categories of products and services offered by this particular destination. Accordingly, “medical tourism” consist of various non-substitutable products and as such can be classified as a bundle.

Consistent with literature, Lewis and Chambers (1989) argue that the tourist product is made of three main elements: the "formal product" which is what the tourists think they are purchasing. The "core product" which is the abstract and intangible attributes of the product. The "augmented product" and that is the total benefits of all elements received or experienced by the tourist from the product. Therefore; when a tourist product is purchased, it is purchased as a whole with all its elements included. This makes tourist products enjoy an essential attribute that is a "bundle purchase concept" (Lewis and Chambers, 1989, P. 300).

Early definitions of the concept of bundle goes back to Adams and Yellen (1976) where it was described as selling goods in packages. It was also described as “marketing two or more products/services in a single package for a special price” (Guiltinan 1987).

Furthermore, medical tourism can be classified as pure bundle. Pure bundling means that products cannot be bought separately (Adams and Yellen, 1976). The components of medical tourism ranging from tourism services to medical services need to be purchased together in a single trip to fulfill the act of medical tourism. Still, the package is dynamic as one can mix different clinics and airlines within the same decision to purchase.

Bundle selection can be one of the most intuitive cross-category decision making process. Research on the effects of bundles regarding the decision-making process is still developing. Historically, the majority of bundling research was concentrated in the economics field. Before 1993, only two published articles studied consumers' evaluation of bundle offers (Gaeth et al. 1991; Drumwright 1992). Nevertheless, knowledge on consumer behavior and decision-making process plays a significant role in creating bundles and marketing them. As companies became more customer oriented, the interest on understanding consumers grew into a general trend in marketing research and practice. Consequently, more research was allocated to understanding customers' demands in bundling and providing them value in bundles (Noble et al. 2002). The value perceived from purchasing a bundle is critical in the decision-making process. It is described as an overall assessment resulting from evaluation processes of benefits and sacrifices at several points in time (Zeithaml 1988).

The implications of the bundling concept will be discussed in the context of five step decision-making process in the following section. Such implications are significant in comprehending the pre-purchase motivations, perceived value and resulting satisfaction of medical tourism experience. It is critically relevant to view such sequence from a bundle approach since medical tourism is purchased as a bundle.

### **3.8. Five-step model of decision making process**

The consumer's evaluation on the purchased product extends long before and after the actual purchase choice, as the consumer passes through steps of decision making process. Consumers' evaluations are related to a five-step model of decision making starting with problem recognition, information search, evaluation of alternatives, purchase, and ending with outcomes of purchase (Engel et al. 1968).

Applying this model on medical tourism, step one is the problem recognition. This is when the consumer realizes that there is a strong reason to leave the home country and seek medical care abroad. Such reasons could vary from long waiting lists, unavailability of treatment at home, high price of treatment locally and/or other elements that are considered a driver for looking at international markets.

Step two is information search. Extra time is invested in this stage as it involves evaluation of pros against cons. Recommendations and previous experiences play a role at this stage as well. Availability of information on medical tourism in the destination is important at this stage as it facilitates the decision. Marketing and advertising of features and services offered at the destination play a role at this step.

Step three is evaluation of alternatives. After investigating information, the question being asked by the consumer at this stage would be “which destination is the most suitable for me?” Some consumers compare options or read reviews of others or listen to others’ word of mouth. The evaluation may be based on factors important to the consumer such as quality or price or other perceived factors.

Step four is the purchase step. Based on the collected information from the previous stages, the consumer is now ready to purchase the product that is to travel for medical care in the specific destination. This decision could be made based on emotional factors, information provided, advertising campaign or ease of access to information and its availability. Such decisions can relate to various psychological approaches for consumer behavior.

The final step is the outcomes of purchase and can be represented by post purchase satisfaction or dissatisfaction. The significance of this phase lies in the consumer’s evaluation of the

experience partially and wholly. Medical tourism products and services will have to meet or exceed the consumer's expectation if not, the dissatisfaction will translate into negative word of mouth and negative influences on other potential medical travelers in their second stage of the decision-making process as well as losing future potential travels to the destination. On the other hand, when satisfied, the medical tourist will tend to come back to the destination as well as spread positive word of mouth encouraging others to visit the destination for medical services or mere leisure tourism (Lee and Beeler, 2009; Kim and Brown, 2012).

### **3.8.1. Five-step decision making process vs. push-pull theory in medical tourism**

When comparing the five-step model of decision making process to push-pull theory in tourism, several steps of the model correspond to the components of the theory. Problem recognition exemplifies the push factors that compel the patient to leave his/her country and travel abroad. While the pull factors are prominent in the second and third step of the model. The availability and accessibility of the destination's pull factors facilitates moving to step two while the attractiveness, quality, competitive advantage and other pull factors which single out the specific destination from competitors in fact draw the consumer to take the purchase decision. Table 3.5 provides a comparison between the five-step model of decision making process to push-pull theory.



**Table 3.4 Comparison between the five-step model of decision making process and push-pull theory**

**Decision Making Process                      Examples from medical tourist      Push-Pull Factors perspective**

Step 1	Problem recognition	<ul style="list-style-type: none"> <li>• Prices are very expensive for my treatment in my country.</li> <li>• The quality of medical care is low in my country.</li> <li>• The treatment is unavailable in my country.</li> </ul>	Push factors
Step 2	Information search	<ul style="list-style-type: none"> <li>• I can access information on medical care in “X” destination online.</li> <li>• There are advertisements for medical care in “X” destination.</li> <li>• Medical packages are available for destination “X” and provided by travel agents.</li> </ul>	Pull factors - The accessibility of pull factors spreads the awareness of the destination and makes it an option to consider.

		<ul style="list-style-type: none"> <li>• Medical brokers facilitate my medical trip to “X” destination.</li> </ul>	
Step 3	Evaluation of alternatives	<p>Destination “X” offers</p> <ul style="list-style-type: none"> <li>• High quality medical care.</li> <li>• Affordable prices for my treatment.</li> <li>• Attractions that my family and I can enjoy while visiting.</li> </ul>	<p>Pull factors -</p> <p>The attributes of the destination attract toward choosing the destination. Such attributes can result from comparison with home country and/or other destinations.</p>
Step 4	Purchase	<ul style="list-style-type: none"> <li>• I am travelling to “X” for medical care.</li> </ul>	
Step 5	Outcomes of purchase	<ul style="list-style-type: none"> <li>• I am satisfied/unsatisfied with the services offered in “X” destination.</li> </ul>	<p>Resulting from motivational push and pull factors and/or destination's attributes and performance.</p>

It is worth mentioning that there can be a reciprocal relationship between the push factors related to step one of the decision-making process and the pull factors related to steps two and three of the decision-making process. While comparing the attributes and characteristics of the destination with home country, the attractiveness of the destination attributes changes with variations in potential medical tourist's motivational factors. Alternatively, such attributes of the destination can trigger the intrinsic motivations for the potential medical tourist and pushes him/her to seek medical tourism experience (Oh, Uysal, and Weaver, 1995).

Two steps are significant when applying the decision-making process to bundles, since medical tourism is purchased as a bundle, and analyzing the way consumers perceive bundle values. They are motivations and satisfaction and they stem from consumer's evaluation of the steps before and after the purchase. The motivations, shaped by the pull factors of the destination which are the drivers for choosing the destination for medical tourism. Therefore, they are what consumers expect the destination to provide and what motivates them to travel to the destination. When medical tourism is experienced in the destination and that is post purchase, the consumers form an evaluation based on their experience which results in feeling satisfied, dissatisfied or somewhere in between. Both the expected and the experienced evaluations are important in analyzing the value of the bundle and therefore, the perceived value of a particular destination in medical tourism. The pull factors which stimulate the initial decision of purchase to be made along with experience which results in being satisfied or dissatisfied, lead to repeated visits and spread of positive word of mouth or vice versa. It is therefore important to assess motivations and satisfaction for one whole purchase. Another reason is to explore whether some medical tourism bundle categories are high in motivations while low in satisfaction or the other way

around and how such variations affect the overall value and attractiveness of the bundle and intention to repurchase.

### **3.9. Factors influencing consumers' pre-purchase motivations and post-purchase satisfaction**

Furthermore, consumers' motivations and satisfaction with bundles are influenced by several factors. Of which are the composition of the bundle and the characteristics of the consumer.

The components of the bundle affect the consumers' perception of the value of the bundle. The attractiveness of the bundle is affected by the number of products included in the bundle (Herrmann et al., 1997). Therefore, the destination that offers a variety of medical and tourism services to choose from will perceive higher value by medical tourists. According to Gaeth et al. (1996), consumers give higher values for bundles when they play a role in their creation. Consequently, when given the opportunity to choose from a wide array of accommodations or medical centers in a destination, the medical tourist would perceive higher value for medical tourism in this destination. As mentioned earlier, the pull factors that the destination offers affect the motivations of medical tourists and can either attract them towards choosing the destination or not.

The characteristics of medical tourists in this study are based on demographic factors as well as elements related to their trip plan. The characteristics are used to explore the various segments of medical tourists and how their motivations differ with difference in characteristics.

### **3.10. The research contribution**

Despite the fact that research endeavors have focused on bundle value, the focus is on the pre-purchase steps. Particularly on factors that affect the motivations leading to purchase decision. Little research has been allocated to post purchase satisfaction and linking it to the pre-purchase

motivational preferences. Nguyen et al. (2009) and Naylor and Frank (2001) are of the few researches that studied the bundle post-purchase overall satisfaction.

Similarly, in medical tourism, previous studies that focused on medical tourism motivations did not incorporate the element of satisfaction in their assessment such as Fetscherin and Stephano (2015); Peters and Sauer (2011). While other recent studies such as Lajevardi (2016) and Canoglu et al. (2016) are of the very few that incorporated motivational factors and satisfaction. However, the focus was on the effect of motivational factors on destination image perception in medical tourism as well as the relation between overall satisfactions and value perceptions.

This study has reconciled the push-pull theory from the tourism field and the five steps decision-making process in the marketing field. Against this background, this study examines and analyzes the motivational preferences for medical tourists and their effect on perception of quality, satisfaction and intention to revisit, a subject area that has not been investigated in medical tourism literature. On another level; from bundling research context, few studies have been conducted in this specific domain. Therefore, this study contributes to the marketing literature, mainly to the contexts of bundling and decision-making process, as well as to the tourism literature, particularly medical tourism.

Moreover, this research is investigating the medical tourism phenomenon from both supply side, being the business organizations including facilitators involved in medical tourism and the demand side, being the medical tourists. Primary data is collected from both sides and conclusions are drawn in view of a more inclusive picture of the subject matter. Very few studies in medical tourism, if any, have combined both suppliers and consumers perceptions in one analysis, rather it has been viewed from a single angle. Such comprehensive attribute presents a unique and valuable contribution of the research and its adopted methodology.

According to the recent review by Hoz-Correa et al. (2018) on the evolution of medical tourism research between years 1931 and 2016, there is a lack of formal literature in medical tourism despite the increasing number of publications. Most of the earlier studies are exploratory in nature tending to describe the general global status and development of the phenomenon and its evolving markets. (Woo and Schwartz, 2014) This general understanding of the phenomenon can take the ethical, political or economic repercussions.

Hence, what is required, according to Hoz-Correa et al. (2018) review, is more empirical research with more reliance on primary data as well as empirically driven approaches from a variety of disciplines. In this matter, Hoz-Correa et al. (2018) analysis "reveals an interconnection between research on medical tourism and other marketing-specific aspects such as consumer behavior or service quality". Further it states "there is a huge potential for researchers to include factors such as image, motivations or cross-cultural analysis in their work" (Hoz-Correa et al., 2018, P. 205) and concluded that most of the studies in their conducted review are not related to either marketing-specific attributes such as consumer or psychological attributes which, according to them, "implies a challenge to the scientific community and highlights the necessity of more advanced analyses of features such as decision-making" (Hoz-Correa et al., 2018, P. 209).

From this point, the role and contribution of this research work stems as a hybrid of medical tourism and consumer behavior. It also answers the future research recommendations posed by Hoz-Correa et al. (2018), particularly in its approach which is driven theoretically and empirically by the disciplines of tourism and marketing, more specifically, decision-making. The study launched from exploration of motivations paving its way to satisfaction and intention to revisit, all embedded in the decision-making process. Thus, the incorporation of the push-pull

theory from the tourism discipline with the five steps decision-making process from the marketing discipline demonstrates this interconnection.

The study aims to classify medical tourists into different segments. The purpose from the segmentation is obtaining an in-depth understanding of the medical tourist and his/her characteristics. From a cultural perspective, very few studies in medical tourism have been conducted in the Middle East. Most of the research work have focused on destinations such as India, Thailand, Malaysia as well as other countries located mainly in the Far East. Since the empirical work took place in Lebanon and the participating medical tourists were from the neighboring Middle Eastern countries, the study and its findings serve as a foundation for understanding the Middle Eastern medical tourist and an insight into medical tourism in this part of the world. They also represent a cornerstone for research work regarding this genre in this region of the world and contributes as well in understanding the cultural influences on the shape of medical tourism industry. Additionally, the segmentation method originated in this research can be utilized and benchmarked in further medical tourism researches.

### **3.11. The research question and hypothesized relationships**

In view of what is discussed in the previous section, the central research question of this study is posited to understand medical tourists' motivations for medical tourism destination, the effect of those motivations on their perception of quality, satisfaction and intention to revisit. In addition, the study aims to explore the various characteristics of medical tourists which yields in classifying them into different segments.

In determining the motivations, this study relied on the previous literature in the field of medical tourism as well as qualitative interviews conducted with the suppliers of medical tourism in the destination of study. Accordingly, the pull factors were classified into “destination”,

“convenience”, “medical institutions and medical procedure” and “price”. As for the perceived quality, it was classified into “perceived medical quality” and “perceived tourist quality”. The classification will be discussed further in chapter 5.

Accordingly, the central research question of this study is posited to understand medical tourists’ motivations for medical tourism destination, perception of medical and touristic quality, satisfaction and intention to revisit based on the motivational push factor and pull factors classified into “destination”, “convenience”, “medical institutions and medical procedure” and “price”. In addition, the study aims to explore the various characteristics of medical tourists which yield in classifying them into different segments.

#### **3.11.1. Hypothesized relationships and proposed model**

In view of the research question, the following hypotheses are proposed:

Previous tourism literature indicates that there is a reciprocal relationship between push and pull factors (Dann, 1981; Klenosky, 2002; Kim, Lee and Klenosky, 2003; Oh, Uysal, and Weaver, 1995). In health tourism, Hallab (1999) confirmed this relationship. To know whether a relationship exists between push and pull in medical tourism, it is important to first identify the structure of the constructs, particularly that this study classifies pull into “destination”, “convenience”, “medical institutions and medical procedure” and “price”.

In an attempt to find out the factorial structure of the pull construct(s), two different paths were designed. The first is a multidimensional path model which allows the four constructs to be freely correlated. While the second is a second order unidimensional path model which correlates the four constructs to measure a higher order construct (single dimension) which is "comprehensive pull" construct.



Therefore, in order to know whether a relationship exists between push and pull and to which path this relationship adheres, two sets of proposed hypotheses were developed.

The first set which is the list of hypothesized relationships proposed in the first path model (multidimensional model) are:

*Hypothesis 1: Positive relationship exist between push and pull factors*

*Hypothesis 1A: Push and destination are positively related*

*Hypothesis 1B: Push and convenience are positively related*

*Hypothesis 1C: Push and medical institutions and medical treatment are positively related*

*Hypothesis 1D: Push and price are positively related*

The second set which is the list of hypothesized relationships proposed in the second path model (unidimensional model) are:

*Hypothesis 11: Positive relationship exist between push factor and pull factor*

*Hypothesis 11A: Pull factor is positively influencing destination*

*Hypothesis 11B: Pull factor is positively influencing convenience*

*Hypothesis 11C: Pull factor is positively influencing medical institutions and medical treatment*

*Hypothesis 11D: Pull factor is positively influencing price*

The motivations were explored and identified in this study based on previous readings in medical tourism literature as well as qualitative interviews conducted with the suppliers of medical

tourism in the destination of study. To test the effect of motivations on perceived medical and touristic quality, hypotheses 2, 3, 4 and 5 are proposed.

*Hypothesis 2: Push factor is positively influencing perceived medical quality*

*Hypothesis 3: Push factor is positively influencing perceived touristic quality*

*Hypothesis 4: Pull factors is positively influencing perceived medical quality*

*Hypothesis 4A: Destination is positively influencing perceived medical quality*

*Hypothesis 4B: Convenience is positively influencing perceived medical quality*

*Hypothesis 4C: Medical institutions and medical treatment is positively influencing perceived medical quality*

*Hypothesis 4D: Price is positively influencing perceived medical quality*

*Hypothesis 5: Pull factors are positively influencing perceived touristic quality*

*Hypothesis 5A: Destination is positively influencing perceived touristic quality*

*Hypothesis 5B: Convenience is positively influencing perceived touristic quality*

*Hypothesis 5C: Medical institutions and medical treatment is positively influencing perceived touristic quality*

*Hypothesis 5D: Price is positively influencing perceived touristic quality*

In order to acquire a deeper insight on satisfaction in medical tourism, hypotheses are developed to test whether a cognitive approach to satisfaction applies where satisfaction is viewed as a function of motivation (Chen and Chen, 2010; Huh et al., 2006; J. Lee and Beeler, 2009; Pizam

and Milman, 1993; Yoon and Uysal, 2001). Thus, hypotheses 6 and 7 are proposed to test whether the effect of motivational preferences is direct on satisfaction.

*Hypothesis 6: Satisfaction is positively influenced by push factor*

*Hypothesis 7: Satisfaction is positively influenced by pull factors*

*Hypothesis 7A: Satisfaction is positively influenced by destination*

*Hypothesis 7B: Satisfaction is positively influenced by convenience*

*Hypothesis 7C: Satisfaction is positively influenced by medical institutions and medical treatment*

*Hypothesis 7D: Satisfaction is positively influenced by price*

Alternately, to test whether the cognitive-affective approach to satisfaction applies where satisfaction is viewed as a function of tourists' evaluation of the destination's attribute performances as well as travel motivation (Bosque and Martin, 2006; Homburg, Koschate, and Hoyer, 2006; Pizam, Neumann, and Reichel, 1978), hypotheses 8 and 9 are proposed. They test the effect of perceived quality on satisfaction. Based on hypotheses 6, 7, 8 and 9, it can be concluded whether the effect of motivational preferences on satisfaction is direct or mediated via perceived quality.

*Hypothesis 8: The higher the perceived medical quality, the higher the satisfaction*

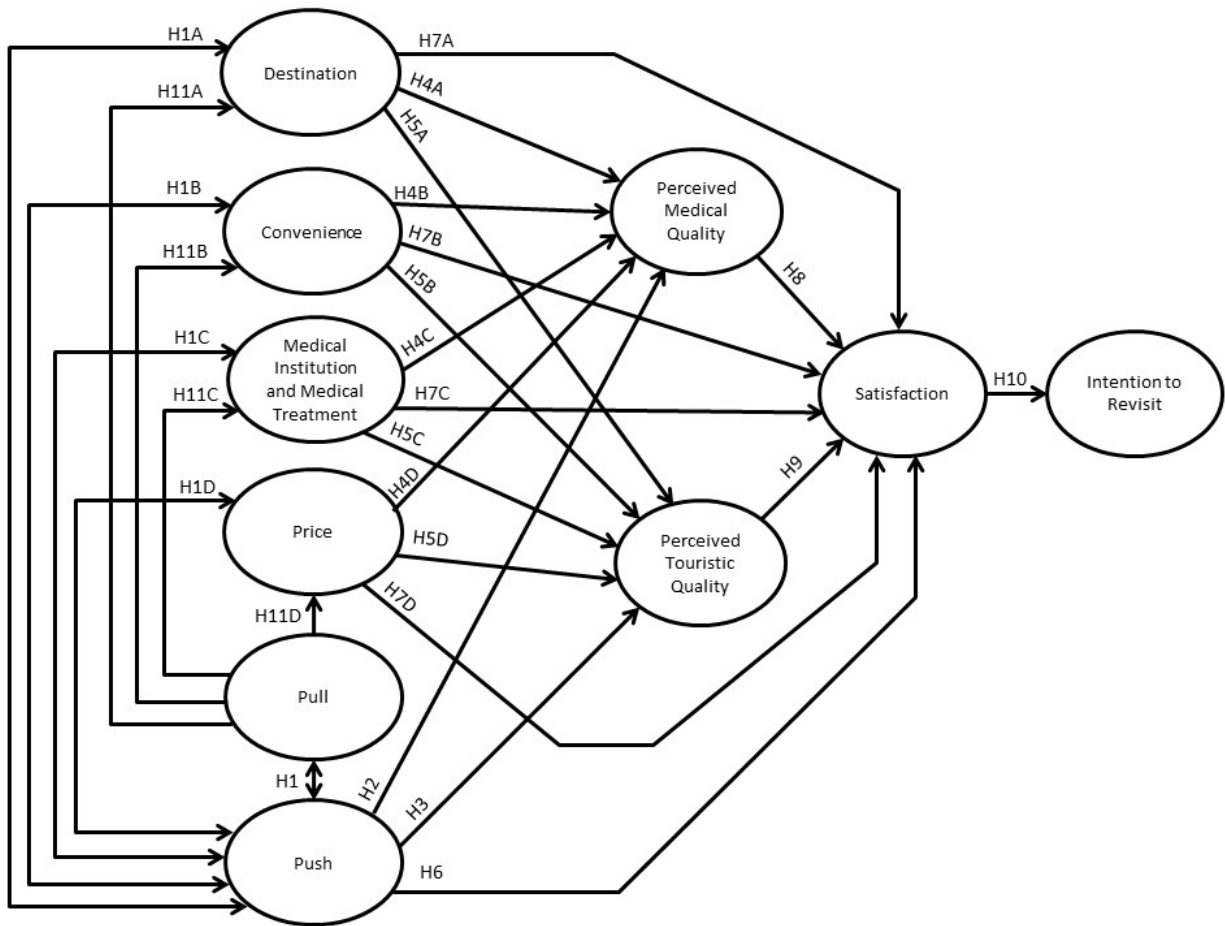
*Hypothesis 9: The higher the perceived touristic quality, the higher the satisfaction*

Previous literature has confirmed that satisfaction yields in willingness to revisit the destination and recommend it to friends and family (Lee and Beeler, 2009; Kim and Brown, 2012). To test conformity or dispute with literature, hypothesis 10 is proposed.

*Hypothesis 10: Satisfaction is positively influencing intention to revisit*

In view of the 10 hypotheses, a comprehensive model is developed in figure 3.2 as an inclusive and simultaneous illustration of the proposed hypotheses. The model is deduced from the literature review and identification of the knowledge gap.

**Figure 3.2 Hypothetical model**



### 3.12. Conclusion

This chapter presented the theoretical cornerstone that the study is based on. It provided a narration of the theories as well as their applicability and application in the field of medical tourism.

The research work is based on the five-step model of decision making process which is a theory rooted in the marketing discipline. The theory was examined through interfacing it with other related theories from the tourism discipline in order to obtain a deeper and insightful answer to the research question that covers various angles.

First, the push-pull theory represents the applied logic of examining medical tourists' motivations and stands for the initial steps of the decision-making process. The previous studies that inspired building the motivational factors and variables of the study includes the work of Heung, Kucukusta and Song (2010), Smith and Forgione (2007), Fetscherin and Stephano (2015) and Peters and Sauer (2011).

At the other end of the spectrum of the five-step decision making process is the "outcome of the purchase". In this regard, the chapter dedicated a section on conception of service perceived quality and a section on conception of satisfaction and its various shapes in tourism literature.

This chapter classified medical tourism as a bundle which consist of various non-substitutable products. The reason behind portraying medical tourism as a bundle in this study lies in the fact that bundle selection has a specific consideration in the decision-making process and can be one of the most intuitive cross-category decision making process. This fact has its implications in the empirical outcomes later in the study.

The theoretical frameworks buildup the section that discusses the contribution of the research to existing literature and the knowledge gap it aims to fill. The discussion of the study contribution was followed by a statement of the main research question and the hypothesized relationships proposed by the study. To conclude, an illustrated model of the hypothesized relationships was presented at the end of the chapter.

## Chapter 4: Methodology

### 4.1. Introduction

This chapter includes the methods that were employed to achieve the current study's objectives. The content provides a detailed discussion of the adopted research design and the data analysis methods that were employed to (1) identify the study variables, (2) test the hypothesized relationships and (3) obtain a deeper understanding of the medical tourism phenomenon.

### 4.2. The research philosophy

The adopted research philosophy is the way in which the researcher approaches the study and relates to the development of knowledge and the nature of that knowledge (Saunders et al., 2016). It contains important assumptions about the way in which the researcher views the world (Miller and Brewer, 2003). From a business research perception, the distinct 'way of seeing' organizational realities (Morgan, 1986). The researcher, throughout the course of the research work, aims to provide answers to such assumptions. These assumptions address the relationship of the researcher to that researched and what constitutes acceptable knowledge in the field of study (epistemology); the researcher's point of view on the nature of reality (ontology), the role of the researcher's values throughout the research process (axiology), and the way the research process is conducted (methodology) (Creswell, 1998; Sarantakos, 2005; Creswell and Plano Clark, 2007; Saunders et al., 2016).

Although many authors have defined the phenomenon of medical tourism as one that has been created from the perceptions and actions of concerned social actors 'medical tourists' (Connell, 2006; Horowitz, Rosensweig and Jones, 2007) which is a subjectivist ontological perspective of the phenomenon, this study views medical tourism as an age-old tradition that has been there since mid-first millennium B.C. (Smith and Kelly, 2006, p. 1). Nevertheless, the involved social

actors have changed the shape of medical tourism throughout times. Such perspective views medical tourism as a social entity existent in reality external to social actors. Thus, the study adopts an objectivist position of the researched social phenomenon.

Since the study is concerned with the motivations of medical tourists and their perceived quality and satisfaction, the epistemology which is what is viewed important in the study is rather subjective. In essence, the feelings and attitudes of medical tourists is what this research is opting to analyze in the phenomenon of medical tourism. Nevertheless, this study quantifies those feelings into measures and presents them in form of statistical data or 'facts' and accordingly tests the study hypothesis in a value-free way.

From another perspective, Tashakkori and Teddlie (1998) argued that "at some points the knower and the known must be interactive, while at others, one may more easily stand apart from what one is studying" (Tashakkori and Teddlie, 1998, P. 26) Therefore, the research methodology can be built from the context of the research question being the most important consideration. Building on this pragmatist position, this study has in reality paved its way from the research question which influenced the applied techniques and procedures, the research approaches and the research philosophy. At some points of the research, the researcher was part of the qualitative data collection process while at others the researcher was interpreting results, particularly relationships, taking an external stance and an objective position apart from any perception or bias. Having said that, this leads to the inference that this study embraces the pragmatist philosophy that the most important determinant in the study is the research question.

In order to get richer output to the research question, the research approach for this study integrated inductive and deductive techniques. The purpose behind this combined application is enhancing the quantitative outcome with valuable interview data and supplementing the

interview data with statistical support. The approach of this investigation seeks to quantify the data in order to explain the causal relationships of the research question. However, the inductive exploration generates intricate details and provides deeper conceptual validation particularly that literature on medical tourism is fairly recent. From an application perspective, combining both approaches can aid the researcher to overcome some limitations inherited in each of the approaches used singly. Saunders et al. (2016) viewed that combining both approaches is not only possible but often advantageous.

From a practical perspective, the induction approach was applied in this study to obtain close understanding of medical tourism, to collect qualitative data in a more flexible structure and to get a more subjective view from people concerned in medical tourism phenomenon. The deductive approach was applied to transfer the theoretical contexts into data, to explain the causal relationships between variables, to ensure the validity of the results in a form of structured conclusions (Saunders et al., 2016).

Since this study is employing both qualitative and quantitative methods, this subsection is dedicated to examining both methods separately and jointly.

#### **4.2.1. Research Methods**

Contemporary educational research has been typically of an empirical nature. The words “qualitative” and “quantitative” can be understood as research paradigms and research methods. At one level quantitative and qualitative refers to distinctions about the nature of knowledge: how one understands the world and the ultimate purpose of the research. On another level of discourse, the terms refer to research methods - how data are collected and analysed - and the types of generalizations and representations derived from the data (McMillan and Schumacher,



2006, p. 12). For the purpose of this study, “qualitative” and “quantitative” will refer to research methods and how data is collected and analysed.

There has been a clear distinction in social sciences between qualitative and quantitative research approaches. Besides, there has been a long debate between both methods of research. While qualitative research helps attain in-depth information about a case or phenomenon through an exclusive participant or set of participants, quantitative data tends to widen the scope of the population in order to reach more of a generalized view through specific and narrow questions (Farrelly, 2013).

Many academics have attempted to differentiate the nature and characteristics of the two research methods. Of the many differences, qualitative research has inductive nature whereas; quantitative research is deductive in nature. Inductive logic contradicts with hypothesis deductive-approach or experiments which is the base for deductive logic. Therefore, the qualitative analyst would seek interrelationship among different dimensions of data without necessarily relying on a hypothesis or prior assumption. Whereas, quantitative analyst builds the analysis on defined variables and tests the correlative relationships (Patton, 2001).

Along the same line, Krathwohl (1998) argued that in the quantitative research approach, the researcher initiates the study with the purpose of reaching an existing objective reality typically with some information about the intended area of investigation; whereas in qualitative approach, the researcher is concerned with studying an existing reality and the different perceptions of this particular reality. Bogdan and Biklen (2007) argued as well that quantitative research leads to reaching a pre-assumed result whereas qualitative research reveals different values, experiences and beliefs.

Another differentiation amongst many is between the part and the whole. While qualitative analysts attempt to define a phenomenon as a whole, the quantitative analyst would take it apart and study how each part functions. The holistic view of qualitative approach assumes that “the whole is understood as a complex system that is greater than the sum of its parts” (Patton, 2001, P. 59). Thus, the qualitative analyst strives to gather data from multiple sources and aspects to build a comprehensive and round picture of the phenomenon. On the other side, the quantitative analyst would seek different dependent and independent variables to reach a measurable outcome through statistical covariance (Patton, 2001).

Besides qualitative and quantitative, research approaches can also be divided into case-oriented and variable –oriented. While case-oriented is an examination of an existing case or phenomenon such as the study of a society or an economic system. Variable-oriented is more of a comparative approach that tries to link the variables and relationships of different cases over the widest possible population of observations. Therefore, the case-oriented approach is more concerned with outcomes of a specific case or phenomenon while variable-oriented approach is more concerned with discovering links and correspondence between relationships between several cases aiming to reach for a hypothesis or a general theory (Della Porta and Keating, 2008).

#### *4.2.1.1. Qualitative Research Methods*

Qualitative research inquiry is characterized by exploratory nature and inductive logic. Such inductive analysis results from analytical observations; typically, open-ended observations with no initial hypothesis that leads to confirmation or refutation. Thus, and since there is no hypothesis before data collection, there are no variables, relationship between variables, deductive hypothesis-testing or outcome measurement in this research method. A challenge of such method is to derive a creative and original synthesis from narrative observations and

findings. The purpose of the analysis and the number and types of study cases determine the nature of the inductive analysis (Patton, 2001).

Qualitative approach allows for an active and involved role for both the researcher and the participant(s). Among the most common methods used in qualitative research is "interview".

Interviews are believed to allow for deeper understanding of a phenomenon through exploring thoughts, viewpoints and beliefs. Interviews can be divided into three main types: structured, semi-structured and unstructured. Structured interviews are verbally administered questionnaires that consist of a list of questions with no scope for divergence or follow-up questions. Therefore, they are rapid, however they may not provide in-depth information. Unstructured interviews, opposite to the structured interviews, do not have predetermined questions or theories to initiate from. They usually start with an opening question and proceed with little or no organization. They are usually time-consuming and with little guidance to the interviewer, yet they are beneficial in obtaining in-depth information. The qualitative research method adopted in this study is semi-structured interviews which fall between structured and unstructured. They usually consist of key questions that draw the guidelines framework of the interview. Nevertheless, they allow the interviewer to diverge or elaborate to obtain further information on certain points. The semi-structured type provides both guidance and flexibility (Gill et al., 2008).

Therefore, qualitative research is a methodology used when a situation cannot be adequately interpreted quantitatively or when the findings cannot be attained through statistical applications (Strauss and Corbin, 1990). Additionally, qualitative methods can be used to extort and identify variables that will later be tested quantitatively (Strauss and Corbin, 1998). Since medical tourism is a new area that has not yet been fully explored, the adopted methodology started with

qualitative exploration which led the way to form the research question and identify the variables that were quantitatively tested afterwards.

#### *4.2.1.2. Quantitative Research Methods*

Quantitative methods of research have a rich history in natural sciences. The researcher's objective in quantitative approach is usually to look for distribution of variables or to find a universally accepted law through logical structure with premises and conclusions. Typically, the quantitative researcher begins with hypothesis and concludes with a measured outcome. Social sciences took the guise of natural sciences in quantitative research. It has been doubted by many scholars that a universally accepted law can be concluded through the context of social sciences. Nevertheless, numerous social science scholars tend to evade it, and hence quantitative methods of research have been widely applied in social sciences (Smeyers, 2008).

The research methods that fall under the category of quantitative research include surveys and questionnaires, structured interviews, experiments, quasi-experiments and randomized controlled trials (RCT), which were methods defined by Farrelly (2013, p. 42) as “a survey is designed to obtain information from populations regarding the prevalence, distribution and interrelationship of variables within those populations”. Furthermore, “in its simplest form, a structured interview involves one person asking another person a list of predetermined questions about a carefully-selected topic the person asking the questions” (Farrelly, 2013, p. 43). Experiments “involve testing some kind of intervention to see whether it has an effect or not. We do this all the time in everyday life for example in cooking as we attempt to improve the flavor of a recipe...” (Farrelly, 2013, p. 43). Quasi-experiments “omit one aspect of experiments—usually randomization. Consequently, you may for instance decide as a school nurse that you would like to try a new approach to offering your service in a school and then measure the satisfaction with

the service to see whether it has increased. You could compare your findings to another similar school where approach remains the same...” (Farrelly, 2013, p. 43). Finally, randomized controlled trial (RCT) can be defined as “an experimental method used when two or more treatment procedures are to be compared, and they are considered to be evidence of the highest grade” (Farrelly, 2013, p. 43).

The quantitative research method applied in this study is survey, where selected variables were tested for relationship and interrelationship based on information obtained by a sample of the population.

#### *4.2.1.3. Mixing Research Methods*

Whether quantitative or qualitative, all depends on what the researcher is trying to capture. Some researchers prefer using one method while other researchers such as Creswell (2003) and Krathwohl (1993) view qualitative and quantitative methods as complimentary.

According to Gorard and Taylor (2004, p. 7) combined or mixed-methods research has been identified as a "key element in the improvement of social science" with research strengthened by the use of a variety of methods. Gorard and Taylor (2004) argued that mixed method research "requires a greater level of skill, the routine combination of methods creates researchers with an increased ability to make appropriate criticisms of all types of research" as well as "can lead to less waste of potentially useful information" (Gorard and Taylor, 2004, p. 7).

Tashakkori and Creswell (2007, p. 4) defined mixing methods as: “research in which the investigator collects and analyses data, integrates the findings and draws inferences using both qualitative and quantitative approaches or methods in a single study”.

In social sciences, Cambell and Fiske (1959) were among the first to use combined methods. They have developed a validation process named multitrait-multimethod matrix. The aspect of validation emphasized in this process is “validation is typically convergent, a confirmation by independent measurement procedures. Independence of measures is a common denominator among the major types of validity (excepting content validity) insofar as they are to be distinguished from reliability” (Campbell and Fiske, 1959, p. 81).

The use of more than one method in studying a certain matter is often referred to as triangulation. Triangulation is broadly defined by Denzin (1978, p. 291) as “The combination of methodologies in the study of the same phenomenon”. Denzin (1978) was the first to outline triangulation into four types; data triangulation, investigator triangulation, theory triangulation and methodological triangulation.

Moreover, triangulation is emerged from the concept that one can reach more accurate judgment by looking at data of a certain phenomenon from different theoretical angles. Therefore, cross validation can be achieved when two or more independent research methods yield comparable data. Such methods can be all qualitative or all quantitative or mixed from both (Jick, 1979).

#### **4.3. Lebanon: A destination for medical tourism**

Medical tourism has emerged in various countries scattered around different parts of the globe and with diverse political, economic, and social settings. Previous medical tourism literature examined case studies of numerous countries that worked on developing their medical tourism niche market and are now considered major medical tourism destinations such as Thailand, Singapore, India, Mexico, Bolivia, Brazil, Cuba, Belgium, Poland, Hungary, Jordan and others. Almost every medical tourism destination-country encompasses different socio-economic and political settings which makes it a unique case study on its own. On the other hand, and as with

medical tourism markets, such destination countries share common characteristics and cater to the requirements of tourists' segments in terms of cost, quality, proximity and other variables.

Despite the continuous success achieved by Asian countries such as Thailand, India, Malaysia and Singapore, many Middle Eastern destinations succeeded in elevating their medical tourism offers onto a world map. According to the MTI, Abu Dhabi ranks 5th, Jordan 8th, Dubai 21st, Turkey 29th (Fetscherin and Stephano, 2015).

The stories of neighboring countries are worth considering with respect to benchmarking opportunities. The cultural, language, historical ties that exist between countries of the same region leave their traces on benchmarking criteria and make their experiences more moldable. UAE, Jordan, Turkey and Israel are Middle Eastern countries that marked their names in medical tourism. They have gained high regional ranking by the 2016 MTI. Appendix 1 provides a synthesis of medical tourism in these Middle Eastern countries.

Although Lebanon is a center for medical excellence in the Middle East, its potential as a destination for world-class medical tourism is still virtual. This study focuses on data collected from the stakeholder of the Lebanese medical tourism industry via interviews and survey in the endeavor to assess the status of the industry and the feedback of consumers.

Lebanon is 10,452 Km<sup>2</sup>; it has 147 well-equipped hospitals distributed throughout the country, seven of which exceeds 200 beds (Saab and Musharrafieh 2006). Compared to its neighboring countries, Lebanon spends above 6%, a significant portion of its GDP, on healthcare services. This spending rate is the highest in the MENA region. Lebanon is ranked number one in the Arab world in terms of hospital beds density and that is 3.5 beds per 1,000 individual. Additionally, Lebanon has the rate of 3.5 physicians available per 1,000 individual which,

excluding Israel, is the highest rate of physician's availability in the Middle East (Bank Bemo, 2013).

Lebanon has ISO certified hospitals capable of performing specialized medical procedures. The American University of Beirut Medical Center (AUBMC) in Beirut was established in 1902 and has a long history as being one of the leading medical centers in the Middle East. Today, AUBMC is a medical centre that handles more than 360,000 patient visit a year (AUBMC, 2018).

AUBMC is the only medical institution in the Middle East to have earned the three International Accreditations of the Joint Commission International (JCI), Magnet®, and the College of American Pathologists (CAP), due to its high standards in patient-centred care, nursing, and pathology/laboratory services (American University of Beirut Medical Centre, 2014).

AUBMC has dedicated two faculties for cutting-edge research; the first is the Faculty of Medicine Research and the second is the Clinical Research Institute. In 2013, AUBMC launched the Robotic Surgery Program with an objective of reducing invasive procedures and speeding up recovery. In March 2016, the first robotic radical cystectomy and intracorporeal neo-bladder surgery to treat bladder cancer in Lebanon and the region was performed at AUBMC. December 2017 witnessed the first-of-its-kind robotic surgery in Lebanon and the region at AUBMC. In March 2018, for the first time in the world, an operation was performed to close three holes in a child's heart without restoring to surgery. Moreover, in 2018 for the first time in the Middle East and Asia, cutting edge technology was utilized to perform Transcaval Percutaneous Aortic Valve Replacement at AUBMC (AUBMC, 2018).



Another state-of-the-art medical centre that has earned the Accreditations of the Joint Commission International (JCI) is Clemenceau Medical Centre (CMC). With a one-on-one nurse ratio, this medical centre has gained its reputation for being a compassionate and friendly environment where patients enjoy an ambiance of a 5-star hotel (Clemenceau Medical Centre, 2014). CMC was awarded Excellence in Customer Service and Best Use of Technology in Medical Tourism at the 2018 IMTJ annual award ceremony in Athens, Greece. Moreover, CMC was ranked among the 30 most technologically advanced hospitals in the world by Master's in Healthcare Administration in 2014. It was also recognized as one of the world's most high-tech hospitals with cutting-edge equipment. At the 2018 IMTJ Medical Travel Awards, CMC was shortlisted in the category of "Best use of technology in medical tourism- Innovative Technologies" (Clemenceau Medical Center, 2018).

Besides being one of the top medical destinations in the Middle East, Lebanon is a donor country of doctors and physicians and with the highest immigration factor in the Middle East and North Africa. (Akl et al., 2008) Over the past 25 years, around 40% of graduating doctors and physicians from Lebanese medical universities are practicing medicine in USA (Sayegh and Badr, 2012).

Aside from healthcare and medical related services, Lebanon is a major touristic destination in the region. It has a strategic geographic location that is proxy to many Arab and European countries. It also enjoys a warm climate and a variety of landscapes ranging from Mediterranean seaside to green mountains and valleys. The travel and tourism sector provides a significant contribution to the Lebanese economy and constitutes one of the economy's leading growth engines. Travel and tourism sector's share to GDP was 29%, 27% and 25% in years 2010, 2011 and 2012 consecutively (Bank Med, 2013).

Lebanon's tourism has been highly affected by its political status quo and the Lebanese sociopolitical structure plays a major role in shaping it. Many Lebanese leaders in power have worked to gain regional political collaboration and backing. This has, in several occasions, destabilized the Lebanese political climate and left its traces on tourism. Appendix 14 describes the Lebanese sociological structure as well as the role of the Diaspora in shaping this structure.

On the other hand, the Lebanese government has realized the tourism impact on the economy and accordingly shaped many policies and reforms to facilitate tourism. Of such policies in the travel and tourism sector is the Open Sky Policy at Beirut's Rafik Hariri International Airport; a policy that entails the liberalization of regulations on commercial aviation and granting free access for international carriers to run flights to a nation's airports (ICAO, 2007).

In July 2001, the Lebanese government issued a decree to establish a national commission for the development of health tourism. The commission included representatives from the Ministry of Public Health, Ministry of Tourism, Ministry of Environment, and Ministry of Information. In addition to representatives from medical centers, hotels, hotel unions and travel agencies (Khalil, 2016). The outcomes of this national commission are still at the bureau status.

In addition to its climate, natural beauty, cultural heritage and multilingual workforce, Lebanon has various tourists' facilities ranging from private hotels to international chain hotels and more than 120 travel agencies around the country as well as transportation services from car rental companies to on-the-spot taxi services. In 2009, New York Times recommended Beirut as the first among the top 44 most compelling places to visit (Sherwood and Williams, 2009). In addition, the survey conducted by Travel and Leisure, an influential internet travel brand, ranked Beirut "the best international city for food" for year 2017 and the number one destination for food-oriented travelers (Lieberman, 2016).

Building on Lebanon's regional position as a healthcare service provider and on the fact that it is a country that relies heavily on tourism, there exists a potential scope for the development of a promising niche segment of tourism that is medical tourism.

#### **4.3.1. The development of the Lebanese healthcare system - public and private**

The history of civil war and political conflict in Lebanon contributed to the weakening of the public health sector financially and institutionally. Meanwhile, private sector and NGOs took a bigger role in the Lebanese healthcare sector. By the end of the Lebanese civil war, only half of the public hospitals were operating. Meanwhile, the private hospitals were less affected and the unregulated development of privately-owned hospitals led to an increase of the pre-existing oversupply of hospitals and hospital beds.

As a result, the Ministry of Public Health (MoPH) had to devote dedicated efforts in order to balance with the private sector and strengthen its regulatory role. Accordingly by 1993, more public hospitals were established in diverse Lebanese regions and had even better equitable distribution than private hospitals. Further on, the issued decree in 1996 allowed the public hospitals to have managerial and financial autonomy by appointing an autonomous administration board that have the liberty to contract with financing agencies including the MoPH. This step led to the development of public hospitals to become more competitive to private ones (Ammar, 2009).

Meanwhile, the private healthcare providers continued their investments in profit maximization areas as poorer areas of the country were not attractive. The highest concentration of private hospitals is in Beirut and surrounding areas of Mount Lebanon which comprise the major touristic areas of Lebanon.

Currently, the Lebanese health system includes a mix of public and private service providers and payers. There are 165 hospitals in Lebanon. Around 82% of them are privately owned. While, the small private hospitals are mostly owned by physicians who are considered prominent figures, larger private hospitals are associated with religious affinities (Ammar, 2009) and seven hospitals are university hospitals (Khalil, 2016).

Around 48% of the Lebanese population are covered by the National Social Security Fund (NSSF). The MoPH reimburses the 131 contracted hospital, being public or private, between 85% to 95% of the hospitalization costs. The contracting system between the MoPH and contracted hospitals has gone through several reform steps which led to reimbursement based on a mixed model that includes hospital Case Mix Index (CMI) calculation, customer satisfaction and select policy indicators (Khalife, et al., 2017). The implementation of this system led to improving the performance of both public and private hospitals. Moreover, the close relationship between the MoPH and the Syndicate of Private Hospitals reflects the public-private-partnership in the Lebanese health system (Khalife, et al., 2017). It is worth mentioning that many of the hospitals are accredited to the ISO 9000 standards (Khalil, 2016).

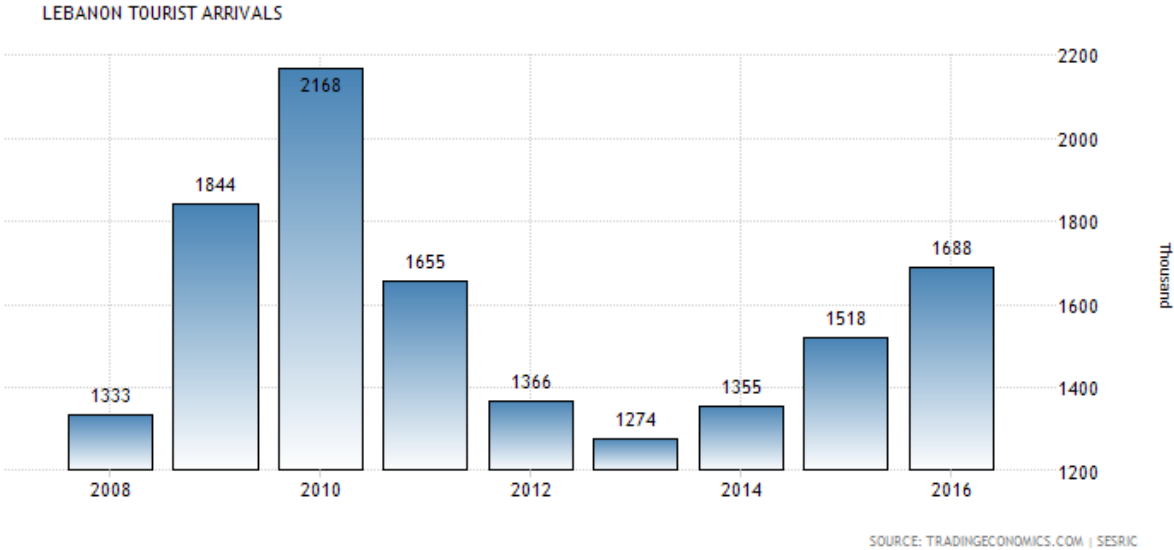
Although the public hospitals has witnessed managerial and operational development and enjoy a certain extent of managerial autonomy, still the sector attends to Lebanese, particularly low-income citizens, as well as the recent Syrian refugees and treat patients at minimal charges (Blominvest, 2018). While, private hospitals extend admissions of medical tourists who often come to Lebanon targeting the service provider or medical doctor.

#### **4.3.2. Middle East war context and its effect on Lebanon's tourism**

Despite the fact that Lebanon was, to a certain extent, spared from the Arab uprisings, the political and economic spillovers on the Lebanese government and people were unavoidable.

Since 2011, the Lebanese economy and particularly the tourism sector has been hit and the figures show a decrease in numbers of incoming tourists. The worsening Syrian crisis and the regional political instability has affected Lebanon and averted it from maintaining its position as the magnet of Arab tourists.

**Figure 4.1 Lebanon Tourist Arrivals from year 2008 till year 2016**



*Source:* Tradingeconomics.com, 2018

Year 2013 witnessed the least number of tourists. The halting political instability and the increased travel warnings on the GCC citizens by their governments led to a decrease in the incoming tourists and a change in the breakdown of tourists' nationalities. As the Emirati, Kuwaiti and Saudi tourists, who constituted the bulk of tourists and biggest spenders, stepped away from Lebanon, numbers of Iraqi tourists kept growing to make almost 35.3% of total Arab tourists in 2013. This could be explained by the business ties established between Lebanon and emerging Iraq.

Despite the decrease in total number of tourists arrivals, Lebanon sustained an attractive position as a regional medical destination. When it comes to life-affecting medical cases, overcoming political instability and travel warnings seem a possible matter. According to Mohamad Sayegh, dean of the Faculty of Medicine and vice president of Medical Affairs at the American University of Beirut Medical Center (AUBMC), international patients are drawn to the highly specialized healthcare services at AUBMC and the majority of the cases at the center are referral cases and are serious and complex (Rahhal, 2013).

This is not to deny that the volatile political climate of Summer 2012 did not affect medical tourism. According to Mounes Kalaawi, partner and chief executive of Clemenceau Medical Center (CMC), which is another reputable medical center in Lebanon, “We have a steady flow of international patients but this flow goes up and down according to the regional stability. The events of 2012 saw a reduction of international patients by 50 percent from certain nationalities but they were replaced by patients from other countries who were not affected by [travel] bans”. Medical center that rely on elective surgery witnessed a drop in incoming medical tourists. According to Dia Hassan, president and CEO of Bellevue Medical Center (BMC) “The Gulf countries simply stopped sending their nationals to Lebanon for healthcare and we... felt their absence”. The most performed operations at BMC are plastic surgeries (Rahhal, 2013).

The years following 2013 witnessed a gradual increase in tourists arrivals as Lebanon started recouping its attractive image vis-à-vis the region's political and economic shaky climate. By December 2017, number of tourists arrivals increased by 9.98% to reach 1.86 million as represented in figure 4.1. This rise is mostly driven by incoming tourists from Europe, the Arab countries and the Americas constituting 34.45%, 30.23% and 17.6% of total tourists respectively

(MOT). A portion of this increase goes to Medical tourism. However, it seems not enough to make Lebanon gain back its depicted title "Hospital of the Middle East".

Nowadays, the breakdown of medical tourists' nationalities has also changed. According to Bahij Arbid, advisor of Lebanon's Minister of Public Health, "Thousands of patients from neighboring Arab countries used to come to Lebanon for treatment, but unfortunately, in recent years, the number of tourists from Gulf countries shrunk, which caused a decline in medical tourism rates. Today, this rate is limited to Jordanians, Iraqis and some Arabs from African countries." (Khalil, 2016).

Despite the adverse internal and external conditions the Lebanese healthcare system showed progress in major international ranking reports. The World Economic Forum in its published Global Competitiveness Report 2016-2017 ranked Lebanon 34th with a score of 6.8 out of 7 which contributes to the good performance of the Lebanese healthcare sector.

Moreover, "Bloomberg 2017 Healthiest Country Index" reconfirmed showed Lebanon as the healthiest country in the Arab world which confirms the good performance of the Lebanese healthcare system. In addition, "Health Care and Quality Index" in its publication in Lancet in May 2018 ranked Lebanon 33 among 195 countries with a score of 86 out of 100 (MOPH, 2018).

On medical tourism suppliers level, Clemenceau Medical Center (CMC), a major medical center in Lebanon, was ranked second in the top 10 list for the world's best hospitals for medical tourists on the Medical Travel Quality Alliance (MTQUA) in 2017. CMC won medical tourism award at the IMTJ Medical Travel Awards 2017 for their efforts in attracting international patients to Beirut, Lebanon. It was also named excellence in customer service in IMTJ 2016 Medical Travel Awards.

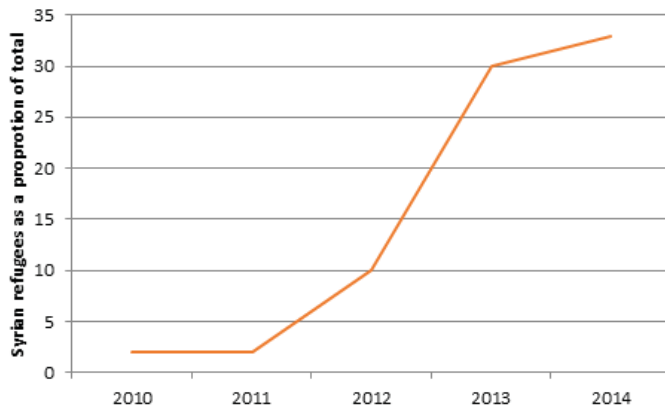
#### 4.3.3. Regional war effect on the Lebanese healthcare system

The overflows of the Syrian war has been weighing on the Lebanese government, society and economy. The number of Syrian refugees in Lebanon is debatable and it has been claimed that since 2011, the influx of Syrian refugees has increased the Lebanese population by 30% which make Lebanon the country with highest refugee density since 1980 (Ammar et al., 2015). The refugees includes war-wounded people, people who have lost their homes and people who have left their homes due to war conditions.

The healthcare one of the sectors that endured a load of this weight. Since 2013, the number of primary healthcare centers as well as beneficiaries steadily increased in the Lebanese national network. Total number of beneficiaries exceeded 1.2 million in year 2014, of which 35% go to Syrian nationals (Ammar et al., 2015).

While this rapid increase loaded heavily on the Lebanese healthcare sector, the main bearer is the public healthcare sector. Meanwhile, the admissions for insured Lebanese in private hospitals remained undisrupted. Figure 4.2 represents the increase in the proportion of Syrian beneficiaries at Rafic Hariri Governmental University Hospital (public hospital in Beirut) from 2% in 2010 to 33% in 2014.

**Figure 4.2 Utilization of hospital services in public hospitals from 2010 to 2014**





*Source:* Ammar, 2015, P. 303

According to Mohamad Sayegh, dean of the Faculty of Medicine and vice president of Medical Affairs at the American University of Beirut Medical Center (AUBMC), “The war in Syria obviously had an impact on the medical centers there and people who have complicated illnesses are forced to seek healthcare elsewhere and some come to Lebanon,” Sayegh proceeds that the massive influx of Syrian refugees augments this number (Rahhal, 2013).

On the bright side and according to a study on the resilience of the Lebanese health system by Ammar et al. (2015), one of the major reasons that the Lebanese healthcare system was capable of handling the influx of patients and maintain its service delivery for both Lebanese and internationals is the sufficient supply of health human resources and the adequate health infrastructure. Years before the Middle Eastern turmoil, there has been a persistent oversupply of Lebanese physicians. This is coupled lately with a steady increase in the number of nurses over the past few years. In addition to the diverse set of providers and the oversupply of hospital beds and technology (Ammar, 2015).

This is to mention that the Lebanese health workforce is responsive and well experienced in war and crisis situations as it has experienced the Lebanese civil war of 1975-1990 and the war of 2006. This experience facilitated a health workforce supply that is capable of catering to both Lebanese and internationals including war-wounded patients.

Accordingly, the Lebanese medical skills are going to war-wounded people and refugees within the framework of public healthcare sector. From the angle of the private healthcare sector, where the admission of medical tourists take place, the health human resources and medical skills are fairly undisrupted.

#### **4.4. The application of qualitative and quantitative methods in the research**

The way in which data were collected in this study is what is referred to as sequential mixed methods data collection strategy which involves collecting data in two phases. The data collected in one phase will contribute to the data collected in the other (Creswell and Plano Clark, 2007, P. 121). The data collected in the first phase of the study which is the interview phase contributed to the second phase survey instrument where it allowed for review and analysis of the developed questionnaire. This triangulation approach had a primary advantage of verifying the overall results of the whole study. In addition, it is a step towards achieving the validation discussed by Campbell and Fiske (1959) and Jick (1979) via using two different independent measurement instruments.

Therefore, the research question was addressed through triangulation. The interview-collected information, which led to identification of variables that were quantitatively tested afterward. From another angle, the research question was tested from both the demand and the supply side of medical tourism. The supply side is identified by the key stakeholders in the medical tourism market represented by service providers and supporting agents, ranging from medical centres, travel agencies and other service and service-related providers in the field of medical tourism. The demand side is represented by tourists who have travelled for medical purposes.

The purpose behind collecting data from suppliers of medical tourism as a first step is to obtain an in-depth understanding of the phenomenon as viewed by the social players who are routinely involved in it on a practical level. This first step provided a platform for the second step which is obtaining specific information from the demand side represented by medical tourists. This specific information is synthesised through testing and validating the hypothesised relationships

inspired from the outcomes of the first step as well as the previous literature all in prospective of reaching results.

#### **4.4.1. Qualitative interviews**

Lebanese medical tourism service providers and supporting agents ranging from medical centres, travel agencies, hotels and other service and service-related providers from the medical field and tourism field comprehensively comprise the supply side of medical tourism in Lebanon.

The data collected from medical tourism service providers were in the form of semi structured interviews. A general interview guide approach was adopted to ensure that the same areas of information were collected from each interviewee, based on Heung et al. (2010). Utilizing the semi structured interviews will provide the framework and guide the interviewees in their talk, it will also allow interviewees to elaborate and diverge in some ideas. Such elaboration will provide more details on specific areas of research. It may as well lead for the discovery of important association that has not been thought of before in the flow of the research. Open-ended questions will be utilized to give space for respondents to talk more. It will also build up confidence and lead to extracting richer information (Gill et al., 2008).

Based on the existing literature and the research question, the explored areas of information were identified, and accordingly key questions were developed (See appendix 2). To obtain a deeper understanding of the medical tourism phenomenon in Lebanon as viewed by the players practically involved in it and establishing business from it, the interviews focused on their perception of the status of the industry in Lebanon, its development barriers and possible ways to improve it.

The interviews evolved around key areas; each was fragmented into themes aimed to facilitate the analysis with quantitative data collected from the survey questionnaire. The key areas in the

interviews were political stability, government support, economic and financial stability, public private partnership (PPP), promotion and advertising from the government side, promotion and advertising from the private sector side, adequacy of infrastructure and superstructure, facilities and attractions, costs of medical care, quality of medical care and qualifications of physicians and medical staff.

The objective of conducting interviews was to collect information from a wider variety of stakeholders and representatives of the field of medical tourism. The stakeholders range from medical doctors with profiles of non-Lebanese patients to representatives of medical centres, travel agencies, hotels, tourism boards, tourism organizations and others. The interviews aimed to cover the widest range possible of suppliers of medical tourism in Lebanon.

Eight interviews were conducted with senior managers' representing three medical centers, two travel agencies, two medical doctors, and a pharmacy that is visited by medical tourists. The respondents were informed beforehand of the research purpose and details. Before conducting interviews, there was an ethical statement to assure the anonymity of the interview and the strict use of the respondents' answers for research purposes only. To protect against bias, the interviews of 25-30 minutes were recorded and then transcribed.

To validate the accuracy of the interview content, emails were sent to the respondents with a summary of contents. All respondents approved that contents were consistent and coherent with original answers of the interviews.

#### *4.4.1.2. Qualitative data analysis*

Data was analyzed through three stages following methods widely used in management and social sciences researches (Berg, 2004). First, the interviews from the audio recorder were transcribed along with the notes taken during the interview in preparation for content analysis.

Some interviews were translated from Arabic to English before being transcribed. Second, the data was classified into categories obtained by clustering the themes. Furthermore, this data along with the data collected from quantitative analysis were compared with the data collected from the literature and secondary data.

#### **4.4.2. Quantitative tests**

The hypothesis presented in section 3.8.1 were subjected to quantitative testing using SPSSv20 and AMOSv20. The outcomes of quantitative analysis were attained through subjecting the survey data to three main statistical techniques; Exploratory Factor Analysis (EFA), Confirmatory Factor Analysis (CFA) and Structural Equation Modeling (SEM). This section is dedicated to introducing the three statistical techniques.

##### **4.4.2.1. Exploratory Factor Analysis (EFA)**

The data was first analysed using factor analysis. Exploratory Factor Analysis (EFA) was used at this stage of the study and it allows for analysis of which variables ‘go together’ (DeCoster, 1998). One of the uses of factor analysis is that it assembles common variables into descriptive and meaningful groups (i.e. factors) and reduces the number of variables describing a phenomenon so as to allow focus on key variables and facilitate interpretation (Rummel, 1970). Additionally, factor analysis is rooted in partial correlation and regression theories (McDonald, 1985). Hence, performing factors analysis at such initial stages paves the way for further steps in the study.

To determine whether the data is suitable for EFA, Kaiser-Meyer-Olkin (KMO) is a measure for sample adequacy. The KMO index ranges from 0 to 1. The cut-off value for KMO of sampling adequacy is 0.6. The world-over accepted index is above 0.6. If the KMO requirement is not met, this indicates that distinct and reliable factors cannot be produced from the EFA process.

Therefore, either the sample size requires enlargement or the variables causing dispersion need to be excluded (Yong and Pearce, 2013).

Bartlett's Test of Sphericity is used in the study to confirm the existence of patterned relationship within a factor. The test results in a factor score that is only correlated within its own factor (Yong and Pearce, 2013). Thus, Bartlett's Test of Sphericity determines the collinearity of the matrix, by calculating the determinants of the matrix -from which the intercorrelation matrix is derived-which is converted to a chi-square statistic and then tested for significance. Therefore, a significance that is less than 0.05 confirms the hypothesis that correlation matrix is an identity matrix and all variables are correlated as part of the same factor.

There are two methods for analysis, factor analysis and principal component analysis (PCA). PCA assumes that there is no error variance, that is the total variance of the variables can be justified by means of its factors. On the other hand, factor analysis assumes the existence of error variance, that the variables do not account for 100% of the variance (Rietveld and Van Hout, 1993). Many studies highlighted the similarities between principal component analysis and factor analysis. According to Rietveld and Van Hout (1993, p. 268) "The difference between factor analysis and principal component analysis decreased when the number of variables and the magnitudes of the factor loadings increased". Based on the number of variables and the magnitude of the factor loading, Principal Component Analysis (PCA) was used as a method of analysis in this study. The extraction of factors in PCA is based on the eigenvalues of the matrix as the number of factors to be extracted is determined by the number of positive eigenvalues.

Rotation allows for better interpretation of factors, reaching a structure where variable load on as few factors as possible as well as maximizing the number of high loading on each variable (Rummel, 1970). Orthogonal rotation was used in the study based on the assumption that the

factors are uncorrelated with each other and are rotated 90° from each other (DeCoster, 1998; Rummel, 1970). Varimax rotation method was particularly used to maximize the variance of components. It is the recommended rotation technique to start exploring a dataset. It works on minimizing the number of variables that have high loadings on each factor as well as making small loadings even smaller (Yong and Pearce, 2013). Varimax procedure is also commonly used in tourism segmentation research.

The loadings of factors are imperative when interpreting factor analysis as they represent the strength of relationships. They are represented in the rotated component matrix. Therefore, each factor represents a cluster of interrelated variables. A general rule to determine the reliability of the factor is to look at the relationship between the individual rotated factor loading and the magnitude of the absolute sample size (Stevens, 2002). Using the two-tailed alpha level of .01, a rotated factor loading for a sample size of at least 300 would need to be at least .32 to be considered statistically meaningful (Tabachnick and Fidell, 2007). Thus, a factor loading of .32 gives us approximately 10% of the overlapping variance. However, the number of factors to retain is critical in the study as the results need not to be subject to error variance nor missing valuable common variance. The choice of cut-off may differ from one study to another and it can vary based on the complexity of study variables. Kaiser's criterion is a general measure used to determine the number of factors to maintain. It suggests keeping all factors whose eigenvalues are above 1 (Kaiser, 1960).

#### *4.4.2.2. Confirmatory Factor Analysis (CFA)*

The confirmatory nature of the research question in this study mandates the use of CFA. CFA is a theory-driven confirmatory technique that is based on observed variables called indicators and unobserved variables or latent variables called factors or constructs. It is to check the reliability

and validity of measurements and to compare the population covariance matrix with the observed covariance matrix. The purpose is to minimize the differences between both matrices (Schreiber et al., 2006). Therefore, goodness of fit is the focus of hypothesis in testing CFA.

Graphically, the indicators, and they are the measured variables, are depicted with rectangles while the latent variables or factors are depicted with circles or ovals. The errors of measurements which are unobserved sources of measurements unique to each indicator are depicted with small circles. They are unique factors because the effect of each is associated with only one indicator. The straight arrow pointing from the latent variable to the observed variable indicates a causal relation which is the causal effect of the latent variable on the observed variable. The two-headed curved arrow between latent variables represents correlation between them. The graphic representation is the hypothesized model and can be translated statistically through a set of measurement equations that specify the relations between its elements. Thus, to see how well the hypothesized model fits the observed data.

Therefore, CFA allows to test the reliability of the observed variables. It allows to measure the extent of interrelationship or covariance among latent constructs. Additionally, model modifications can be made to the original model to reach a better-fitting model called trimmed model or nested model. However, it is important to explain the reason for the modification from theoretical and statistical views (Stage, 1990).

In comparison with EFA, the application of CFA is deductive which implies a hypothesized number of factors and patterns of factor loadings that are analyzed by imposing several restrictions on the test result. Whereas in EFA the application process is inductive, and it employs oriented extractions and rotation algorithms to reach a simple structure. Therefore, EFA implies no restrictions on the pattern of weights associated with factors while CFA assumes a



structure and imposes it on the factor loadings pattern. To generate the factor model most consistent with the observed data, this study is applying EFA and CFA. Both models are routinely applied together in various studies and are viewed as advantageous and complementary to each other (Hoyle, 2000).

### **Assumptions of CFA**

The typical application of CFA requires a minimum sample size as it relates to the statistical power of the parameter estimates since the desired outcome of CFA is failure to reject the null hypothesis. There are various viewpoints on the adequate sample size for application of CFA application. Some argue that a sample size of at least 200 is advisable for CFA modeling. However, there is no exact rule for the required sample size. According to Anderson and Gerbing (1988), a sample size between 100 and 150 is the minimum for prototype use of CFA. Hair *et al.* (1998) recommend that the minimum sample size be at least greater than the number of free parameters. Since, maximum likelihood estimation (MLE) is the most commonly used CFA estimation technique, the recommended minimum sample size to guarantee stable MLE results is between 100 and 150, and preferably 200 (Hair et al., 2006).

Another requirement for prototype use of CFA is the distributional properties of the data. The most common estimators in CFA assumes a multinormally distributed data (Bollen, 1989). However, in many circumstances actual data is not normally distributed (Micceri, 1989). In such cases, there is no exact rule and standard estimators, such as maximum likelihood, would work well with adequate sample size and reasonably accurate resulting model (Chou and Bentler, 1995; Curran, West, and Finch, 1996; Hu et al., 1992). Normality distributions of variables is measured by skewness which is the measure of the symmetry of a distribution and by kurtosis which is the measure of the peakedness or flatness of a distribution (Tabachnick and Fidell,

2001). There are no formal cutoff criteria on levels of skewness and kurtosis for the data to still be considered normal. However, Tabachnick and Fidell (2001) suggest that skewness and kurtosis values should be within the range of - 2 to +2 when the variables are normally distributed. According to Monte Carlo simulations, skewness value less than 2.00 and Kurtosis value less than 7.00 are considered normal, skewness values ranging from 2.00 to 3.00 and kurtosis values ranging from 7.00 to 21.00 are considered moderately non-normal, while skewness value greater than 3.00 and kurtosis value greater than 21.00 are considered extremely non-normal (Curran, West and Finch, 1996). In this study, the skewness and kurtosis results indicate that all the variables can be considered normally distributed. Therefore, the maximum likelihood estimation can be used in testing the structural model in this study (Hair *et al.*, 1998). It is worth mentioning that in a study done by Schreiber *et al.* (2006) which reviewed 16 articles published in *The Journal of Educational Research* between the years 1989 and 2002 and used CFA and SEM techniques, authors of the reviewed articles provided no discussion concerning normality of the data.

The maximum likelihood estimator (MLE) which is commonly used in CFA assumes that indicators are measured on a continuous scale (Jöreskog, 1994). Nevertheless, many studies in social and behavioral sciences apply the polychotomous scales in assessing the study constructs such as the likert scale. Such indicators are called coarsely categorized (Bollen and Barb, 1981). They have been proven to operate well for standard estimators such as the maximum likelihood when their measurements are made of five or more categories (Bollen and Barb, 1981; Tepper and Hoyle, 1996).

The type of indicator applied in CFA model is a requisition as it maps the pattern of relationship in the model. In CFA, the indicators are assumed to be caused by factors and thus there is a

causal effect that extends from the factor to the indicator. Therefore, indicators are the observed and measured reflections of the factor they cause.

Items per construct is another assumption for CFA. There is no formal literature on the number of items required for each construct and more items per construct does not necessarily designate a better construct as this would call for larger sample size (Byrne, 2006; Tabachnick and Fidell, 2007). However, a construct with three items preferably four produce satisfactory results to avoid model identification problems (Hair et al., 2006).

The core of CFA analysis revolves around an examination of the coefficients of hypothesized relationships and how well the hypothesized model fits with the observed data. Path coefficients are tested for significance via *t*-test or *z*-test. This study is using the software AMOS version 20 and accordingly the significance for path coefficients is presented through *z* values. The goodness of fit is performed via a range of indices.

The fit indices can be classified into three basic types: Absolute fit indices, incremental fit indices and model parsimony indices (Arbuckle, 2008). The absolute fit indices measure the overall model adequacy without any comparison to a null model (Hair et al., 2006). such indices include chi square  $\chi^2$ , RMR and RMSEA. Incremental fit indices measure the model's goodness of fit in relation to alternative null model (Hair et al., 2006). Common indices for this measure include Normed Fit Index (NFI), Comparative Fit Index (CFI), and Tucker Lewis Index (TLI). Model parsimony indices appraise the best model among a set of competing models. The parsimony measure is done by calculating the model's fit in relation to the model's complexity (Hair et al., 2006). Common indices for this measure include Parsimony Comparative Fit Index (PCFI) and Parsimony Normed Fit Index (PNFI) (Byrne, 2006).

Generally, researchers use CFI, TLI and RMSEA for testing an initial model. When modifications are made, further indexes are applied (Schreiber et al., 2006). Appendix 12 represents a list of widely used fit indexes and their cutoff criteria.

#### *4.4.2.3. Structural Equation Modeling (SEM)*

SEM is closely related to CFA. It extends the interrelation among latent constructs and observed variables in the hypothesized model into a succession of structural equations. It has been described as a combination of EFA and multiple regression (Ullman, 2001). Therefore, SEM includes the two components of measurement model and structural model. The measurement model also examines the extent of interrelationships or covariance among the latent constructs in an attempt to derive the best display of latent variables prior to testing the structural model (Schreiber et al., 2006).

Another fundamental component of SEM is what is called endogenous and exogenous variables similar to dependent and independent variables. As such, the endogenous variables are affected by exogenous and other endogenous variables. Consequently, the relation between the model components can be described as causal or direct which represents the effect of an exogenous variable on endogenous variable or on another exogenous variable. This relation is depicted by a single-headed arrow. The other relation is described as noncausal or unexplained which is depicted by two-headed curved arrow between two exogenous or endogenous variables. This arrow represents a correlation between the two variables. Therefore, SEM allows to test the theoretical hypothesis about relationships between variables and the directionality of significant relationships (Schreiber et al., 2006).

## **Reporting SEM**

In this study, SEM of the overall model is reported in terms of model specification, model identification, model evaluation and modification and model estimation.

Model specification is an initial step that is based on review of previous literature with an objective to develop the conceptual framework, model and hypotheses. Model specification entails “determining every relationship and parameter in the model that is of interest to the researcher” (Schumacker and Lomax, 2010, P. 213). This is a very critical step for once the model is correctly specified, the relationships between indicators and factors and between factors can be performed in SEM. This step is discussed in section 7.5.

Models identification describes the amount of information carried by the model to identify a solution for the set of equations presented in the model. Models can be classified as just-identified, over identified and underidentified or unidentified. The sample covariance matrix determines the information that exist. Precisely one parameter estimated for each unique variance and covariance between measured items (Hair et al., 2006).

Therefore, an underidentified model is where the number of parameters to be estimated is exceeding the number of variances and covariances of the observed variables (Raykov and Marcoulides, 2006) and thus, the model contains insufficient information to find a solution for the set of equations presented in the model. A just-identified model "is one in which there is a one-to-one correspondence between the data and the structural parameters. That is to say, the number of data variances and covariances equals the number of parameters to be estimated" (Byrne, 2006, p. 31). Thus, a just-identified model does not have degrees of freedom and therefore can never be rejected (Byrne, 2006). An overidentified model is the one in which the

number of estimated parameters does not exceed the number of variances and covariances of the observed variables (Byrne, 2006). Therefore, it has a positive number of degrees of freedom which allows for rejection of the model. Such model criterion is what is required in SEM.

Once the model has been identified, evaluation of the model fit is determined. This is how well the observed sample data fits the theoretical model. The model evaluation is executed on two levels; one level is measuring the adequacy between the individual observed variables and the latent variables and the other level is measuring the fit of the overall model which is referred to as the goodness-of-fit.

For evaluating the adequacy of each individual parameters of the model, the AMOS output for the model provides the critical ratio (C.R.) which is the ratio of the estimated parameter to its estimated standard error. The C.R. value should be statistically different from zero and with a 0.05 probability level, it should exceed the value of  $\pm 1.96$  in order to reject the null hypothesis, and hence, that no relationship exists (Byrne, 2010).

As for the goodness of fit for the entire model, it is described in the previous section 4.4.2.2. and the cutoff criteria for its indices are presented in appendix 12.

Modifications can be applied in order to attain a better model fit. If the values of fit indices are less than satisfactory, modifications can be performed via eliminating parameters that are considered to have poor reliability and/or adding extra parameters to attain at a modified better-fit model (Tabachnick and Fidell, 2007).

A common estimation technique for SEM is maximum likelihood estimation (MLE) which is affected by factors including missing data, outliers and non-normal data distribution. Therefore, to attain stable MLE results, no missing data, no outliers and normal data distribution need to be

realized (Schumacker and Lomax, 2010). AMOS version 20 was used in this study as it allows for graphic illustration to draw the measurement and the structural paths jointly.

#### **4.5. Summary**

This chapter started with identifying the research design adopted in the study including the research philosophy, the research methodology and data collection methods. The pragmatist philosophy was embraced in this study building on the principal that the most important determinant in the study is the research question.

This was followed by an in-depth discussion of the study instruments that were employed to achieve the study objectives. Qualitative interviews and survey were the two main instruments employed in the study. The chapter defined both instruments and justified their use as the main source of data collection and explained the process of their construction.

Further, the chapter presented the execution ground of the study and where the instruments were empirically applied. Lebanon was the destination of study. This chapter presented the touristic and medical success factors that Lebanon encompasses in order to justify the reason for choosing it as an empirical ground for the study.

The following part of the chapter discussed the application of the research methods. The manner in which interviews were developed and executed and qualitative data analysis was performed. The quantitative method of the study was further discussed in the chapter. It included the main statistical analysis techniques that were employed as well as the software (AMOSv20) that was used in the computation of the data.

Three main statistical analysis techniques were used in the study; EFA, CFA and SEM. Since the study has numerous variables that are assumed to characterize latent factors, it was sensible to

subject the variables first to EFA in order to reduce the number of variables describing a phenomenon so as to allow focusing on key variables and assemble common variables into descriptive and meaningful groups (Rummel, 1970).

Next, CFA was employed. Unlike EFA, CFA is a deductive technique that is based on a theoretical hypothesized model in which a theoretical relationship exists between the observed and unobserved variables (Hoyle, 2000). CFA was applied as a second step since it is concerned with modeling latent factors which were theoretically hypothesized in the study prior to analysis.

Extending on CFA, SEM was applied to measure the directional relations between latent constructs. It is a structural model that depicts the pattern of relations in observed data and pattern of relations implied by the hypothesized model. Therefore, it allows to test the directionality of significant relationships in order to attain the structural model (Schreiber et al., 2006).



## **Chapter 5: Questionnaire Development and Data Collection**

### **5.1. Introduction**

This chapter represents a thorough examination of the questionnaire which constitutes the main instrument of the research study. It begins with the initial formation of the questionnaire, its main parts and the measurement scales used within the document. Furthermore, the chapter discusses the stages of questionnaire development leading to the final instrument.

Next, the chapter provides a detailed inspection of each variable employed in the questionnaire in view of previous literature.

Finally, this chapter narrates the data collection process and gathering procedure; data collection locations, the way the medical tourists were approached, and the scheme used to attain a better representative sample.

### **5.2. Measurements and questionnaire development**

The field survey questionnaire aims to capture data from the demand side represented by tourists coming to Lebanon for medical purposes. The survey questionnaire was developed in stages. First, it was checked by the reviewer with the purpose of enhancing the design and clarity of the questionnaire. Later, it was distributed to be a pilot sample. Accordingly, adjustments were applied which led to the production of the final instrument.

The questionnaire aims to have a better understanding of medical tourists' motivations and satisfaction; the reasons for travelling and their preference for Lebanon as a destination for medical tourism. It aims to evaluate Lebanon as a destination for medical tourism and possible areas of improvement from the consumer's perspective. The questionnaire also aims to study the characteristics of the medical tourists coming to Lebanon and the various segments in which they

can be classified. The questionnaire was developed in a way that would enable further implementation of statistical tests to find whether the hypothesized relationships exist or not.

In addition to a brief description of the research and its objectives at the beginning, the questionnaire is made of five main parts. The first part is general information about the trip, titled "about your trip". The second part, titled "seeking medical care abroad" aims to measure the factors that led the tourists to leave their home countries and travel abroad for medical care. The third part titled "Let's talk about Lebanon as a tourism destination" aims to measure the factors that attracted them to come to Lebanon for medical care. The fourth part titled "feedback" is made of two main questions. The first question aims to assess the medical tourists' perspective of the performance of the healthcare sector and the tourism sector in Lebanon. While the second question aims to assess their satisfaction and intention to revisit Lebanon. The last part titled "about you" is to reveal some basic demographic information on the medical tourists.

Based on the literature and the information obtained from the qualitative interviews, well-validated measurement drivers for study constructs were formed and applied in the questionnaire. Five-Point Likert-type scales from “Strongly agree” (5) to “Strongly disagree” (1) were used to measure the study variables of part two, three and the second question in part four. While the study variables of the first question in part four was measured using a five-Point Likert-type scales from “Very good” (5) to “Very poor” (1). Part one and five of the questionnaire were measured using a nominal and ordinal scales as the variables were categorical except for questions of age and income which were considered metric.

### **5.3. Pilot Testing and Questionnaire Adjustments**

At first, the initial questionnaire was distributed to 12 reviewers ranging from academics, post graduate students, professionals in the medical field, and previous medical tourists with the

purpose of enhancing the design, wording and clarity of questionnaire. In view of that, several improvements were applied to the original questionnaire that revolved mainly around the wording and the design of the questionnaire segments. Appendix 3 provides a presentation of the initial questionnaire.

The primary data collection included 108 observations of which 78 were complete. The data was collected mainly in form of soft copies emailed directly to lists of previous as well as recent medical tourists who have chosen Lebanon for medical care. The lists of medical tourists were obtained from clinics and medical doctors. Additionally, some hard copies were distributed to two hotels surrounding the American University Medical Centre in Beirut and answers were collected from medical tourists during checkout or before checkout from the hotel by the hotels' front desk agents. Since there were regional tourists who prefer to fill the form in Arabic, the questionnaire was translated to Arabic and approved by sworn a translator to minimize or avoid language error as much as possible. Electronically, a link was emailed to surveyors that allowed them to choose whether to fill the questionnaire in English or Arabic. Similarly, questionnaire copies in both English and Arabic were distributed to hotels' front desk agents. The data were collected within a period of two months from the end of November 2015 until the end of January 2016.

After examining the pilot study results and further reading in the literature as well as a reflective review on the interviews answers, adjustments were applied to the questionnaire as well as to the method of data collection. The questionnaire adjustments took place within a period that stretched from November 2016 until April 2017. The applied adjustments are narrated in appendix 4 and the final questionnaire is presented in appendix 5.

As for the data collection procedure, no electronic questionnaires were sent. Answers were collected via paper-and-pen instrument only from current medical tourists who were towards the end of the medical trip. It is presumed that this would allow for fresher and more accurate opinions and feedback. To minimize missing answers resulting from any vagueness or contingency, respondents were personally reached, and data was collected in the form of interviews where questionnaires were completed by the surveyor unless the respondent wished to complete it himself/herself.

After performing normality tests on pilot study answers, the results for most of the variables were negatively skewed. Therefore, the objective was to enlarge the sample. At the end, there were two sets of data; the first was the pilot study with the 108 answers of which 78 were complete and the second was the final sample of 212 observations. The data of the two sets were subjected to independent sample t-test to check whether it would be possible to merge the two data sets. If merged, then the result was the risk of having Type I Error prevailing due to a significant number of missing data.

In order not to completely discard the pilot study results, it was partially utilized in the study analysis. Accordingly, the pilot study sample was incorporated into the final instrument to reach a sample size of 320 observations. This merged sample was used in the descriptive analysis of the survey results where a larger sample better contributed in shaping the characteristics of respondents and the various segments they can be classified into. On the other hand, the data which were used for hypothetical testing and modelling were based on the sample of the 212 observations.

## 5.4. Study Variables

This section discusses the variables developed in the study and applied in the questionnaire. The variables in this section are presented in sequencing folds similar to the sequence of the questionnaire. First, push variables are presented followed by the pull variables. Next, variables measuring to perceived medical quality and perceived touristic quality are presented followed by satisfaction and intention to revisit and recommend variables. The last fold is related to variables identifying various segments of medical tourists they are related to the demographic questions in the questionnaire and questions related to the tourist's trip.

### 5.4.1. Variables measuring the push motivation

A significant literature has been devoted to studying the motivational reasons behind leaving the home country and travelling distances in pursuit for medical care. According to Crooks et al. 2010 in their comprehensive review of 216 sources on medical tourism, two of four main themes reviewed by the majority of sources are motivations and decision-making. Therefore, the selected push variables in this study are the product of reviewing numerous studies and academic literature.

#### **Medical care abroad is cheaper than domestic care**

This variable has been attributed by some analysts for being a main reason behind the movement of medical tourists from developed countries to developing countries. There are numerous studies where this variable has been discussed although the wording of the variable sometimes varied from one study to another. Guy, Nevins Henson and Dotson (2015) addressed this factor as " the cost was beyond my financial means in the US". An (2014) used " High costs for procedures in home countries" and mentioned that cost is one of the most frequently cited motivations. Moreover, Crooks et al. (2010) reported 'cost' as one of the push factors most

frequently noted in medical tourism published research. Similarly, Connell (2006); Cortez (2008) Horowitz, Rosensweig and Jones (2007); Lunt et al. (2011) reported cost discrepancy between the home country as a driver behind the increase demand for medical tourism.

### **Length of waiting time for domestic treatment**

Evading the long waiting lists and delays in home country's medical system is another push variable that has been reported by several studies including An, 2014; Crooks et al., 2010; Guy, Nevins Henson and Dotson, 2015; Horowitz, Rosensweig and Jones, 2007; Lunt et al., 2011 and Peters and Sauer, 2011 among others.

### **Inadequate domestic health insurance**

This variable has been linked with the previously discussed two variables in literature discussing motivational factors of medical tourists. Inadequate domestic health insurance is a main reason for traveling as reported by An, 2014; Crooks et al., 2010; Guy, Nevins Henson and Dotson, 2015; Horowitz, Rosensweig and Jones, 2007; Lunt et al., 2011; Peters and Sauer, 2011; Turner, 2010 as well as others.

### **Treatment is available abroad that is unavailable domestically**

Availability of procedure was mentioned in several previous medical tourism studies. An (2014) indicated it as a sub-factor under medical service factor in which the research aimed to analyze the differences between medical tourists' attitudes and perceptions towards medical tourism in Korea.

Moreover, it was considered by Crooks et al. (2010) as a procedure-based motivating factor for patients engaging in medical tourism.

According to Peters and Sauer (2011), medical service providers listed availability of a treatment abroad that is unavailable domestically as an influencing factor for patients seeking medical tourism.

Similarly, and according to Horowitz et al. (2007), medical tourists travel offshore to perform operations that are not accessible, restricted or widely available in their home countries.

A study conducted by Guy, Nevins Henson and Dotson (2015) on characteristics of consumers likely and unlikely to participate in medical tourism, considered receiving treatment options that are unapproved or unavailable in the US as one of the analyzed factors for travelling outside the US for medical treatment.

### **Low success rate for your-type-of-procedure performed**

This factor has captured little consideration in the literature as the mainstream in today's medical tourism movement is traveling from developed countries with high-quality healthcare systems to developing countries. Accordingly, the low success rate of treatment was not highlighted as a reason to seek treatment abroad in the literature. For example, in their study, Guy, Nevins Henson and Dotson (2015, p. 70) reported "Healthcare quality in many developing countries meets or exceeds minimum standards in industrial countries". This indicates that the healthcare quality in industrial countries is not a push factor for medical travel.

On the other hand, in the process of interviewing medical tourism suppliers, the notion of deteriorating healthcare systems in medical tourists' home countries made this variable a considerable push variable to include in the study.

## **Home Doctor Recommendation**

In the study by Gill and Singh (2011), local primary doctor's recommendation was one of the factors considered by American medical tourists before choosing a destination outside the U.S. for medical tourism.

In the study on medical tourism development in Hong Kong, Heung et al. (2010) considered recommendation of doctor/physician as an element of the medical tourism supply and demand model.

## **Anonymity of Treatment**

Privacy and confidentiality was also discussed by Horowitz and Rosensweig (2007) and it was considered a reason for patients seeking care at medical tourism destinations abroad.

A study conducted by Guy, Nevins Henson and Dotson (2015) on characteristics of consumers likely and unlikely to participate in medical tourism considered the desire to have privacy, discretion or confidentiality as one of the factors for travelling outside the US for medical treatment.

According to Peters and Sauer (2011), medical service providers considered anonymity of treatment as an influencing factor for patients seeking medical treatment abroad.

Privacy was also represented in the push-pull-based medical tourists' motivation framework developed by Ye, Yuen, Qiu, and Zhang (2008) under the push factors.

### **5.4.2. Variables measuring the pull motivation**

The pull variables were segmented into four categories. The first three categories with similar classification carried by Crooks et al. (2010), they were "travel-based", "procedure-based" and "cost-based". In this study, they were named "destination", "medical institution and medical



treatment" and "price" pull variables. However, the variables listed under each category in this study were not entirely similar to the variables in Crooks et al. (2010) as there are additions and modifications.

The category of "convenience" which is the fourth category of pull variables in this study was stimulated by the work of An (2014) where convenience was introduced as a sub-factor for understanding medical tourists' attitudes in Korea.

#### *5.4.2.1. Destination variables*

In their travel-based motivating factor for medical tourists' decision making, Crooks et al. (2010) motivators were the destination location, ease and affordability of travel, frequency of flights, ease of collecting the visa, the existence of brokers/facilitators that assist with travel and medical arrangements as well as the availability of package deals which make the whole medical trip easier.

#### **Proximity to country of residence**

Geographic proximity was mentioned as a favorable factor for attracting medical tourists by Guy, Nevins Henson and Dotson (2015). It was also listed by Crooks et al. (2010) as travel-based motivating factors for patients seeking medical tourism.

Geographic location was also cited in a study conducted by Černikovaitė and Mameniškis (2015) on medical tourists' expectations when choosing Lithuania for healthcare services. It was listed as one of the weaknesses in a SWOT analysis of medical tourism in Lithuania. (Černikovaitė and Mameniškis, 2015, P. 30)

In the supply and demand model of medical tourism developed by Heung, Kucukusta and Song (2010), 'distance' was also represented as a selection criterion for the country of medical tourism.

Additionally, Musa, Thirumoorthi and Doshi (2011) included proximity to tourist's home country as a factor in their analysis for travel motivation for inbound medical tourists to Kuala Lumpur.

Furthermore, Zhang et al. (2013) investigated geographical distance as well as other factors that influence potential Chinese medical tourists when selecting the destination country for international healthcare.

### **Typography and Climate in Lebanon**

Although not discussed heavily as an influencing factor in medical tourists' decision making, weather and climate are added in this study as they are influencing factors when deciding on the vacation part of the trip.

Climate and weather have been a marketing tool for destinations medical tourism. Weather was listed as a factor in destination's tourism attractiveness in medical tourism index (Fetscherin and Stephano, 2015).

Weather has been a factor in studies related to destination attractiveness and building destination image. It was listed by Qu, Kim and Im (2011) under touristic attractions factor for cognitive destination image.

### **Government policies and laws in Lebanon**

In the study by Gill and Singh (2011), government policies and laws were reported as one of the factors considered by American medical tourists before choosing a destination outside the U.S. for medical tourism.

In their study on medical tourism development in Hong Kong, Heung et al. (2010) discussed government regulations as part of the medical tourism supply and demand model. "Policies and regulations" and "government attitude" were presented as overlapping themes in the content analysis results of the study (Heung et al., 2011).

Furthermore, in the medical tourism decision model developed by Smith and Forgione (2007), regulatory standards are one of the three factors affecting the medical tourist's choice of international country location.

### **Political stability in Lebanon**

Political stability was reported in several studies in medial tourism. Guy, Nevins Henson and Dotson (2015, p.71) considered "favorability of political environment related to terrorism or political uprising" as one the factors that would attract medical tourists when considering the destination country.

In their developed model, Smith and Forgione (2007) considered political climate one of the three factors affecting the medical tourist's choice of international country location. Additionally, the proposed supply and demand model of medical tourism by Heung, Kucukusta and Song (2010) identified the political condition as one of the factors for country selection.

"Excellent safety and security" was reported by Musa, Thirumoorthi and Doshi (2011) as one of the motivation items for medical tourists visiting Kuala Lumpur.

Furthermore, political stability and security was mentioned in each conducted interview with medical tourism suppliers which accentuated the significance of including this variable in the study questionnaire.

## **Combining Medical Treatment with Vacation**

The tourism aspect of destinations has been addressed in medical tourism literature as an attracting factor for the destination. Fetscherin and Stephano (2015) listed cultural and natural attractions as a tourism attracting factor of a destination in Medical Tourism Index (MTI).

Crooks et al. (2010) noted that the potential for travel and tourism is a motivating factor that may be considered by medical tourists.

In another study, combining medical treatment with vacation was reported by medical tourism service providers as one of the influences on decision to seek medical tourism abroad (Peters and Sauer, 2011)

A study conducted by Guy, Nevins Henson and Dotson (2015) on characteristics of consumers likely and unlikely to participate in medical tourism, concluded that the ability to combine medical care along with touring and enjoying the desirable foreign destination is one of the factors for travelling outside the US for medical treatment.

This aspect was also discussed by Horowitz and Rosensweig (2007) and it was considered a reason for patients seeking care at medical tourism destinations abroad.

## **Availability of shopping centers**

This factor has rarely been viewed as a motivational factor in medical tourism literature. It was reported by Musa, Thirumoorthi and Doshi (2011) as one of the activities sought by medical tourists. The inclusion of this factor was inspired by the outcome of conducted interviews and the feedback of service providers who dealt with medical tourists.

## **Advertising in home country**

Connell (2006) introduced the endeavors of several destinations in promoting and advertising their medical tourism industry. Many destinations such as Hungary and Mauritius advertised their medical tourism advantages on the in-flight magazines and government tourism publication in an effort to attract tourists to utilize medical services while visiting the country.

Lunt et al. (2011) also discussed the role of advertising and the variety of information provided to potential medical tourists and suggested further research in this area to better understand the medical tourists' perception of advertising.

According to a research conducted by Jabbari et al. (2013) which aimed to attract medical tourists to Shiraz, Iran, advertising media is among the variables that attracted medical tourists. International media advertising in the field of healthcare, medical care and medical technology can lead to attracting medical tourists.

In another research by An (2014, p. 1153), promotion material in tourist's home country was presented as an item in the factor analysis in the study on understanding medical tourists in Korea.

In a study by Černikovaitė and Mameniškis (2015) on medical tourists' expectations when choosing Lithuania for healthcare services, "lack of marketing strategy" was considered one of the weaknesses in SWOT analysis of medical tourism in Lithuania (Černikovaitė and Mameniškis, 2015, P. 30).

Marketing strategies and overseas promotions were also portrayed in the supply and demand model of medical tourism developed by Heung, Kucukusta and Song (2010). They were listed as part of the supply factors by the medical tourism destination.

In their study on medical tourism development in Hong Kong, Heung et al. (2010) discussed promotion as part of the medical tourism supply and demand model. It was considered a theme which contained sub-categories, in the content analysis results of the study and was classified as a barrier in the developed framework of barriers for medical tourism development in Hong Kong.

Furthermore, on advertising, Viladrich and Baron-Faust (2014) addressed the advantages of advertising particularly online advertising in attracting medical tourists and promoting Argentina as a destination for cosmetic medical tourism.

#### *5.4.2.2. Convenience variables*

The variables affiliated with "convenience" are not related to the destination itself nor to the medical aspects sought by tourists. They are selected based on convenience and the facilitation they provide to the medical tourist's trip.

The variables associated with convenience in this study are similar to the variables listed under travel-based motivating factor for medical tourists' decision making in Crooks et al. (2010) study review. However, some variables were added, and others were removed. The motivators in Crooks et al. (2010) are the destination location, ease and affordability of travel, frequency of flights, ease of collecting the visa, the existence of brokers/facilitators that assist with travel and medical arrangements as well as the availability of package deals which make the whole medical trip easier and more affordable.

Lee (2007) has also discussed the influencing factor that travel convenience plays in attracting medical tourists. Travel convenience included the location of the destination, visa procedures and availability and frequency of airline routes. Convenience was also mentioned by An (2014) in the study on understanding medical tourists in Korea.

### **Airline routes and frequency**

In addition to Crooks et al. (2010) and Lee (2007), airlines and flights were mentioned in the study by Černikováitė and Mameniškis (2015) as part of the SWOT analysis of medical tourism in Lithuania.

### **Availability of travel agencies medical packages**

Klaus (2005) discussed surgery-vacation packages that American patients, especially uninsured, can purchase and their role in the medical tourism boom. Moreover, Saniotis (2007) presented the advice and guidance that discount international packages can provide for medical tourists in planning their medical trip.

Lee (2012) and Yoon (2012) presented the VIP medical tourism packages in Korea as a way for encouraging medical tourists to choose the medical service provider for medical or aesthetic purposes (Lee, 2012; Yoon, 2012).

Han and Hyun (2014) discussed the advantages of designing attractive packages in increasing the number of international medical tourists to the destination.

In the study by Heung et al. (2010), “medical travel agencies” and “hospitals’ rep.” were presented as elements in the supply and demand model of medical tourism.

The study by Viladrich and Baron-Faust (2014) on promoting Argentina as a capital for cosmetic tourism, examined the Argentinean unique components of cosmetic surgery packages which combines plastic enhancement treatment with Tango pleasures.

### **Availability of medical institutions' brokers**

The important role that brokers and facilitators played in the rise of medical tourism was mentioned in several studies including Connell, 2006; Horowitz and Rosensweig, 2007; Cortez, 2008; Klaus, 2005; Smith and Forgione, 2007; Turner, 2010 and others.

Turner (2010) discussed the role of medical brokerages and presented them as an attractive option for uninsured US patients and those seeking inexpensive healthcare as well as for American employers opting to decrease their expenditure on health benefits.

Brokers have access to hospital networks and liaise between the hospitals and the international patient (Connell, 2006). Accordingly, partnership between travel agencies and worldwide hospitals are giving them a platform for new global marketing methods (Smith and Forgione, 2007). The internet has created a podium for such medical tourism brokers and agencies (Horowitz and Rosensweig, 2007; Cortez, 2008).

Additionally, medical travel facilitator websites were investigated by Cormany and Baloglu (2011) in an exploratory study on the information they provide on their websites to prospective medical tourists.

Availability of facilitators and brokers was also listed as an item in the factor analysis in An (2014, p. 1153) study on understanding medical tourists in Korea.

### **Ease of collecting visa**

Several studies on medical tourism in India has mentioned the role of medical travel classification of visa, the M-visa as a new visa category in attracting medical tourists and their companions to India (Chinai and Goswami, 2007; Reddy and Qadeer, 2010; Lunt et al., 2011).



An (2014, p. 1153) listed “simple and quick to obtain Korean medical visa” as an item in the factor analysis in the study on understanding medical tourists in Korea. It was also mentioned in Fetscherin and Stephano (2015) as a factor for destination’s attractiveness in medical tourism index.

### **Language and cultural similarity**

In the study on medical tourism development in Hong Kong, Heung et al. (2010) presented language as part of the medical tourism supply and demand model (Heung et al., 2010). “Language and communication” was one of the themes in the content analysis results of the study and a classified barrier to development of medical tourism in Hong Kong.

In the research by Altin, Singal and Kara (2011) on consumer decision components for medical tourism, prior experience to the culture and language was considered a personal factor that facilitates in the decision of seeking medical tourism abroad. In addition, according to Hanefeld et al. (2015), lack of language barriers is a motivational factor for medical tourists.

Furthermore, Zhang et al. (2013) investigated the factors of psychological distance as well as other factors that influence potential Chinese medical tourists when selecting of destination country for healthcare. Among such factors in the study is the language difference.

### **Access to Information**

This variable was inspired from the study of Cormany and Baloglu (2011) on medical travel facilitator websites. The authors explored the information provided to prospective medical tourists by medical tourism facilitators through the services and content items provided on their websites.

Additionally, the study by An (2014, p. 1153) reported access to information as a sub-factor in the factor analysis conducted on understanding medical tourists in Korea.

Heung et al. (2010) considered internet and media as elements of their developed medical tourism supply and demand model. Internet was also listed in their developed framework of barriers to medical tourism development in Hong Kong.

Cortez (2008) reported that internet usage by patients, providers and facilitators is one of the major trends that facilitates medical tourism. The internet provides potential medical tourists with key information related to prices, quality, accreditation, technology and other information which facilitates their decision making.

#### **Proximity of accommodation to medical center**

This variable was inspired from a study by Han and Hyun (2014) on medical hotels and their role in the growth of medical tourism. In their study, physical convenience had significant positive impact on tourists' willingness to stay in medical hotels.

#### ***5.4.2.3. Medical institutions and medical treatment***

The quality of medical care has dominated a front stage discussion in medical tourism literature.

Almost all previous studies on medical tourism have tackled the topic of quality of medical care in destination. Some have considered it the primary determinant for seeking medical care abroad.

In the proposed model of Smith and Forgione (2007), quality of care is one of the four factors affecting the choice of international medical facility. Quality and modernity of medical service facilities has also been emphasized by Horowitz and Rosensweig (2007) and Connell (2006).

The Medical Tourism Index (MTI) developed by Fetscherin and Stephano (2015) is comprised of four dimensions one of which is the quality of medical facilities and services. Another study

conducted in Thailand by Chomvilailuk and Srisomyong (2015) on medical tourists' destination brand choice, resulted that "demand-supply quality of the medical/health facilities of the country/the hospital" is one of the three factors behind selecting a country and/or hospital by medical tourists.

Medical quality as a motivational factor has been measured in former studies through various subcategories, dimensions and variables. In this study, the pull variables associated with medical institutions and medical treatment have been selected from several previous studies.

### **Lebanon's reputation in medical services / word of mouth**

In their study on the pull factors for inbound health tourists in Kuala Lumpur, Musa, Thirumoorthi and Doshi (2011) included the motivation item of "reputable medical services". The mean score of this motivation item was one of the top five items among respondents.

In another study based on a push-pull motivation theory, Ye, Yuen, Qiu, and Zhang (2008) proposed a framework of the motivations of the medical tourists. In the developed model, reputation of the destination, hospital and doctors were part of the pull factors.

Country medical reputation was also presented in the Medical Tourism Index (MTI) developed by Fetscherin and Stephano (2015) under the facility and services factor of MTI.

Additionally, the study by Gill and Singh (2011), considered medical facilities and services as one of the factors considered by American medical tourists before choosing a destination outside the U.S. for medical tourism.

## **International accreditation of Lebanon's medical institutions**

Accreditation is one of the widely mentioned and discussed topics in medical tourism literature. A scoping review by Hoz-Correa et al. (2018) on past themes and future trends in medical tourism research revealed a list of most common keywords covered in 1119 papers of the review. "Accreditation" was one of the listed keyword with 10 occurrences in the covered papers (Hoz-Correa et al. 2018, P. 205).

Furthermore, Smith and Forgione (2007) considered accreditation as one of the four factors influencing the choice of international medical facility.

The aspect of accreditation by Joint Commission International and/or International Organization of Standardization (ISO) was also discussed by Horowitz and Rosensweig (2007) and it was considered a useful benchmark for patients seeking care at medical tourism destinations abroad.

Additionally, accreditation of the medical facility was listed in the Medical Tourism Index (MTI) developed by Fetscherin and Stephano (2015) under the facility and services factor of MTI.

In their study on medical tourism development in Hong Kong, Heung et al (2010) discussed accreditation part of the medical tourism supply and demand model.

In their review on medical tourism treatments, markets and healthcare implications, Lunt et al., (2011) specified a section on accreditation and portrayed it as a response to questions and concerns for quality and safety of overseas medical care.

## **Reputation of a particular medical provider in Lebanon**

According to An (2014) study, one of the main pull factors for Korea's medical tourist is the quality of medical institutes and the experience and reputation of its medical staff.

Peters and Sauer (2011) considered experience and reputation of a medical provider as an influencing factor for seeking medical tourism as well as for choosing a particular medical provider and destination country as reported by medical tourism service providers.

Reputation of the hospital was represented in the medical tourists' motivation framework developed by Ye, Yuen, Qiu, and Zhang (2008) as well as in the supply and demand model developed by Heung, Kucukusta and Song (2010).

Musa, Thirumoorthi and Doshi (2011) included the factor of reputable medical services as well in their analysis for travel motivation for inbound medical tourists to Kuala Lumpur.

In addition, reputation of the hospital/facility was listed in the Medical Tourism Index (MTI) developed by Fetscherin and Stephano (2015) under the facility and services factor of MTI.

### **Experience and reputation of a particular medical doctor**

This factor was also researched in a study conducted by Černikováitė and Mamėniškis (2015) on medical tourists' expectations when choosing Lithuania for healthcare services. "Highly-skilled professionals" were listed as one of the strengths in a SWOT analysis of medical tourism in Lithuania (Černikováitė and Mamėniškis, 2015, P. 30). The study also compared between medical tourists' choice for healthcare services in Thailand and Lithuania. "Professional and certified doctors" were listed as an influencing factor for choosing the destination for health care services (Černikováitė and Mamėniškis, 2015).

Additionally, a study conducted by Guy, Nevins Henson and Dotson (2015) on characteristics of consumers likely and unlikely to participate in medical tourism, integrated the fact of having the most qualified doctors and specialists in a particular medical condition located outside the US as one of the considerations for travelling outside the US for medical treatment.

Reputation of the doctor/physician was represented in the medical tourists' motivation framework developed by Ye, Yuen, Qiu, and Zhang (2008) as well as in the supply and demand model developed by Heung, Kucukusta and Song (2010).

In the Medical Tourism Index (MTI) developed by Fetscherin and Stephano (2015), reputation of doctors was listed under the facility and services factor of MTI.

Furthermore, well-trained physicians were considered a critical point by Horowitz and Rosensweig (2007) in selecting the best possible destination for a particular medical treatment abroad.

### **More guaranteed results and higher success rate for your-type – of- procedure performed in Lebanon**

A positive response from patients who travelled to Jordan, China, India and UAE stating that the level of care and quality is satisfactory and that 80% would return to the same country for treatment if required (Guy, Nevins Henson and Dotson, 2015; Alsharif, Labonte and Lu, 2010).

Low rate of treatment failure was also included by Musa, Thirumoorthi and Doshi (2011) as a factor in the analysis for travel motivation for inbound medical tourists to Kuala Lumpur.

This factor was also discussed in Gill and Singh (2011) study as a “success rate for my –type -of –procedure” which was considered important for seeking medical care outside the U.S.

#### *5.4.2.4. Price*

Cost has been one of the most explored topics in medical tourism. As it has been considered the main driver behind contemporary medical tourism and the shift of travel from developed countries towards developing countries. The variables related to price in this study share similarities with other studies that discussed this aspect and itemized it such as An (2014); Černikovaitė and Mameniškis (2015) and Musa, Thirumoorthi and Doshi (2011).

#### **Price of medical care in Lebanon**

Several studies in medical tourism literature (Connell, 2006; Cortez, 2008; Horowitz, Rosensweig and Jones, 2007; Menvielle et al., 2011 and Woodman, 2008) presented prices of medical care abroad as a driver behind medical tourism. Other studies considered prices of medical care a variable subject to measurement. It was reported by Peters and Sauer (2011) as "procedure cost". It was addressed by An (2014) as "affordable medical expenses in Korea". It was also addressed by Černikovaitė and Mameniškis (2015) as "affordable medical services".

#### **Value of medical care for price in Lebanon**

The factor of value of medical care for price was not frequently discussed by many studies as the focus was on price itself and the significant savings that medical tourists can benefit by treatment abroad. Nevertheless, value of medical care was discussed and analyzed in the work of Choi, Cho, Lee, Lee and Kim (2004) as they have developed a model and tested the perceived value of medical services on patient satisfaction and on patient behavioral intentions in a study based in South Korea healthcare market (Choi et al, 2004).

Musa, Thirumoorthi and Doshi (2011) included the factor of value-for-money medical services as well in their analysis for travel motivation for inbound medical tourists to Kuala Lumpur.

In a comparative analysis between Thailand and Lithuania by Černikováitė and Mameniškis (2015), “value for money” was listed as an influencing factor for choosing the destination for health care services as price-quality ratio was one of the main factors for choosing Lithuania for medical tourism.

### **Your health insurance covers treatment in Lebanon**

Some employers and insurance companies are taking the initiative to cover the costs of medical tourism since the medical and travel costs combined can be lower than what could be incurred within the country (Crooks et al., 2010). Blue Cross and Blue Shield South Carolina is an example of such an endeavor (Turner, 2010).

Insurance has been discussed by many authors in the medial tourism literature. “Insurance plan” was listed as an influencing factor for choosing the destination of health care services in a study conducted by Černikováitė and Mameniškis (2015, p. 35) on medical tourists’ expectations when choosing Lithuania for healthcare services.

The study conducted by Guy, Nevins Henson and Dotson (2015), listed insurance coverage for medical treatment outside the US as one of the factors for considering medical tourism. In an inverse analysis in the same study, of the deterring factors for medical tourism was lack of insurance coverage on international medical treatments. An (2014, p. 1153) listed “Reimbursement for medical travel to Korea” as an item in the factor analysis within the study on understanding medical tourists in Korea.

This factor was listed as well by Peters and Sauer (2011) as an influencing factor for US patients to seek medical tourism. Moreover, it was illustrated by Lunt et al. (2011) as a key stakeholder component with commercial interest in their medical tourism industry model.



## **Prices of tourist good and services in Lebanon**

Along with medical costs, the medical tourist is expecting to pay for other goods and services at the destination. This variable was enthused primarily from the outcome of conducted interviews and the feedback of service providers who dealt directly with medical tourists.

Additionally, the study of An (2014, p. 1153) on factors and attitudes of various medical tourists visiting Korea presented "additional costs in Korea" as an item in the factor analysis conducted in the study.

### **5.4.3. Variables measuring perceived medical quality and perceived touristic quality**

The variables in this section are grouped into two categories; one measures the perceived medical quality and the other measures perceived touristic quality. The selected variables which measure perceived quality of their medical trip are supposed to be dependent on the push and pull motivation variables as stated by Hypothesis 2 and Hypothesis 4. Therefore, they are enthused from the motivational variables yet elaborated with an objective to capture the various aspects of the medical tourist experience.

#### **5.4.3.1. Perceived medical quality variables**

The variables in this section aimed to cover the various aspects of the medical experience from quality of medical institution, medical procedure, doctor, staff, facilities, after-care, privacy, prices of medical services, and proximity of the medical institution to other areas. The selected variables were previously reported in various research studies.

According to Cortez (2008), the demand of medical tourists to developing countries is increasing due to the improved quality of medical care in developing countries. Quality of medical care can be exemplified in three key areas: medical professionals, facilities and technology.

Menvielle et al. (2011) discussed several variables that contribute to environment favoring the setup of medical tourism among which is the technological environment. Physicians and post-operative care are elements presented within the technological environment which make a destination attractive for medical tourism.

Quality of after-care, quality of facilities and procedure cost were also presented in the study of Peters and Sauer (2011) as influencing factors specific to medical tourism decisions as reported by medical tourism service providers. While privacy was reported by Horowitz and Rosensweig (2007) as a reason for patients seeking medical care abroad.

The variables "proximity of the medical institution to other areas" was included in Peters and Sauer (2011) study in view of the outcomes of conducted interviews with service providers who dealt with medical tourists. The aspect of physical convenience which is related to proximity was also discussed by Han and Hyun (2014) in their study on medical hotels and their role in the growth of medical tourism.

#### *5.4.3.2. Perceived touristic quality variables*

Airlines and airfares were reported in several studies. Fetscherin and Stephano (2015) considered low costs to travel, affordability of airfares and low cost of accommodation a component of medical tourism index listed under the factor of medical tourism costs.

Crooks, Kingsbury, Snyder and Johnston (2010) discussed the motivating factors for patients engaging in medical tourism. Of which is affordability of international travel and frequency of flights.

As for accommodation variable, Lunt et al. (2011) in their scoping review depicted the medical tourism industry with several key stakeholders of which accommodation and concierge is considered a key stakeholder with commercial interest in the industry.

Moreover, the research by An (2014) on factors and attitudes of various medical tourists visiting Korea reflected the items of convenience to travel to Korea and convenient accommodation in Korea in the factor analysis within the study on understanding medical tourists in Korea (An, 2014, p. 1153).

Accommodation was also exemplified as a daily tourist expenditure category in the analysis by Pongsirirushakun and Naewmalee (2003) on foreign tourist expenditure visiting Thailand.

Other than airlines and accommodation, the perceived touristic quality included variables related to the activities carried out by the medical tourist at the destination, such as food and beverage, shopping experience, attractions and leisure activities and local transportation.

Musa, Thirumoorthi and Doshi (2011) listed food variety, shopping, touring, relaxing as motivational factors among inbound health tourists visiting Kuala Lumpur.

Additionally, in the analysis conducted by Pongsirirushakun and Naewmalee (2003) of foreign tourist expenditure in Thailand, food and beverage, sightseeing, local transportation, shopping and entertainment were represented as categories of daily tourists' expenditure visiting Thailand.

Facilities and tourist attractions was also discussed by Heung et al. (2010). It was presented as a theme in the content analysis results of the study and a classified barrier in the developed framework of barriers to medical tourism in Hong Kong.

Other variables that makeup the perceived touristic quality and experience are related to surrounding environment such as the local community, safety and stability, prices of daily consumer products, availability of money transfer and exchange services and weather.

In the developed model by Menvielle and Menvielle (2010) which represents pressure and external variable controllability levels affecting a tourist-patient, the tourist has control and influence over some variables more than others. Two of the variables that tourists have little or no influence are the economic environment and the political and geopolitical environment (Manvielle et al. 2011). Indirect costs and nonmedical costs were discussed in the economic environment by Manvielle et al. (2011). While, safety and security were discussed in the political and geopolitical environment by the same study. In view of that, the variables "prices of daily consumer products" and "safety and stability" were developed and incorporated in this study.

The variables "money exchange and transfer services", "local transportation" and "friendliness of local community", were inspired from Musa, Thirumoorthi and Doshi, (2011). In their study, the authors listed the factors of "credit card payment facility", "excellent transportation services" and "welcoming health tourists" as a motivation item in their study on the travel behavior of medical tourists visiting Kuala Lumpur.

"Weather" was reported by Fetscherin and Stephano (2015) as a component of medical tourism index listed under the factor of tourism destination.

"Ease of trip planning" variable was added to the study after examining several studies that discussed various aspects that facilitated the medical trip such as the existence of medical brokers, packages and information on the internet (Cormany and Baloglu, 2011; Cortez, 2008; Turner, 2010).

#### **5.4.4. Variables measuring satisfaction and intention to revisit and recommend**

The study of Lajevardi (2016) on medical tourists' motivations and their effect on satisfaction identified overall satisfaction and the factors that determine overall satisfaction for medical tourists. The variables that constructed overall satisfaction included overall satisfaction with hospital/medical facilities services, overall satisfaction with hospitality services and overall satisfaction with the traveled destination for medical treatment.

Guy, Nevins Henson and Dotson (2015) reported satisfaction in their study and linked it to prior visits as previous tourism experience presented a possible reason for returning to the destination and repeating the experience.

Similarly, Tam (2007) studied patients' overall satisfaction and claimed that quality improvement positively impacts patient's satisfaction and intention to revisit as stated by Hypothesis 8.

A previous study by An (2014) measured the satisfaction of medical tourists and whether they would intend to come back to Korea for medical tourism as well as whether they would recommend Korea for their friends and family medical tourism plans. In view of that, Hypothesis 10 states that satisfaction positively influences intention to revisit.

#### **5.4.5. Variables identifying segments of medical tourists**

##### **Medical Tourists – Age and Gender**

A study of characteristics of people willing and unwilling to consider medical tourism by Guy, Nevins Henson and Dotson (2015) found no significant differences based on gender and age. On the other hand, a study of medical tourism by Deloitte (2008) found that males were more willing to consider medical tourism than females by 11.2%. In addition, the study found that the willingness of people to consider medical tourism declines with age. Another study by Lunt and Carrera (2010) found that motivation for medical tourism vary with age. Younger and older

respondents were motivated by travel factors while middle-aged respondents were considering medical tourism for elective surgeries.

### **Medical Tourists – Education and Income**

Education and income were discussed by Guy, Nevins Henson and Dotson (2015) and the results of the study found no significant differences based on education and income. While the study by Gan and Frederick (2011) found that middle income groups are more likely to consider medical tourism as lower income groups are less capable of paying for travel and may receive government assistance, and higher income groups are usually covered by medical insurance and are willing to pay more for domestic medical services. In addition, they are less affected by cultural variances and stereotypes since they might have prior travel experiences.

### **Medical Tourists – Prior Medical Travel**

Although there are positive and negative experiences with medical travel, studies found that prior medical travel experience is more likely to result in repeated medical trips (Guy, Nevins Henson and Dotson, 2015; Gan and Frederick, 2011; Smith and Forgione, 2007). A positive response from patients who travelled to Jordan, China, India and UAE stated that the level of care and quality is satisfactory and that 80% would return to the same country for treatment if required (Guy, Nevins Henson and Dotson, 2015; Alsharif, Labonte and Lu, 2010).

Another study by Yeoh, Othman and Ahmad (2013), investigated prior medical travel in an attempt to determine the demographics of outpatient medical tourists in Malaysia. The results showed that the majority of respondents were repetitive medical tourists.

## **Medical Tourists – Country of Residence**

Due to geographic location, cultural similarities and historical ties, some destinations have been attracting certain nationalities more than others. Cortez (2008) has discussed this aspect on a global level and reviewed the top medical tourism destinations and the nationalities each destination attracts. Based on the perspective that not all patients travel to all countries for all procedures. The countries reviewed in the study were Chile, Cuba, India, Jordan, Malaysia, Singapore, Thailand, UK, USA as well as other countries.

The flow of medical tourism has some established medical patterns. Taiwan has been attracting main land Chinese. Western Europeans have been attracted to Eastern European countries such as UK to Poland. The historical ties play a role as well such as the UK and Malta. The colonial history between the UK and India seems to have an influence on attracting British medical tourists to India. Mexico attracting US medical tourists. Similarly, the Diaspora populations such as immigrants and second-generations living in the US opt to travel back to their home countries for medical care (Lunt et al, 2011).

From a Middle Eastern perspective, Dubai has established Dubai Health Care City (DHCC) and marketed the destination as an inclusive healthcare city to sustain the Middle Eastern tourists in the region and attract them to Dubai rather than travelling to Asian and European countries for medical care (Lunt et al, 2011).

Additionally, country of residence was applied in the nationwide survey by Yeoh, Othman and Ahmad (2013) aiming to determine the demographics of medical tourists visiting Malaysia.

### **Medical Tourists – Type of Medical Procedure**

Many authors have linked medical tourism to elective surgeries while several studies have classified medical tourists by the type of procedure they pursue. Cormany (2008) has classified tourists according to the type of procedure they are pursuing. The categories of classification, sometimes overlapping, were: 1) Necessary Minor Surgery, 2) Necessary Major Surgery, 3) Diagnostic Services, 4) Alternative Therapy Treatment, 5) Lifestyle/wellness, and 6) Cosmetic Surgery. Accordingly, different segments will have different expectations from the medical tourism destination. Likewise, destinations have been well-known for a specific medical specialization (Cormany, 2008).

The type of medical procedure was also discussed by Connell (2006) and Cortez (2008) from the viewpoint that some countries have become important for some medical specializations.

Classification by “type of medical procedure” was also used by Yeoh, Othman and Ahmad (2013) in their nationwide survey on determining the characteristics of medical tourists visiting Malaysia.

### **Medical Tourists – Number of Accompanying Family Members and Friends**

The income generated from medical tourism is not only limited to the medical sector but extends to other tourism related sectors as the expenditure is exercised by the medical tourists as well as their companions (Lunt et al., 2011).

Additionally, “number of guests accompanying patient” was used as a demographic variable in determining the characteristics of medical tourists in the nationwide survey conducted by Yeoh, Othman and Ahmad (2013). The results showed that the majority of the respondents were visiting with at least one companion.



## **Medical Tourists – Trip Budget**

This question was inspired from several readings on medical tourism global industry and revenues gained in destination countries. An example of such papers includes Carrera and Bridges (2006) and Horowitz and Rosensweig (2007).

### **5.5. Data Collection and Gathering Procedure**

Answers were collected in a period of three months from mid of April 2017 until mid of July 2017 via paper-and-pen instruments. To obtain an insightful and reflective feedback of the whole experience, patients were approached when they were towards the end of their medical process or when they were done with their medical procedure and in their recovery period. Most of the questionnaires were filled in Arabic. Out of the 212 questionnaires, only seven were filled in English.

To better represent the various segments of medical tourists coming to Lebanon, answers were collected from several points including medical clinics, hospitals, hotels in Beirut as well as Beirut Rafic Hariri International Airport. The target was to approach medical tourists as much as possible at the stage of concluding their trip, when they have experienced the various elements of medical tourism in the destination. This stage is expected to result in more accurate, insightful and reflective answers. To guarantee that there is no invasion of medical tourists' privacy or hampering with their medical condition, the timing of interviewing the tourist and filling the questionnaire was carefully studied. Participants were approached only when they were in physical and emotional conditions that gave them the liberty to choose whether to take part in the research and state their opinion.

In hotels, questionnaires were distributed at the lobby's front desk during checkout or before checkout from the hotel. In clinics, questionnaires were distributed at the waiting lounge while

patients were waiting for their doctor's appointment. As for hospitals which were the most sensitive location for meeting with the patients, extra consideration was given through coordinating with the nurses on the best timing to meet with patients. Patients in hospitals were approached during the final recovery period and before checkout when they were in a physical state that would allow them to participate in the study. The last location to visit and collect answers was Beirut International Airport. This was due to the time required for processing the application and obtaining the formal approval to access the airport facilities and interview passengers, and therefore, the data was collected in other venues meanwhile. A selection of approval letters are presented in appendix 15.

Three hotels were approached within the Hamra district in Beirut which are known for being the medical district, having five major medical centres as well as numerous medical clinics for well-known and reputable doctors. The chosen hotels are within a walking distance from four major medical centres in Beirut and are known to accommodate medical tourists. In addition to a fourth hotel in Raouche district which is a seaside district and known for attracting tourists. To avoid bias, the chosen hotels were not entirely from one single district and they were representative of other hotels within Beirut in terms of occupancy levels and star ranking as two hotels were 3-stars hotels and two hotels were 4-stars hotels. The hotels' front desk agents were a cooperative element in data collection. They were requested to approach medical tourists with the questionnaire at a time closer to the conclusion of their trip.

When the response rate from hotels was relatively low, further data was collected from clinics and hospitals. Many clinics were visited, including aesthetic and skincare, cosmetic, dental, bones and joints and neurological. Data were collected from international patients while waiting in the lounge for their appointment. Patients were first asked if they were coming for their first

appointment. This question served to determine whether to proceed with the questionnaire or conclude and move to another patient. Clinics were the most effective channel of data collection as they made the highest response rate.

Data collection in medical centres was different. Several letters were sent to the administration offices and research centres of nine major medical institutions within Beirut and its vicinity. In addition, phone calls and walk-in visits were conducted with an objective of inviting them to participate in the study through obtaining a formal approval for interviewing their international patients. The only medical institution that replied with a formal positive answer was Hôtel-Dieu de France which was very cooperative as the administration facilitated direct entrance to international patients' rooms. The remaining institutions, despite the follow-up calls, visits and emails did not respond neither positively nor negatively. Nevertheless, in some medical centres, a verbal approval was given by the lobby supervisor or head of information desk and this allowed for an opportunity to collect data at the lobby of medical centres whilst medical tourists were waiting in the lounge for checkout procedures. Moreover, medical nurses were immensely supportive and cooperative in many medical centres as they volunteered to participate in the study and collect data for the international patients to whom they were assigned.

It is worth mentioning that data was also collected from a coffee shop in Hamra district within Beirut which is also a shopping district. The chosen coffee shop lies in the vicinity of the medical centres, doctors' clinics and surrounding hotels. Data were collected from medical tourists while having coffee or a beverage.

The last stop was Beirut International Airport. After obtaining the approval from Airport Security, the airport was visited for data collection from departing passengers. The first question addressed to passengers at the airport was whether they visited Lebanon for medical purposes.

This question served to determine whether to proceed with the questionnaire or conclude and move to another passenger. Some cases were more apparent as the departing passenger had visible indications of being medically treated.

## **5.6. Summary**

This chapter was dedicated to the questionnaire which creates the main data collection instrument of the study. It began with a representation of the five main parts of the questionnaire and the objective of each section. This was followed by a display of the measurement instruments used in the questionnaire which is mainly Likert-scales instrument.

Furthermore, the chapter discussed the developmental stages of the questionnaire through critical reviewing by 12 reviewers which led to enhancement in the design and wording of the questionnaire. The next stage of questionnaire development was through conducting a pilot test on 108 respondents which led to further adjustments in the questionnaire ranging from including sections, deleting and adding variables and changes in the wording of some variables and questions. The adjustments also included the method of data collection which was changed to paper-and-pen instrument only.

The chapter further presented an in-depth analysis of the measurement variables used in the questionnaire. Each variable was thoroughly discussed and associated to previous studies and literature.

Finally, the chapter presented a narration of the data collection process and gathering procedure and discussed the strategy used, places visited and the way the medical tourists were approached. The strategy was to collect data from tourists who were towards the end of their medical process or have completed their medical procedure and were in their recovery period. This was to obtain an insightful and reflecting feedback of the whole experience. To better represent the various

types of medical tourists coming to Lebanon, answers were collected from several locations ranging from medical clinics, hospitals, hotels in Beirut as well as from Beirut Rafic Hariri International Airport.

## Chapter 6: Descriptive Findings

### 6.1. Introduction

This chapter is divided into two main sections; section 6.2 includes an inclusive and deep analysis of the data inferred from the qualitative interviews which constituted the foundation of the study factors and variables that were quantitatively tested further on in the study. The collected data were categorized to reflect the discussed themes.

Section 6.3 is concerned with extrapolating descriptive results from the survey questionnaire data. The section is mostly concerned with answers collected from the first and the last part of the questionnaire. It presents a description of the surveyed sample in terms of their demographic characteristics as well as an identification of the different medical tourists' segments deduced from the cross-tabulation process. This section presents the highest and lowest means and standard deviation as well for the questionnaire parts that applied the Five-Point Likert-type scales and they are sections two, three and four.

### 6.2. Interview results

Building on the research work of Heung et al. (2010) and the information themes discussed in the interviews, the derived content analysis were categorized into “government attitude”, “cost”, “infrastructure and superstructure”, “policies and regulations”, “promotion”, “expertise/manpower”, “language and communication”, “facilities and tourist attractions”. An additional category was added that is “political stability and security” since all respondents identified this category as the main barrier to medical tourism development in Lebanon making it ranked highest among barriers. Equally high was promotion as all respondents highlighted that more support is required from the government. Government attitude was another strong factor, along with lack of new policies and regulations.

### **6.2.1. Political stability and security**

Expected from the tourism literature (Chapuis, Le Falher and Gonzales, 2015) and the current state of affairs within the Middle East, political transparency and social stability were classified as one of the factors that attributed in making a destination for medical tourism. Political stability and security was mentioned in each conducted interview and described as the main barrier. Some respondents emphasized a rising issue resulting from the unstable situation in many Middle Eastern countries such as Syria and Iraq. According to one respondent *“The rising conflict and unstable situation in Syria is highly affecting Lebanon and its political image on the media channels and networks. More tourists in general and medical tourists in particular would be coming to Lebanon had the political situation been more stable or even better and more accurately portrayed on satellite channels”*.

### **6.2.2. Government attitude**

Although medical tourism is mainly established through the private sector, however, the government plays a vital role in its development. Almost all of the interviewees stressed on the fact that the government is not playing a role in supporting medical tourism in Lebanon. An interviewee attributed this deficiency to the lack of financial resources since the Lebanese economy has a high debt to GDP ratio. Furthermore, the Lebanese economy has been facing an additional burden with the large number of incoming refugees fleeing from the unsecure situation in Syria. According to one respondent *“It is very challenging for the government to support the medical tourism sector, Private-Public Partnerships and reducing taxes on investment. Since Lebanon is not a rich country and lacks resources at the moment”*. According to officials in Dubai, of the main drivers contributing to Dubai’s medical tourism growth are the emirate’s regulatory environment, capacity planning and encouragement of Public Private Partnership (PPP) (D’Souza, 2013).

### 6.2.3. Policies and regulations

Interviewee said that the Lebanese law does not allow pharmacies in Lebanon to advertise for their businesses. *“The Doctors Syndicate in Lebanon does not allow advertisements for physicians, medical doctors and medical procedures” as stated by one respondent.*

### 6.2.4. Promotion

All interviewees agreed on lack of promotion which they expect the government to support. According to one respondent *“The campaigns that the Lebanese government launch is restricted on the tourism sector in general and are not targeted towards niche tourism sectors such as medical tourism. The Lebanese government participates through the Ministry of Tourism in international Conventions and Exhibitions abroad such as ATM Dubai, ITB Berlin, WTM London, and Istanbul Convention. However, in such exhibitions, the promotion is for Lebanese tourism in General and not specific to niche segments”.* Some respondents suggested that Lebanon should create an image especially in the field of plastic surgery since it is highly reputable in this field. *“The Arab region trust the capability of the Lebanese cosmetic doctors as being most professional achieving best results”* claimed one respondent. *“Plastic surgery is in demand and Lebanon is very well-known for plastic surgery”* claimed another respondent.

### 6.2.5. Costs

Some respondents claimed that costs of medical service in Lebanon are high while others claimed that they are comparable to what the region is offering. *“The cost depends on the tourist country of origin. If the tourist is coming from a country with poor economy, he would find prices of medical services in Lebanon relatively expensive. However, if the tourist is coming from a country with rich economy, he would find the prices reasonable.”* Another respondent claimed that the tourist who is coming to Lebanon for medical treatment is primarily targeting



the quality and is willing to pay the current prices. Such segment is not price sensitive. Content analysis did not provide a clear result; one of the reasons a survey is more valid to measure cost.

#### **6.2.6. Infrastructure and superstructure**

Almost all respondents claimed that Lebanon has adequate infrastructure and superstructure with potential areas for improvements. Most respondents claimed that the transportation network is one of the major drawbacks in the Lebanese infrastructure. The lack of adequate public transportation system such as an underground system or a train system results in traffic congestions. According to one respondent *“It is not easy for a tourist to reach addresses and destinations inside Beirut. Most medical tourists approaching the clinic will prefer to stay in a nearby hotel to avoid the hassle of transportation”*. On the other side, Lebanon has a variety of malls, shopping centers, souks, restaurants, night clubs, and other facilities that combine the western and eastern culture and taste. Modern hotels are also built within the same vicinity of medical centers which makes it more convenient to the medical tourists and their travelling companions.

#### **6.2.7. Expertise/manpower**

Almost all respondents stated that the primary reason for medical tourism in Lebanon is highly-qualified physicians. Many Lebanese physicians hold degrees from well-reputable universities in Lebanon that are affiliated with American and French universities. Nevertheless, Lebanon is a donor country of doctors and physicians and with the highest immigration factor in the Middle East and North Africa (Akl *et al.*, 2008). Over the past 25 years, around 40% of graduating doctors and physicians from Lebanese medical universities are practicing medicine in USA (Sayegh and Badr, 2012). Accordingly, the Lebanese doctors are in demand. According to one respondent *“In the aesthetic field, Lebanese doctors are most famous. The Arab region trusts the capability of the Lebanese cosmetic doctors as being most professional achieving best results”*.

*“Most well-known Lebanese doctors and especially in the field of aesthetic have established clinics in the neighboring countries such as the GCC countries and accordingly these famous doctors will go and treat the patient in their home countries instead of having them come to Lebanon as medical tourists. Many Lebanese doctors have certain type of contracts with the GCC countries as well and they travel on regular basis to such countries. This affects negatively medical tourism in Lebanon”.*

#### **6.2.8. Language and communication**

All respondents stressed that there is no language barrier between medical staff and medical tourists since almost all workers in the field of healthcare are highly educated and speak in addition to Arabic, English or French or both.

#### **6.2.9. Facilities and tourist attractions**

Lebanon is a major touristic destination in the region. It has a strategic geographic location that is proxy to many Arab and European countries. It also enjoys a warm climate and a variety of landscapes ranging from Mediterranean seaside to green mountains and valleys. Travel and Tourism sector provides a significant contribution to the Lebanese economy and constitutes one of the economy's leading growth engines. Travel and tourism sector's share to GDP was 29%, 27% and 25% in years 2010, 2011 and 2012 consecutively (Bank Med, 2013). An area of development is the prices of food and beverage as two respondents have claimed that they receive feedback from many medical tourists that prices of food and beverage are relatively high and need further reconsideration. However, few respondents related tourism infrastructure to medical tourism in Lebanon.

### **6.3. Descriptive survey results**

From a demographic perspective, 45.3% of participants were males while 54.7% were females. The female-dominant types of medical treatment are cosmetic and aesthetic and dental while the

male-dominant types of medical treatment are general surgery, heart surgeries, gastro-intestinal surgeries, knee, hip and joints surgery and eye treatment. The majority of respondents were coming from Iraq and they constituted the biggest segment representing 42.5% of the sample, followed by 11.3% coming from Syria, 6.3% from Kuwait, and 5.6% from Jordan. The age groups 25 to 34 and 35 to 44 years old both scored 32.1% of the sample. This was followed by the age group 45 to 54 years old as this group constituted 16.0% of the sample. As for the educational background, the highest percentage 50.6% was for respondents who earned a college university degree followed by 20.0% for those holding graduate degrees and 13.4% for respondents who did some college education. According to income, the biggest group of medical tourists which is 25.4% earned an annual income that ranges between USD 5,000 and USD 30,000 followed by 22.8% earned an annual income between USD 30,000 and USD 55,000. The same percentage earned an annual income between USD 70,000 and USD 95,000. While 11.4% earned USD 120,000 and more. This is to mention that 114 of surveyors stated their annual income. Of the medical tourists who participated in this survey 19.1% travelled three times in the last three years, 13.4% travelled two times in the last three years, 12.2% travelled four times in the last three years, 4.4% traveled more than ten times in the last three years and 5.6% did not travel at all in the last three years. Consequently, 55.6% considered themselves moderately experienced international travelers while 35.9% considered themselves experienced travelers.

As noted previously, the questionnaire was divided into five parts. The first part is to collect general information about the trip while the last part is to have a demographic impression about the traveler.

The second part applies Five-Point Likert-type scales to measure the push factors which are the reasons that made the respondent travel abroad for medical care. The highest mean in this subset

is 3.54 for "low success rate for your-type – of- procedure performed" while the lowest mean is 2.50 for "medical care abroad is cheaper than domestic care". The highest standard deviation is 1.193 for "treatment is available abroad that is unavailable domestically" while the lowest standard deviation is 0.970 for "low success rate for your-type – of- procedure performed".

The third part of the questionnaire applies Five-Point Likert-type scales to measure the influential drivers that stand behind choosing this particular destination for medical tourism and they are the pull factors. In this subset, the variable "more guaranteed results and higher success rate for your-type – of- procedure performed in Lebanon" has the highest mean which is 4.36 and the lowest standard deviation which is 0.727. While the variable "your health insurance covers treatment in Lebanon" has the lowest mean of 2.86 and the highest standard deviation of 1.209.

Part four of the questionnaire aims to measure the experience of the medical tourists through a quality feedback question and a satisfaction question. Both are measured via Five-Point Likert-type scales. Quality feedback is divided into medical related feedback and touristic related feedback. As for the medical subset, the variable "medical doctor" has the highest mean of 4.42 and the lowest standard deviation of 0.692. While the variable "prices of medical services" has the lowest mean of 3.37 and the highest standard deviation of 0.836. The touristic subset, the variable "food and beverage" has the highest mean which is 4.28. The variable "prices of daily consumer product" has the lowest mean of 3.31 and the highest standard deviation of 0.951. The lowest standard deviation is 0.698 for the variable "accommodation".

The satisfaction subset of part four of the questionnaire scored a highest mean of 4.30 for the variable "you are satisfied with the medical services received in Lebanon" and a lowest mean of 3.14 for the variable "you are willing to come back to Lebanon for leisure tourism in the next two years". The highest standard deviation in this subset is 1.531 for "you are willing to come

back to Lebanon for medical services in the next two years" and the lowest standard deviation is 0.569 for "you are satisfied with the overall experience in Lebanon".

For the purpose of statistical analysis, some types of medical procedures were merged, particularly those that included small number of observations. The merge was done while keeping the name of the medical procedures. Hence, the categories for types of medical procedures after adjustment came to be "cosmetic surgery and aesthetic treatment", "dental treatment and surgery", "eye treatment and surgery", "obesity and gastro-intestinal surgery", "general surgery", "heart surgery", "infertility treatment", "knee, hip and joints surgery", "neurological treatment and surgery", "tumors and blood treatment", "glands and urinary tract treatment" as well as a category for "other treatment or surgery".

#### **6.3.1. Medical tourists' segmentation**

Medical tourists coming to Lebanon can be classified into different segments based on gender, age, level of income, education background, type of procedure pursued, number of accompanying family members and friends, previous medical travel experience and previous travel experience.

The collected data confirmed Lebanon's reputation for cosmetic surgery as 31.8% which is the highest percentage of medical tourists were pursuing cosmetic surgery and aesthetic treatment in Lebanon. It is worth mentioning that of this percentage, 80.4% are females, 54.3% range between 25 and 34 years old and 28.3% range between 35 and 44 years old. Therefore, the biggest segment of medical tourists are females pursuing aesthetic treatment and cosmetic surgery ranging between 25 and 44 years old. The second category is for tourists coming for dental surgery and treatment and it constitutes 10.4% of medical tourists. Of the tourists pursuing dental surgery and treatment, 53.3% are females and 46.7% are males. Fifty percent range between 35

and 44 years of age and 36.7% range between 25 and 34 years of age while none of the tourists in this category is 55 years of age and above. The third category comprise 9% of the sample and is for tourists coming for knee, hip and joints surgery of which 34.6% range between the age of 45 and 54 years old. The fourth category is general surgery and it makes 7.3% of the sample. The fifth category is 6.9% for tourists coming for neurological treatment. This makes the difference between first and second category 21.4 while the difference between second and third, third and fourth, fourth and fifth categories 1.4, 1.7 and 0.4 respectively. (For more information on the type of medical procedure pursued and age, see Appendix 6, table A).

The biggest percentage of medical tourists which is 36.3% carried a budget that ranges between USD 8,000 and USD 12,000. 44.8% of this segment spend half of their budget on medical services. This segment is dominated by tourists seeking cosmetic surgery and aesthetic treatment followed by knee, hip and joints surgery. (For more information on this cross tabulation, see Appendix 6, table B) The second biggest budget category makes 24.2% and it is for tourists carrying a budget between USD 5,000 and USD 8,000. It is apparent that 37.1% of tourists in this segment spend 40% of their budget on medical services while 25.7% spend 50% of their budget on medical services. (For more information on this cross tabulation, see Appendix 6, table C).

Although the category of highest budget for the trip is a budget of more than USD 20,000 constitutes only 10% of respondents, however most of the tourists in this budget category (31.0%) is represented by tourists seeking cosmetic and aesthetic treatment, followed by tourists seeking general surgery (17.2%). (For more information on this cross tabulation, see Appendix 6, table D) The biggest segment of tourists (37.9%) in this budget category spend more than 20% of their trip budget on accommodation; whereas, 31% of the same budget category spend 20% of

their trip budget on accommodation. Therefore, medical tourists coming with high budgets are not necessarily spending the bulk of their budgets on medical matters. (For more information on this cross tabulation, see Appendix 6, table E).

As for accommodation, the categories were close to each other. Similar percentage of tourists which is 23.5% spent 10% and 20% of their trip budget on accommodation. This is followed by 22.1%, 21.5%, and 9.3% for tourists who spent 15%, more than 20% and 5% of their trip budget on accommodation respectively.

Of the tourists who spent more than 20% on accommodation, 63.2% are from Iraq, 22.5% are from GCC countries and 8.2% are from Jordan. While a significant portion of the smallest category goes for Lebanese living abroad and staying at their family's home for their trip. Iraqis who constitute the biggest segment of medical tourists spend primarily 20% (26.9%) and 10% (26.2%) of their trip budget on accommodation. The majority of tourists coming from GCC countries spend 10% (26.8%) and 15% (26%) of their trip budget on accommodation, while the majority of Jordanian tourists (37.5%) spend 15% of their trip budget on accommodation. (For more information on this cross tabulation, see Appendix 6, table F).

The majority of respondents arranged their accommodation by themselves and this constitutes 60.9% while 19.4% arranged their accommodation through a travel agent and 13.5% arranged their accommodation through a medical institute. It is discernible that 43.8% of the tourists who used the services of travel agent are coming for cosmetic and aesthetic treatment. The next category of tourists who sought the services of travel agents is for those coming for dental treatment and surgery. Tourists carrying lowest trip budgets constituted the smallest portion of those who sought the services of travel agents, while tourists carrying highest trip budgets constitutes the second smallest portion of those who sought the services of travel agents.

However, 46.4% of the tourists who arranged their accommodation through a travel agent stayed in average hotels followed by 32.1% stayed in luxury hotels. (For more information on this cross tabulation, see Appendix 6, table G). It is worth mentioning that as the trip budget increased the choice of luxury hotels increased. (See Appendix 6, table H)

Family and friends can be an influencing factor in the medical tourist's decision making particularly when it comes to accommodation. The number of accompanying friends and family members can influence the type of accommodation, the budget allocated for accommodation as well as the total budget for the trip. It is perceptible that 36% of respondents were accompanied by two members, 33.6% were accompanied by one, 22.1% were accompanied by more than two and 8.3% were travelling without companion.

As the number of accompanying friends and family members increased, the choice towards furnished apartments increased. For example, only 7% of tourists travelling alone chose to stay in furnished apartments while 42.1% of tourists coming with more than two companions chose to stay in furnished apartments. (For more information on this cross tabulation, see Appendix 6, table I) On the other hand, the total budget of the trip did not fluctuate with the number of accompanying friends and family members as the budget category USD 8,000 - USD 12,000 comprised the biggest budget segment for travellers with all varying numbers of accompanying friends and family members. (For more information on this cross tabulation, see Appendix 6, table J).

The majority of tourists (36%) are coming with two companions. This is followed by tourists coming with one companion (33.6%). Majority of tourists coming for cosmetic and aesthetic treatment, general surgery, obesity and gastro intestinal surgeries, dental surgery and treatment, neurological treatment, and eye treatment and surgery are coming with two companions. While



most of the tourists coming for knee, hip and joints surgery, cosmetic surgery and aesthetic treatment, infertility treatment, scans/investigations and laparoscopic surgery and glands and urinary tract treatment are coming with one companion. In addition, the majority of travellers with no companion are coming for cosmetic surgery and aesthetic treatment as well as eye surgery. (For more information on this cross tabulation, see Appendix 6, table K).

Nevertheless, it is worth mentioning that none of the travellers in the age group 18 to 24 as well as age 55 and above were travelling alone.

More than half of the surveyed sample experienced medical tourism previously. It is apparent that 62.4% of them have chosen Lebanon again for medical services. While smaller percentages experienced prior medical tourism in countries such as Egypt, France, Germany, Iran, India, United Arab Emirates, United Kingdom, and United States of America. It is discernible that 46.8% of repetitive medical tourists and 56.4% of first-time medical tourists did not consider travelling to any other country for medical services before choosing Lebanon. The majority of repetitive and non-repetitive medical tourists who thought of an alternative destination before coming to Lebanon, considered Amman for medical services followed by Dubai. (For more information on this cross tabulation, see Appendix 6, table L).

The association of medical tourists' characteristics with push motivational items yields in important results which revolve mostly around items with highest means and they are "Low success rate for your-type – of- procedure performed" followed by "Treatment is Available Abroad that is Unavailable Domestically". Repetitive medical tourists left their home country mostly because their type of treatment is unavailable domestically (57%). Moreover, they believed that their medical procedure has a low success rate domestically (57.9%). (see Appendix 6, table M).

Medical tourists who were motivated to travel due to unavailability of treatment are mostly coming from Egypt, Libya and Yemen. As for Iraqi patients, half of them recorded this factor a reason to travel while the majority (80%) attributed their travel to low success rate of treatment (see Appendix 6, table N). According to Mohamad Sayegh, Dean of the Faculty of Medicine and Vice President of Medical Affairs at the American University of Beirut Medical Center (AUBMC), “The Iraqis don’t have a lot of good resources for radiation therapy..., so they tend to come here for those purposes” (Rahhal, 2013).

Similarly, Syrians attributed their travel mostly to low success rate of treatment (48%) rather than unavailability of treatment (33%). The highest type of treatment recorded unavailable at home country is cosmetic and aesthetic. Low success rate is diversified among different types of treatments such as general surgery, heart surgery, hip surgery, tumors and neurological treatment as well as scans and investigations (See see Appendix 6, table O).

Moreover, patients who are in the highest-bracket of trip budget are leaving their country for primary push factor that is related to the unavailability of treatment as well as the low success rate of their medical treatment (See see Appendix 6, table P). Similarly, the primary push factor for patients with the lowest bracket of trip budget is the low success rate of their medical treatment followed by inadequate domestic health insurance.

As for patients who travelled based on home physician recommendation, they are mostly seeking complex surgeries such as heart, knee and joints and neurological surgeries and treatments as well as patients coming for scans and investigation purposes. Therefore, patients who have been referred to travel abroad for medical treatment are in need of complex and specialized types of treatments. Patients who were referred to travel are mostly coming from Iraq and Yemen. This

indicates that patients from countries with deteriorating healthcare systems are being referred by their physicians to travel abroad for better treatment.

Medical tourists seeking better prices are coming from GCC countries such as Kuwait and Qatar in addition to patients coming from Jordan (See appendix 6, table Q). Around half of the medical tourists who were motivated by better prices choose to stay in average hotels, the rest is divided between luxury hotels and furnished apartments while the smallest portion choose to stay in economy hotels.

63.3% of patients who sought anonymity and privacy behind their medical travel chose Lebanon again as a destination which indicates that Lebanon is providing to a certain extent the requested level of medical privacy and anonymity. The majority of medical tourists who seek anonymity of treatment are pursuing cosmetic and aesthetic types of surgeries and treatment, followed by tourists pursuing obesity surgery and infertility treatment (See appendix 6, table R).

The majority of medical tourists who travel for cosmetic and aesthetic treatment do not have adequate domestic medical insurance that covers their treatment. However, there is a fine difference between those who believe that prices abroad are not cheaper than at home and others who do not (See appendix 6, table S). Therefore, the segment of cosmetic and aesthetic travelers who are price driven is almost equal to the one of travelers who are not price driven. Moreover, only 14.3% of them are traveling based on their domestic doctor's recommendation.

As for patients who were motivated to travel due to long waiting time for treatment in their country of residence, they constitute a smaller segment of medical tourists and are mostly coming from developed countries such as Canada, France and USA. Some of those tourists are Lebanese immigrants living in these countries and coming to Lebanon, their home country, for

treatment. The type of medical treatment that is associated with this push motivational item are eye surgery and general surgery.

#### **6.4. Summary**

This chapter was dedicated to descriptive and exploratory findings. It first examined the data derived from the qualitative interviews and categorized it into nine categories. All respondents stated that “political stability and security” as well as “promotion” were the main barriers for medical tourism development in Lebanon. On the other hand, almost all respondents agreed that the “expertise” of the Lebanese physicians is a primary reason for medical tourism in Lebanon.

Furthermore, the chapter continued to present descriptive analysis yet derived from the survey data. The findings were a display of the general characteristics of the sample which led to categorization of segments for medical tourists. One of the biggest segments of medical tourists coming to Lebanon are females pursuing aesthetic treatment and cosmetic surgery ranging between 25 and 44 years old.

The frequency distribution of the survey results confirmed the several qualitative findings of the interviews. For example, the variable "medical care abroad is cheaper than domestic care" received the lowest mean in its push subset which consists with the opinion of some interviewees who claimed that medical tourists are not coming to Lebanon because of prices of medical care. While the highest mean in the push subset is for the variable "low success rate for your-type – of- procedure performed" which also confirms with the interviewee's opinion that the deteriorating medical systems in neighboring countries are compelling patients to seek medical care in Lebanon. Moreover, "more guaranteed results and higher success rate for your-type – of- procedure performed in Lebanon" received the highest mean among pull variables, a result that is consistent with interviewees who claimed that medical tourists come to Lebanon with the

objective of medical quality. Another consistency is for the variable "medical doctor" which received the highest mean in perceived medical quality subset and viewed to be the primary reason for medical tourism in Lebanon by almost all interviewees. Furthermore, "local transportation" which received the second lowest mean in perceived touristic quality confirms as well with the interview outcomes of almost all respondents who claimed that the transportation network is one of the major drawbacks in the Lebanese infrastructure.

Nevertheless, other themes discussed in the interview, such as prices of medical services, need further confirmation in order to attain more convergent results. Thus, quantitative analysis is carried out subsequently in pursuit of more confirmatory outcomes.

## **Chapter 7: Confirmatory Findings**

### **7.1. Introduction**

This chapter is dedicated to the examination and analysis of the confirmatory findings of the survey data. It begins with a preliminary data screening, a preparatory step for quantitative testing. This screening includes missing values, outliers and normality testing. In addition, the study variables were tested for reliability through Cronbach's Alpha test.

Next, the chapter analyses the results of the EFA which was performed on each factor of the study. This step was followed by a detailed and thorough application and analysis of CFA and SEM.

Before examining the overall measurement model, CFA was executed on the measurement constructs with an objective of establishing a better-fit overall model. The SEM analysis of overall model is reported through model specification and identification, model evaluation and modification and model estimation. The steps yielded in hypothesis testing through examining the correlations and regressions that exist in the model which led to the development of the final model with significant paths.

### **7.2. Preliminary analysis and data screening (prior to testing)**

Some factors that affect the quality of quantitative tests and analysis are related to the data characteristics in terms of missing values, outliers and normality of the data. This section is dealing with such characteristics and how they were handled.

The data entry process was initially screened by examining all entries case by case. Second, descriptive statistics including frequency tables, mean and standard deviation were executed and verified.

The missing data was rather minor as there were three missing answers in the Likert-type scale questions which were replaced by the median value "3". As for the numeric questions, question number 21 titled "approximately, what is your annual household income before taxes?" had 96 missing answers as some respondents preferred not to answer this question. Nevertheless, this question was only reported in the descriptive analysis part and therefore, did not affect the quality of the quantitative tests.

As for outlier cases, an outlier is defined as "a case with such an extreme value on one variable (i.e. a univariate outlier) or such a strange combination of scores on two or more variables (i.e. multivariate outlier) that they distort statistics"(Tabachnick and Fidell, 2001, P. 66). The variables used in the quantitative analysis of the study are all based on Likert-type scale ranging from one to five which arguably set higher and lower limits to answers. Nevertheless, in an attempt to examine outlier cases as well as review the normality of the data, descriptive statistical analysis was conducted where the skewness and kurtosis scores were examined for all variables. Kurtosis is a measure of heavy-tailed or light-tailed data relative to a normal distribution. Thus, a high kurtosis is an indicator of heavy tails or, outlier cases. The data revealed that no variable had the kurtosis score greater than three and the highest kurtosis score was 2.605 for the variable titled "you are satisfied with the medical services received in Lebanon". Additionally, SPSS did not plot extreme cases that required removing.

#### **7.2.1. Normality tests results**

The collected answers were statistically tested using SPSSv20 software. First, Kolmogorov-Smirnov and Shapiro-Wilk tests were applied to measure the normality of the collected data. Kolmogorov-Smirnov and Shapiro-Wilk tests compare the data in the sample to a normally distributed set of data with the same mean and standard deviation; the null hypothesis for this test

is that “sample distribution is normal.” If the tests result is significant, the distribution is non-normal. Kolmogorov-Smirnov (K-S) test “investigates the significance of the difference between an observed distribution and a specified population distribution.” (Kanji, 2006, P. 78) While Shapiro-Wilk which was published later in 1965 tests the null hypothesis that a sample  $x_1, \dots, x_n$  came from a normally distributed population. Comparing both tests, Shapiro-Wilk is more sensitive to a wide array of non-normality even with small size samples than K-S test (Shapiro and Wilk, 1965). However, both tests were used in this study to measure the normality of the data.

When the tests were performed on the data, the results were significant. An observation of the skewness results indicated that the scores in general were slightly negatively skewed. Among the push variables, "medical care abroad is cheaper than domestic care" had the highest positive skewness of 0.722 while "low success rate for your-type – of- procedure performed" was the only negatively skewed variable in the push subset scoring -0.577. Among the pull variables, -1.149 was highest negatively skewed score for the variable "more guaranteed results and higher success rate for your-type – of- procedure performed in Lebanon". While 1.086 was the highest positively skewed score for the variable "your health insurance covers treatment in Lebanon". In the quality feedback subset, the variable "medical doctor" scored the highest negative skewness of -1.301 while "shopping experience" was the only positively skewed variable scoring 0.183. Finally, in the satisfaction subset, the variable "you are satisfied with the medical services received in Lebanon" had the highest negative skewness of -1.012 while there were no positively skewed variables in the subset. (See appendix 7 for normality tests results)



### 7.2.2. Cronbach's Alpha results

Reliability is defined as the consistency and repeatability of test results. Accuracy is a function of reliability, higher reliability yield in more accurate results and vice versa (Eldridge, 2017). A reliability coefficient indicates the accuracy of the test designer in expecting a certain collection of variables to yield interpretable results about individual differences (Kelley, 1942). The reliability of the variables was tested using Cronbach's Alpha which is one of the most popular methods for reliability testing (Craig and Douglas, 2000, p. 267-269; Hair, Bush, and Ortinau, 2006, p. 374). The Chronbach's Alpha value ranges between zero and one and it measures the internal consistency of a test or scale. In addition, it shows the amount of measurement error in a test. The reliability is interpreted by correlating the test with itself and the measurement of error is by squaring the correlation and subtracting from one. Therefore, as the reliability increases, the test measurement attributable to error decreases (Nunnally and Bernstein, 1994). Hence, Chronbach's Alpha enhances the accuracy of assessments and measurements to ensure validity and reliability (Tavakol and Dennick, 2011).

When reliability was tested using Cronbach's Alpha. The test was performed on all 58 variables inclusively as well as on each subset separately and they are push variables subset, pull variables subset, perceived quality subset, satisfaction subset and intention to revisit subset. Acceptable reliability requires alpha value of 0.7 or higher. There are various studies on the acceptable alpha range. As some reports suggest that an alpha of 0.95 indicates a high degree of consistency particularly in some applied settings (Bland and Altman 1997), others suggest that a high alpha value over 0.9 may reflect redundancy, length of test and unnecessary duplication of measurement items (Streiner, 2003; Tavakol and Dennick, 2011).

Chronbach's Alpha test result for all 58 variables of this study, was 0.893 which is higher than 0.7. Therefore, the statistical results ensuing from the questionnaire variables are reliable.

When measuring the reliability of the subsets, the reliability for push variables subset was 0.202 which is low. As for the pull variables subset, variables were grouped into four factors representing destination, convenience, medical treatment and medical facilities, and price. Reliability was tested for the entire subset including all pull variables comprehensively as well as for each factor. As a result, Cronbach's alpha for all pull variables was 0.821. As for the factors, the reliability for "destination" was 0.720, the reliability for "convenience" was 0.689, the reliability for "medical institutions and medical treatment" was 0.795 and the reliability for "price" was 0.610.

The perceived quality subset resulted in Cronbach's alpha of 0.863 while the satisfaction subset resulted in 0.720 and the intention to revisit subset resulted in 0.719. Therefore, the statistical results ensuing from the three subsets are reliable without modification.

### **7.3. EFA results**

Exploratory Factor Analysis was performed on each subset of the study. Initially, KMO and Bartlett's test were executed to test the suitability of the data for EFA. Afterwards, the total variance was minimized through the PCA extraction method and accordingly the rotated component matrices were shaped. (See Appendix 13 for more details on the loadings for each subset)

The KMO result for the "push" subset is 0.629 and the Bartlett's test significance is 0.000. As for the rotated component matrix results, "treatment is available abroad that is unavailable domestically", "low success rate for your-type – of- procedure performed" and "home doctor recommendation" loaded on one construct. While "inadequate domestic health insurance" and

"anonymity of treatment" loaded on another construct, and "medical care abroad is cheaper than domestic care" and "length of waiting time for domestic treatment" loaded on a third construct. (See Appendix 13 for more details on the loadings)

In view of the rotated component matrix results, some items were deleted. Since a factor should contain a minimum of three variables to be labelled as a factor (Tabachnick and Fidell, 2007), items were deleted accordingly. As a result, "inadequate domestic health insurance" and "anonymity of treatment" loading on one factor were deleted. Similarly, "medical care abroad is cheaper than domestic care" and "length of waiting time for domestic treatment" loading on another factor were deleted. The items remaining in the push subset are "treatment is available abroad that is unavailable domestically", "low success rate for your-type – of- procedure performed" and "home doctor recommendation" and they all load on one factor. From another perspective, an ad hoc attempt was made by keeping all seven items in the push factor and subjecting it to CFA. The results indicated deleting the same four items due to low lambda values.

By doing so, the Cronbach's alpha value for the push subset increased to 0.654. An alpha value of 0.6 is an acceptable value for new developed measures, otherwise, 0.70 should be the threshold for alpha value (Nunnally, 1978; Nunnally, 1988).

KMO and Bartlett's test were executed on the minimized push subset. The KMO result for the significant three-items push subset is 0.611 and the Bartlett's test significance is 0.000.

As for the "pull" subset which contains 23 items, the items were loading on seven constructs. The KMO test for all items is 0.755 and the significance for Bartlett's hypothesis is 0.000. Considering "price" factor in the pull subset and subjecting it to EFA, the rotated component

matrix results showed one item "your health insurance covers treatment in Lebanon" loading on one factor while the remaining three items loading on another factor. Moreover, the lambda value for this items "your health insurance covers treatment in Lebanon" is weak (0.271). Consequently, the item was deleted which resulted in an increase in alpha value to 0.725.

The perceived quality was divided into two subsets "medical" and "touristic". EFA was performed on each subset. The items in "medical" subset were loading on two items; "prices of medical services" and "proximity of the medical institution to other areas" were loading on the one construct while the rest of the items were loading on another construct. The KMO result for this subset is 0.825 and the Bartlett's test significance is 0.000.

The rotated component matrix for "touristic" subset resulted in three constructs. "Local transportation", "prices of daily consumer product" and "attractions and leisure activities" loaded on one construct. "Friendliness of local community" and "safety and stability" loaded on another construct. The remainder of items in the subset loaded on a third construct. The KMO result for this subset is 0.854 and the Bartlett's test significance is 0.000.

All four items of the "satisfaction" subset were loading on one construct and the subset's KMO result is 0.709 and the Bartlett's test significance is 0.000. Likewise, the three items of the "intention to revisit" subset were loading on one construct, the subset's KMO result is 0.601 and the Bartlett's test significance is 0.000.

#### **7.4. CFA and SEM results**

Confirmatory factor analysis which is often performed through structural equation modeling incorporates a sophisticated technique that test the theory about latent processes (Tabachnick and Fidell, 2007).

Evaluation of the model fit is an important step in CFA and SEM (Hair et al., 2006). Researchers and reviewers argue on the preferred goodness of fit indexes to be used in SEM evaluation process. For example, Kenny and McCoach (2003) stress the common use of CFI, TLI and RMSEA indexes and argued that there is no consistent criterion for evaluating an acceptable model while Kline (2005) emphasize the use of  $\chi^2$ , RMSEA, CFI and SRMR as fit indexes. While there are no fixed rules for which indices to use, the indices of fit that were used in this study are based on the recommendation of Byrne (1998). They are Chi-square ( $\chi^2$ ) test, the Normed chi-square ( $\chi^2/df$ ), Goodness-of-Fit index (GFI), Adjusted Goodness-of-Fit Index (AGFI), Comparative Fit Index (CFI), and Root Mean Square Error of Approximation (RMSEA).

#### **7.4.1. Initial measurement constructs models fit and modification**

The final model was built in stages. First, CFA was implemented on the constructs using AMOSv20 as they represent the components of the final model. Appendix 8 presents the initial AMOS illustration of each construct. The push variables are called push, the pull variables are divided into four constructs namely; destination, convenience, medical institutions and medical treatment, and price. Perceived quality was divided into perceived medical quality model and perceived touristic quality model. Satisfaction variables form one construct and intention to revisit form another construct. In addition, CFA was implemented on all pull variables making a comprehensive pull constructs model.

The factors that can affect model estimation such as missing data, outliers, and nonnormality of data distribution were considered and handled as discussed in section 7.2. In the estimation process, the goodness of fit for each model was evaluated to test whether the proposed constructs fit the data and accordingly modifications were applied when required.

CFA allows to test the dimensionality and validity of the measurements (Gerbing and Anderson, 1988; Hair et al., 2006).

The objective behind subjecting each construct to CFA at this stage is to assess their unidimensional measures which means "that a set of measured variables (indicators) has only one underlying construct" (Hair et al., 2006, P. 781). In addition, it means that any covariance among errors of any two measured variables should be fixed to zero (Hair et al., 2006). Otherwise, the observed items reflect something other than the postulated factor.

As for validity of the construct, it can be tested in terms of convergent validity and discriminant validity. The convergent validity assesses the degree to which a variable is actually measuring what it is supposed to measure. In essence, the degree of positive relationship among scale items developed to measure the same construct. Opposite to convergent validity, discriminant validity assesses the degree that a variable is not measuring in reality what it is not supposed to measure in theory. Therefore, it aims to demonstrate that a measure does not correlate with another measure that theoretically it is not supposed to correlate with (Schumacker and Lomax, 2010). "Both convergent and discriminant constructs are used to support or refute a claim of construct validity" (Zhu, 2000, P. 190). In CFA and SEM, validity can be assessed through factor loadings, composite reliability (CR) and the average variance extracted (AVE). In this section, the validity of constructs is assessed through factor loadings. Further on, section 7.4.5 will discuss the AVE and CR of the constructs.

#### *7.4.1.1. Measurement constructs modifications*

Since CFA provides an assessment on the reliability and validity of the observed variables for each factor or latent variables (Jöreskog and Sörbom, 1989), the modifications that were applied to the models were reflective to such assessments. First, reliability was measured by squared

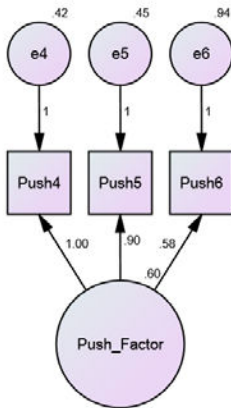
factor loading ( $\lambda^2$ ) which refers to the degree of variance explained by the construct rather than by error. Observed variables can be classified into three levels of reliability based on their squared factor loading. If the squared factor loading for each observed variable is more than 0.50, then they are considered to have high reliability; if between 0.30 and 0.50, they are considered to have moderate reliability, and if below 0.30, they are considered to have poor reliability (Holmes-Smith, 2001). In this study the observed variables that were having squared factor loadings less than 0.20 were excluded from the model.

The second modification reflects validity which is obtained when the relationship between the observed variable and construct is statistically significant (Anderson and Gerbing, 1988). It is applied through establishing a covariance between residuals of the same construct as long as the covariance is significant ( $p < 0.05$ ). As validity is the extent to which the observed variables measure what they are supposed to measure (Hair *et al.*, 1998). The covariance modifications for the measurement constructs models are presented in appendix 9.

#### **7.4.1.2. Push**

The push construct is measured by three items, all of which were subjected to CFA. As a result the indices of fit for the push construct were the following: Chi-square ( $\chi^2$ )= 0.000, df= 0, CMIN=0, GFI=1, CFI=1, and RMSEA=0.401. The push construct is presented in figure 7.1.

**Figure 7.1 Push factor**



Examination of the standardized loadings and their significance are summarized in table 7.1

**Table 7.1 Summary of initial findings: Push**

Item		Construct	Item wording	Standardized loading ( $\lambda$ )	C.R.	P
Push4	<---	Push	Treatment is Available Abroad that is Unavailable Domestically	0.765		
Push5	<---	Push	Low success rate for your-type – of-procedure performed	0.721	4.757	***
Push6	<---	Push	Home doctor recommendation	0.418	4.496	***

Table 7.1 indicates that push factor is made of three observed variables and that push6 loads lower than push4 and push5. No modifications are to be performed to push factor at this stage since modifications were executed earlier in section 7.3.

**7.4.1.3. Pull**

Theoretically, pull is represented by destination, convenience, medical institutions and medical treatment and price. In order to find out the factorial structure of the pull constructs, two different path models were designed in section 3.11.1 and subjected to CFA in SEM in this section. The



first path model (i.e. multidimensional model) allows the four constructs to be freely correlated. While the second path model (i.e. second order unidimensional model) correlates the four constructs to measure a higher order construct (single dimension) which is "comprehensive pull" construct.

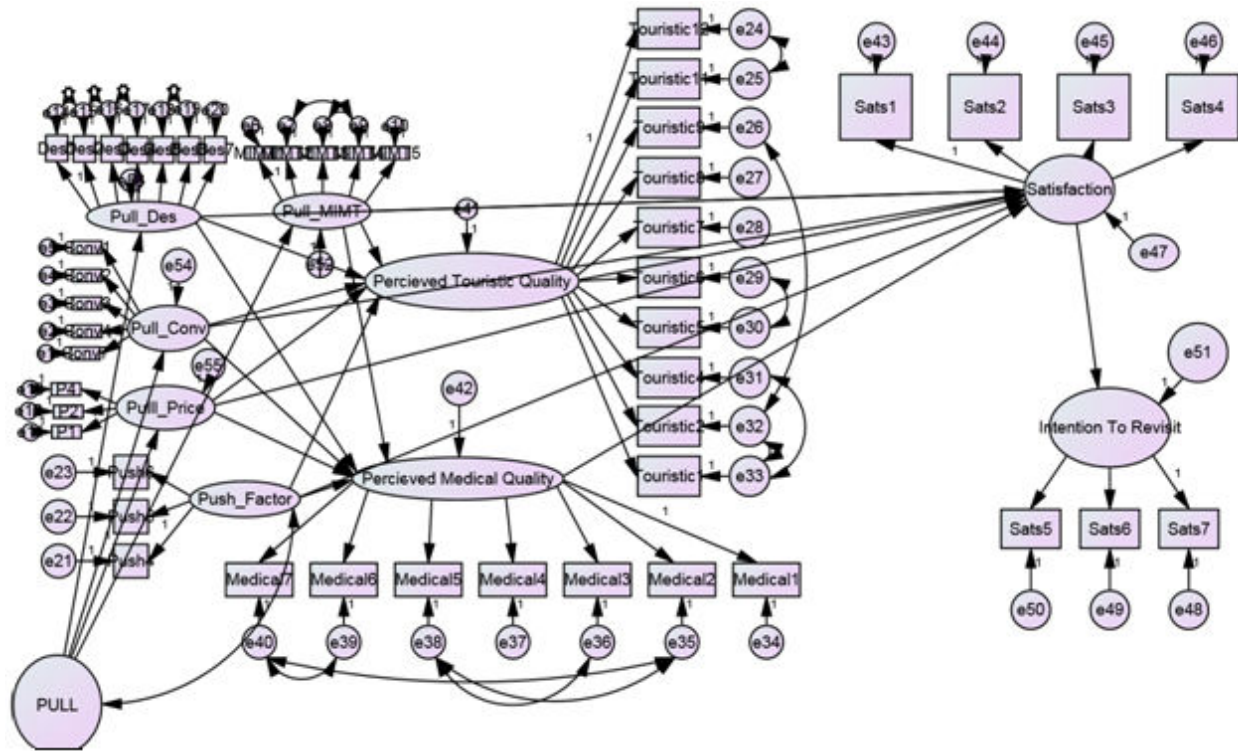
The first model assumes that pull is a four-factor structure composed of destination (Pull\_Des), convenience (Pull\_Conv), medical institutions and medical treatment (Pull\_MIMT) and price (Pull\_P). Destination is measured by seven items, convenience is measured by seven items, medical institution and medical treatment is measured by five items and price is measured by three items.

The CFA of first model, hypothesizes a priori that

- 1- Pull can be explained by four factors: Pull\_Des, Pull\_Conv, Pull\_MIMT and Pull\_P.
- 2- Each item-per measure has a nonzero loading on the factor that it was designed to measure and a zero loading on all other factors.
- 3- Measurement errors are uncorrelated.

The second model tests a higher factor order model, where the four factors are measures of one single attribute of pull. The same number of indicators is used to measure each factor as in the first model. The only difference between this model and the previous model is that in this model the factors are correlated as measures of one higher factor of "pull". Thus, they are correlated because they are measuring one higher order dimension as illustrated in figure 7.2.

Figure 7.2 Pull second factor order model



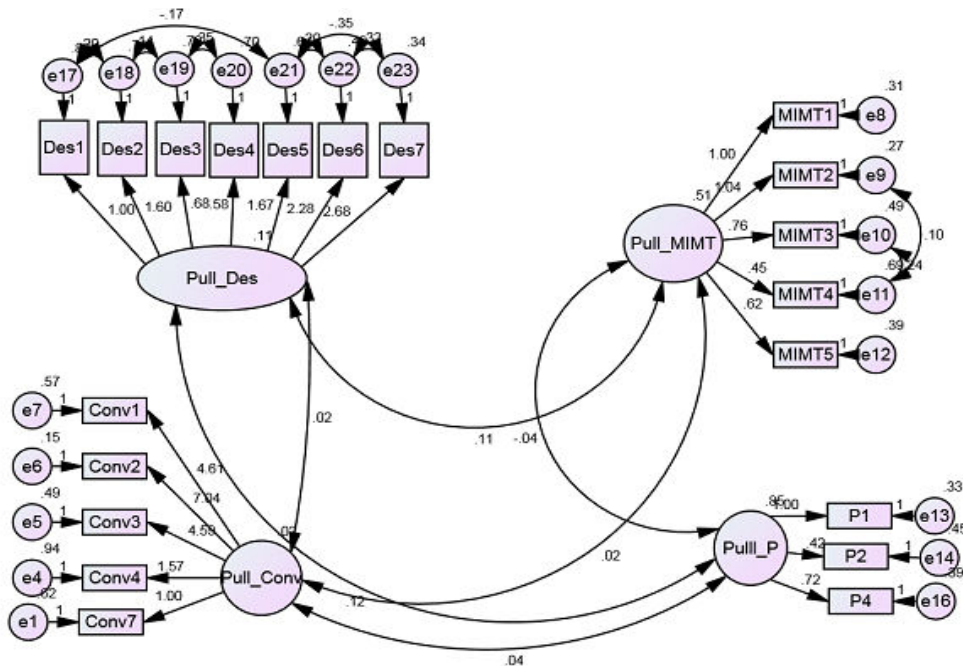
Both pull models were incorporated into the overall model and then subjected to CFA. The result was an overidentified first model (multidimensional model) and an unidentified second model (second order unidimensional model). Accordingly, the first model was adopted for the study. Meanwhile, the second set of developed hypotheses in section 3.11.1 and they are H11, H11A, H11B, H11C and H11D are all rejected.

Therefore, all items in the four constructs in the first model (multidimensional model) were subjected to CFA to verify the dimensionality of the items and to assess whether the model is an adequate fit to the data. The resulted fit indices were the following: Chi-square ( $\chi^2$ )= 737.265, Chi-square significance= 0.000, df= 203, Normed chi-square ( $\chi^2/df$ )= 3.632, GFI= 0.731, AGFI= 0.665, CFI= 0.64, and RMSEA= 0.112.

CFA results indicated that the model needs modifications to enhance the fit indices towards the recommended level. Therefore, some covariance modifications were applied. In addition, two items were excluded, they are "language and cultural similarity" and "access to information". No more items were excluded since further modifications resulted in an under identified model.

Figure 7.3 displays the modified pull constructs model.

**Figure 7.3 Modified pull constructs model**



As a result, the applied modifications improved the goodness of fit as summarized in the following table 7.2. Considering the standardized estimates of the pull construct model, there is only one insignificant loading for the variable "ease of collecting visa" where its  $p=0.07$ . The rest of the variables are significantly loading on their respective factors.

**Table 7.2 Goodness of fit improvement and summary of initial findings: Pull constructs**

<b>Index</b>	<b>Before modification</b>		<b>After modification</b>	
Chi-square ( $\chi^2$ )	737.265		368.384	
<i>p</i> -value	0.000		0.000	
Normed chi-square ( $\chi^2/df$ )	3.632		2.377	
Goodness-of-Fit index (GFI)	0.731		0.851	
Adjusted Goodness-of-Fit Index (AGFI)	0.665		0.798	
Comparative Fit Index (CFI)	0.64		0.84	
Root Mean Square Error of Approximation (RMSEA)	0.112		0.081	

<b>Item</b>		<b>Construct</b>	<b>Item wording</b>	<b>Modified</b>		
				<b>Standardized Loading</b>	<b>C.R.</b>	<b>P</b>
Pull11_Des7	<---	Pull_Des	Advertising in home country	0.84	4.212	***
Pull6_Des6	<---	Pull_Des	Availability of shopping centers	0.739	4.079	***
Pull5_Des5	<---	Pull_Des	Combining medical treatment with vacation	0.577	3.542	***
Pull2_Des2	<---	Pull_Des	Typography and climate in Lebanon	0.54	5.022	***
Pull1_Des1	<---	Pull_Des	Proximity to country of residence	0.338		
Pull3_Des3	<---	Pull_Des	Government policies and laws in Lebanon	0.263	3.114	0.002
Pull4_Des4	<---	Pull_Des	Political Stability in	0.23	2.839	0.005

			Lebanon			
Pull8_Conv2	<---	Pull_Conv	Availability of travel agencies medical packages	0.924	2.277	0.023
Pull9_Conv3	<---	Pull_Conv	Availability of medical institutions' brokers	0.658	2.265	0.024
Pull7_Conv1	<---	Pull_Conv	Airline routes and frequency	0.629	2.258	0.024
Pull10_Conv4	<---	Pull_Conv	Ease of collecting visa	0.21	1.812	0.07
Pull14_Conv7	<---	Pull_Conv	Proximity of accommodation to medical center	0.167		
Pull16_MIMT2	<---	Pull_MIMT	International accreditation of Lebanon's medical institutions	0.821	10.732	***
Pull15_MIMT1	<---	Pull_MIMT	Lebanon's reputation in medical services / word of mouth	0.786		
Pull17_MIMT3	<---	Pull_MIMT	Reputation of a particular medical provider in Lebanon	0.611	8.365	***
Pull19_MIMT5	<---	Pull_MIMT	More guaranteed results and higher success rate for your-type – of- procedure performed in Lebanon	0.579	7.932	***
Pull18_MIMT4	<---	Pull_MIMT	Experience and reputation of a particular medical doctor	0.363	4.632	***

Pull20_P1	<---	Pulll_P	Price of medical care in Lebanon	0.849		
Pull23_P4	<---	Pulll_P	Prices of tourist good and services in Lebanon	0.727	8.144	***
Pull21_P2	<---	Pulll_P	Value of medical care for price in Lebanon	0.501	6.356	***

**AVE and CR values for pull constructs**

Construct	AVE	CR
Pull_Conv	0.351	0.674
Pull_MIMT	0.426	0.777
Pulll_Price	0.500	0.742
Pull_Des	0.302	0.718

Considering the correlations between the pull construct as summarized in table 7.3, there exists one moderate positive correlation between destination construct and medical institution and medical treatment construct (0.475), which indicates that as the motivation to choose Lebanon for its touristic aspects increases, the motivation to choose Lebanon for its medical aspects increases and vice versa.

**Table 7.3 Pull constructs model correlations**

Construct		Construct	Estimate
Pull_Conv	<-->	Pull_MIMT	0.201
Pull_Conv	<-->	Pulll_Price	0.309
Pull_Conv	<-->	Pull_Des	0.395
Pull_MIMT	<-->	Pulll_Price	-0.066
Pull_MIMT	<-->	Pull_Des	0.475
Pull_Price	<-->	Pull_Des	0.393

The moderate positive correlation between destination and medical institution and medical treatment indicates that as the motivation to choose Lebanon for touristic purposes increases, the motivation to choose it for medical purposes increases and vice versa. This correlation designates, to a certain extent, that medical tourists do not come to Lebanon for medical purposes solely, they rather incorporate tourism activities in their trip. Similarly, destination positively correlates with price and convenience, although a weak correlation, which indicates that as the motivation to choose Lebanon for touristic purposes increases, the motivation to choose it due to convenience and price matters increases, however to a weak extent.

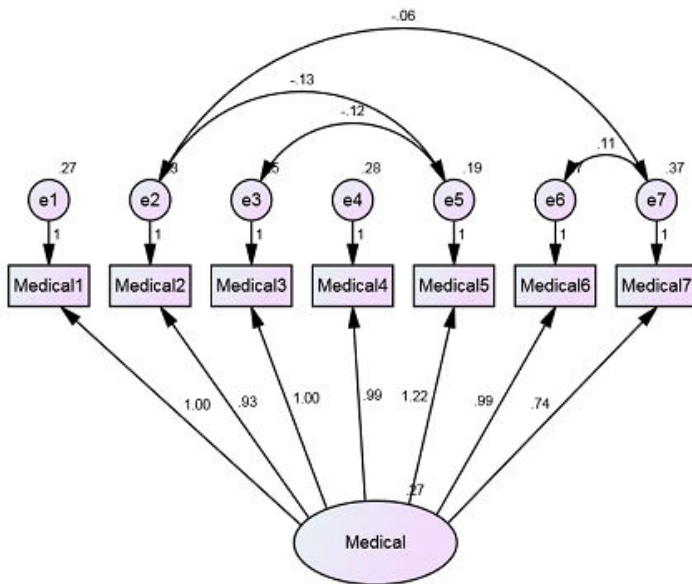
#### *7.4.1.4. Perceived medical quality*

Initially, perceived medical quality was measured by nine items. After subjecting all nine items to CFA, "proximity of the medical institution to other areas" variable was removed due to its very low squared factor loading ( $\lambda$ ) value which is almost zero.

Therefore, the perceived medical quality construct remained with eight items. The eight items were subjected to CFA. The initial indices of fit for perceived medical quality construct were the following: Chi-square ( $\chi^2$ )= 84.035, Chi-square significance= 0.000, df= 20, Normed chi-square ( $\chi^2/df$ )= 4.202, GFI= 0.906, AGFI= 0.831, CFI= 0.883, and RMSEA= 0.123.

The second modifications applied on the perceived medical quality construct excluded another variable which is "prices of medical services" as well as some covariance modifications. The modified model is presented in figure 7.4.

**Figure 7.4 Modified perceived medical quality construct model**



The modifications applied resulted in an improved goodness of fit as the indexes values improved to meet their cutoff criteria. Examination of the standardized loadings signifies that all variables are significantly loading on their factor. The improvement in goodness of fit values as well as factor loadings for perceived medical quality construct are summarized in table 7.4.



**Table 7.4 Goodness of fit improvement and summary of initial findings: Perceived medical quality**

<b>Index</b>	<b>Before modification</b>		<b>After modification</b>	
Chi-square ( $\chi^2$ )	84.035		12.124	
<i>p</i> -value	0.000		0.277	
Normed chi-square ( $\chi^2/df$ )	4.202		1.212	
Goodness-of-Fit index (GFI)	0.906		0.983	
Adjusted Goodness-of-Fit Index (AGFI)	0.831		0.953	
Comparative Fit Index (CFI)	0.883		0.996	
Root Mean Square Error of Approximation (RMSEA)	0.123		0.032	

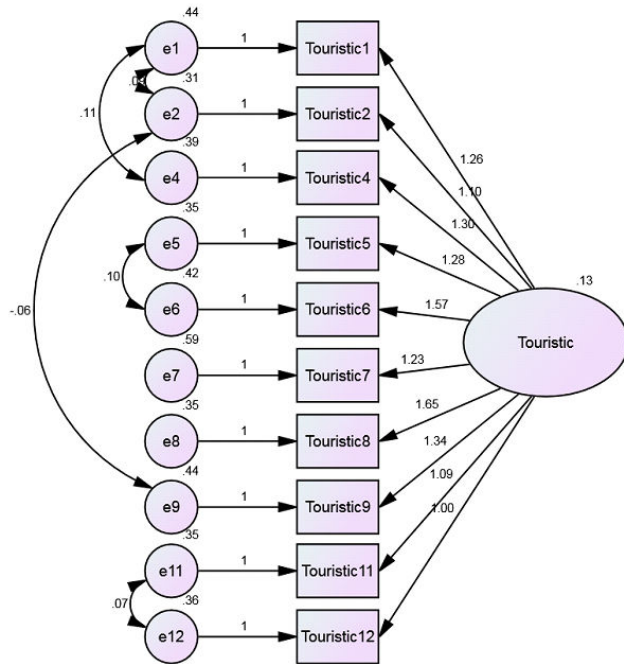
<b>Item</b>		<b>Construct</b>	<b>Item wording</b>	<b>Modified</b>		
				<b>Standardized loading</b>	<b>C.R.</b>	<b>P</b>
Medical3	<---	Medical	Medical doctor	0.724	9.363	***
Medical4	<---	Medical	Medical staff	0.698	9.984	***
Medical5	<---	Medical	Quality of facilities	0.823	10.051	***
Medical6	<---	Medical	Quality of after-care	0.601	8.574	***
Medical7	<---	Medical	Privacy	0.535	7.419	***
Medical1	<---	Medical	Quality of Medical institution	0.709		
Medical2	<---	Medical	Medical procedure	0.707	9.295	***

#### *7.4.1.5. Perceived touristic quality*

Perceived touristic quality is measured in this study by twelve items. All items were subjected to CFA which resulted in initial goodness of fit indices as the following: Chi-square ( $\chi^2$ )= 147.476, Chi-square significance= 0.000, df= 54, Normed chi-square ( $\chi^2/df$ )= 2.731, GFI= 0.896, AGFI= 0.849, CFI= 0.861, and RMSEA= 0.091. Noting that EFA for perceived touristic quality suggested three factors.

The applied modifications excluded two items from the construct as well as some covariance modifications. The items excluded from the perceived touristic quality are "local transportation" and "safety and stability". The modified model is presented in figure 7.5.

**Figure 7.5 Modified perceived touristic quality construct model**



Item	Item wording
Touristic1	Airlines
Touristic2	Accommodation
Touristic4	Money exchange and transfer services
Touristic5	Food and beverage
Touristic6	Shopping experience
Touristic7	Prices of daily consumer product
Touristic8	Attractions and Leisure activities
Touristic9	Friendliness of local community
Touristic11	Weather
Touristic12	Ease of trip planning

The modifications applied resulted in an improved goodness of fit as the indexes values improved to meet their cutoff criteria. Examination of the standardized loadings signifies that all variables are significantly loading on their factor. The improvement in goodness of fit values as well as factor loadings for perceived medical quality construct are summarized in table 7.5.

**Table 7.5 Goodness of fit improvement and summary of initial findings: Perceived touristic quality**

Index	Before modification	After modification
Chi-square ( $\chi^2$ )	147.476	43.666
<i>p</i> -value	0.000	0.051
Normed chi-square ( $\chi^2/df$ )	2.731	1.456
Goodness-of-Fit index (GFI)	0.896	0.962
Adjusted Goodness-of-Fit Index (AGFI)	0.849	0.93

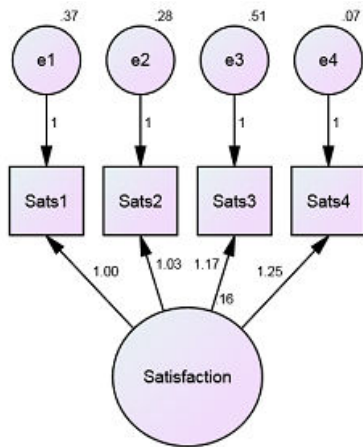
Comparative Fit Index (CFI)		0.861	0.977			
Root Mean Square Error of Approximation (RMSEA)		0.091	0.046			
Item		Construct	Item wording	Modified		
				Standardized loading	C.R.	P
Touristic12	<---	Touristic	Ease of trip planning	0.51		
Touristic11	<---	Touristic	Weather	0.547	6.361	***
Touristic9	<---	Touristic	Friendliness of local community	0.588	5.892	***
Touristic8	<---	Touristic	Attractions and Leisure activities	0.707	6.557	***
Touristic7	<---	Touristic	Prices of daily consumer product	0.496	5.272	***
Touristic6	<---	Touristic	Shopping experience	0.654	6.223	***
Touristic5	<---	Touristic	Food and beverage	0.612	6.089	***
Touristic4	<---	Touristic	Money exchange and transfer services	0.599	5.967	***
Touristic2	<---	Touristic	Accommodation	0.575	5.786	***
Touristic1	<---	Touristic	Airlines	0.561	5.759	***

#### 7.4.1.6. Satisfaction

Satisfaction construct is measured by four items. After conducting CFA to verify the dimensionality of the items and to assess the adequacy fit to the data. The indices of fit for satisfaction construct were the following: Chi-square ( $\chi^2$ )= 5.8, Chi-square significance= 0.055, df= 2, Normed chi-square ( $\chi^2/df$ )= 2.9, GFI= 0.987, AGFI= 0.936, CFI= 0.98, and RMSEA= 0.095. Therefore, CFA analysis suggested that satisfaction construct was acceptable without any

modification as the goodness of fit indices are satisfactory and the items exhibited high loading scores. The satisfaction construct model is illustrated in figure 7.6 and the summary of the initial findings and the goodness of fit indices for the satisfaction construct are presented in table 7.6.

**Figure 7.6 Satisfaction construct model**



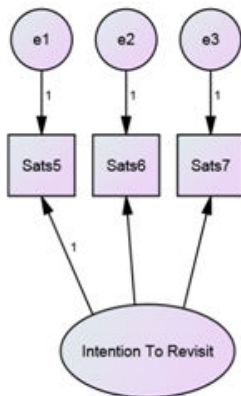
**Table 7.6 Goodness of fit and summary of initial findings: Satisfaction**

Item		Construct	Item wording	Standardized loading	C.R.	P
Sats1	<---	Satisfaction	You are satisfied with the tourism products and services received in Lebanon	0.548		
Sats2	<---	Satisfaction	You are satisfied with the medical services received in Lebanon	0.616	6.49	***
Sats3	<---	Satisfaction	You are satisfied with the prices you paid for tourism and medical products and services in Lebanon	0.548	6.064	***
Sats4	<---	Satisfaction	You are satisfied with the overall experience in Lebanon	0.883	6.363	***

#### 7.4.1.7. Intention to revisit

Intention to revisit were measured by three items; items Sats5 titled "you are willing to come back to Lebanon for medical services in the next two years", Sats6 titled "you are willing to come back to Lebanon for leisure tourism in the next two years" and Sats7 titled "you would recommend Lebanon to a friend of colleague". The items were subjected to CFA which resulted in an unidentified construct. Nevertheless, when intention to revisit construct was uploaded as a component to the final model, the result was no longer unidentified. Therefore, the items were retained for later use in the final overall models. An illustration of the intention to revisit construct is presented in figure 7.7.

**Figure 7.7 Intention to revisit construct model**



To conclude from the above analysis, the measurement construct was all subjected to initial statistical analysis and CFA and they achieved the preferred level of fit indices with the exception of intention to revisit construct. Nevertheless, such results along with satisfactory standardized loading scores confirm the factors and are indicative toward support of the overall measurement model.

#### 7.4.2. Measurement model specification and identification

So far, individual measurement constructs have been tested including all dependent and independent variables. In this process, six items have been excluded from the initial individual constructs to achieve an improved fit.

Assembling the above CFA measurement constructs with an objective to create an overall model that verifies the dimensionality of the measures and represents a comprehensive prospect of the theory. This overall model specification is based on a theoretical framework and research question that is discussed in section 3.10 and the hypothetical illustration presented in figure 3.2.

Accordingly, and as discussed in section 3.10.1, the model will be subjected to SEM with an objective to test the following hypothesis:

*Hypothesis 1: Positive relationship exist between push and pull factors.*

*Hypothesis 1A: Push and destination are positively related.*

*Hypothesis 1B: Push and convenience are positively related.*

*Hypothesis 1C: Push and medical institutions and medical treatment are positively related.*

*Hypothesis 1D: Push and price are positively related.*

*Hypothesis 2: Push factor is positively influencing perceived medical quality.*

*Hypothesis 3: Push factor is positively influencing perceived touristic quality.*

*Hypothesis 4: Pull factors is positively influencing perceived medical quality.*

*Hypothesis 4A: Destination is positively influencing perceived medical quality.*

*Hypothesis 4B: Convenience is positively influencing perceived medical quality.*

*Hypothesis 4C: Medical institutions and medical treatment is positively influencing perceived medical quality.*

*Hypothesis 4D: Price is positively influencing perceived medical quality.*

*Hypothesis 5: Pull factors are positively influencing perceived touristic quality.*

*Hypothesis 5A: Destination is positively influencing perceived touristic quality.*

*Hypothesis 5B: Convenience is positively influencing perceived touristic quality.*

*Hypothesis 5C: Medical institutions and medical treatment is positively influencing perceived touristic quality.*

*Hypothesis 5D: Price is positively influencing perceived touristic quality.*

*Hypothesis 6: Satisfaction is positively influenced by push factor.*

*Hypothesis 7: Satisfaction is positively influenced by pull factors.*

*Hypothesis 7A: Satisfaction is positively influenced by destination.*

*Hypothesis 7B: Satisfaction is positively influenced by convenience.*

*Hypothesis 7C: Satisfaction is positively influenced by medical institutions and medical treatment.*

*Hypothesis 7D: Satisfaction is positively influenced by price.*

*Hypothesis 8: The higher the perceived medical quality, the higher the satisfaction.*

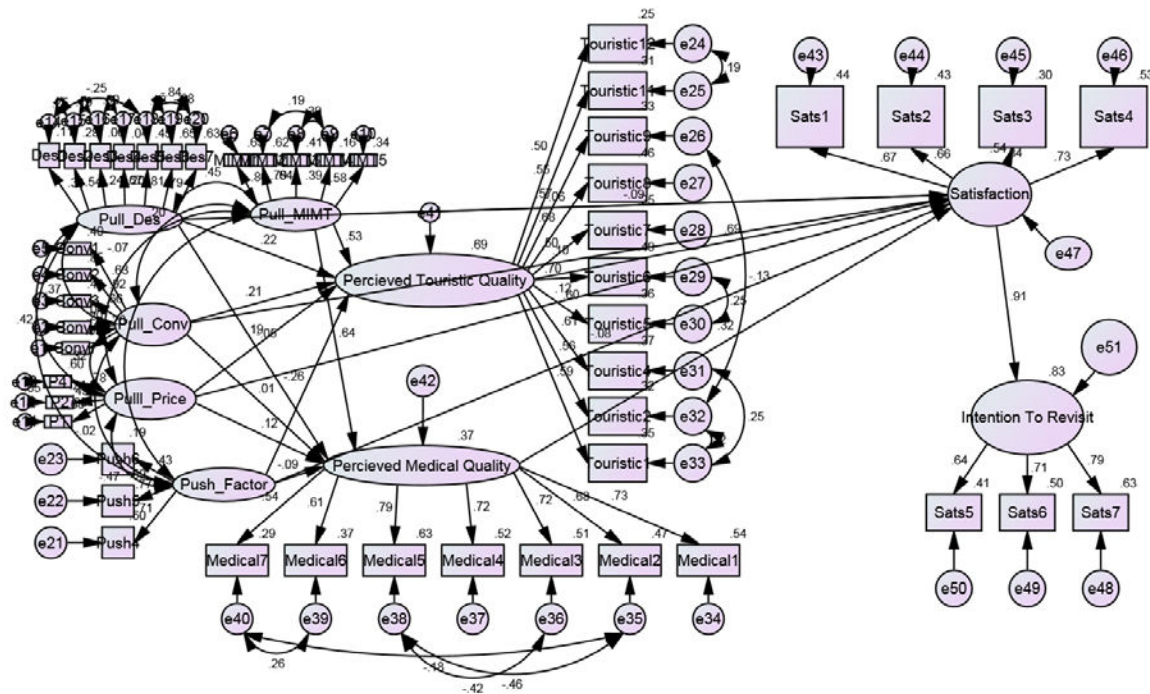
*Hypothesis 9: The higher the perceived touristic quality, the higher the satisfaction.*



*Hypothesis 10: Satisfaction is positively influencing intention to revisit.*

Model identification is a prerequisite of SEM. In summary, the overall model has 1128 distinct sample moments or elements in the covariance matrix, and they represent the number of pieces of information represented by the data, and 140 parameters to be estimated. Therefore, the model has 988 degrees of freedom based on an overidentified model as the number of estimated parameters does not exceed the number of variances and covariances of the observed variables (Byrne, 2006).

**Figure 7.8 Overall measurement model**



### 7.4.3. Measurement Model Evaluation and Modifications

Initially, the individual measurement constructs that were subjected to CFA and the six items that were excluded consequently as discussed in section 7.4.1 was a preliminary step towards achieving an overall model with good fit. Herein, an overall measurement model test has been carried out to test the adequacy of the model. The initial indices of fit for the measurement model

were the following: Chi-square ( $\chi^2$ )= 1971.364, Chi-square significance= 0.000, Normed chi-square ( $\chi^2/df$ )= 1.995, GFI= 0.702, AGFI= 0.659, CFI= 0.767, and RMSEA= 0.069. Figure 7.8 illustrates the AMOS graphic of the initial measurement model and its structural paths.

The model was subjected to several modification steps. First, three negative covariance between errors were removed as presented in table 7.7. Additionally, the item pull10\_Conv4, pull4\_Des4, pull3\_Des3, pull18\_MIMT4 were removed because their  $r^2 < 0.2$ .

A further examination of the loadings indicated that the standardized regression weight for pull1\_Des1 is very low (0.262) and the standardized regression weight for Pull14\_Conv7 is very low as well (0.169). Since AMOS software automatically fixes the first one of the factors standardized loading estimation to 1.00 (Arbuckle, 2008), both pull1\_Des1 and Pull14\_Conv7 were fixed to one automatically. An ad hoc attempt was made by fixing the parameter for other items to one in both constructs which allowed to exclude pull1\_Des1 and Pull14\_Conv7.

As a result, the final overall model was tested with 95 variables (i.e. 41 observed variables and 54 unobserved variables) and the changes in goodness of fit values between the initial and the final model are presented in table 7.8.

**Table 7.7 Covariance error changes from the overall model**

Error		Error	Covariance	
e19	<-->	e20	-0.354	Removed
e18	<-->	e20	-0.399	Removed
e14	<-->	e18	-0.17	Removed

**Table 7.8 The overall model goodness of fit improvement**

<b>Index</b>	<b>Before modification (107 variables)</b>	<b>After modification (95 variables)</b>
Chi-square ( $\chi^2$ )	1971.364	1498.237
<i>p</i> -value	0.000	0.000
Normed chi-square ( $\chi^2/df$ )	1.995	2.022
Goodness-of-Fit index (GFI)	0.702	0.727
Adjusted Goodness-of-Fit Index (AGFI)	0.659	0.682
Comparative Fit Index (CFI)	0.767	0.798
Root Mean Square Error of Approximation (RMSEA)	0.069	0.07

The improvement in fit statistics justify the deletion of the items from different constructs. The retained 95 items in different constructs suggest improved congruity between the sample data and the model.

Further, the error covariance indicates that there is an issue that is not specified by the model that is causing the covariance, hence, a correlated unexplained variance for two indicators. The error covariance that were removed reveal relatively high misspecifications values associated with different items. On the other hand, the added error covariance is between two errors that are on the same construct. The steps were performed with an objective of improving the model's fit.

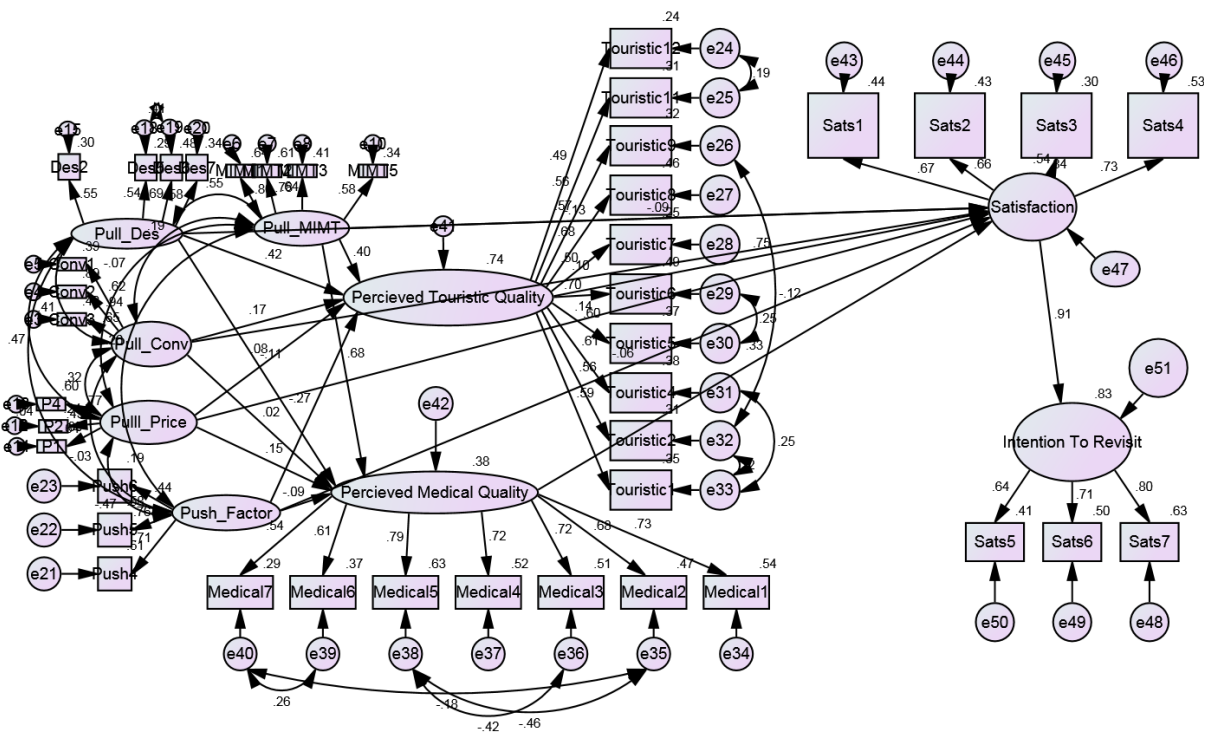
On individual parameters level, the critical ratios (C.R.) values assess the adequacy of each individual parameters of the model. An examination of the C.R. values presented in table 7.9, indicates that all values are above 1.96 and are statistically different from zero which supports the validity of the items that each observed variable serves as measure of its latent variable.

#### 7.4.4. Model estimation (Factor loading)

In preparation for SEM analysis, all factors that can affect model estimation such as missing data, outliers and nonnormality of data distribution were considered and handled as discussed in section 7.2.

The data for the model was entered in AMOSv20 by using the ML estimation technique. AMOS software automatically fixes the first one of the factors standardized loading estimation to 1.00 (Arbuckle, 2008). In addition, AMOS Graphic is used to draw the measurement and structural paths collectively in the modified model as shown in Figure 7.9.

**Figure 7.9 Modified overall measurement model**



Factor loading are interpreted as the direct path from the latent variable (factor) to the observed variable (indicator). The standardised factor loadings are interpreted as correlations between the indicator and its factor. While unstandardised factor loadings are interpreted as the unstandardised regression coefficient. The assumptions are that the indicators of each latent

factor will load respectively onto their latent factor. Push indicators will load onto push latent factor, pull\_Des indicators will load onto pull\_Des latent factor, pull\_Conv indicators will load onto pull\_conv latent factor, pull\_MIMT indicators will load onto pull\_MIMT latent factor, pull\_P indicators will load onto pull\_P latent factor, and so forth.

**Table 7.9 Model's parameter estimates**

**Push Factor**

Item		Item wording	Estimate	Estimate	C.R.	p-value
			(Unstandardised)	(Standardised)		
Push4	<---	Treatment is Available Abroad that is Unavailable Domestically	1	0.714		
Push5	<---	Low success rate for your-type – of- procedure performed	1.021	0.761	7.318	***
Push6	<---	Home doctor recommendation	0.644	0.435	5.214	***

**Destination factor**

Item		Item wording	Estimate	Estimate	C.R.	p-value
			(Unstandardised)	(Standardised)		
Pull2_Des2	<---	Typography and climate in Lebanon	0.764	0.546	6.166	***
Pull5_Des5	<---	Combining medical treatment with vacation	0.731	0.537	7.597	***
Pull6_Des6	<---	Availability of shopping centers	1	0.691		
Pull11_Des7	<---	Advertising in home country	0.876	0.585	5.357	***

**Convenience factor**

Item		Item wording	Estimate	Estimate	C.R.	p-value
			(Unstandardised)	(Standardised)		
Pull9_Conv3	<---	Availability of medical	0.632	0.649	9.059	***

		institutions' brokers				
Pull8_Conv2	<---	Availability of travel agencies medical packages	1	0.942		
Pull7_Conv1	<---	Airline routes and frequency	0.637	0.622	8.033	***

**Medical institution and medical treatment factor**

Item		Item wording	Estimate	Estimate	C.R.	p- value
			(Unstandardised)	(Standardised)		
Pull15_MIMT1	<---	Lebanon's reputation in medical services / word of mouth	1	0.798		
Pull16_MIMT2	<---	International accreditation of Lebanon's medical institutions	0.975	0.783	11.283	***
Pull17_MIMT3	<---	Reputation of a particular medical provider in Lebanon	0.782	0.638	8.779	***
Pull19_MIMT5	<---	More guaranteed results and higher success rate for your- type – of- procedure performed	0.618	0.583	8.176	***

**Price factor**

Item		Item wording	Estimate	Estimate	C.R.	p- value
			(Unstandardised)	(Standardised)		
Pull20_P1	<---	Price of medical care in Lebanon	1	0.8		
Pull21_P2	<---	Value of medical care for price in Lebanon	0.434	0.487	6.571	***
Pull23_P4	<---	Prices of tourist good and services in Lebanon	0.813	0.774	8.661	***

**Perceived Medical Quality factor**

Item		Item wording	Estimate	Estimate	C.R.	p- value
			(Unstandardised)	(Standardised)		
Medical3	<---	Medical doctor	0.96	0.716	9.639	***

Medical4	<---	Medical staff	0.988	0.72	10.363	***
Medical5	<---	Quality of facilities	1.133	0.792	10.482	***
Medical6	<---	Quality of after-care	0.972	0.612	8.671	***
Medical7	<---	Privacy	0.72	0.536	7.417	***
Medical1	<---	Quality of Medical institution	1	0.732		
Medical2	<---	Medical procedure	0.872	0.684	9.362	***

**Perceived Touristic Quality factor**

Item		Item wording	Estimate	Estimate	C.R.	p-value
			(Unstandardised)	(Standardised)		
Touristic12	<---	Ease of trip planning	1	0.495		
Touristic11	<---	Weather	1.152	0.561	6.569	***
Touristic9	<---	Friendliness of local community	1.333	0.565	5.928	***
Touristic8	<---	Attractions and Leisure activities	1.631	0.676	6.56	***
Touristic7	<---	Prices of daily consumer product	1.269	0.496	5.362	***
Touristic6	<---	Shopping experience	1.727	0.697	6.551	***
Touristic5	<---	Food and beverage	1.3	0.604	6.18	***
Touristic4	<---	Money exchange and transfer services	1.372	0.612	6.191	***
Touristic2	<---	Accommodation	1.104	0.561	5.861	***
Touristic1	<---	Airlines	1.367	0.592	6.078	***

**Satisfaction factor**

Item		Item wording	Estimate	Estimate	C.R.	p-value
			(Unstandardised)	(Standardised)		

Sats1	<---	You are satisfied with the tourism products and services received in Lebanon	1	0.666		
Sats2	<---	You are satisfied with the medical services received in Lebanon	0.904	0.656	7.994	***
Sats3	<---	You are satisfied with the prices you paid for tourism and medical products and services in Lebanon	0.961	0.544	6.971	***
Sats4	<---	You are satisfied with the overall experience in Lebanon	0.853	0.73	8.943	***

**Intention To Revisit factor**

Item		Item wording	Estimate	Estimate	C.R.	p-value
			(Unstandardised)	(Standardised)		
Sats7	<---	You would recommend Lebanon to a friend of colleague	1	0.795		
Sats6	<---	You are willing to come back to Lebanon for leisure tourism in the next two years	1.296	0.707	9.547	***
Sats5	<---	You are willing to come back to Lebanon for medical services in the next two years	0.947	0.639	9.195	***

Examination of the loadings in table 7.9 indicated that push6 is loading relatively low (0.435) and pull21\_P2 is also loading relatively low (0.487). However, both items belong to three-items constructs and excluding one item will only result in unidentified factor since a factor should contain a minimum of three variables to be labelled as a factor (Tabachnick and Fidell, 2007).



In summary, factor loading results indicate that almost all items loaded satisfactorily on their respective factors and that no cross-loadings of items on other factors occurred. This fact confirms the convergent validity of the constructs that items of each construct converge into their single factor model.

In addition, the values indicate that the data is satisfactory and clear of problems. Since there are no negative error variance as reported in appendix 10 and no standardised estimation exceeding the value "1", this indicates that the model does not have estimation problems for logically impossible parameters, or what is called, Haywood case. Such case happens when there is a negative error variance or a standardised parameter estimation that exceeds the value of "1" which is theoretically impossible (Hair et al., 2006).

#### **7.4.5. Validity of the Constructs**

The findings reported in table 7.10 indicate that items are indicators of their respective constructs which support the claim of convergent and discriminant validity of the constructs. The standardized factor loadings are satisfactory. Furthermore, the Average Variance Extracted (AVE) and the Composite Reliability (CR) are calculated for each construct. Besides the standardised factor loadings which should be greater than 0.5 (Hair et al., 2006), the recommended CR value should be above 0.70 and above and the recommended AVE value should be above 0.50 to meet the criteria of construct convergent validity (Fornell and Larcker, 1981). Table 7.10 summarizes the AVE and CR values for the constructs in the model.

**Table 7.10 AVE and CR values for the model's constructs**

<b>Construct</b>	<b>AVE</b>	<b>CR</b>
Pull_Conv	0.565	0.79
Pull_MIMT	0.499	0.797
Pull_Price	0.492	0.736
Pull_Des	0.352	0.682
Push_Factor	0.426	0.679
Perceived Touristic Quality	0.347	0.84
Perceived Medical Quality	0.475	0.862
Satisfaction	0.426	0.746
Intention To Revisit	0.513	0.758

Examination of the values in table 7.10 indicate that the CR values are all above the cut-off criterion of 0.70 except for the destination and the push constructs. While the AVE values are slightly lower than 0.50 for most construct. However, taking a second look at the results of table 7.9 indicate that almost all items loaded satisfactorily on their respective factors and that no cross-loadings of items on other factors occurred. Such fact supports the convergent validity of the constructs. Considering the reliability of the variables, Chronbach's Alpha test result for all 41 variables is 0.906. which indicates that the applied modifications resulted in an increased reliability as it was 0.893 for the initial 58 variables.

#### **7.4.6. Correlations between unobserved (latent) variables**

The next step towards gaining theoretical precision from the data is examining the correlation between construct measures. Table 7.11 represents the correlations between push and pull constructs.

**Table 7.11 Implied correlation between push and pull constructs**

Construct		Construct	Estimate	P-value
Pull_Conv	<-->	Pull_MIMT	0.186	0.024
Pull_Conv	<-->	Pulll_Price	0.322	***
Pull_Conv	<-->	Pull_Des	0.408	***
Pull_Conv	<-->	Push_Factor	-0.03	0.73
Pull_MIMT	<-->	Pulll_Price	-0.07	0.433
Pull_MIMT	<-->	Pull_Des	0.553	***
Pull_MIMT	<-->	Push_Factor	0.261	0.006
Pulll_Price	<-->	Pull_Des	0.467	***
Pulll_Price	<-->	Push_Factor	-0.47	***
Pull_Des	<-->	Push_Factor	-0.038	0.717

Observation of table 7.11 indicates a significant correlation for most constructs. There are some moderate positive correlations between destination and convenience (0.408), destination and medical institutions and medical treatment (0.553) and destination and price (0.467). There is also one moderate negative correlation between push and price (-0.47) which indicates that as the need to leave the home country to seek medical care abroad increases, the motivation to choose Lebanon because of price decreases. Thus, the reason for choosing Lebanon is not price. This result refutes H1D that push and price are positively related. On the other hand, destination correlates positively with other pull factors indicating that as tourists are more motivated to choose to Lebanon for its touristic aspects, the motivations related to convenience, price and medical aspects increases.

Some of the correlations could be further highlighted when interpreting the hypothesis findings and results of the model further on.

Spearman's 'rho' correlation tests were individually conducted on indicators level between push and pull variables and the results are displayed in appendix 11. Notably, the strong rho correlations are between variables that belong to the same constructs which confirms with the SEM outcome.

### **7.5. Hypothesis testing**

All the assumptions that should be considered before testing the model with SEM (i.e. adequate sample size, dealing with missing data and outlier and normality) were previously discussed and examined. Furthermore, the measurement construct was subjected to initial statistical analysis and CFA and the results were acceptable and indicative toward support of the overall measurement model. The main conclusion of the examination of the SEM assumptions is that the data of the current study is adequate for hypothesis testing using SEM.

The central research question of this study is posited to understand medical tourists' preferences for medical tourism destination, the effect of those preferences on their perception of quality, satisfaction and intention to revisit. The proposed framework and a set of hypotheses were developed in section 3.10. The proposed modified model including all hypothesised paths is illustrated in figure 7.9.

This section will present the detailed SEM results for the path relationships. The hypothesised path results of the modified model are reported to test the hypothesis.

**Table 7.12 Summary of hypotheses testing**

Hypothesis	Path		Standardized Estimate $\beta$	C.R.	P-value	Result	
H1A	Pull_Des	<->	Push_Factor	-0.038	- 0.362	0.717	Rejected
H1B	Pull_Conv	<->	Push_Factor	-0.03	- 0.345	0.73	Rejected
H1C	Pull_MIMT	<->	Push_Factor	0.261	2.763	0.006	Accepted
H1D	Pulll_Price	<->	Push_Factor	-0.47	- 4.459	***	Accepted
H5C	PercievedTouristicQuality	<---	Pull_MIMT	0.404	3.316	***	Accepted
H4C	PercievedMedicalQuality	<---	Pull_MIMT	0.683	4.827	***	Accepted
H5A	PercievedTouristicQuality	<---	Pull_Des	0.423	2.653	0.008	Accepted
H4A	PercievedMedicalQuality	<---	Pull_Des	-0.109	- 0.677	0.498	Rejected
H5B	PercievedTouristicQuality	<---	Pull_Conv	0.172	2.266	0.023	Accepted
H4B	PercievedMedicalQuality	<---	Pull_Conv	0.023	0.302	0.762	Rejected
H5D	PercievedTouristicQuality	<---	Pulll_Price	0.08	0.672	0.502	Rejected
H4D	PercievedMedicalQuality	<---	Pulll_Price	0.148	1.142	0.253	Rejected
H3	PercievedTouristicQuality	<---	Push_Factor	-0.269	- 2.856	0.004	Accepted
H2	PercievedMedicalQuality	<---	Push_Factor	-0.09	- 0.957	0.339	Rejected
H7C	Satisfaction	<---	Pull_MIMT	-0.091	- 0.691	0.49	Rejected
H7A	Satisfaction	<---	Pull_Des	-0.131	- 0.814	0.416	Rejected
H7B	Satisfaction	<---	Pull_Conv	0.099	1.491	0.136	Rejected
H7D	Satisfaction	<---	Pulll_Price	0.144	1.379	0.168	Rejected

H6	Satisfaction	<---	Push_Factor	-0.059	-0.64	0.522	Rejected
H8	Satisfaction	<---	PercievedMedicalQuality	0.326	4.335	***	Accepted
H9	Satisfaction	<---	PercievedTouristicQuality	0.752	3.71	***	Accepted
H10	IntentionToRevisit	<---	Satisfaction	0.908	9.15	***	Accepted

The SEM findings reported in table 7.12 are assessments of hypothesis based on the p-value and estimated path coefficient  $\beta$  value with critical ratio (C.R.). Significant paths are assessed in this study based on the significance value  $\leq 0.05$  and the C.R. exceed the value of  $\pm 1.96$ . The results assess whether the hypothesis is accepted or rejected. The reported p-values in the table show that there are ten significant paths (p value is  $\leq 0.05$ ) the C.R. values of those paths exceed the value of  $\pm 1.96$ . As a result, ten hypotheses are supported.

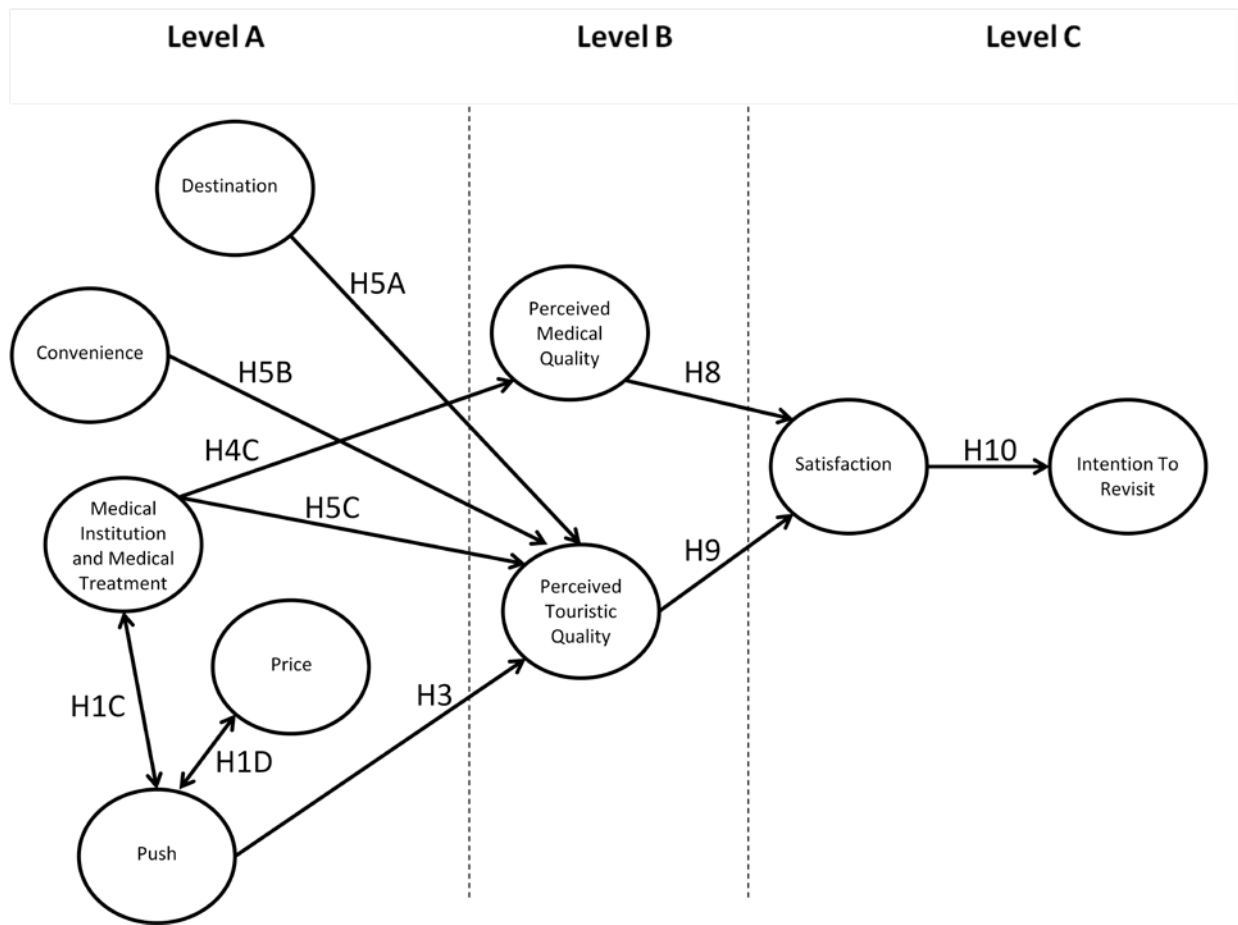
Therefore, H1 is partially accepted as only H1C (i.e. path coefficient= 0.261, p <0.05) and H1D are accepted (i.e. path coefficient= -0.47, p <0.05). H2 is rejected, H3 is accepted (i.e. path coefficient= -0.269, p <0.05), H4 is partially accepted as only H4C is accepted (i.e. path coefficient= 0.683, p <0.05), H5 is mostly accepted as H5A (i.e. path coefficient= 0.423, p <0.05), H5B (i.e. path coefficient= 0.172, p <0.05) and H5C (i.e. path coefficient= 0.404, p <0.05) are all accepted and only H5D is rejected , H6 is rejected, H7 is rejected, H8 is accepted (i.e. path coefficient= 0.326, p <0.05), H9 is accepted (i.e. path coefficient= 0.752, p <0.05), H10 is accepted (path coefficient= 0.908, p <0.05).

Reviewing the path coefficient  $\beta$  value, there are two positive strong effects as  $\beta$  values for H9 (0.752) and H10 (0.908) indicating that the touristic dimension has more impact on satisfaction than medical dimension. Moreover, there is a moderate negative effect for H1D as  $\beta$  values is (-0.47). Path coefficient  $\beta$  values for the rest of the significant paths will be highlighted and further discussed in chapter eight.

Excluding all insignificant paths from the hypothesised model and keeping only the significant paths, a new illustration will result as a conclusion and result of the CFA and SEM employment.

Figure 7.10 illustrates the deduced model with only significant paths.

**Figure 7.10 Resulting model with significant paths**



### 7.6: Summary

This chapter represents the results of the quantitative tests and analysis. The chapter began with examination of the data characteristics as they were screened for missing values, outliers and nonnormality in order to obtain better results of the quantitative tests. In addition, the variables were subjected to Cronbach's Alpha test to measure their reliability.

The EFA results reported in this chapter led to the deletion of three items from the push subset. As for the results obtained from subjecting each construct to CFA, six items were excluded from the initial individual constructs in order to achieve an improved fit.

The highlight of the confirmatory findings was reported in the last sections of the chapter which reported the SEM analysis via model specification and identification, model evaluation and modification and model estimation. The SEM analytical steps yielded in hypothesis testing through examining the significant correlations and regressions that exist in the model along with their C.R. and  $\beta$  values. There were ten accepted hypotheses which led to the development of the final model with significant paths.



## **Chapter 8: Discussion**

### **8.1. Introduction**

This chapter will discuss the study findings in levels. First, there will be a discussion of the hypothesis test findings which will be carried out in line with the causality sequence of the model. Second, based on the descriptive findings extrapolated from the survey questionnaire data and the qualitative interviews, various segments of medical tourists coming to Lebanon will be identified and evaluated. The segments will be identified based on demographic elements as well as elements applicable to medical tourism; such as type of procedure pursued, number of accompanying family members and friends, trip budget, and previous medical travel experience.

The third stage will address the managerial level or what has been identified earlier as suppliers of medical tourism. The findings of the study will be molded into beneficial guidelines and proposals addressed to the corporate and business sector of medical tourism. Mainly, they are addressed to medical centers administrators, hotels operators and travel agencies.

Next, the findings will be broadened to serve Lebanon as a destination for medical tourism. The objective at this level is promoting Lebanon as a destination for medical tourism and supporting the various sectors that shape this industry in Lebanon. The proposals and recommendations at this level are addressed to national officials and key decision makers in the fields of healthcare and tourism.

### **8.2. Discussion of hypothesis test findings**

Out of the proposed hypothesis, 10 are significant. The discussion of the hypothesis tests findings will be presented in line with the causality sequence of the model which is inspired by the five-step decision making process theory. The first measurement is between push and pull

factors. The second measurement is the effect of push and pull factors on perceived medical and touristic quality. The third measurement is the effect of perceived medical and touristic quality on satisfaction. The fourth measurement is the effect of satisfaction on intention to revisit. Finally, the overall model will be discussed in view of the research question. In comparison with five-step decision making process theory, the measurements harmonize with the five steps; problem recognition, information search, evaluation of alternatives, purchase and outcomes of purchase.

### **8.2.1. The correlation between push and pull factors**

The relationship between push and pull is an undirected relationship representing covariances between push and pull factors in the model. The first measurement is related to H1 which is a positive correlation between push and pull factors in the model. Among the hypothesized relationships between push and pull factors, two significant relationships exist; one between push and medical institution and medical treatment (H1C) and the estimated standardized  $\beta$  value of which is 0.261 and another between push and price (H1D) and the estimated standardized  $\beta$  value of which is -0.47.

The standardized coefficients for "medical institution and medical treatment" and "price" are expressed in terms of correlations since both factors are involving one predictor, an undirected relationship between each of the push and pull factors. Accordingly, there is a significant weak positive correlation between push and medical institution and medical treatment,  $r= 0.261$  and a significant moderate negative relationship between push and price,  $r= -0.47$ . While there are no significant relationships between push and destination (H1A) or between push and convenience (H1B).

Notably, the three variables that remained in the push factor are related to the local medical system in the tourist home country in terms of availability of treatment, success rate of the treatment and home doctor recommendation to travel abroad. Therefore, what is compelling tourists to leave their home country is the deteriorating local medical systems, not the prices, nor waiting time, nor the inadequate insurance at home.

The moderate negative correlation between push and price indicates that as the need to leave the home country increases or as patients are motivationally pushed out of their country to seek medical care abroad, attractiveness to choose Lebanon because of price decreases. Therefore, the reason for choosing Lebanon is not price. A deeper examination of the correlations between the two factors "push" and "price" designate that the strongest coefficient is -0.285 and it is between the variable "low success rate for your-type – of- procedure performed" and the variable "price of medical care in Lebanon".

A reflection on the variables that were excluded from the push factor calls for comparison with mainstream medical tourism literature. Such findings contradict with several previous studies that examined the motivations of medical tourist. Relative to price, Connell (2006); Horowitz, Rosensweig and Jones (2007); Smith and Forgione (2007); Yap (2007); Cortez (2008); Crooks et al. (2010); Woodman (2008); Peters and Sauer (2011); An (2014); Heung, Kucukusta and Song, (2010); Menvielle et al. (2011) as well as many others comprehensively argue that the price is main reason behind the movement of medical tourists and seeking medical care abroad. Relative to length of waiting time, several authors such as Crooks et al. (2010); Guy, Nevins Henson and Dotson (2015); Horowitz, Rosensweig and Jones (2007); Lunt et al. (2011) and Peters and Sauer (2011) argue that the long waiting time to start the treatment at home is a main reason for seeking medical care abroad. As for inadequate home insurance, Crooks et al. (2010); Guy,

Nevins Henson and Dotson (2015); Horowitz, Lunt et al. (2011); Peters and Sauer (2011); Rosensweig and Jones (2007); Turner (2010) argue that the lack of medical insurance in home country plays a role in pushing patients to travel abroad for medical care since the option for travelling and seeking medical care is more feasible and affordable for uninsured people.

The inconsistency with main literature with regards to the motivational factors for leaving home country and seeking medical care abroad, in other words, push factors, puts forward a significant exclamation that calls for an answer.

Previous literature on the phenomenon of medical tourism view it as the movement of patients from developed countries to developing countries. Such perception is based on several definitions of medical tourism including the definition of Connell (2006); Horowitz, Rosensweig and Jones (2007); Awadzi and Panda (2005) as well as others mentioned in section 2.2. Therefore, previous studies and researches were based on the consumer/medical tourist being a resident of a developed country such as USA or Canada. Nevertheless, there are destinations around the world experiencing medical tourism by tourists coming from developing countries and countries with deteriorating healthcare systems. Thus, the aforementioned perception of medical tourism would not apply in such destinations since the consumer behavior, being medical tourists, is demographically and culturally different. Therefore, such cases call for a reconsideration of the proposed definitions of medical tourism in the mainstream literature.

Going back to H1, the only positive relationship that exist between push and pull factors is between "push" and "medical institution and medical treatment", yet it is weak. An in-depth examination on the correlations between the variables in both factors designate that the strongest r coefficient is 0.158 between "low success rate for your-type – of- procedure performed" and "Lebanon's reputation in medical services / word of mouth". Therefore, as the need to leave the

home country because of deteriorating medical quality increases, the attractiveness to choose Lebanon due to its reputation in medical services increases.

As a result, H1 is partially accepted. Of the pull factors, only MIMT is significantly positively correlated with push. Price is significantly negatively correlated with push while convenience and destination do not have any significant relationship.

Since only one weak positive significant correlation exist, between push and medical institution and medical treatment, this means that push and pull factors are mainly not jointly related in medical tourism. If they were to be, the medical aspects are the grounds for this reciprocal relationship. Reflecting on the previous literature, the findings seem inconsistent with the theory of Dann (1981) and Oh, Uysal, and Weaver (1995) that the push and pull factors are jointly related and that pull factors can trigger intrinsic motivations does not apply in medical tourism with the exception of price. The findings do not cohere as well to the previous study on wellness tourism by Hallab (1999) which states that there is reciprocal interaction between healthy-living behavior and wellness travel choices with respect to certain push and pull factors (Hallab, 1999).

On the other hand, this study built its theoretical framework around the five-step model of decision making process which states that consumers' purchase evaluation passes through five steps (Engel et al. 1968). The steps according to the model are not reciprocal but sequential as they start with need recognition and end with outcomes of purchase. Section 3.7.1 interfaced push-pull theory and the five-step decision making process. In view of that, step one corresponded to push motivations while steps two and three corresponded to pull motivations. Accordingly, the push-pull relationship outcome of this study consists with five-step decision making process in the aspect that push and pull motivations are separate steps of decision making process that are not jointly related.

A related point to consider while examining the pull side of the motivational factors is that 51.2% of repetitive and first-time medical tourists did not consider any other destination before choosing Lebanon. This could suggest that tourists did not do comparative shopping before coming to Lebanon and this contradicts with other, particularly US medical tourists' behaviour examined in previous studies (Gill and Singh, 2011; Guy, Nevins Henson and Dotson, 2015; Peters and Sauer, 2011). It also suggests that Lebanon possesses a competitive advantage relative to other regional destination and/or that Lebanon's pull factors, rather than push, are the main driver behind the tourists' medical travel.

Taking a look at the frequency distribution to explore the pull variables that drove medical tourists to Lebanon, "more guaranteed results and higher success rate for your-type – of procedure performed in Lebanon" achieved the highest mean (4.36), followed by "reputation of a particular medical provider in Lebanon" (4.24), "Lebanon's reputation in medical services / word of mouth" (4.23) and "experience and reputation of a particular medical doctor" (4.21). This means that medical tourists coming to Lebanon are strongly attracted by its medical aspects.

The remainder of answers for the question of destinations that were considered before choosing Lebanon were spread between Amman (15.8%), Dubai (12%), Istanbul (10%), Riyadh (3.1%) and other destinations (7.9%) which makes Amman, Dubai and Istanbul the main competitors for Beirut. See appendix 1 for more information on medical tourism in these destinations.

### **8.2.2. The effect of push and pull factors on perceived medical and touristic quality**

This subsection examines the effect of motivational factors on perceived quality, in other words, the pre-purchase motivations on post purchase quality feedback. As shown in table 7.12 there are four significant path coefficients from the four pull factors to perceived medical quality and

perceived touristic quality and one significant path from the push factor to perceived touristic quality.

Perceived medical quality is a recipient of one significant path from medical institutions and medical treatment as H4C is accepted. In other words, only medical institutions and medical treatment is a significant contributor to predicting perceived medical quality. The estimated standardized  $\beta$  value is 0.683. which means that if medical institution and medical treatment were increased by one standard deviation, perceived medical quality would be expected to increase by 0.683 standard deviations. Thus, the pre-purchase medical institutions and medical treatment motivational factor affect the post purchase perceived medical quality while controlling for the correlated effects of other predictors.  $r = 0.594$  which indicates a moderate positive correlation.

The squared multiple correlations for perceived medical quality is  $r^2 = 0.384$  which represents the proportion of total variance in perceived medical quality (38%) that is explained by the linear relationship between perceived medical quality and the weighted combination of factors affecting it (i.e. push, destination, convenience, medical institution and medical treatment and price).

Considering the frequency of answers in the medical quality feedback subset, "medical doctor" had the mean (4.42) followed by "medical procedure" (4.30). These figures consist with the qualitative results of the conducted interviews as almost all interviewees confirmed that highly-qualified physicians are the primary reason for medical tourism in Lebanon.

As for perceived touristic quality, it is a recipient of four significant paths from push and pull factors. First, a significant path coefficient from destination to perceived touristic quality (H5A)

with an estimated standardized  $\beta$  value of 0.423. which means that if destination were increased by one standard deviation, perceived touristic quality would be expected to increase by 0.423 standard deviations. The  $r= 0.765$  which indicates strong positive relationship. In other words, medical tourists who were highly motivated by the touristic aspects of the destination before pursuing their trip are perceiving good and very good quality from their experience.

Another significant path from convenience to perceived touristic quality (H5B) with an estimated standardized  $\beta$  value of 0.172. If convenience were increased by one standard deviation, perceived touristic quality would be expected to increase by 0.172 standard deviations. The  $r= 0.454$  which indicates a moderate positive relationship between convenience and perceived touristic quality.

The other pull factor that affects perceived touristic quality is medical institutions and medical treatment (H5C). The estimated standardized  $\beta$  value is 0.404 indicating that if medical institution and medical treatment were increased by one standard deviation, perceived touristic quality would be expected to increase by 0.404 standard deviations.

The strong positive effect of destination on perceived touristic quality (H5A) and the medium positive effect of medical institutions and medical treatment on perceived touristic quality (H5C) call for special consideration since perceived touristic quality has strong positive influence on satisfaction ( $\beta= 0.752$ ) which will be discussed further in the following section.

Considering the push component of pre-purchase motivations, the push factor has a significant path to perceived touristic quality (H3) and the estimated standardized  $\beta$  value is -0.269. Hence, if push factor were increased by one standard deviation, perceived touristic quality would be expected to decrease by 0.269 standard deviations. This negative relationship indicates that as



the pre-purchase motivation to leave the home country and seek medical care abroad increases, the post purchase perceived touristic quality decreases. This can be explained by the reasons that pushed the tourists to leave their home countries and they are related to the incapable local medical system as discussed in the previous subsection. Therefore, the tourist that is compelled to leave home country and seek medical tourism abroad is less likely to enjoy the touristic aspects of the destination and would keep more on the medical reason for travel. On the other hand, the medical tourist who deliberately chose medical tourism is more likely to enjoy touristic aspects of the destination.

The squared multiple correlations for perceived touristic quality is  $r^2 = 0.736$  which represents the proportion of total variance in perceived touristic quality (almost 74%) that is explained by the linear relationship between perceived touristic quality and the weighted combination of factors affecting it (i.e. push, destination, convenience, medical institution and medical treatment and price).

A comparison between the estimated standardized  $\beta$  values of significant paths to perceived touristic quality assesses the strength of relationship between each predictor or exogenous factor (pull and push factors) to the criterion or endogenous factor (perceived touristic quality). The higher the beta value, the greater the impact of the predictor on the criterion. The comparison reveals that the direction of relationship from all the pull factors to perceived touristic quality is positive. Destination has the strongest effect (0.423), followed by medical institution and medical treatment (0.404) and convenience (0.172). Accordingly, an expected increase in post purchase perceived quality can be realized through working on increasing the motivation pull factors relating to primarily destination and medical institution and medical treatment since both

attribute to a considerable portion of the criterion increase and secondarily on convenience as it attributes to a lesser portion of the criterion increase.

It is notable that medical institution and medical treatment is a pull factor that positively affects both perceived medical and perceived touristic quality. Moreover, the highest means among the pull variables frequency distribution go to this factor. Thus, an enhanced medical institution and medical treatment pull motivation would yield its positive outcomes on total perceived quality.

As for the touristic quality feedback, the frequency of answers revealed that "food and beverage" had the highest mean (4.28) followed by "accommodation" (4.16). This statistic is an empirical confirmation with the title that Beirut won for being "the best international city for food" for year 2017 by Travel and Leisure Magazine (Lieberman, 2017).

A reflection on the perceived quality literature and the main service quality diagrams discussed in section 3.4 indicate that the study findings consist with the disconfirmation diagram (Parasuraman et al., 1985). The significant paths from push and pull factors to perceived medical and perceived touristic quality designate that expectations (i.e. motivations) constitute a component of perceived quality measurement (perceptions-expectations=perceived quality). Accordingly, H4C indicated that perceived medical quality is influenced by pull motivations associated with medical attributes. Similarly, H3, H5A, H5B and H5C indicate that perceived touristic quality is affected by push motivations as well as by pull motivations associated with destination, convenience and medical attributes.

### **Price**

The only pull factor that does not have any significant path to either perceived medical quality or perceived touristic quality is price. Therefore, price as a pre-purchase motivation does not affect

the post purchase quality feedback. Considering the frequency distributions among the pull variables, the lowest mean (2.86) is for the variable "your health insurance covers treatment in Lebanon" which belongs to the price factor. This lowest mean can be explained by the fact that 89.2% of medical tourists do not have insurance coverage for their medical procedure in Lebanon. Another low mean (2.92) is for the variable "prices of tourist good and services in Lebanon" which also belongs to the price pull factor. On the other hand, "price of medical care in Lebanon" did not have a low mean compared to other pull variables (the mean was 3.43).

Reflecting on the feedback of qualitative interviews, cost of medical care was a subject of discrepancy as one respondent claimed that medical tourists coming to Lebanon are targeting quality and willing to pay the current prices while other claimed that tourist' perception of current prices of medical services in Lebanon is subject to the economic condition of their home country. Some tourists coming from countries with a poor economy would consider prices relatively expensive while others coming from countries with rich economy would find prices reasonable.

Examining the frequency of answers in the quality feedback subsets, "prices of medical services" had the lowest mean (3.37) in the medical quality feedback subset and "prices of daily consumer product" had the lowest mean (3.31) in the touristic quality feedback subset.

The figures extrapolated from the frequency distributions indicate that price, including medical, touristic and daily consumer prices is not a competitive advantage for Lebanon. It has the lowest mean among the pull variables and among both medical and touristic quality feedback variables. The findings are consistent with the result of the moderate negative correlation between push and price discussed in the previous subsection which also deduce that the reason for choosing Lebanon is not price.

As discussed earlier in the subsection 8.2.1., such findings seem inconsistent with the theoretical expectation as well as the findings of a number of past studies that stressed price as a reason for medical travel including Deloitte Center for Health Solutions (2008); Connell (2006); Cortez (2008); Horowitz, Rosensweig and Jones (2007). Nevertheless, from a different context, it is consistent with findings in other studies that stressed quality of product instead of lower price as a reason for medical travel McKinsey and Company (2008).

### **8.2.3. The effect of perceived medical and perceived touristic quality on satisfaction**

Table 7.12 shows two significant path coefficients to satisfaction. The first is from perceived medical quality, the estimated standardized  $\beta$  value of which is 0.326. The second is from perceived touristic quality to satisfaction, the estimated standardized  $\beta$  value of which is 0.752. Both factors have a positive relationship with satisfaction. Therefore, an increase in any of them would lead to an increase in satisfaction and vice versa. It is notable that the  $\beta$  value for perceived touristic quality is higher than the  $\beta$  value for perceived medical quality. Accordingly; satisfaction, being an endogenous factor, is more strongly influenced by a change in perceived touristic quality than change in perceived medical quality.

The squared multiple correlations for satisfaction is  $r^2= 0.841$  which represents the proportion of total variance in satisfaction (84%) that is explained by the linear relationship between satisfaction and the weighted combination of factors affecting it (perceived medical quality and perceived touristic quality).

Moreover, table 7.12 reveals that no significant relationship exists between push factor and satisfaction and no significant relationship exist between any of the pull factors and satisfaction. As H6, H7A, H7B, H7C and H7D are all refuted. Therefore, no direct relationship exists

between motivational factors and satisfaction. The relationship is mediated by perceived medical and touristic quality.

Reflecting on satisfaction literature by Fornell et al. (1996); Kaplan et al. (2007) and Song et al. (2012), satisfaction is considered a latent variable that is understood by the antecedents determining it and consequences resulting from it as well as all the relationships among all its components. Accordingly, the significant antecedents of satisfaction in the study's model are perceived medical quality and perceived touristic quality whereas, push and pull motivations are not significant antecedents of satisfaction. Hence, the study findings are not consistent with the cognitive approach adopted by Chen and Chen, 2010; Huh et al., 2006; J. Lee and Beeler, 2009; Pizam and Milman, 1993; Yoon and Uysal, 2001; Huh et al., 2006; Meng et al., 2008 that satisfaction is a function of customer's motivation.

On the other hand, the study findings are consistent with Tse and Wilton (1988) and Alegre and Garau (2010) that tourists' satisfaction is a function of the evaluation of the destination's actual performance. It is worth mentioning at this point, the argument of Yoon and Uysal (2005) which implies that Tse and Wilton (1988) model holds true only for first time tourists and that repetitive tourists develop pre-visit expectations of the destination which consequently affect their satisfaction. The survey statistics reveals that 62.4% of repeated medical tourists are choosing Lebanon again for medical care, 85.3% of them agreed and strongly agreed on their satisfaction with the overall experience in Lebanon. Linking this fact with refuted results of H6, H7A, H7B, H7C and H7D, implies that the study findings with regards to repetitive medical tourists to Lebanon are not consistent with the Yoon and Uysal (2005) argument.

#### **8.2.4. The effect of satisfaction on intention to revisit**

The highest estimated standardized  $\beta$  value in the model is for the path coefficient from satisfaction to intention to revisit which is 0.908. In other words, medical tourists who are satisfied with their experience are strongly willing to come back again to the destination.

The  $r^2$  for intention to revisit is 0.825 which represents the proportion of total variance in intention to revisit (83%) that is explained by the linear relationship between intention to revisit and the satisfaction affecting it.

The findings in this section and the previous one is consistent with the previous literature of Lee and Beeler (2009) that service quality is the strongest predictor of satisfaction which is the predictor of future intention to revisit. The findings are also consistent with the study of Kim and Brown (2012) on the impact of perceived travel experiences and tourist characteristics on overall satisfaction and destination loyalty, particularly in nature-based settings. Moreover, the findings are consistent with the tourism destination loyalty theory discussed by Yoon and Uysal (2005). Finally, the findings imply that satisfaction will result in positive word-of-mouth and recommendation to friends and family which is consistent with Bramwell, (1998) and with Oppermann (2000).

#### **8.2.5. The overall model relationships**

Reflecting on the main research question which is to understand medical tourists' motivations for medical tourism destination, the effect of those motivations on their perception of quality, satisfaction and intention to revisit. Additionally, to explore the various characteristics of medical tourists which yield in classifying them into different segments.

Motivations are the starting point in the model and they are classified into push and pull. Although push is a factor that cannot be controlled as it is related to the healthcare systems in the

tourists' home countries, however its examination can lead to interpreting significant implications, particularly with respect to price of medical care since the relationship between push and price is negative.

As the healthcare systems in tourists' home countries deteriorate and become incapable, the incoming medical tourists will be more focused on medical aspects of the trip and less on the touristic aspects of the trip because they will be more compelled to travel for medical care rather than choose to travel for medical care. This is explained by the negative relationship between push and perceived touristic quality. This result consists with Horowitz and Rosensweig (2007, p. 25) comment "as the seriousness of the medical situation increases, the recreational aspects of travel have diminishing importance".

Moreover, they will be more price sensitive as they will have to pay for travel and accommodation expenses which were not considered initially. In addition, the deteriorating healthcare systems in regional countries are reflections of deteriorating economic situations. In view of that, perceptions of prices in Lebanon for medical tourists coming from those countries is influenced.

The findings indicate that the pull factors requiring special consideration are destination and medical institution and medical treatment. Destination moderately influence perceived touristic quality which strongly influence satisfaction. Medical institutions and medical treatment moderately influences perceived touristic quality as well as solely and moderately influences perceived medical quality which effect satisfaction. All influences are positive. Therefore, the findings suggest some highlights to consider.

The strongest destination variables that drew medical tourists to Lebanon are "combining medical treatment with vacation" (mean= 4.00) and "proximity to country of residence" (mean= 3.77). While the strongest medical institutions and medical treatment variables that drew medical tourists to Lebanon are "more guaranteed results and higher success rate for your-type – of-procedure performed in Lebanon" (mean= 4.36) and "Reputation of a particular medical provider in Lebanon" (mean= 4.24) and "Lebanon's reputation in medical services / word of mouth" (4.23).

The high means of the aforementioned variables indicate that in order to have more medical tourists drawn to Lebanon because of its pull factors, emphasis is required to be given to promote "destination" and "medical institution and medical treatment" factors in tourists' feeder markets through promoting their strong variables. The implications will be discussed later in section 8.5 This emphasis will also yield in higher perceived quality of the experience as those motivational factors significantly and positively influence the tourists' perception of medical and touristic quality in Lebanon.

Although perceived medical quality has a fairly weak positive effect on satisfaction, however it possesses a vital role that cannot be ignored as satisfaction in a medical trip cannot be a solo outcome of its touristic experience. Accordingly, the strongest variables in the perceived medical quality subset are "medical doctor" (mean= 4.42), "medical procedure" (mean= 4.30) and "medical staff" (mean= 4.19). On the other hand, the weakest variables are "prices of medical services" (mean= 3.37) and "quality of after-care" (mean= 4.00) The strongest variables constitute a solid ground that needs to be maintained while the weakest variables are areas for improvement. The improvements will be informed of policies and practices discussed in section 8.4.



As for perceived touristic quality which has a strong positive effect on satisfaction, the strongest variables in its subset are "food and beverage" (mean= 4.28) and "accommodation" (mean= 4.16). On the other hand, the weakest variables are "local transportation" (mean= 3.58) and "safety and stability" (mean= 3.79). Similar to the variables in perceived medical quality, the weak variables in perceived touristic quality require improvement. Nevertheless, the practical responsibility falls under a different operational body.

Lastly, satisfaction has a positive high effect on intention to revisit. Satisfaction is also classified as medical and touristic. It is important for revisiting Lebanon for medical and leisure purposes as well as for spreading positive word-of-mouth.

Going back to the research question and in light of the hypothetical findings of this research work, one can conclude that medical tourists are motivated by the pull factors related to the destination itself as well as to its medical aspects. In turn, such motivational factors influence the tourists' perception of medical and touristic quality. The perceived medical and touristic quality are the two antecedents that determine the tourists' satisfaction with their trip which in return determine their intention to revisit the destination and recommend it to others.

Next section is dedicated to discussing the second part of the research question which is the characteristics of medical tourists and the various segments that can be formed accordingly.

Therefore, this study comes as a continuity of the previous literature inspiring it. The motivational factors constitute a restructured form of Fetscherin and Stephano (2015) Medical Tourism Index (MTI) which "measures the attractiveness of a country as a medical tourism destination in terms of overall country environment, healthcare costs and tourism attractiveness, and quality of medical facilities and services" (Fetscherin and Stephano, 2015, p. 6). However,

the factors are molded to fit into the push-pull theory. Moreover, the motivational factors reflect the work of Peters and Sauer (2011) yet in a broader spectrum. As Peters and Sauer (2011) research surveyed the perception of medical tourism agencies and brokers on factors influencing the medical tourists' decisions, this study utilizes the factors to survey the opinion of actual medical tourists.

The model realized in this study is a merge of pre-purchase motivations with post purchase perception of quality and satisfaction. In essence, the model inspires from Smith and Forgione (2007) model on "factors affecting choice of facility and country" and expands it to include post-experience phase which ends in intention to choose again. Therefore, the model can be considered a "step-two" that includes the pre-choice and post experience of medical tourism.

The outcomes of the study serve to the benefit of "Lebanon" as a destination for medical tourism. The implications of the study as well as its national-level recommendations are presented in harmony with the framework of barriers developed by Heung, Kucukusta and Song (2010). Thus, outcomes of the study revolve around the continuum of Heung, Kucukusta and Song (2010), yet in a different geographic location. Moreover, Heung, Kucukusta and Song (2010) employed the push-pull motivation theory in analyzing Hong Kong medical tourists' motivation, which is similar to this study.

### **8.3. Segmentation**

The primary objectives of this study are to know what the characteristics of medical tourists are coming to Lebanon. Hence, it is to know the target segments for medical tourism. This information will assist in shaping and directing marketing efforts of medical tourism in the destination.

Medical tourists surveyed in this study can be classified into different segments based on gender, age, level of income, education background, type of procedure pursued, number of accompanying family members and friends, previous medical travel experience and previous travel experience. Based on this classification, it is meaningful to identify the most significant and influential segments of medical tourists coming to Lebanon.

There is no major variance between males and females as the females are only 9.4% more than males, yet what differentiates the two segments is the type of procedure they pursue. Female medical tourists are concentrated mostly with cosmetic surgery and aesthetic treatment while male medical tourists are scattered in various types of medical procedures. The majority of medical tourists are between 25 and 44 years old. It is apparent that 72.9% of the age group 25 to 34 are females and 48.5% of the age group 35 to 44 are also females. This makes females more dominant in these two age groups.

In terms of type of procedure, there is a significant difference between the first and the second biggest categories and the difference minimizes and becomes almost insignificant as we move from the second to the third and so forth.

As noted in the descriptive display of data, the biggest portion of tourists coming to Lebanon are pursuing cosmetic surgery and aesthetic treatment. Of this segment, 80.4% are females, 54.3% range between 25 and 34 years old, and 28.3% range between 35 and 44 years old. This makes young females pursuing cosmetic and aesthetics treatment and surgery one of the most significant target segments, if not the most significant target segment of medical tourists in Lebanon.

Another significant segment is medical tourists pursuing dental treatment. This segment is made up of 46.7% males and 53.3% females. Most of them range between 25 and 44 years of age.

In terms of monetary spending, we notice that the biggest segment spends between USD 8,000 and USD 12,000. Almost half of this segment spends half of their budget on medical services and the other half goes to touristic matters. The second biggest segment carries a smaller budget and most of them spend between 40% and 50% on medical services. Notably, the biggest segment of tourists is coming for cosmetic and aesthetic reasons followed by dentistry which explains that when tourists travel for elective surgery or treatment, they allocate a considerable portion of their budget to touristic matters. A point worth mentioning here is that questionnaires were carried out with the medical tourists and the question of budget reflects the total budget of the medical tourists and their dependents. When travelling with companion(s), the medical tourist would not be the solo spender. Therefore, this budget figure may not reflect what is totally being spent in the medical trip as the companion might be carrying an additional budget that goes to touristic matters. Therefore, practically medical tourists and their companions could spend more than half of their budget in the tourism sector.

To conclude in terms of gender, females are slightly dominant as they comprise 54.7% of the sample. The dominant age group is between 25 and 44 years old. The most pursued type of procedure is cosmetic and aesthetic surgery and treatment. Most of the tourists are coming from Iraq. Most tourists spend between USD8,000 and USD12,000. Half of the medical tourists' budget goes to medical matters and the other half to touristic matters.

### **8.3.1. The role of travel agents in segmentation**

There is a considerable difference between tourists who arranged their accommodation by themselves (60.9%) and those who arranged their accommodation through a travel agent (19.4%)

or a medical broker (13.5%). Even when it comes to first-time medical tourists who are not familiar with the destination, the majority (66.9%) arranged their accommodation by themselves. This can be attributed to lack of medical packages offered by travel agents, and lack of advertising. On the other hand, this fact indicate that Middle Eastern medical tourists are becoming savvier and rely on their own web search when planning a trip.

Therefore, medical tourism packages which combine hospitality with healthcare can be a suitable option, particularly that most of the medical tourists are coming for elective surgery and treatment (i.e. 43.8% of the surveyed tourists who used the services of travel agent are coming for cosmetic and aesthetic treatment followed by tourists coming for dental treatment and surgery). Such medical tourism packages can be assembled by travel agents and by medical brokers and advertised for in geographic feeder markets such as Iraq, GCC countries and Jordan where the majority of medical tourists and the ones with highest trip budgets are coming from. Particularly that high-trip-budget medical tourists spend highly on accommodation. It is perceptible that 46.4% of the tourists who arranged their accommodation through a travel agent stayed in average hotels while 32.1% stayed in luxury hotels. This indicates that a range of medical packages can be created to suite different budgets as there is a considerable segment size for both average and luxury hotels.

The absence of knowledge about resources can influence the decision of the medical tourist and drive them to choose other competitive destinations. Therefore, the role of marketing and advertising is vital. This aspect was realized by many web-based service providers and medical brokers as they started providing services to offshore patients assisting them with planning and executing their medical trip; choosing the destination and medical provider, assessing prices, arranging travel and accommodation as well as other services. Such specialized medical brokers

can be a suitable and convenient option to encourage regional and international patients to come to Lebanon.

### **8.3.2. The role of lodging operators in segmentation**

Regardless of whether they are arranging their accommodation on their own or via an agent, majority of medical tourists (69.1%) spend between 10% and 20% of their budget on accommodation. The accommodation sector, particularly hotels and furnished apartments located in the vicinity of medical centers are primary beneficiaries of medical tourists. It is apparent that 36% of the surveyed medical tourists travelled with two companions, 33.6% travelled with one and 22.1% travelled with more than two. These figures propose certain considerations to be given to the accommodation requirements, not only with regards to the medical tourists but to their companions as well. As the number of accompanying friends and family members increased, the choice towards furnished apartments increased. Therefore, extra room space and feel-at-home environment are important accommodation criteria to medical tourists and their companions.

## **8.4. Recommendations on business level**

This study is important to all stakeholders of medical tourism in Lebanon. The findings of this study have significant managerial implications for medical tourism service providers in Lebanon.

The highlights fall into Lebanon's pull factors through focusing on enhancing pre-visit motivations as well as the perceived quality and satisfaction through focusing on the medical and touristic experience during the visit. The highlights are mainly targeted to medical centers, hotels and travel agencies in Lebanon.

### **8.4.1. Recommendations to medical centers**

According to the frequency distribution, the variables associated with the factor pertaining to medical care scored the highest among other pull variables. It is evident that what motivates

medical tourists to come to Lebanon is its medical aspect including its reputation in general, the reputation of its medical facilities and medical doctors and the success rate of medical treatment performed in Lebanon. These figures give advantage to the medical institutions which they can build on.

To have more medical tourists choosing Lebanon and its medical facilities for their medical care, channeled efforts need to be allocated to enhance their pre-visit motivations. This can be by having strong presence first, in the tourist home country and second, on social media and the web.

To have more presence in the tourist home country, medical centers need to establish and maintain strong ties with medical brokers and travel agencies in the tourist home country. Therefore, a bureau can be designated for international patients' relations. The objective of this bureau is to coordinate with other medical centers and travel agencies abroad, developing medical packages and coordinate patient transferring procedures as well as other related matters. Moreover, medical centers can participate or even partially sponsor some medical-related events that thought to attract potential medical tourists.

Advertising media is another potent weapon which attracts medical tourists. International media advertising in the field of healthcare, medical care and medical technology can lead to attracting medical tourists. This can be realized as recommended by as Jabbari et al. (2013) through updating hospitals websites, using telephone counseling services, issuing periodic reports about the hospitals, providing special discounts for patients among others.

Presence on the web is very important in today's market since patients are becoming savvier and the majority rely on their own web search when planning a trip. Web presence can be

strengthened by establishing businesses with web-based medical brokers. Such brokers can draw more medical tourists and even open new venues and attract new segments of medical tourists from new geographic markets. Moreover, social media can be utilized to advertise for Lebanese medical centers as it is considered an influential tool. This can be achieved by cooperating with social media celebrities to advertise or mention the medical center on their accounts. The female celebrities of social media can be of significant influence in the aesthetic and cosmetic field as their figure can be an icon for thousands, sometimes millions of followers.

Moving to the medical tourist experience which is a determinant of their satisfaction, medical centers can significantly influence tourists' perception of medical quality. First, by facilitating their medical appointments and matching it with their trip schedule. This can be done via the international patients' relations bureau. All appointments can be taken and arranged for prior to the patient's arrival. Additionally, an after-care policy tailored to international patients can be constructed by the medical center and executed by the medical team caring for the international patient. Such policy can involve coordination with the nearby hotels where the medical tourists stay after their check-out from the medical center.

A point that requires special attention is the quality and the success rate of the medical procedure. Based on the survey results, "more guaranteed results and higher success rate for your-type – of- procedure performed in Lebanon" received the highest ranking in the medical institution and medical treatment pull factor whereas, "medical procedure" received the second highest ranking in perceived medical quality. For that reason, medical centers need to invest in their medical procedures and target high quality and high success rates. Such objective can be attained through incorporating quality assurance systems and quality management systems, investing more in scientific research and keeping up with medical technology and innovations in



the various medical fields and specialties. Moreover, seeking international accreditation such as JCI elevates the medical center practices to meet international standards. Such initiatives can fortify the preexisting competitive advantage and reputation of Lebanon in general and the medical centers in specific.

Medical staff usually are an indirect asset to the medical centers. Noting that the Lebanese educated population usually speak English and French besides Arabic, the mother tongue. Moreover, the Lebanese people are reputable for being friendly and hospitable. This is evident by the variable "friendliness of local community" which received high ranking. Therefore, medical staff can be a significant advantage that brightens the experience of the medical tourist. The variable "medical staff" received high ranking in perceived medical quality. To progress it more, medical center can develop special programs and trainings to their medical staff, particularly those caring directly to medical tourists. Such programs can include communication and patient relations tracks, hospitality tracks and cultural diversity tracks.

Considering the cost of medical service in Lebanon, it is not lower than other regional destinations. Lebanon could target higher-income medical tourists instead of price-sensitive segment. This can be achieved through focusing on the quality and results of medical operations as well as promoting special treatments and procedures that require high-level expertise. This can be feasible since Lebanese doctors and physicians are well-known for their proficiency and expertise.

Focusing on the higher-income segment does not mean that there is a margin for price increase. Such increase can push an existing segment of medical tourists away from Lebanon towards a destination that is offering competitive services. This is to mention that study findings are extrapolated from tourists who have already chosen Lebanon as their destination. Thus, there

could be a potential segment that chose another destination due to high medical care prices in Lebanon.

Therefore, prices of medical care need to be controlled carefully in order not to lose the existing segment of medical tourists. Moreover, quality of medical care and results of medical procedures need to be given utmost importance as they are the main motivational reason that brought medical tourists to Lebanon.

Hence, medical centers can seek more international accreditations as well as joint collaborations with international medical institutes. Focusing on promoting special treatments, particularly in the cosmetic and aesthetic field. Since the biggest segment is young females pursuing cosmetic and aesthetic treatment, medical centers can target this segment via advertising in feeder markets and the utilization of the web-based brokers for promotion as discussed earlier. Parallel attention needs to be given to procedures that require high-level expertise which can create a competitive advantage to Lebanon's medical services. This is attainable because Lebanon has specialized medical centers such as Bhannes Medical Center, established since 1909 and is specialized in treating tuberculosis. It contained later on other types of treatments such as: bone diseases, drug addiction treatments, psychiatric illness, elderly nursing homes and others.

It is worth mentioning that when the political and economic situation in neighboring countries Syria and Iraq start getting resolved and their healthcare systems revive again, Lebanon will be threatened to lose a segment of medical tourists, particularly price-sensitive medical tourists and those who were motivationally more pushed out of their country to seek healthcare abroad. Accordingly, medical centers in Lebanon need to study their prices and could establish a flexible pricing strategy in view of future regional changes.

Several medical centers are spread in different regions in Lebanon. Many of them are located in areas with appealing climate and scenic natural views of mountains, valleys or the Mediterranean. These medical centers mainly serve the local population and have limited exposure, if any, to medical tourism. They can be a great target to medical tourists seeking privacy and relaxation. Owners of such medical centers as well as interested investors can expand the facility to include accommodation and other requirements such as spa and gym facilities. Therefore, such centers can be transformed into a self-sufficient medical tourism facility which then can be introduced to the regional and international market through advertising and offering medical packages.

#### **8.4.2. Recommendations to hotels lodging establishments**

According to the frequency results, accommodation is ranked the second after food and beverage in the perceived touristic quality feedback. Moreover, touristic quality feedback has a significant positive effect on satisfaction. In other words, accommodation plays a major role in medical tourist's satisfaction and intention to revisit. Moreover, the majority of medical tourists spend half of their budget on touristic matters of which accommodation comprises an immense if not the largest element. Particularly, high-trip-budget medical tourists who spend highly on accommodation.

As per the study by Han et al. (2015) on medical hotels and their attributes for attracting medical tourists, there are four-factor perceived outcomes for medical hotels. They are financial saving, convenience, medical service and hospitality product. These factors represent medical tourists' perceived accommodation outcomes. Such outcomes can be utilized in hotels that accommodate medical tourists with an aim at assisting hotel operators to better accommodate and satisfy the

requirements of medical tourists as well as shape effective strategies to attract more medical tourists.

Financial saving can be attained by paying a reduced rate for packages that include healthcare services along with accommodations and meal services. Convenience can be attained in several ways; in terms of physical proximity between medical center and hotel and availability of transportation between the hotel and medical center. For example, the hotel can provide or arrange for transportation services to and from the medical center. Medical care quality can be realized in the hotel through offering reliable post-care services for the hotel's medical tourists by contracting with part-time nurses to look after the medical tourists' needs or coordinating with the associated medical center, particularly for special cases. Hospitality service, and this is particularly meaningful for the patient's accompanying family and friends since it enables them to enjoy several hotel services such as a wide selection of quality food and beverages while staying in a comfortable hotel room suitable in size for their requirements. Investment in this area by providing food with high quality and wide variety would lead to satisfied medical tourists and companions for the variable "food and beverage" received the top ranking in perceived touristic quality. Moreover, food and beverage managers in hotels can implement ethnic menus that cater to the taste of the tourists. For example, a hotel that accommodates Iraqi medical tourists can include an Iraqi menu in its food outlets or can even integrate some Iraqi dishes to its existing menus.

There are additional factors that hotels can utilize to better serve the needs of medical tourists. One factor is reducing planning time and effort. The hotel sales department can work on organizing packages that include arranging initial appointments with the nearby medical center on behalf of medical tourists. The other factor which can be utilized is privacy and

confidentiality and this can be represented by designating a private section or floor in the hotel for medical tourists.

A preference that combines convenience, proximity, privacy and hospitality services would be "medical hotel". There exists room for investing in a medical hotel in Lebanon particularly in locations other than Beirut where the natural environment and climate allows for such development. It would receive a favorable response from Middle Eastern medical tourists particularly that the hospitality product segment which distinguishes medical hotels does not exist in regular clinics. In this regard, the effort should be channeled towards providing quality hotel services from valet parking, room service, concierge service, and so forth, as well as a variety of food and beverage options and various sizes of comfortable rooms to accommodate the accompanying family/friends. Such efforts are recommended for both medical hotels and regular hotels targeting medical tourists.

To promote the concept of a medical hotel in the region, operators should work on encouraging patients and potential medical tourists to visit medical hotels and experience their services. This can be fostered through developing special packages, familiarization visits, and reduced prices for first time visitors targeted to increase the market share.

In essence, investment initiatives in medical hotels should be twined with correlated marketing efforts and strategies to communicate effectively with the target market. Such efforts and strategies need to be concentrated on communication channels that would yield effective results. Joint affiliation with medical doctors and medical institutes in the region, international and particularly in the targeted feeder market can generate positive results. Additionally, visual advertising displaying favorable and attractive images of the medical hotel are recommended since it can boost the desire to visit the advertised hotel.

#### **8.4.3. Recommendations to travel agencies**

Medical tourism is a segment worth major consideration as it can yield in beneficial returns to travel agencies. The findings reveal that the majority of medical tourists arrange their trip on their own. This could suggest that the lack of Lebanese travel agents' involvement in this niche tourism compelled the tourists to arrange their trip on their own.

Many countries have utilized the concept of medical tourism packages. South Korea launched some VIP medical tourism packages that include certain healthcare programs and aesthetic programs along with luxury accommodations and superior meal services (Lee, 2012; Yoon 2012). Producing such packages will add a group of advantages to medical travelers which would result in encouraging them to choose Lebanon and the various medical service providers existing in it for medical or aesthetic purposes. Such a step would increase the number of international medical tourists coming to Lebanon as well as spread the awareness of new medical centers that were not previously heard of by medical tourists. Since medical tourists are becoming more savvy and reliant on the internet, collaborating with web-based service providers and medical brokers to advertise for medical packages would yield in positive results.

Moreover, travel agencies can establish joint collaboration with other travel agencies in feeder markets and sell their medical packages in feeder market via local travel agencies. This would be a win-win situation for both agencies as there would be a commission for the sender travel agency.

For Middle Eastern medical tourists, medical packages could be an attractive option for the patient and the accompanying members. The packages can be created to meet the diverse needs and wants of medical tourists by offering a range of suitable accommodation, meal options, sightseeing options, levels of personalized in-room treatment, and over and above medical

services with a range of prices for packages. Such packages would be most suitable for certain healthcare and aesthetic treatments such as cosmetic surgeries, dental surgeries, fitness programs and others.

In today's highly competitive market developing clusters can increase competitiveness of Lebanese brokers and travel agencies. This applies particularly for small and medium enterprises, as it provides competitive advantage that distant competitors cannot have. Conducting competition analysis, SWOT analysis and Porter's Diamond model analysis can assist in crafting a differentiation in today's competitive market.

#### **8.5. Recommendations on a national level**

As mentioned in the introduction of the study, medical tourism has been a major contributor to the economic growth of several countries such as Singapore, Malaysia, Thailand as well as others. Therefore, the outcomes of this study are of significant importance to the Lebanese government as well as the concerned public sectors in the fields of healthcare and tourism, mainly the Ministry of Tourism and The Ministry of Health.

The highlights focus on the role that the Lebanese government and public sector can contribute towards a) the pull factors pertaining to Lebanon as medical tourism destination via promoting its pre-visit motivations, as well as b) the perceived medical and touristic quality via establishing and maintaining policies, strategies and work plans that contribute in potential benefits to various shareholders and of medical tourism in Lebanon, particularly the medical tourist. The recommendations are presented to the concerned decision makers in form of themes.

*Political stability and security:* The Lebanese economy which rely heavily on service sectors such as travel and tourism has been strongly hit by the mounting tension in the Levant, particularly with neighboring Syria being at the core. Although Lebanon is one of the more

stable countries in the region, a significant segment of potential tourists from outside the Middle East tend to view the Middle East region as a whole rather than individual countries. Additionally, many GCC countries have imposed restrictions that avert or impede their citizens from visiting Lebanon. This is to note that in the years prior to the Arab uprising and their aftershocks, the incoming tourists from GCC countries to Lebanon comprised the biggest tourists segment.

First and foremost, the Lebanese government needs to maintain a sustainable status of political stability and security. Moreover, efforts need to be channelized towards addressing a positive and secure image of Lebanon internationally, which would be the reason behind the return of tourists' influx to Lebanon including medical tourists. This element requires a call for special attention as it was highlighted in all the qualitative interviews as a primary area for improvement and was confirmed in the survey results as "safety and stability" received a low ranking in touristic quality.

It is worth mentioning that the political factor in Lebanon precedes cultural and social factors "ease of collecting visa" has a high mean while the item "cultural and language similarity", although having a high mean, was eventually excluded from the study's final model. Moreover, it was notable during data collection that Arab Muslim tourists from Iraq as well as other Arab countries were visiting Christian medical doctors and staying at hospitals with Christian affiliation. In other words, the political factor is more decisive to citizens of Arab countries than social and cultural factors. Therefore, the Lebanese government needs to thoroughly consider this factor and to facilitate the movement of tourists into the country. Establishing a visa classification for medical tourists would contribute positively in this direction.



*Involving the Diaspora:* Lebanese expatriates residing in developed countries and benefiting from an advanced healthcare system have special demands from the Lebanese health system. The Lebanese expatriates would seek healthcare in Lebanon for types of treatments that are not covered by the healthcare system of their country of residence. This usually applies to cosmetic surgery and treatment and dental treatment since the cost in Lebanon is less than many developed countries. Another reason that would make them come to Lebanon for treatment is the long waiting lists they would encounter in some countries where they reside. This applies in certain countries the experience waiting lists such as Canada and United Kingdom (Horowitz, Rosensweig and Jones, 2007).

While the later reason can be considered a push motivation factor that is related to the expatriate's country of residence healthcare system, the former reason can be viewed as a pull factor that can be employed to the benefit of Lebanese medical tourism. Thus, the Lebanese Diaspora can, with planned objectives, play a role in promoting Lebanon as a destination for elective surgery and treatment in their countries of residence.

The Lebanese government has been paying an increasing attention to the Diaspora. Similarly, the Lebanese Diaspora has established, throughout the years, several organizations, associations and clubs in various countries such as Argentina, Brazil, Australia, Belgium and others. These associations sustain official ties with Lebanon through the Ministry of Foreign Affairs and Immigrants. From this standpoint, Lebanese Diaspora can be an effective liaison in promoting medical tourism. A planned promotional strategy can utilize various channels. Of which, a formal promotion channel can be established via collaboration between Ministry of Tourism, Ministry of Public Health, Ministry of Foreign Affairs and Immigrants and the Immigrants associations and clubs. Another informal channel of promotion can be developed on the level of

expats patients, medical doctors and medical institutions where word of mouth and personal recommendations take a prominent role.

*Government attitude:* Medical tourism cannot achieve optimum results without government support. The Lebanese government can boost medical tourism by encouraging local and foreign investment in the healthcare sector. The government can support PPP as well to minimize the operational risks associated with new healthcare and medical tourism projects.

*Policies and regulations:* To encourage investments furthermore and to utilize the available land towards the benefit of medical tourism, new hospital developments should be encouraged in areas outside Beirut such as the mountains or by the sea side where the land is less expensive, scenery is beautiful, and the environment is relaxed. Medical hotels and medical resorts can be suitable in such locations. The government can encourage investors by offering discounted premiums for such medical tourism projects. The existing hospitals in locations outside Beirut exist in naturally beautiful environment and are mainly targeting the local population. Such hospitals can be a stepping stone for medical tourism developments. They can be renovated and upgraded to cater for medical tourism market. Specialty hospitals can be developed in such locations as well as medical hotels and resorts.

Additionally, to encourage healthcare developments in medical tourism, the government can decrease taxes or license expenses to hospitals that are targeting medical tourists and for that the government needs to stipulate certain criteria to be met by the hospital in order to benefit from this promotional offer.

*Promotion:* Effective promotion is important to build a name and image for a medical tourism destination. The Lebanese Ministry of Tourism can play a vital role in promoting medical

tourism as medical tourism can become part of the national tourism campaign. Special campaigns can be launched under the ministry's patronage to promote fields of specialty in Lebanon such as cosmetic surgery as well as specialties that require high-level expertise, for which some Lebanese physicians are reputable. In Lebanon, there are medical centers and hospitals that are dedicated to plastic and cosmetic surgery. A constructive step can be achieved by facilitating cooperation between such hospitals and advertising media to promote such specialized institutions abroad.

A brand image can be created for Lebanon, such image can be made through an iconic brand name in the field of medicine and healthcare. Hôtel-Dieu de France has a long history of medicine in Lebanon and the Middle East since 1923. As well, the American University of Beirut Medical Center (AUBMC) has a history of more than 145 years and a leading reputation in the Arab world; both can aid in creating such image.

The Lebanese Ministry of Tourism can enhance promotional efforts by focusing on niche tourism including medical tourism via the international conventions and exhibitions it takes part in. Medical tourism can be further promoted by encouraging representation in international medical conferences and seminars. Since "combining medical treatment with vacation" is among the highest ranked motivation for coming Lebanon, such attribute can be highlighted in the promotional medical tourism marketing campaigns. This can be performed by using visual images that portrays the various touristic sides of Lebanon ranging from natural beauty to shopping, attractions and nightlife along with a medical image that addresses concepts of technology, privacy, quality and friendliness.

Joint collaboration with medical institutes, travel agencies and brokers abroad can contribute with more positive results. Not forgetting the enormous power of social media especially that

more patients are becoming knowledge-oriented and web-based medical information is easily accessible (Lunt, Hardey and Mannion, 2010).

*Infrastructure:* As for infrastructure and superstructure, conditions of the roads need improvements in some parts of the city. Additionally, establishing a public transportation network such as an underground system or a train system can significantly reduce the transportation traffic and congestion in the Beirut. This element requires special consideration as it was highlighted in the qualitative interviews as an area for improvement and was confirmed in the survey results as "local transportation" received lowest ranking in touristic quality.

*Facilities and tourist attraction:* Lebanon is a touristic country with a comprehensive variety of facilities and attractions. The facilities and attractions can be advertised and promoted more effectively in international markets and particularly feeder markets of medical tourists. Social media may serve as an inexpensive medium for promotion.

*Pricing:* The pricing of food and beverage can be more controlled by imposing more strict pricing policy by the government on prices of food and beverages.

*Human resources:* Many famous and reputable Lebanese medical specialists are establishing clinics in regional countries, particularly in the GCC countries and splitting their business schedule between Lebanon and the other regional country. By doing so, Lebanon is losing potential regional patients who are seeking a particular medical doctor. This point requires an important consideration especially that both qualitative and quantitative findings of the study emphasize the important role of the Lebanese medical doctors in attracting medical tourists to Lebanon. Therefore, the Lebanese government can play a role in reducing this trend by imposing

higher taxes and strict regulations on medical specialists establishing businesses outside Lebanon.

## **8.6. Conclusion**

This chapter constitutes the extract of the research work and the worth of the study findings. It commenced with discussing the proposed hypothesis in harmony with the phases of the model; starting with the relationship between push and pull factors, moving to the effect of push and pull factors on perceived medical and touristic quality, then the effect of perceived medical and touristic quality on satisfaction and lastly the effect of satisfaction on intention to revisit.

Next, the chapter analyzed the overall model in view of the main research question and concluded that the two main pull factors that have significant positive effect on medical tourists' perceived quality are destination and medical institution and medical treatment. Whereas, push motivational factor has negative impact on perceived touristic quality. Further on, it concluded that both medical and touristic perceived quality affect tourists' satisfaction with higher effect from perceived touristic quality. Lastly, satisfaction has a high positive effect on intention to revisit.

The model showed that price has no effect on either perceived medical quality or perceived touristic quality and that convenience has a minor positive effect on perceived touristic quality. Moreover, the hypothetical analysis revealed that push and pull factors do not reciprocally relate in medical tourism.

The chapter resonated the study findings with the previous authors and settled the research work in the appropriate nest of the previous studies which originally inspired its creation.

Next, the chapter discussed the various segments of medical tourists based on their characteristics. A significant segment among others is young females between the age of 25 and 34 pursuing cosmetic surgery and aesthetics treatment.

According to the hypothetical conclusions, the overall model as well as the highlighted significant segments, recommendations were drawn. They were formulated to work on the aspect of pre-visit motivations and the aspect of during the-visit-experience. Moreover, the recommendations were addressed on a managerial level targeting the corporate suppliers of medical tourism as well as on a national level targeting the government and the concerned public sector, mainly the Ministry of Tourism and the Ministry of Health in Lebanon.

The managerial level recommendations were chiefly addressed to medical centers, hotels and travel agencies in Lebanon. As for the national level recommendations, they were addressed to key decision makers in the Lebanese medical and touristic sectors. They were political stability and security, government attitude, policies and regulations, promotion, infrastructure, facilities and tourist attraction, pricing and human resources.

## Chapter 9: Conclusion

### 9.1. Introduction

This thesis has involved an empirical investigation of the phenomenon of medical tourism in a Middle Eastern country context "Lebanon". It encapsulates theoretical reasoning of two basic theories from the disciplines of tourism and marketing in a new research setting. The basic objective of this research is to develop a conceptual framework illustrating the possible impact of pre-purchase motivations on post purchase perceived quality, satisfaction and intention to revisit in the act of medical tourism.

To address the research question of the study and to achieve the research objectives, a comprehensive review of the phenomenon of medical tourism and its emerging markets was required. It was consolidated in chapter 2. The theoretical framework, potential theories and previous theoretical literature were conducted towards identifying the key components of the study (motivational factors, perceived quality, satisfaction and the nature of decision making process) were reviewed in chapter 3. The research philosophy, design and data analysis methods were discussed in chapter 4. The questionnaire formation and development were reviewed in chapter 5. The descriptive findings derived from qualitative interviews as well as the survey questionnaire were discussed in chapter 6. The confirmatory findings which led to the development of the final model were presented in chapter 7. Descriptive findings and confirmatory results were integrated and discussed in chapter 8 reaching to theoretical implications as well as practical contributions and recommendations in chapter 9.

Consequently, this chapter encapsulates the thesis and focuses on the essence of each part. Therefore, a section of this chapter is dedicated to the highlights of the study conducted. Another

section is dedicated to the highlights of the study findings, and a third section is dedicated to the highlights of the study recommendations. Finally, the chapter reports the limitations that were faced during the research and ends up with potential venues for future research in this field and related fields.

## **9.2. Highlights of study**

The study revolves around the central research question which is posited to understand medical tourists' motivations for medical tourism destination, the effect of those motivations on their perception of quality, satisfaction and intention to revisit. In addition, the study aims to explore the various characteristics of medical tourists which yield in classifying them into different segments.

The theoretical framework of the study is crafted around two main theories; five-step model of decision making process, derived from the marketing discipline, and push-pull motivation theory, derived from the tourism discipline. The study merged both theories in an effort to provide a comprehensive background to answer the research question. The theoretical base initiates from motivations which are classified into push and pull. In parallel, the first step of the decision-making process model is "problem recognition", which is when the medical tourist recognizes a need to travel abroad for medical care. The second step of the model is "information search", it is when the medical tourist starts identifying and investigating the pull factors offered by destinations. The third step of the decision-making process is "evaluation of alternatives" which is also related to pull factors; here, the medical tourists are evaluating the offered options and determining which attributes are more relevant for his/her choice. The fourth step is "purchase" and the fifth step are "outcomes of the purchase".



Since, both the fourth and the fifth steps take place post the motivation phase and purchase phase, a thorough theoretical investigation was required to better link the pre-purchase motivations with post purchase outcomes. Accordingly, perceived quality and satisfaction were introduced to the study as theoretical ground that support the post purchase outcome. Perceived quality in this study is understood from the perspective of service perceived quality since medical tourism entails healthcare services and tourism services, accordingly it can be explained via service quality diagrams such as functional quality paradigm (Grönroos, 1984), disconfirmation diagram (Parasuraman et al., 1985) or performance-based diagram (Cronin and Taylor, 1992). Satisfaction in this study is comprehended according to the core concept that it is a post consumption evaluation that is based on the overall experience, such evaluation meets, exceeds or disappoints expectations (Wang and Yang, 2004). Moreover, it was considered a latent variable determined by its antecedents (Fornell et al., 1996; Kaplan et al., 2007; Song et al., 2012). Accordingly, its antecedents could be motivations (Yoon and Uysal, 2005) or actual performance of the destination and its attributes (Tse and Wilton, 1988) or a combination of both actual experience and emotional response (Bosque and Martin, 2006; Homburg, Koschate, and Hoyer, 2006; Pizam, Neumann, and Reichel, 1978).

This study is concerned with the motivations of medical tourists and their perceived quality and satisfaction. It was built from the context of the research question being the compass that directed the methodology. Thus, the applied philosophy in the study is pragmatic in nature, the researcher at some points of the research was part of the data collection process involved in understanding and comprehending the phenomenon. At other points, the researcher was taking an external objective stand interpreting relationships, effects and analyzing results. The epistemology of the study is subjective in a sense that it is concerned with feelings ranging from

motivations to satisfaction. Nevertheless, the emotions were quantified into measures and indicators for interpretation of relationships. The applied methodology is a combination of inductive and deductive. The first stage of the research was inductive in form of qualitative interviews. The purpose of this stage is obtaining an in-depth understanding of medical tourism from the concerned players. It is a more subjective view that sheds light on the subject matter to allow further exploration in more specific aspects. The second stage is deductive and is carried out in form of survey questionnaire distributed to current medical tourists in Lebanon. This stage is designed to transform theory into data via explaining the causal relationships between variables and with the purpose of reaching results and structured conclusions.

Accordingly, the research employed triangulation approach via combining the qualitative and the quantitative methods in the study of medical tourism. The interviews were conducted with suppliers of medical tourism in Lebanon and they range from medical centres, travel agencies and other service and service-related providers in the field of medical tourism. The interviews were semi-structured, and they were designed to obtain an in-depth understanding of the phenomenon as viewed by the social players who are practically and routinely involved in the process. Additionally, the information collected from the interviews led to identification of variables which were tested in the questionnaire for causality.

The interviews evolved around key areas obtained by clustering the themes and they were adopted from Heung et al. (2010) and the information themes discussed in the interviews, the derived content analysis were categorized into “government attitude”, “cost”, “infrastructure and superstructure”, “policies and regulations”, “promotion”, “expertise/manpower”, “language and communication”, “facilities and tourist attractions”. An additional category was added that is “political stability and security”.

The second stage of data collection was designed in view of the outcomes of the the first step as well as the previous literature. It was designed as a prospective of interpreting the research question. The questionnaire went through several stages before it reached its final form. First, it was critically reviewed by 12 reviewers with the purpose of enhancing its design and wording. Next, it was distributed to a pilot of 108 medical tourists which resulted in significant changes including deleting and adding variables and sections, changes in wording as well as change in the method of distribution which included only paper-and-pen instrument.

Consequently, well-validated measurement drivers for study constructs were formed and applied in the questionnaire. The questionnaire is made of five main parts. The first part is general information about the trip, titled "about your trip". The second part, titled "seeking medical care abroad" aims to measure the factors that led the tourists to leave their home countries and travel abroad for medical care. This part is concerned with measuring the motivational push factors. The third part titled "let's talk about Lebanon as a tourism destination" aims to measure the factors that attracted them to come to Lebanon for medical care. This part is concerned with the motivational pull factors. Based on the previous literature in the field of medical tourism as well as qualitative interviews conducted with the suppliers of medical tourism, the pull factors are classified into “destination”, “convenience”, “medical institutions and medical procedure” and “price”.

The fourth part titled "feedback" is made of two main questions. The first question aims to assess the medical tourists' perspective of the performance of the healthcare sector and the tourism sector in Lebanon. While the second question aims to assess their satisfaction and intention to revisit Lebanon. This part is to measure perceived medical and touristic quality, satisfaction and intention to revisit.

The last part titled "about you" is to reveal some basic demographic information on the medical tourists. The last part along with the first part serve in determining and identifying the various segments of medical tourists visiting Lebanon. The measurement instruments used in the questionnaire is mainly Likert-scales instrument.

Data were collected from 212 respondents in a three-months period that extended from mid of April 2017 till mid of July 2017. To obtain an insightful and reflective opinion, respondents were approached when they were towards the end of their trip. To better capture various segments of medical tourists, answers were collected from several collection points ranging from medical clinics, hospitals, hotels in Beirut as well as from Beirut Rafic Hariri International Airport.

The survey answers were analyzed using a range of statistical tests using SPSSv20 and AMOSv20; most significantly EFA, CFA and SEM. Since the study involves latent variables and observed variables, EFA was applied to evaluate which variables 'go together', that is which common variables make jointly one meaningful group. Additionally, the purpose of EFA is to reduce the variables so as to allow focusing on key variables only representing the group or the latent variable (Rummel, 1970).

EFA can be a preparatory step that paves the way for CFA which is applied in this study due to its confirmatory nature. CFA involves graphical representation of a hypothesized theoretical model upon which several modifications can be applied to reach a better-fitting model or most consistent with the observed data. Thus, CFA tests the reliability of the observed variables as well as the extent of interrelationship among latent variables. While EFA employs an exploratory pattern and CFA employs a confirmatory pattern, this study is employing both techniques and thus following the steps of many authors who have viewed both techniques complimentary and advantageous to each other (Hoyle, 2000).

SEM takes the CFA to the next level by extending the interrelation among latent variables and observed variables in the hypothesized model into a succession of structural equations. Thus, it employs multiple regression to test the theoretical hypothesis about relationships between variables and the directionality of significant relationships (Schreiber et al., 2006).

In line with the research question, the CFA model tested the causal and noncausal relationships and was designed on four levels. First, is the positive correlation between push and pull factors (noncausal relationship). Second, is the positive effect of push and pull factors on perceived medical and touristic quality (causal relationship). Third, is the positive effect of perceived medical and touristic quality on satisfaction (causal relationship). Fourth, is the positive effect of satisfaction on intention to revisit (causal relationship).

### **9.3. Highlights of the results**

The frequency of answers indicates that the pull variable with the highest scores is "more guaranteed results and higher success rate for your-type – of- procedure performed in Lebanon" and the lowest is for "health insurance covers treatment in Lebanon". The variable with the highest score in the perceived medical quality is "medical doctor" while the lowest is "prices of medical services". The variable with the highest score in the perceived touristic quality is "food and beverage" followed by "accommodation" while the lowest score is for "prices of daily consumer product". In terms of satisfaction, the highest score is for "satisfaction with medical services" and the lowest is for "satisfaction with prices paid for medical and tourism products".

After applying the EFA, CFA and SEM statistical tools to test the relationships between factors, the results were the following:

Between push and pull factors, a negative relationship exists between "push" and "price". It indicates that as patients are more pushed to leave their home countries for medical care, they are

less attracted to come to Lebanon due to its prices. The only positive relationship between push and pull factors is a weak relationship between push and medical institution and medical treatment. This means that as the need to leave a home country increases, the attractiveness to choose Lebanon due to its reputation in medical services increases as well. Therefore, the positive correlation between push and pull factors is rejected with the exception of medical institution and medical treatment.

As for the effect of push and pull factors on perceived medical and touristic quality, the findings indicate that the pull factors that require special consideration are "destination" and "medical institution and medical treatment" for they both have positive significant influences on perceived medical and perceived touristic quality. Destination moderately influences perceived touristic quality. Medical institutions and medical treatment moderately influences perceived touristic quality as well as solely and moderately influences perceived medical quality. The other pull factors, "convenience" and "price" do not have significant effect on either perceived medical quality or perceived touristic quality.

As for satisfaction, it is strongly positively influenced by perceived touristic quality and weakly positively influenced by perceived medical quality.

Moreover, satisfaction has a positive high influence on intention to revisit. Satisfaction is also classified as medical and touristic. It is important for revisiting Lebanon for medical and leisure purposes as well as for spreading positive word-of-mouth.

As a result, and from a comprehensive perspective, the motivation of medical tourists is inspired by pull factors associated with the destination itself as well as its medical aspects. The motivations positively influence the tourists' perceived medical and perceived touristic quality.

In return, both perceived medical and perceived touristic quality positively influence tourists' satisfaction with their trip which determine their intention to revisit the destination and recommend it to others.

Qualitative results derived from the survey were utilized to shape the various segments of medical tourists. A significant segment of medical tourists is coming from Iraq and the age groups 25 to 34 and 35 to 44 are the largest. The biggest segment of medical tourists earned an annual income that ranges between USD 5,000 and USD 30,000. In terms of medical treatment, the major segment goes to cosmetic surgery and aesthetic treatment. Collectively, the largest segment of medical tourists in Lebanon is comprised of young females between the age of 25 and 44 pursuing cosmetic and aesthetics treatment and surgery.

Another significant segment is medical tourists pursuing dental treatment. This segment is made up of 46.7% males and 53.3% females. Most of them range between 25 and 44 years of age.

In terms of monetary spending, the biggest segment spends between USD 8,000 and USD 12,000. Half of the medical tourists' budget goes to medical matters and the other half to touristic matters. The majority of medical tourists spend between 10% and 20% of their budget on accommodation. The biggest segment travelled with two companions followed by one companion. As the number of accompanying friends and family members increased, the choice towards furnished apartments increased. Moreover, most tourists were arranging their accommodation by themselves even when they were familiar with the destinations. A significant difference exists between tourists who arranged their accommodation by themselves and those who arranged it via a travel agent or medical broker.

#### **9.4. Highlights of the recommendations**

The findings of this study are of significance to the various participants in the medical tourism industry. Empirically, suppliers of medical tourism ranging from clinics, medical centers, travel agencies, hotels as well as others can derive several managerial propositions and implications to enhance their performance and attract more medical tourists. Therefore, the recommendations were concentrated on enhancing pre-visit motivations as well as the perceived quality and satisfaction through focusing on the medical and touristic experience during the visit.

##### **9.4.1. Recommendations to Lebanese suppliers of medical tourism - medical centers**

Since medical tourists coming to Lebanon are attracted by its medical aspects, medical centers need to focus on medical quality. This can be performed by a) promoting quality and b) investing in quality.

Quality can be promoted in an effort to enhance the pre-visit motivations. To promote medical quality, medical centers need to have stronger presence in the tourists' home countries as well as on the web and social media. As for the tourists' home countries, stronger presence can be achieved by establishing strong ties with travel agencies and medical brokers in tourists' home countries, participating and/or sponsoring some medical-related events that would attract potential medical tourists, as well as visual advertising in healthcare publications and media.

As for the web, stronger presence can be attained by establishing businesses with web-based medical brokers. Social media is an influential tool that can be utilized in today's advertising. Medical centers can cooperate with the celebrities of social media, who have significant number of followers, to advertise for the medical centers. A calculated selection process needs to be done before selecting the celebrity, for the audience of the selected celebrity needs to be a potential market segment for the medical center. This can be applied in the aesthetic and cosmetic field as



female social media stars can make significant influence on thousands, sometimes millions of followers.

As for investing in medical quality, it can be executed on several levels:

First, "medical center" as a whole. The JCI accreditation focuses on the medical institution as a whole. Such accreditation gives credit to the medical center and conveys a sense of trust to international patients by acknowledging that it operates on international standards. Moreover, Lebanese medical institutions can establish joint collaborations with well-known international medical institutions. Such a step would promote and enhance the quality of the medical center.

Second, "medical treatment". Success rate is a significant indicator for quality of medical treatment. It can be attained through incorporating quality assurance systems and quality management systems as well as bringing cutting-edge technology to the various medical specialties. There are numerous quality assurance systems and quality indicators in the field of healthcare and some even surveys patient satisfaction. The medical center needs to research the various systems and implement the one that is suitable. Special attention needs to be given to specialized procedures and procedures that require high-level expertise for they can provide competitive advantage to the medical center.

Third, "human resources". Medical centers need to retain their qualified and reputable physicians through establishing a well-designed and personalized motivation system as well as career development system. Medical staff, and they create an asset to the medical center, can be skilled to better meet the needs of medical tourists. This can be achieved through special training programs on communication skills, patient relations, hospitality, and cultural diversity. Moreover, a designated bureau for international patients' relations can be established. The duty

of this bureau is to facilitate the medical trip from arrival to departure; this could take the form of a complete medical package or partial services such as taking appointments, facilitating after-care process, airport pickup and drop-off, arranging accommodation, as well as other arrangements.

While focus on quality is important, price should not be compromised. An increase in price can push an existing segment of medical tourists away from Lebanon towards a destination that is offering competitive services with similar or lower price.

#### **9.4.2. Recommendations to Lebanese suppliers of medical tourism - hotels and lodging establishments**

The study recommendation addressed to hotels and lodging establishments focus on four aspects. They are financial saving, convenience, medical service and hospitality product.

Financial saving can be realized by offering packages that includes healthcare services along with accommodations and meal services at reduced rates. Convenience can be realized by offering transportation to and from the medical center as well as by offering home-feel like rooms that can accommodate the size of the accompanying family and friends. Convenience can also be realized by offering services that include arranging medical appointments on behalf of the tourists.

Medical care quality can be attained in the hotel through offering reliable post-care services for the hotel's medical tourists by contracting with part-time nurses to look after the medical tourists' requirements or coordinating with the associated medical center, particularly for special cases. Hospitality services which is particularly meaningful for the patient's accompanying family and friends since it enables them to enjoy a wide selection of quality food and beverages. This can be

attained by offering a variety and high-quality food and beverage items as well as including ethnic menus or dishes that cater to the taste of the medical tourists and their families.

A recommended concept worth investing in is "medical hotel", particularly in locations that enjoys natural beauty and relaxed environment. This concept encompasses convenience, proximity, privacy and hospitality services. The uniqueness of this concept lies in its offering the hospitality product which does not exist in regular clinics and medical centers. To promote medical hotels, marketing efforts and strategies need to be communicated effectively to the target market. This would include visual advertising, developing special packages, familiarization visits, and reduced prices for first time visitors.

#### **9.4.3. Recommendations to Lebanese suppliers of medical tourism - travel agencies**

There exists a significant space to be utilized by travel agencies in the sphere of medical tourism. Travel agencies can design array of packages that cater to the needs of the various segments of medical tourists.

This study has portrayed segments of medical tourists based on demographic characteristics as well as others related to the nature of the pursued trip. Moreover, the study has highlighted the most significant segments in the market. Accordingly, the segmentation can guide travel agencies in developing packages that meet the diverse needs of such segments. Packages can include a range of suitable accommodation, meal options, sightseeing options, levels of personalized in-room treatment, and over and above medical services with a range of prices including single-supplement prices.

The study also recommends that travel agencies establish joint collaborations with other travel agencies in feeder markets to sell pre-designed medical packages. This step would be a win-win situation for both agencies. Furthermore, collaboration with web-based service providers and

medical brokers would enhance advertising for medical packages and strengthen the web presence of travel agencies.

#### **9.4.4. Recommendations to the Lebanese public sector - national level**

On a national level, concerned government sectors in the tourism field and healthcare field can utilize the outcomes of this research to enhance the attractiveness of their destinations as well as to elevate their destinations to become world-class medical tourism destinations.

Promoting the destination is primary in affecting pre-visit motivations and attracting medical tourists. Promotion can be focused on the medical aspect and the touristic aspect. More importantly, is building the image for Lebanon as a destination for medical tourism. A brand image can be created for Lebanon through an iconic brand name in the discipline of healthcare, medical institutions with strong history and reputation in the Levant such as Hôtel-Dieu de France, American University of Beirut Medical Center (AUBMC), or Clemenceau Medical Center (CMC) create a strong brand image for Lebanon.

The cooperation between Ministry of Tourism and Ministry of Public Health is key to building this image. Special campaigns can be launched under the ministries' patronage to promote fields of specialty in Lebanon such as cosmetic surgery as well as specialties that require high-level expertise. Moreover, participation in international conventions and exhibitions related to tourism, healthcare or medical tourism can contribute significantly to promoting Lebanon as a destination for medical tourism. Ministry of Tourism can focus more on this tourism niche in the annual conventions and exhibitions it usually participates in.

A key criterion for medical tourism worth paramount consideration is Lebanese physicians. Ministry of Public Health needs to sustain this human asset by encouraging physicians to stay in Lebanon as well as averting them from establishing clinics in feeder markets, particularly in the

GCC countries since many reputable Lebanese physicians are establishing side businesses within neighboring countries. Such a step can be attained by spreading awareness through the Lebanese Order of Physicians on the importance of medical tourism to the Lebanese economy and the major role that the Lebanese physicians play in attracting such tourists. Moreover, the government can contribute towards sustaining this human asset by increasing the benefits of physicians who work locally. Conversely, the government can discourage them from establishing dual business abroad by increasing taxes on physicians who choose to establish businesses abroad.

Government support is paramount to the success of medical tourism. New government regulations are needed to encourage investment in the healthcare sector and particularly medical tourism. Such encouragement can take the form of tax decrease or facilitation of business license and permits for investments targeting international markets. The support of PPP is critical for minimizing the operational risks associated with new medical tourism projects.

Additionally, locations outside Beirut where the land is more available and cheaper, sceneries are beautiful, and environment is relaxed are suitable for establishing medical hotels. Therefore, government can encourage the development of specialty hospitals located outside Beirut as well as support the renovation of existing hospitals in such areas to meet international standards and accommodate medical tourists. It is worth mentioning that some existing hospitals in Lebanon have the potential to be converted into medical resorts.

Transportation is an aspect that needs reconsideration as it will yield in satisfactory results for citizens and tourists. First, well-organized public transportation networks need to be established. Second, reviving the disabled rail system which connects the Lebanese cities. Third, enhancing the quality of the taxi experience by enforcing standards on the conditions of public vehicles.

The Lebanese government can cooperate with the Lebanese Diaspora to promote medical tourism to Lebanon through establishing a planned promotional strategy. This strategy may involve immigrants' associations and clubs for effective and planned promotion in countries of Diaspora.

Finally, the Lebanese government needs to maintain stability and security as well as to portray this message extensively in various media channels. Maintaining a positive and secure international image of Lebanon is particularly important not only for medical tourism but for tourism in general since the Lebanese economy relies heavily on tourism.

#### **9.4.5. Recommendations to the Lebanese government - benchmarking opportunities**

Medical tourism experience has succeeded in countries with diverse economic, geopolitical, social and cultural infrastructures. Several countries around the world have climbed the ladder to become world-class destinations in medical tourism. Their success stories collectively make a rich foundation of ideas, strategies and work plans from which emerging destinations can learn to thrive in this field. Lebanon can benefit from the experiences of others with calculated consideration on what can become a successful benchmark.

Medical tourism growth cannot be possible without government support and futuristic vision. Thriving destinations have witnessed this support through various forms. Primarily, governments have dedicated specific committees and boards through concerned ministries to care for medical tourism development matters. Malaysia has developed inter-ministerial committee that has five subcommittees for the development of medical tourism. Malaysia has also developed Malaysia Healthcare Travel Council (MHTC) with the purpose of reforming the healthcare sector to attract more international patients. On a similar note, Jordan has developed the Jordan Tourism Board which focuses on niche tourism markets among which is healthcare tourism. On another level,

India linked health with economic development by establishing Commission of Macroeconomic and Health which envisions investment in health a route to economic development.

In 2001, Lebanon established the National Commission for the Development of Health Tourism which includes representatives from involved public and private bodies. This committee can benefit from the plans and strategies developed by other similar committees and boards such as Malaysia, India and Jordan to reach elevated outcomes that have better impact on the Lebanese medical tourism and economy.

Another form of governmental support can be in the form of promoting medical tourism investment by offering incentives and tax exemptions in such investments. Jordan has applied such investment incentives. In a similar step, Dubai has established Dubai Healthcare City (DHCC) with more than ninety medical centers and a range of hotels. Lebanon can take similar initiatives, particularly that the Lebanese healthcare sector is made primarily of private investments. Many of them concentrated in Beirut and the surrounding areas. Therefore, Lebanon can benefit from Jordan and Dubai's experience and encourage medical tourism investments in natural and relaxed areas of Lebanon.

To facilitate the entry of medical tourists, countries such as Malaysia and India have developed a classification of visa specific for medical travelers. Malaysia offers a three-months visa that is issued upon the medical tourist arrival. In India, this visa is called M-visa and it allows the medical traveler to stay with companion for a period up to one year. The application of a similar visa classification in Lebanon can not only facilitate the entry of medical tourists but can serve as well in calculating the number of yearly medical tourists arrivals. These figures can be utilized in various ways to further develop the industry in Lebanon.

On another level, some countries have issued decrees that aim to develop and in certain cases to regulate the medical tourism industry. Israel has recently issued the Medical Tourism Law which aims to increase the income of Israeli economy from medical tourism, and ensure the professional and ethical care of the medical tourist. Such a law, which has passed several developmental stages can be utilized as a platform for building similar decree that promotes and regulates the medical tourism industry in Lebanon. However, the Israeli medical tourism experience cannot be officially benchmarked or effectively benefited from unless peace is established between Lebanon and Israel.

Airline tickets can make a considerable portion of the tourist's budget and accordingly influence the decision to travel. National carrier can play a role in motivating potential medical tourists to take the decision of travelling to Lebanon. Turkish Airlines has become a major promoter for medical tourism in Turkey through signing protocols and agreements with healthcare centers in the destinations where it serves. According to which, medical tourists are offered discounted tickets and incentives to visit Turkey for meditation. A similar initiative can be performed by the Middle East Airlines (MEA), the Lebanese National Carrier, particularly in destinations that are considered potential feeder markets. Such an incentive would motivate the patient to proceed with the travel decision making process.

Furthermore, to attract more segments of medical tourists, Lebanon can follow the steps of India and build partnership with other countries with an objective of enhancing tourism to both countries. Moreover; Lebanon, particularly the Lebanese travel agents and medical brokers, can benefit from the established ties with the Lebanese expatriates and promote medical tourism to Lebanon. The Israeli medical brokers such as Global Health Israel have established partnerships with religious affiliations in various countries with Jewish Diaspora. While the Israeli brokers



focus on the religious aspect to attract medical tourists, the Lebanese brokers can focus on the national aspect to attract the Lebanese expatriates to visit Lebanon for healthcare. This step can be fortified and regulated by the support of the Lebanese Ministry of Foreign Affairs and Immigrants.

### **9.5. Limitations**

Some limitations were faced during this study and they are mostly related to data collection processes and procedures. As for interviews, the attempt was to collect data from the maximum possible number of medical tourism service providers, yet the busy schedule of some interviewees and management restrictions by some institutions hindered from conducting some preplanned visits. Additionally, some interviewees were busy during the interviews which did not allow room for expansion in some answers.

Another limitation in the study was the inadequate cooperation expressed by some medical centers. Obtaining approvals to enter medical centers and collect data from international patients was a vague and lengthy process. Several medical centers were contacted, and follow-up visits were paid to administrative offices in charge, yet the reply, whether positive or negative, kept being postponed and overlooked. This non-response situation required searching for alternative ways to reach medical tourists. Such ways involved approaching lobby supervisors for verbal approvals of data collection during the checkout of international patients as well as seeking cooperation of medical nurses who volunteered to participate in the study and collect data for the international patients whom they were assigned to.

Furthermore, some channels of data collection were not as resourceful when compared to others. Hotels were one of those channels that yielded in a low response rate. When front desk agents

were asked about the reason, the answer was the lack of time from the medical tourists' side particularly during checkout.

Another limitation in the data collection process was time. Since respondents were personally reached and survey data were collected via paper-and-pen instrument, the process was time and resource intensive. Some respondents were elaborative discussing their experience and often diverting from the survey questions, which required listening and filtering the relevant information into the comment field of the questionnaire paper. Such process was often time consuming.

Additional limitation in the study was the data obtained from the Ministry of Tourism. After filling the required documents in request for specific statistics and information related to medical tourism, the data received was partial to what was requested.

Another important limitation of the study is the current political context within the Middle East which is unstable and changing. Such condition impinges directly on Lebanon and particularly the tourism sector. The collapsing medical systems in some neighboring countries encourage their residents for seeking medical care in surrounding countries. On the other hand, the political conflict between countries in the region influences tourism sector in Lebanon in terms of the number and nationalities of incoming tourists. Such regional changes leave its residues on medical tourism field in terms of types and characteristics of medical tourists and accordingly their demands and expectations.

## **9.6. Venues for future research**

Consistent with Hoz-Correa et al. (2018) recent review recommendation, the findings of this study call for a need to develop an "appropriate" definition for medical tourism. Accordingly, a

major area that requires future examination in medical tourism formal literature is the creation of a definition that provides a consistent terminology to the field.

Based on this study, further developed research can be carried in the fields of medical tourism from the perspective of supply and demand, push-pull theory, consumer satisfaction, consumer behavior, decision-making process and bundling. In addition, this study can pave the way to several researches in medical tourism destinations, destination attractiveness, destination image, market segmentation as well as other areas. In the tourism discipline further research can be developed on motivations of medical tourists from a different theoretical background such as "travel career ladder" (TCL) theory. Moreover, further studies can be carried out on brand image of destinations, destination personality as well as other subject areas in medical tourism destinations.

From a sector performance perspective and based on the study findings, further research can be developed to improve the service quality in medical tourism field based on disconfirmation-based diagram and SERVQUAL measurement scale

In the marketing discipline, future studies with respect to international marketing for destinations and medical facilities using various applications such as marketing mix can be developed. Additionally, further research on consumer behavior in the medical tourism field can be built on. Moreover, in the bundling subject area, this study can serve as a reference point for bundles pre-purchase motivations and post purchase satisfaction.

In the field of healthcare, future studies can be developed on possibilities for integrating hospitality attributes to cater for international patients in medical centers in addition to studies on

possible synergies between hotels and medical centers. Moreover, studies on dealing with patients from diverse cultural backgrounds can be developed.

This study can be developed to execute a more accurate comparison between demand side perspective and supply side perspective on factors that affect the medical tourists' destination choice as well as areas for improvement in the medical tourism experience. A gap analysis can be performed in this regard. Moreover, a validation method such as multitrait-multimethod matrix can be utilized in verifying the similarities and differences.

Another validation method which can be executed in future studies to further confirm and develop the causal inferences of this research is choosing a longitudinal sample. While the choice of this study sample was cross sectional at a specific point in time, longitudinal study sample that test the medical tourists at the beginning of the trip and towards the end of the trip can result in development of proven relationships.

The developed model in the study can be utilized in further research as an example or reference point in relation to world-class medical tourism destinations and their determinants. It can also be utilized in other niche tourism studies focusing on consumer behavior and decision-making process. The model as well can inspire future developments and elaborations on the motivation side, perceived quality or satisfaction side.

This study is one of the very few, if any, that analyzed the Middle Eastern medical tourist. Hence, it makes a preliminary foundation for understanding the traits and behavior of Middle Eastern medical tourist. It also creates an insight into medical tourism in this part of the world. Therefore, from a cultural perspective, further researches can be carried out towards a deeper and more developed understanding of the Middle Eastern medical tourists. Moreover, this study can

be utilized in understanding the cultural effect on medical tourists in terms of personality traits, motivation, destination choice and decision making, perception of brands in medical tourism, spending pattern in addition to cross-cultural studies in medical tourism and related disciplines.

From a regional perspective, this research can be developed for extended studies on medical tourism in Lebanon and the Middle East. According to the recent review by Hoz-Correa et al. (2018), research on "medical tourism destinations" will be one of the relevant areas of study in the future years. Therefore, the conclusions and recommendations can be applied in further empirical studies to generate new strategies and work plans that enhance the attractiveness of Destinations in Medical Tourism. Such strategies and work plans shall target the various players in medical tourism supply chain in the destination aiming to enhance their course of work. Furthermore, the findings of this work will aid future researches on possibilities for benchmarking endeavours in other countries of the region.

### **9.7. Conclusion**

To answer the research question and to achieve the research objective, this study developed a conceptual model based on the theoretical framework derived from previous literature and qualitative interviews. According to the logical reasoning of modification indices in SEM analysis, the model was evaluated, modified and estimated, reaching to the final model with only significant paths.

In a nutshell, the motivational pull attributes of the destination positively affect the perceived quality on a medical level and touristic level which both affect satisfaction and intention to revisit the destination for medical and touristic purposes.

Empirically and generally, to realize the full potential of medical tourism in Lebanon, well-designed strategies focusing on pre-visit motivations as well as hospitality services and medical

care quality need to be developed and executed. Moreover, strategic coordination among key players including hospitals, medical doctors, travel agencies, related web-based service providers and medical tourists can yield in fruitful results.

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## Appendices

### Appendix 1: Medical tourism in Middle Eastern countries

#### **Amman, Jordan**

The Jordanian government took several initiatives to boost Jordan's healthcare and medical tourism and to encourage investments in the hospital industry through offering incentives and exemptions in such investments (International Medical Travel Journal, 2015). As well as waiving visa fees and exit taxes on some tourists cases.

Jordan has 64 private hospitals with national accreditation and nine hospitals with JCI accreditation. In 2012, there was an influx of 250,000 medical tourist along with 500,000 of their respective relatives and friends generating a revenue of more than one billion dollars. (Barua and Esmail, 2013)

Jordan was ranked fifth in the world as medical tourism destination by the World Bank in 2010. The proceeding years witnessed many efforts by the Jordan government to sustain its level/position through hosting congresses, expositions and promotion strategies aimed at enhancing its medical tourism industry (Jordan: Managing medical tourism, 2012).

The Jordan Tourism Board's 2013 plan was to build on the key principles of Jordan's National Tourism Strategy (NTS) and to diversify Jordan tourism focusing more on niche tourism markets such as healthcare, adventure, and religious tourism among others. (Hornett, 2012)

A country rich in history and distinctive nature, Jordan offers more than advanced contemporary medical services and quality care to its medical tourists. The Aqaba and the Dead Sea, the lowest point on earth constitute a cornerstone to health tourism in Jordan. The development in the Dead Sea zone has attracted international health travelers through its luxurious hotels, spas and fitness facilities. (Stephano, 2014)

#### **Dubai, UAE**

Aside from being a world leisure travel destination due to its modern infrastructure, contemporary architecture, leisure shopping mall and warm climate, Dubai encompasses state-of-the-art medical centers making it a world destination for medical tourism. In 2013, the medical tourism sector in Dubai reached \$1.69 billion. (Dubai Medical Tourism Transformation More Than Cosmetic Procedure, 2014)

In the past, the UAE used to send around 8,500 outbound medical tourist to various countries, mainly Germany, USA, Thailand and Singapore spending around \$2 billion a year (*International Medical Travel Journal*, 2011). However, in 2014, Dubai revealed a master medical tourism plan with the aim to target 500,000 medical tourist a year and accordingly Dubai's authorities expect

by year 2020 about 500,000 patient with revenues of about \$700 million. By then as well, 18 private and 4 public hospitals would have been built. (Fetscherin and Stephano, 2015)

In its heart, Dubai encompasses a remarkable world-class healthcare development. That is Dubai Healthcare City (DHCC) with more than ninety medical centers and two internationally accredited hospitals. DHCC operates in conjunction with world leading health-care institutions such as London Center for Aesthetic Surgery, Moorfield Eye Hospital, Boston Institute for Dental Research and Education and many others.

With nearly two-thirds of DHCC's patients coming from outside UAE, it was developed to cater for medical tourists. Therefore, surrounding DHCC, exists a range of accommodation options from hotels and hotel apartments. In 2013, DHCC catered to 1 million patients up from 400,000 in 2010. An additional attribute for medical tourism in Dubai is the existence of healthcare professional from various nationalities speaking more than 40 languages. (Woodman, 2012)

### **Istanbul, Turkey**

Turkey has been a booming tourism destination. Its geographical location as a link between Asia and Europe attracts tourists from both Europe and the Arab world.

After 1990, Turkey's healthcare sector witnessed an increase in the private sector and achieved progresses in terms of qualified manpower, international accreditation of its organizations, high-quality healthcare services and increasing the number of incoming medical tourists. Turkey's Ministry of Health expects medical tourists to increase from 270,000 in 2012 to 2.0 million by 2023

Transportation has been a major promoter for Turkish medical tourism. The Turkish Airlines has flights to 199 destinations throughout the world. ([turkishairlines.com](http://turkishairlines.com), 2015) It also established agreements and protocols with healthcare organizations giving incentives and discounts for medical tourist traveling to Turkey.

Waiving the visa with many countries have resulted in a significant boost in the number of incoming tourists to Turkey including medical tourists. This step made it more feasible for the medical tourist to choose Turkey as a destination for the medical treatment.

### **Tel Aviv, Israel**

Israel is ranked by the International Healthcare Research Center (IHRC) as one of the medical tourism destination that combines treatment with vacation (Shamah, 2014). According to the Ministry of Health, Israel's total income from medical tourism reached \$140 million in 2012 (Shamah, 2014).

There are no exact figures on the total number of medical tourists arrivals to Israel. However, it has been, for the past few years, around 30,000 medical tourist arriving each year. Most of the

medical tourists are coming from Russia, Cyprus, Eastern European countries as well as other European countries such as Germany, France and UK (State of Israel Ministry of Health, 2017). Most of the major medical centers such as Tel Aviv Sourasky Medical Center, Hadassah Medical Center and Sheba Medical Center have established medical tourism departments and developed packages for medical tourists that facilitates different aspects of their trip (Robinson, 2013). In addition, several listed medical brokers and facilitators based in Israel and other countries such as Global Health Israel and Medistracenter work on promoting medical tourism to Israel (IMTJ, 2018). International patients choose Israel for various procedures including less common ones such as in-vitro fertilization (IVF), bone marrow transplant, cosmetic surgery, eye surgery as well as other surgeries and treatments (Finer, 2018).

The Israeli healthcare system operates under the control and supervision of the Israeli Ministry of Health which regulates and standardizes health practices in diverse healthcare centers as well as regulates the credentials and qualifications of medical professionals. Israel has around 70 general hospitals most of which are owned and operated by the government and NGOs (Health-tourism, 2018).

In November 2010, the Israeli Health Minister appointed an investigative committee whose primary responsibility is to search resources and means for developing the medical tourism industry (Even, 2013). Medical tourism in Israel has grown to become a lucrative business and a profitable source of income. The rise of Israeli medical tourism and the increasing numbers of admitted international patients in Israel's hospitals has initiated concerns among Israeli citizens and other government bodies that viewed the healthcare system a priority for Israelis and that international patients are taking places of Israeli patients (Shamah, 2014). Such concerns initiated calls to reexamine and regulate the industry of medical tourism.

The regulation of the Israeli medical tourism industry has gone through several stages reaching its current status. In 2017, the Medical Tourism Law was first approved in the Knesset Plenum. The law was initially a bill between the Ministry of Health and the Ministry of Tourism with the objective of regulation medical tourism industry. The bill highlighted three principles: Protection of the Israeli patient, increasing the income of Israeli economy from medical tourism, and ensuring the professional and ethical care of the medical tourist. The law also proposed creating a directory for registered medical tourism agents as well as establishing criteria and requirements for registration (State of Israel Ministry of Health, 2017).

Today, Israel is an attractive destination for medical travel equipped with advanced technology and skilled medical professionals as described by the Medical Tourism Index in their 2016 report.

## Appendix 2: Interview questions and profile of respondents

### Interview Questions:

1. Do you see Lebanon as a medical tourism center in Middle East? Why or why not?
2. What are the factors affecting Lebanon in developing its medical tourism industry?
3. Do you think that the infrastructure and superstructure in Lebanon are adequate to cater for the growth of medical tourists?
4. How can the government support medical tourism in terms of promoting it within and outside Lebanon?
5. What are the human resource issues related to medical tourism development in Lebanon?
6. Do you think that Lebanon has the expertise and manpower to deal with medical tourists from different countries?
7. Do you think that medical tourism staff should be specifically trained? What do you think is the situation in Lebanon?
8. How does the economic situation in Lebanon affect medical tourism development?
9. How can the private and public sectors be encouraged to support medical tourism efforts or investment?
10. What are some activities and effective ways of promoting medical tourism in Lebanon?
11. How can medical service providers communicate with medical patients or tourists more effectively?
12. Does Lebanon have the facilities and attractions to cater for the needs of medical tourists?
13. Can you think of any other factors that could be a barrier to development?

### Profile of respondents

Respondents	Title/Position	Age	Length of interview
Respondent 1	Owner and managing director for medical center	40	15 minutes
Respondent 2	Owner and manager for pharmacy	56	25 minutes
Respondent 3	Operations manager for travel agency	25	21 minutes
Respondent 4	Owner and managing director for travel agency	31	28 minutes
Respondent 5	Medical doctor in medical center	30	18 minutes

Respondent 6	Medical doctor and Head of Unit in a hospital	58	30 minutes
Respondent 7	Department manager in a hotel	38	25
Respondent 8	Medical Doctor in a hospital	27	20 minutes

**Appendix 3: Initial questionnaire**  
**Université Paris 1 Panthéon-Sorbonne**

This questionnaire will be used in a research study conducted as a part of a doctorate program at Université Paris 1 Panthéon-Sorbonne. The survey aims to evaluate the competitiveness of Lebanon as a destination for medical tourism amongst regional competitor destinations and possible areas of improvement from the consumer’s perspective. The questionnaire will talk about your trip, your preference for Lebanon as a destination for medical tourism. Next, we welcome your feedback. The answers will be anonymous and will be used strictly for the research analysis.

Thank you for your time!

**Overview:**

**Medical tourist** is defined as a person who travels for the purpose of enhancing or maintaining health as well as for the purpose of receiving medical care.

**Destination’s assessment** well-validated measurement drivers upon which the destination’s competitiveness in medical tourism is measured against others.

**I. About your trip**

1. Have you ever travelled outside your residence for medical services?

<input type="checkbox"/> Yes	<input type="checkbox"/> No
------------------------------	-----------------------------

2. If yes, which country/countries?

3. Would you go to Lebanon for medical services?

<input type="checkbox"/> Yes	<input type="checkbox"/> No
------------------------------	-----------------------------

4. How many family member(s) or friend(s) were traveling with you?

<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> more than 2
----------------------------	----------------------------	----------------------------	--------------------------------------

5. Was the hotel you were staying at affiliated with the medical institute?

<input type="checkbox"/> Yes	<input type="checkbox"/> No
------------------------------	-----------------------------

6. You (and your family) were staying in

<input type="checkbox"/> Luxury hotel	<input type="checkbox"/> Midscale hotel	<input type="checkbox"/> Economy hotel	<input type="checkbox"/> Furnished apartment	<input type="checkbox"/> Other: please specify_____
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7. Your total budget for this trip ranges between

<input type="checkbox"/> \$3,000-\$5,000	<input type="checkbox"/> \$5,000-\$8,000	<input type="checkbox"/> \$8,000-	<input type="checkbox"/> \$12,000-	<input type="checkbox"/> More than
--	--	-----------------------------------	------------------------------------	------------------------------------



		\$12,000	\$20,000	\$20,000
--	--	----------	----------	----------

8. Of this budget, you are approximately allocating up to \_\_\_ % for medical purposes

25%	40%	50%	75%	100%
-----	-----	-----	-----	------

9. Of this budget, you are approximately allocating \_\_\_% for accommodation

5%	10%	15%	20%	25%
----	-----	-----	-----	-----

10. Who arranged your accommodation?

<input type="checkbox"/> Yourself	<input type="checkbox"/> Medical institute	<input type="checkbox"/> Travel agent	<input type="checkbox"/> Other: please specify _____
-----------------------------------	--	---------------------------------------	--

11. If you have come via a travel agent, what is the name of the travel agency?

\_\_\_\_\_

12. What medical procedure were you pursuing?

Heart surgery
Hip surgery
General surgery
Knee surgery
Laparoscopic surgery
Obesity surgery
Dental surgery/treatment
Infertility treatment
Scans/investigations
Cosmetic surgery
Aesthetic Treatment
Other: specify

**II. Let's talk about Lebanon as a tourism destination**

*This part aims to measure the influential drivers that stand behind choosing this particular destination for medical tourism.*

13. Before choosing Lebanon, you were thinking of \_\_ for your medical procedure

Amman, Jordan	Dubai, UAE	Istanbul, Turkey	Riyadh, KSA	Other: Specify
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14. From 1 to 5, rank the following influential drivers standing behind choosing Lebanon as your destination for medical services: 5 as being most important and 1 as being least important

**A. The Destination**

	1 Least important	2 Not important	3 Neither	4 Important	5 Most important
Geographic location					
Typography and climate of destination					
Advertising in home country					
External network: Airline routes and frequency					
External network: availability of travel agencies medical packages					
External network: availability of medical institutions' brokers					
Ease of collecting visa					
Combining medical treatment with vacation					

**B. Medical Institution and Medical Treatment**

	1 Least important	2 Not important	3 Neither	4 Important	5 Most Important
Reputation of the destination's medical institutions					
Accreditation of the destination's medical institutions					
Reputation of a particular medical provider					
Experience and reputation of a particular medical doctor					
Treatment is available in the destination abroad that					

is unavailable domestically					
Treatment is available domestically but better (yet with more guaranteed results) in the destination abroad					
Home doctor recommendation					
Anonymity of treatment					

### C. Price

	1 Least important	2 Not important	3 Neither	4 Important	5 Most important
Price of medical care in the destination abroad					
Value of medical care for price in the destination abroad					
Client's health insurance covers treatment in the destination abroad					

### III. Feedback and performance rankings

*This part is about your perspective of the performance of the healthcare sector and the tourism sector in Lebanon.*

15. Rank your experience as a medical tourist in Lebanon in terms of the following factors:

#### A. Medical

	Very good	Good	Neutral	Bad	Very bad
Quality of Medical institution					
Medical procedure					
Medical doctor					
Medical staff					
Quality of facilities					
Quality of after-care					
Prices of medical					

services					
----------	--	--	--	--	--

**B. Nonmedical**

	Very good	Good	Neutral	Bad	Very bad
Airlines					
Accommodation					
Local transportation					
Money exchange and transfer services					
Food and beverage					
Shopping experience					
Prices of daily consumer product					
Leisure activities					
Friendliness of local community					
Proximity of the medical institution to other areas					

16. I am willing to come back to Lebanon for medical services

<input type="checkbox"/> Strongly agree	<input type="checkbox"/> Agree	<input type="checkbox"/> Neither agree nor disagree	<input type="checkbox"/> Disagree	<input type="checkbox"/> Strongly disagree
---	--------------------------------	---	-----------------------------------	--

17. I am willing to come back to Lebanon for leisure tourism

<input type="checkbox"/> Strongly agree	<input type="checkbox"/> Agree	<input type="checkbox"/> Neither agree nor disagree	<input type="checkbox"/> Disagree	<input type="checkbox"/> Strongly disagree
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**IV. About you**

18. Gender

<input type="checkbox"/> Male	<input type="checkbox"/> Female	<input type="checkbox"/> Prefer not to answer
-------------------------------	---------------------------------	---

19. Age

\_\_\_\_\_ Years

20. What is your country of residence?

\_\_\_\_\_

21. What is your highest level of education?

<input type="checkbox"/> Have not completed high school	<input type="checkbox"/> High school Diploma	<input type="checkbox"/> Some college	<input type="checkbox"/> College graduate	<input type="checkbox"/> Graduate degree
---	--	---------------------------------------	---	--

22. Experience with travel: How many times a year did you travel for leisure or business in the last three years?

\_\_\_\_\_ times

23. How would you consider yourself as an international traveler?

<input type="checkbox"/> Inexperienced	<input type="checkbox"/> Moderately experienced	<input type="checkbox"/> Experienced
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#### Appendix 4: Questionnaire modifications

Additional pull variables were incorporated to part III of the questionnaire titled “Let’s talk about Lebanon as a tourism destination”. The added variables were “access to information”, “proximity of accommodation to medical centre”, “language and cultural similarity”, “government policies and laws”, “political stability and security”, “availability of shopping centres” and “Prices of tourist goods and services in destination”. Other variables were removed from part III and incorporated in part II as they served as push variables instead of pull. They were “Treatment is Available Abroad that is Unavailable Domestically”, “Home doctor recommendation” and “anonymity of treatment”. In the initial questionnaire, the pull variables were categorised into groups titled “destination”, “medical institutions and medical treatment” and “price”. While this grouping serves in the statistical analysis of the results, surveyors need not to know about it as it may create unnecessary confusion to them and accordingly the variables were combined into one comprehensive list. Changes to the wording of some variables were applied such as “Geographic location” was changed to “Proximity to home country” and “Treatment is available domestically but better (yet with more guaranteed results) in the destination abroad” was changed to “More guaranteed results and higher success rate for your-type – of- procedure performed in Lebanon”. “Lebanon” was used more as word instead of “destination abroad” as it is assumed to extract more realistic answers by bringing the questionnaire statements closer the tourist’s lifelike experience in Lebanon.

Additional variables were added to the quality feedback represented in question number 15. “Privacy” and “prices of medical services” were added to the part A of the question titled “medical”. “Safety and stability”, “weather” and “ease of trip planning” were added to part B of the question title “touristic”. These additions are presumed to serve in the statistical analysis through linking the pull variable to corresponding perceived quality variable with the objective of having perceived quality variable for every pull factor(s). Thus, it will serve in testing whether a correlation exist between pre purchase preference and post purchase perceived quality feedback. Additional changes were incorporated in this question. The variable “proximity of the medical institution to other areas” was moved from part B to part A of the question as it was considered to have a better fit in the medical part of the question. Also, the title of part B of the question was changed from “nonmedical” to “touristic” and the variable “leisure activities” was changed to “attractions and leisure activities”.

“Level of income” was added to demographic information in part V titled “about you”. Additionally, an open ended question titled “Comments and suggestions as a medical tourist” was added at the end of the questionnaire to capture missing elements that were not targeted in the questionnaire and that could serve as an observation in this research.

The initial focus of the study was to examine the attributes of the destination in attracting medical tourists. Thus, the pull factors were the focus of the questionnaire. After further research, more focus was allocated to push factors as they can play a role in shaping medical tourists’ preferences. And since it is significant to relate the “problem recognition” which is step

one of the decision making process to push-pull theory, it was imperative to include the push factors to the study as they exemplify the reasons that compelled the medical tourists to leave their countries and seek medical tourism abroad. Especially that many studies suppose that there is a reciprocal relationship between push and pull variables. (Oh, Uysal, and Weaver, 1995) Therefore, part II of the questionnaire titled “Seeking medical care abroad” was added.

To be able to measure the satisfaction of medical tourists and to link it to the motivational factors and perceived quality, question number 16 that reflects level of satisfaction was added. This addition was fundamental in linking the pre purchase preferences and perceived quality to post purchase satisfaction.

## Appendix 5: Final questionnaire

Dear Respondents,

This questionnaire is being conducted as partial fulfillment of a doctoral degree at Université Paris 1 Panthéon-Sorbonne. The survey aims to have a better understanding of medical tourists' motivations and satisfactions and to evaluate Lebanon as a destination for medical tourism and possible areas of improvement from the consumer's perspective. The questionnaire will talk about your trip, your reasons for travelling, your preference for Lebanon as a destination for medical tourism and general information about you. Next, we welcome your feedback.

Your participation in this study is completely voluntary and should take only 5 to 10 minutes. The answers will be anonymous and will be used strictly for the research analysis. If you wish to withdraw your participation from the research, you may do so at any time.

Thank you for your time, cooperation and participation!

Samar Noaman  
Ph.D. Student  
Ecole Doctorale de Management Panthéon-Sorbonne  
Contact phone: 00961 70701259  
Contact email: [samar.noaman82@gmail.com](mailto:samar.noaman82@gmail.com)

### Overview:

Medical tourist is defined as a person who travels for the purpose of enhancing or maintaining health as well as for the purpose of receiving medical care.

Destination's assessment well-validated measurement drivers upon which the destination's attractiveness in medical tourism is measured.

### **Part I: About your trip**

Please respond the following questions by checking (X) the box that corresponds to your answer

24. Before this trip, have you ever travelled outside your residence for medical services?  
 **Yes**  **No**

25. If yes, which country/countries?  
\_\_\_\_\_

26. How many family member(s) or friend(s) are traveling with you?  
 **0**  **1**  **2**  **more than 2**

27. Is your accommodation affiliated with the medical institute?  
 **Yes**  **No**

28. You (and your family) are staying in  
 **Luxury hotel**  **Midscale hotel**  **Economy hotel**  **Furnished apartment**  **Other: please specify \_\_\_\_\_**

29. Your total budget for this trip ranges between  
 **\$3,000-\$5,000**  **\$5,000-\$8,000**  **\$8,000-\$12,000**  **\$12,000-\$20,000**  **More than \$20,000**



30. Of this budget, you are approximately allocating up to \_\_\_ % for medical purposes  
 25%       40%       50%       75%       100%
31. Of this budget, you are approximately allocating \_\_\_% for accommodation  
 5%       10%       15%       20%       25%       More than 25%
32. Who arranged your travel plans?  
 Yourself       Medical institute       Travel agent       Other: please specify \_\_\_\_\_
33. What medical procedure were you pursuing?  
 Heart surgery       Laparoscopic surgery  
 Hip surgery       Obesity surgery  
 General surgery       Dental surgery/treatment  
 Knee and joints surgery       Infertility treatment  
 Tumors treatment       Neurological treatment  
 Cosmetic surgery. Specify \_\_\_\_\_       Scans/investigations  
 Aesthetic Treatment       Other: Specify \_\_\_\_\_
34. Do you have any insurance coverage on this particular medical procedure in Lebanon?  
 Yes       No
35. Before choosing Lebanon, you were thinking of going to \_\_ for your medical treatment  
 No other country       Amman, Jordan       Dubai, UAE       Istanbul, Turkey       Riyadh, KSA       Other: Specify \_\_\_\_\_

**Part II: Seeking medical care abroad**

This part aims to measure the reasons that made you travel abroad for medical care.

36. The below reasons are the most influential to your decision in seeking medical tourism abroad. Please indicate your level of agreement for the following statements by circling the appropriate number from 5 “strongly agree” to 1 “strongly disagree”

	<b>Agreement</b>				
	Strongly agree Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree Strongly disagree
1. Medical Care Abroad is Cheaper than Domestic Care	5	4	3	2	1
2. Length of Waiting Time for Domestic Treatment	5	4	3	2	1
3. Inadequate Domestic Health Insurance	5	4	3	2	1
4. Treatment is Available Abroad that is Unavailable Domestically	5	4	3	2	1
5. Low success rate for your-type – of-procedure performed	5	4	3	2	1

6. Home doctor recommendation	5	4	3	2	1
7. Anonymity of treatment	5	4	3	2	1

**Part III: Let's talk about Lebanon as a tourism destination**

*This part aims to measure the influential drivers that stand behind choosing this particular destination for medical tourism.*

14. The below drivers are related to Lebanon and are considered the most influential to your decision for choosing Lebanon for medical tourism. Please indicate your level of agreement for the following statements by circling the appropriate number from 5 “strongly agree” to 1 “strongly disagree”

	Agreement				
	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
1. Proximity to country of residence	5	4	3	2	1
2. Typography and climate in Lebanon	5	4	3	2	1
3. Government policies and laws in Lebanon	5	4	3	2	1
4. Political Stability in Lebanon	5	4	3	2	1
5. Combining medical treatment with vacation	5	4	3	2	1
6. Availability of shopping centers	5	4	3	2	1
7. Airline routes and frequency	5	4	3	2	1
8. Availability of travel agencies medical packages	5	4	3	2	1
9. Availability of medical institutions' brokers	5	4	3	2	1
10. Ease of collecting visa	5	4	3	2	1
11. Advertising in home country	5	4	3	2	1
12. Language and cultural similarity	5	4	3	2	1
13. Access to information	5	4	3	2	1
14. Proximity of accommodation to medical center	5	4	3	2	1
15. Lebanon's reputation in medical services / word of mouth	5	4	3	2	1
16. International accreditation of Lebanon's medical institutions	5	4	3	2	1
17. Reputation of a particular medical provider in Lebanon	5	4	3	2	1
18. Experience and reputation of a particular medical doctor	5	4	3	2	1
19. More guaranteed results and higher success rate for your-type – of- procedure performed in Lebanon	5	4	3	2	1
20. Price of medical care in Lebanon	5	4	3	2	1
21. Value of medical care for price in Lebanon	5	4	3	2	1
22. Your health insurance covers treatment in Lebanon	5	4	3	2	1
23. Prices of tourist good and services in Lebanon	5	4	3	2	1

### **Part IV: Feedback**

This part is about your perspective of the performance of the healthcare sector and the tourism sector in Lebanon as well as your satisfaction and intention to revisit.

15. Please rank your experience as a medical tourist in Lebanon in terms of the following factors by circling an appropriate number from 5 “very good” to 1 “very poor”

#### A. Medical

	<b>Assessment</b>				
	Very Good Very good	Good	Average	Poor	Very poor Very poor
<b>1. Quality of Medical institution</b>	5	4	3	2	1
<b>2. Medical procedure</b>	5	4	3	2	1
<b>3. Medical doctor</b>	5	4	3	2	1
<b>4. Medical staff</b>	5	4	3	2	1
<b>5. Quality of facilities</b>	5	4	3	2	1
<b>6. Quality of after-care</b>	5	4	3	2	1
<b>7. Privacy</b>	5	4	3	2	1
<b>8. Prices of medical services</b>	5	4	3	2	1
<b>9. Proximity of the medical institution to other areas</b>	5	4	3	2	1

#### B. Touristic

	<b>Assessment</b>				
	Very Good Very good	Good	Average	Poor	Very poor Very poor
<b>10. Airlines</b>	5	4	3	2	1
<b>11. Accommodation</b>	5	4	3	2	1
<b>12. Local transportation</b>	5	4	3	2	1
<b>13. Money exchange and transfer services</b>	5	4	3	2	1
<b>14. Food and beverage</b>	5	4	3	2	1
<b>15. Shopping experience</b>	5	4	3	2	1
<b>16. Prices of daily consumer product</b>	5	4	3	2	1
<b>17. Attractions and Leisure activities</b>	5	4	3	2	1
<b>18. Friendliness of local community</b>	5	4	3	2	1
<b>19. Safety and stability</b>	5	4	3	2	1
<b>20. Weather</b>	5	4	3	2	1
<b>21. Ease of trip planning</b>	5	4	3	2	1

16. Please indicate your level of agreement as a medical tourist in Lebanon for the following statement by circling an appropriate number from 5 “strongly agree” to 1 “strongly disagree”

	<b>Agreement</b>				
	Strongly agree Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree Strongly disagree
<b>1. You are satisfied with the tourism products</b>	5	4	3	2	1

<b>and services received in Lebanon</b>					
<b>2. You are satisfied with the medical services received in Lebanon</b>	5	4	3	2	1
<b>3. You are satisfied with the prices you paid for tourism and medical products and services in Lebanon</b>	5	4	3	2	1
<b>4. You are satisfied with the overall experience in Lebanon</b>	5	4	3	2	1
<b>5. You are willing to come back to Lebanon for medical services in the next two years</b>	5	4	3	2	1
<b>6. You are willing to come back to Lebanon for leisure tourism in the next two years</b>	5	4	3	2	1
<b>7. You would recommend Lebanon to a friend of colleague</b>	5	4	3	2	1

**Part V: About you**

Please respond the following questions by checking (X) the box that corresponds to your answer

17. Gender  
 Male                                       Female                                       Prefer not to answer

18. Age  
 \_\_\_\_\_ Years

19. What is your country of residence?  
 \_\_\_\_\_

20. What is your highest level of education?  
 Have not completed high school       High school Diploma       Some college       College graduate       Graduate degree

21. Approximately, what is you annual household income before taxes?  
 \_\_\_\_\_

22. Experience with travel: How many times a year did you travel for leisure or business in the last three years?  
 \_\_\_\_\_ Times

23. How would you consider yourself as an international traveler?  
 Inexperienced                               Moderately experienced                               Experienced

24. Comments and suggestions as a medical tourist  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Thank you for your time, cooperation and participation in this study.  
 -----Enjoy your stay in Lebanon -----

## Appendix 6: Cross tabulation tables

Table A:

5. You (and your family) were staying in * 6. Your total budget for this trip ranges between Crosstabulation			6. Your total budget for this trip ranges between					Total
			3000-5000	5000-8000	8000-12000	12000-20000	More than 20000	
5. You (and your family) were staying in	Luxury hotel	Count	0	2	10	8	17	37
		% within 5. You (and your family) were staying in	0.0%	5.4%	27.0%	21.6%	45.9%	100.0%
		% within 6. Your total budget for this trip ranges between	0.0%	2.9%	9.5%	15.4%	58.6%	12.8%
		% of Total	0.0%	.7%	3.5%	2.8%	5.9%	12.8%
	Average hotel	Count	6	31	40	17	5	99
		% within 5. You (and your family) were staying in	6.1%	31.3%	40.4%	17.2%	5.1%	100.0%
		% within 6. Your total budget for this trip ranges between	18.2%	44.3%	38.1%	32.7%	17.2%	34.3%
		% of Total	2.1%	10.7%	13.8%	5.9%	1.7%	34.3%
	Economy hotel	Count	13	12	36	12	0	73
		% within 5. You (and your family) were staying in	17.8%	16.4%	49.3%	16.4%	0.0%	100.0%
		% within 6. Your total budget for this trip ranges between	39.4%	17.1%	34.3%	23.1%	0.0%	25.3%
		% of Total	4.5%	4.2%	12.5%	4.2%	0.0%	25.3%
	Furnished apartment	Count	7	18	13	13	6	57
		% within 5. You (and your family) were staying in	12.3%	31.6%	22.8%	22.8%	10.5%	100.0%
		% within 6. Your total budget for this trip ranges between	21.2%	25.7%	12.4%	25.0%	20.7%	19.7%
		% of Total	2.4%	6.2%	4.5%	4.5%	2.1%	19.7%
Other	Count	7	7	6	2	1	23	
	% within 5. You (and your family) were staying in	30.4%	30.4%	26.1%	8.7%	4.3%	100.0%	
	% within 6. Your total budget for this trip ranges between	21.2%	10.0%	5.7%	3.8%	3.4%	8.0%	
	% of Total	2.4%	2.4%	2.1%	.7%	.3%	8.0%	
Total	Count	33	70	105	52	29	289	
	% within 5. You (and your family) were staying in	11.4%	24.2%	36.3%	18.0%	10.0%	100.0%	
	% within 6. Your total budget for this trip ranges between	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	11.4%	24.2%	36.3%	18.0%	10.0%	100.0%	

**Table B:**

10. What medical procedure were you pursuing? * 6. Your total budget for this trip ranges between								
Crosstab								
			6. Your total budget for this trip ranges between					
			3000-5000	5000-8000	8000-12000	12000-20000	More than 20000	Total
10. What medical procedure were you pursuing?	other	Count	4	2	5	0	1	12
		% within 10. What medical procedure were you pursuing?	33.3%	16.7%	41.7%	0.0%	8.3%	100.0%
		% within 6. Your total budget for this trip ranges between	12.1%	2.9%	4.8%	0.0%	3.4%	4.2%
		% of Total	1.4%	.7%	1.7%	0.0%	.3%	4.2%
	Heart surgery	Count	1	2	6	2	3	14
		% within 10. What medical procedure were you pursuing?	7.1%	14.3%	42.9%	14.3%	21.4%	100.0%
		% within 6. Your total budget for this trip ranges between	3.0%	2.9%	5.7%	3.8%	10.3%	4.8%
		% of Total	.3%	.7%	2.1%	.7%	1.0%	4.8%
	General surgery	Count	3	2	10	1	5	21
		% within 10. What medical procedure were you pursuing?	14.3%	9.5%	47.6%	4.8%	23.8%	100.0%
		% within 6. Your total budget for this trip ranges between	9.1%	2.9%	9.5%	1.9%	17.2%	7.3%
		% of Total	1.0%	.7%	3.5%	.3%	1.7%	7.3%
	Knee, hip and joints surgery	Count	1	7	11	6	1	26
		% within 10. What medical procedure were you pursuing?	3.8%	26.9%	42.3%	23.1%	3.8%	100.0%
		% within 6. Your total budget for this trip ranges between	3.0%	10.0%	10.5%	11.5%	3.4%	9.0%
		% of Total	.3%	2.4%	3.8%	2.1%	.3%	9.0%
	Tumors and blood treatment	Count	1	2	3	6	0	12
		% within 10. What medical procedure were you pursuing?	8.3%	16.7%	25.0%	50.0%	0.0%	100.0%
		% within 6. Your total budget for this trip ranges between	3.0%	2.9%	2.9%	11.5%	0.0%	4.2%
		% of Total	.3%	.7%	1.0%	2.1%	0.0%	4.2%
Cosmetic surgery and aesthetic treatment	Count	8	26	34	15	9	92	
	% within 10. What medical procedure were you pursuing?	8.7%	28.3%	37.0%	16.3%	9.8%	100.0%	
	% within 6. Your total budget for this trip ranges between	24.2%	37.1%	32.4%	28.8%	31.0%	31.8%	
	% of Total	2.8%	9.0%	11.8%	5.2%	3.1%	31.8%	
Obesity and gastro intestinal surgeries	Count	2	5	7	0	3	17	
	% within 10. What medical procedure were you pursuing?	11.8%	29.4%	41.2%	0.0%	17.6%	100.0%	
	% within 6. Your total budget for this trip ranges between	6.1%	7.1%	6.7%	0.0%	10.3%	5.9%	
	% of Total	.7%	1.7%	2.4%	0.0%	1.0%	5.9%	
Dental surgery and treatment	Count	2	5	10	9	4	30	
	% within 10. What medical procedure were you pursuing?	6.7%	16.7%	33.3%	30.0%	13.3%	100.0%	
	% within 6. Your total budget for this trip ranges between	6.1%	7.1%	9.5%	17.3%	13.8%	10.4%	
	% of Total	.7%	1.7%	3.5%	3.1%	1.4%	10.4%	
Infertility treatment	Count	2	6	1	1	1	11	
	% within 10. What medical procedure were you pursuing?	18.2%	54.5%	9.1%	9.1%	9.1%	100.0%	
	% within 6. Your total budget for this trip ranges between	6.1%	8.6%	1.0%	1.9%	3.4%	3.8%	
	% of Total	.7%	2.1%	.3%	.3%	.3%	3.8%	
Neurological treatment	Count	1	5	8	6	0	20	
	% within 10. What medical procedure were you pursuing?	5.0%	25.0%	40.0%	30.0%	0.0%	100.0%	
	% within 6. Your total budget for this trip ranges between	3.0%	7.1%	7.6%	11.5%	0.0%	6.9%	
	% of Total	.3%	1.7%	2.8%	2.1%	0.0%	6.9%	
Scans/investigations and laparoscopic surgery	Count	5	5	3	5	1	19	
	% within 10. What medical procedure were you pursuing?	26.3%	26.3%	15.8%	26.3%	5.3%	100.0%	
	% within 6. Your total budget for this trip ranges between	15.2%	7.1%	2.9%	9.8%	3.4%	6.8%	
	% of Total	1.7%	1.7%	1.0%	1.7%	.3%	6.6%	
Glands and urinary tract treatment	Count	1	0	2	1	0	4	
	% within 10. What medical procedure were you pursuing?	25.0%	0.0%	50.0%	25.0%	0.0%	100.0%	
	% within 6. Your total budget for this trip ranges between	3.0%	0.0%	1.9%	1.9%	0.0%	1.4%	
	% of Total	.3%	0.0%	.7%	.3%	0.0%	1.4%	
Eye treatment and surgery	Count	2	3	5	0	1	11	
	% within 10. What medical procedure were you pursuing?	18.2%	27.3%	45.5%	0.0%	9.1%	100.0%	
	% within 6. Your total budget for this trip ranges between	6.1%	4.3%	4.8%	0.0%	3.4%	3.8%	
	% of Total	.7%	1.0%	1.7%	0.0%	.3%	3.8%	
Total	Count	33	70	105	52	29	289	
	% within 10. What medical procedure were you pursuing?	11.4%	24.2%	36.3%	18.0%	10.0%	100.0%	
	% within 6. Your total budget for this trip ranges between	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	11.4%	24.2%	36.3%	18.0%	10.0%	100.0%	

**Table C:**

7. Of this budget, you are approximately allocating ___ % for medical purposes * 6. Your total budget for this trip ranges between								
Crosstab								
			6. Your total budget for this trip ranges between					Total
			3000-5000	5000-8000	8000-12000	12000-20000	More than 20000	
7. Of this budget, you are approximately allocating ___ % for medical purposes	25%	Count	6	1	9	6	4	36
		% within 7. Of this budget, you are approximately allocating ___ % for medical purposes	16.7%	30.6%	25.0%	16.7%	11.1%	100.0%
		% within 6. Your total budget for this trip ranges between	18.2%	15.7%	8.6%	11.5%	13.8%	12.5%
		% of Total	2.1%	3.8%	3.1%	2.1%	1.4%	12.5%
	40%	Count	10	26	22	4	3	65
		% within 7. Of this budget, you are approximately allocating ___ % for medical purposes	15.4%	40.0%	33.8%	6.2%	4.6%	100.0%
		% within 6. Your total budget for this trip ranges between	30.3%	37.1%	21.0%	7.7%	10.3%	22.5%
		% of Total	3.5%	9.0%	7.6%	1.4%	1.0%	22.5%
	50%	Count	7	18	47	23	10	105
		% within 7. Of this budget, you are approximately allocating ___ % for medical purposes	6.7%	17.1%	44.8%	21.9%	9.5%	100.0%
		% within 6. Your total budget for this trip ranges between	21.2%	25.7%	44.8%	44.2%	34.5%	36.3%
		% of Total	2.4%	6.2%	16.3%	8.0%	3.5%	36.3%
	75%	Count	8	10	19	12	10	59
		% within 7. Of this budget, you are approximately allocating ___ % for medical purposes	13.6%	16.9%	32.2%	20.3%	16.9%	100.0%
		% within 6. Your total budget for this trip ranges between	24.2%	14.3%	18.1%	23.1%	34.5%	20.4%
		% of Total	2.8%	3.5%	6.6%	4.2%	3.5%	20.4%
More than 75%	Count	2	5	8	7	2	24	
	% within 7. Of this budget, you are approximately allocating ___ % for medical purposes	8.3%	20.8%	33.3%	29.2%	8.3%	100.0%	
	% within 6. Your total budget for this trip ranges between	6.1%	7.1%	7.6%	13.5%	6.9%	8.3%	
	% of Total	.7%	1.7%	2.8%	2.4%	.7%	8.3%	
Total	Count	33	70	105	52	29	289	
	% within 7. Of this budget, you are approximately allocating ___ % for medical purposes	11.4%	24.2%	36.3%	18.0%	10.0%	100.0%	
	% within 6. Your total budget for this trip ranges between	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	11.4%	24.2%	36.3%	18.0%	10.0%	100.0%	

**Table D:**

10. What medical procedure were you pursuing? * 6. Your total budget for this trip ranges between		Crosstab						
		6. Your total budget for this trip ranges between					Total	
		3000-5000	5000-8000	8000-12000	12000-20000	More than 20000	Total	
10. What medical procedure were you pursuing?	other	Count	4	2	5	0	1	12
		% within 10. What medical procedure were you pursuing?	33.3%	16.7%	41.7%	0.0%	8.3%	100.0%
		% within 6. Your total budget for this trip ranges between	12.1%	2.9%	4.8%	0.0%	3.4%	4.2%
		% of Total	1.4%	.7%	1.7%	0.0%	.3%	4.2%
	Heart surgery	Count	1	2	6	2	3	14
		% within 10. What medical procedure were you pursuing?	7.1%	14.3%	42.9%	14.3%	21.4%	100.0%
		% within 6. Your total budget for this trip ranges between	3.0%	2.9%	5.7%	3.8%	10.3%	4.8%
		% of Total	.3%	.7%	2.1%	.7%	1.0%	4.8%
	General surgery	Count	3	2	10	1	5	21
		% within 10. What medical procedure were you pursuing?	14.3%	9.5%	47.6%	4.8%	23.8%	100.0%
		% within 6. Your total budget for this trip ranges between	9.1%	2.9%	9.5%	1.9%	17.2%	7.3%
		% of Total	1.0%	.7%	3.5%	.3%	1.7%	7.3%
	Knee, hip and joints surgery	Count	1	7	11	6	1	26
		% within 10. What medical procedure were you pursuing?	3.8%	26.9%	42.3%	23.1%	3.8%	100.0%
		% within 6. Your total budget for this trip ranges between	3.0%	10.0%	10.5%	11.5%	3.4%	9.0%
		% of Total	.3%	2.4%	3.8%	2.1%	.3%	9.0%
	Tumors and blood treatment	Count	1	2	3	6	0	12
		% within 10. What medical procedure were you pursuing?	8.3%	16.7%	25.0%	50.0%	0.0%	100.0%
		% within 6. Your total budget for this trip ranges between	3.0%	2.9%	2.9%	11.5%	0.0%	4.2%
	% of Total	.3%	.7%	1.0%	2.1%	0.0%	4.2%	
Cosmetic surgery and aesthetic treatment	Count	8	26	34	15	9	92	
	% within 10. What medical procedure were you pursuing?	8.7%	28.3%	37.0%	16.3%	9.8%	100.0%	
	% within 6. Your total budget for this trip ranges between	24.2%	37.1%	32.4%	28.8%	31.0%	31.8%	
	% of Total	2.8%	9.0%	11.8%	5.2%	3.1%	31.8%	
Obesity and gastro intestinal surgeries	Count	2	5	7	0	3	17	
	% within 10. What medical procedure were you pursuing?	11.8%	29.4%	41.2%	0.0%	17.6%	100.0%	
	% within 6. Your total budget for this trip ranges between	6.1%	7.1%	6.7%	0.0%	10.3%	5.9%	
	% of Total	.7%	1.7%	2.4%	0.0%	1.0%	5.9%	
Dental surgery and treatment	Count	2	5	10	9	4	30	
	% within 10. What medical procedure were you pursuing?	6.7%	16.7%	33.3%	30.0%	13.3%	100.0%	
	% within 6. Your total budget for this trip ranges between	6.1%	7.1%	9.5%	17.3%	13.8%	10.4%	
	% of Total	.7%	1.7%	3.5%	3.1%	1.4%	10.4%	
Infertility treatment	Count	2	6	1	1	1	11	
	% within 10. What medical procedure were you pursuing?	18.2%	54.5%	9.1%	9.1%	9.1%	100.0%	
	% within 6. Your total budget for this trip ranges between	6.1%	8.6%	1.0%	1.9%	3.4%	3.8%	
	% of Total	.7%	2.1%	.3%	.3%	.3%	3.8%	
Neurological treatment	Count	1	5	8	6	0	20	
	% within 10. What medical procedure were you pursuing?	5.0%	25.0%	40.0%	30.0%	0.0%	100.0%	
	% within 6. Your total budget for this trip ranges between	3.0%	7.1%	7.6%	11.5%	0.0%	6.9%	
	% of Total	.3%	1.7%	2.8%	2.1%	0.0%	6.9%	
Scans/investigations and laparoscopic surgery	Count	5	5	3	5	1	19	
	% within 10. What medical procedure were you pursuing?	26.3%	26.3%	15.8%	26.3%	5.3%	100.0%	
	% within 6. Your total budget for this trip ranges between	15.2%	7.1%	2.9%	9.6%	3.4%	6.6%	
	% of Total	1.7%	1.7%	1.0%	1.7%	.3%	6.6%	
Glands and urinary tract treatment	Count	1	0	2	1	0	4	
	% within 10. What medical procedure were you pursuing?	25.0%	0.0%	50.0%	25.0%	0.0%	100.0%	
	% within 6. Your total budget for this trip ranges between	3.0%	0.0%	1.9%	1.9%	0.0%	1.4%	
	% of Total	.3%	0.0%	.7%	.3%	0.0%	1.4%	
Eye treatment and surgery	Count	2	3	5	0	1	11	
	% within 10. What medical procedure were you pursuing?	18.2%	27.3%	45.5%	0.0%	9.1%	100.0%	
	% within 6. Your total budget for this trip ranges between	6.1%	4.3%	4.8%	0.0%	3.4%	3.8%	
	% of Total	.7%	1.0%	1.7%	0.0%	.3%	3.8%	
Total	Count	33	70	105	52	29	289	
	% within 10. What medical procedure were you pursuing?	11.4%	24.2%	36.3%	18.0%	10.0%	100.0%	
	% within 6. Your total budget for this trip ranges between	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	11.4%	24.2%	36.3%	18.0%	10.0%	100.0%	



**Table E:**

8. Of this budget, you are approximately allocating ____% for accommodation * 6. Your total budget for this trip ranges between								
Crosstab								
			6. Your total budget for this trip ranges between					
			3000-5000	5000-8000	8000-12000	12000-20000	More than 20000	Total
8. Of this budget, you are approximately allocating ____% for accommodation	5%	Count	8	1	7	1	0	27
		% within 8. Of this budget, you are approximately allocating ____% for accommodation	29.6%	40.7%	25.9%	3.7%	0.0%	100.0%
		% within 6. Your total budget for this trip ranges between	24.2%	15.7%	6.7%	1.9%	0.0%	9.3%
		% of Total	2.8%	3.8%	2.4%	.3%	0.0%	9.3%
	10%	Count	8	15	23	17	5	68
		% within 8. Of this budget, you are approximately allocating ____% for accommodation	11.8%	22.1%	33.8%	25.0%	7.4%	100.0%
		% within 6. Your total budget for this trip ranges between	24.2%	21.4%	21.9%	32.7%	17.2%	23.5%
		% of Total	2.8%	5.2%	8.0%	5.9%	1.7%	23.5%
	15%	Count	5	21	26	8	4	64
		% within 8. Of this budget, you are approximately allocating ____% for accommodation	7.8%	32.8%	40.6%	12.5%	6.3%	100.0%
		% within 6. Your total budget for this trip ranges between	15.2%	30.0%	24.8%	15.4%	13.8%	22.1%
		% of Total	1.7%	7.3%	9.0%	2.8%	1.4%	22.1%
	20%	Count	7	12	27	13	9	68
		% within 8. Of this budget, you are approximately allocating ____% for accommodation	10.3%	17.6%	39.7%	19.1%	13.2%	100.0%
		% within 6. Your total budget for this trip ranges between	21.2%	17.1%	25.7%	25.0%	31.0%	23.5%
		% of Total	2.4%	4.2%	9.3%	4.5%	3.1%	23.5%
	More than 20%	Count	5	1	22	13	1	62
		% within 8. Of this budget, you are approximately allocating ____% for accommodation	8.1%	17.7%	35.5%	21.0%	17.7%	100.0%
		% within 6. Your total budget for this trip ranges between	15.2%	15.7%	21.0%	25.0%	37.9%	21.5%
		% of Total	1.7%	3.8%	7.6%	4.5%	3.8%	21.5%
Total	Count	33	70	105	52	29	289	
	% within 8. Of this budget, you are approximately allocating ____% for accommodation	11.4%	24.2%	36.3%	18.0%	10.0%	100.0%	
	% within 6. Your total budget for this trip ranges between	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	11.4%	24.2%	36.3%	18.0%	10.0%	100.0%	

**Table F:**

19. What is your country of residence? * 8. Of this budget, you are approximately allocating ____% for accommodation Crosstabulation								
			8. Of this budget, you are approximately allocating ____% for accommodation					
			5%	10%	15%	20%	More than 20%	Total
19. What is your country of residence?	Bahrain	Count	0	2	0	0	0	2
		% within 19. What is your country of residence?	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
		% within 8. Of this budget, you are approximately allocating ____% for accommodation	0.0%	3.8%	0.0%	0.0%	0.0%	.9%
		% of Total	0.0%	.9%	0.0%	0.0%	0.0%	.9%
Iran	Count	0	1	0	0	2	3	
	% within 19. What is your country of residence?	0.0%	33.3%	0.0%	0.0%	66.7%	100.0%	
	% within 8. Of this budget, you are approximately allocating ____% for accommodation	0.0%	1.9%	0.0%	0.0%	4.1%	1.4%	
	% of Total	0.0%	.5%	0.0%	0.0%	.9%	1.4%	
Iraq	Count	4	34	26	35	31	130	
	% within 19. What is your country of residence?	3.1%	26.2%	20.0%	26.9%	23.8%	100.0%	
	% within 8. Of this budget, you are approximately allocating ____% for accommodation	36.4%	65.4%	56.5%	62.5%	63.3%	60.7%	
	% of Total	1.9%	15.9%	12.1%	16.4%	14.5%	60.7%	
Jordan	Count	0	2	6	4	4	16	
	% within 19. What is your country of residence?	0.0%	12.5%	37.5%	25.0%	25.0%	100.0%	
	% within 8. Of this budget, you are approximately allocating ____% for accommodation	0.0%	3.8%	13.0%	7.1%	8.2%	7.5%	
	% of Total	0.0%	.9%	2.8%	1.9%	1.9%	7.5%	
Kuwait	Count	0	6	2	8	4	20	
	% within 19. What is your country of residence?	0.0%	30.0%	10.0%	40.0%	20.0%	100.0%	
	% within 8. Of this budget, you are approximately allocating ____% for accommodation	0.0%	11.5%	4.3%	14.3%	8.2%	9.3%	
	% of Total	0.0%	2.8%	.9%	3.7%	1.9%	9.3%	
Qatar	Count	0	1	1	3	2	7	
	% within 19. What is your country of residence?	0.0%	14.3%	14.3%	42.9%	28.6%	100.0%	
	% within 8. Of this budget, you are approximately allocating ____% for accommodation	0.0%	1.9%	2.2%	5.4%	4.1%	3.3%	
	% of Total	0.0%	.5%	.5%	1.4%	.9%	3.3%	
Saudi Arabia	Count	1	4	7	1	1	14	
	% within 19. What is your country of residence?	7.1%	28.6%	50.0%	7.1%	7.1%	100.0%	
	% within 8. Of this budget, you are approximately allocating ____% for accommodation	9.1%	7.7%	15.2%	1.8%	2.0%	6.5%	
	% of Total	.5%	1.9%	3.3%	.5%	.5%	6.5%	
United Arab Emirates	Count	1	1	2	2	4	10	
	% within 19. What is your country of residence?	10.0%	10.0%	20.0%	20.0%	40.0%	100.0%	
	% within 8. Of this budget, you are approximately allocating ____% for accommodation	9.1%	1.9%	4.3%	3.6%	8.2%	4.7%	
	% of Total	.5%	.5%	.9%	.9%	1.9%	4.7%	
Yemen	Count	5	1	2	3	1	12	
	% within 19. What is your country of residence?	41.7%	8.3%	16.7%	25.0%	8.3%	100.0%	
	% within 8. Of this budget, you are approximately allocating ____% for accommodation	45.5%	1.9%	4.3%	5.4%	2.0%	5.6%	
	% of Total	2.3%	.5%	.9%	1.4%	.5%	5.6%	
Total	Count	11	52	46	56	49	214	
	% within 19. What is your country of residence?	5.1%	24.3%	21.5%	26.2%	22.9%	100.0%	
	% within 8. Of this budget, you are approximately allocating ____% for accommodation	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	5.1%	24.3%	21.5%	26.2%	22.9%	100.0%	

**Table G:**

5. You (and your family) were staying in * 9. Who arranged your accommodation? Crosstabulation							
			9. Who arranged your accommodation?				Total
			Yourself	Medical institute	Travel agent	Other	
5. You (and your family) were staying in	Luxury hotel	Count	9	10	18	0	37
		% within 9. Who arranged your accommodation?	5.1%	25.6%	32.1%	0.0%	12.8%
	Average hotel	Count	61	9	26	3	99
		% within 9. Who arranged your accommodation?	34.7%	23.1%	46.4%	16.7%	34.3%
	Economy hotel	Count	49	15	7	2	73
		% within 9. Who arranged your accommodation?	27.8%	38.5%	12.5%	11.1%	25.3%
	Furnished apartment	Count	42	4	4	7	57
		% within 9. Who arranged your accommodation?	23.9%	10.3%	7.1%	38.9%	19.7%
	Other	Count	15	1	1	6	23
		% within 9. Who arranged your accommodation?	8.5%	2.6%	1.8%	33.3%	8.0%
Total		Count	176	39	56	18	289
		% within 9. Who arranged your accommodation?	100.0%	100.0%	100.0%	100.0%	100.0%

**Table H:**

5. You (and your family) were staying in * 6. Your total budget for this trip ranges between Crosstabulation								
			6. Your total budget for this trip ranges between					Total
			3000-5000	5000-8000	8000-12000	12000-20000	More than 20000	
5. You (and your family) were staying in	Luxury hotel	Count	0	2	10	8	17	37
		% within 5. You (and your family) were staying in	0.0%	5.4%	27.0%	21.6%	45.9%	100.0%
		% within 6. Your total budget for this trip ranges between	0.0%	2.9%	9.5%	15.4%	58.6%	12.8%
		% of Total	0.0%	.7%	3.5%	2.8%	5.9%	12.8%
	Average hotel	Count	6	31	40	17	5	99
		% within 5. You (and your family) were staying in	6.1%	31.3%	40.4%	17.2%	5.1%	100.0%
		% within 6. Your total budget for this trip ranges between	18.2%	44.3%	38.1%	32.7%	17.2%	34.3%
		% of Total	2.1%	10.7%	13.8%	5.9%	1.7%	34.3%
	Economy hotel	Count	13	12	36	12	0	73
		% within 5. You (and your family) were staying in	17.8%	16.4%	49.3%	16.4%	0.0%	100.0%
		% within 6. Your total budget for this trip ranges between	39.4%	17.1%	34.3%	23.1%	0.0%	25.3%
		% of Total	4.5%	4.2%	12.5%	4.2%	0.0%	25.3%
	Furnished apartment	Count	7	18	13	13	6	57
		% within 5. You (and your family) were staying in	12.3%	31.6%	22.8%	22.8%	10.5%	100.0%
		% within 6. Your total budget for this trip ranges between	21.2%	25.7%	12.4%	25.0%	20.7%	19.7%
% of Total		2.4%	6.2%	4.5%	4.5%	2.1%	19.7%	
Other	Count	7	7	6	2	1	23	
	% within 5. You (and your family) were staying in	30.4%	30.4%	26.1%	8.7%	4.3%	100.0%	
	% within 6. Your total budget for this trip ranges between	21.2%	10.0%	5.7%	3.8%	3.4%	8.0%	
	% of Total	2.4%	2.4%	2.1%	.7%	.3%	8.0%	
Total		Count	33	70	105	52	29	289
		% within 5. You (and your family) were staying in	11.4%	24.2%	36.3%	18.0%	10.0%	100.0%
		% within 6. Your total budget for this trip ranges between	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
		% of Total	11.4%	24.2%	36.3%	18.0%	10.0%	100.0%

**Table I:**

3. How many family member(s) or friend(s) were travelling with you? * 5. You (and your family) were staying in Crosstabulation								
			5. You (and your family) were staying in					Total
			Luxury hotel	Average hotel	Economy hotel	Furnished apartment	Other	
3. How many family member(s) or friend(s) were travelling with you?	0	Count	3	10	1	4	6	24
		% within 3. How many family member(s) or friend(s) were travelling with you?	12.5%	41.7%	4.2%	16.7%	25.0%	100.0%
		% within 5. You (and your family) were staying in	8.1%	10.1%	1.4%	7.0%	26.1%	8.3%
		% of Total	1.0%	3.5%	.3%	1.4%	2.1%	8.3%
	1	Count	15	41	23	11	7	97
		% within 3. How many family member(s) or friend(s) were travelling with you?	15.5%	42.3%	23.7%	11.3%	7.2%	100.0%
		% within 5. You (and your family) were staying in	40.5%	41.4%	31.5%	19.3%	30.4%	33.6%
		% of Total	5.2%	14.2%	8.0%	3.8%	2.4%	33.6%
	2	Count	14	34	35	18	3	104
		% within 3. How many family member(s) or friend(s) were travelling with you?	13.5%	32.7%	33.7%	17.3%	2.9%	100.0%
		% within 5. You (and your family) were staying in	37.8%	34.3%	47.9%	31.6%	13.0%	36.0%
		% of Total	4.8%	11.8%	12.1%	6.2%	1.0%	36.0%
More than 2	Count	5	14	14	24	7	64	
	% within 3. How many family member(s) or friend(s) were travelling with you?	7.8%	21.9%	21.9%	37.5%	10.9%	100.0%	
	% within 5. You (and your family) were staying in	13.5%	14.1%	19.2%	42.1%	30.4%	22.1%	
	% of Total	1.7%	4.8%	4.8%	8.3%	2.4%	22.1%	
Total	Count	37	99	73	57	23	289	
	% within 3. How many family member(s) or friend(s) were travelling with you?	12.8%	34.3%	25.3%	19.7%	8.0%	100.0%	
	% within 5. You (and your family) were staying in	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	12.8%	34.3%	25.3%	19.7%	8.0%	100.0%	

**Table J:**

3. How many family member(s) or friend(s) were travelling with you? * 6. Your total budget for this trip ranges between Crosstabulation								
			6. Your total budget for this trip ranges between					Total
			3000-5000	5000-8000	8000-12000	12000-20000	More than 20000	
3. How many family member(s) or friend(s) were travelling with you?	0	Count	6	7	9	1	1	24
		% within 3. How many family member(s) or friend(s) were travelling with you?	25.0%	29.2%	37.5%	4.2%	4.2%	100.0%
		% within 6. Your total budget for this trip ranges between	18.2%	10.0%	8.6%	1.9%	3.4%	8.3%
		% of Total	2.1%	2.4%	3.1%	.3%	.3%	8.3%
	1	Count	15	26	32	18	6	97
		% within 3. How many family member(s) or friend(s) were travelling with you?	15.5%	26.8%	33.0%	18.6%	6.2%	100.0%
		% within 6. Your total budget for this trip ranges between	45.5%	37.1%	30.5%	34.6%	20.7%	33.6%
		% of Total	5.2%	9.0%	11.1%	6.2%	2.1%	33.6%
	2	Count	8	24	41	17	14	104
		% within 3. How many family member(s) or friend(s) were travelling with you?	7.7%	23.1%	39.4%	16.3%	13.5%	100.0%
		% within 6. Your total budget for this trip ranges between	24.2%	34.3%	39.0%	32.7%	48.3%	36.0%
		% of Total	2.8%	8.3%	14.2%	5.9%	4.8%	36.0%
More than 2	Count	4	13	23	16	8	64	
	% within 3. How many family member(s) or friend(s) were travelling with you?	6.3%	20.3%	35.9%	25.0%	12.5%	100.0%	
	% within 6. Your total budget for this trip ranges between	12.1%	18.6%	21.9%	30.8%	27.6%	22.1%	
	% of Total	1.4%	4.5%	8.0%	5.5%	2.8%	22.1%	
Total	Count	33	70	105	52	29	289	
	% within 3. How many family member(s) or friend(s) were travelling with you?	11.4%	24.2%	36.3%	18.0%	10.0%	100.0%	
	% within 6. Your total budget for this trip ranges between	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	11.4%	24.2%	36.3%	18.0%	10.0%	100.0%	

Table K:

10. What medical procedure were you pursuing? * 3. How many family member(s) or friend(s) were travelling with you?							
Crosstab							
10. What medical procedure were you pursuing?	other	Count	3. How many family member(s) or friend(s) were travelling with you?				Total
			0	1	2	More than 2	
		Count	1	4	3	4	12
		% within 10. What medical procedure were you pursuing?	8.3%	33.3%	25.0%	33.3%	100.0%
		% within 3. How many family member(s) or friend(s) were travelling with you?	4.2%	4.1%	2.9%	6.3%	4.2%
		% of Total	.3%	1.4%	1.0%	1.4%	4.2%
Heart surgery		Count	1	4	3	6	14
		% within 10. What medical procedure were you pursuing?	7.1%	28.6%	21.4%	42.9%	100.0%
		% within 3. How many family member(s) or friend(s) were travelling with you?	4.2%	4.1%	2.9%	9.4%	4.8%
		% of Total	.3%	1.4%	1.0%	2.1%	4.8%
General surgery		Count	3	6	7	5	21
		% within 10. What medical procedure were you pursuing?	14.3%	28.6%	33.3%	23.8%	100.0%
		% within 3. How many family member(s) or friend(s) were travelling with you?	12.5%	6.2%	6.7%	7.8%	7.3%
		% of Total	1.0%	2.1%	2.4%	1.7%	7.3%
Knee, hip and joints surgery		Count	2	10	9	5	26
		% within 10. What medical procedure were you pursuing?	7.7%	38.5%	34.6%	19.2%	100.0%
		% within 3. How many family member(s) or friend(s) were travelling with you?	8.3%	10.3%	8.7%	7.8%	9.0%
		% of Total	.7%	3.5%	3.1%	1.7%	9.0%
Tumors and blood treatment		Count	0	3	4	5	12
		% within 10. What medical procedure were you pursuing?	0.0%	25.0%	33.3%	41.7%	100.0%
		% within 3. How many family member(s) or friend(s) were travelling with you?	0.0%	3.1%	3.8%	7.8%	4.2%
		% of Total	0.0%	1.0%	1.4%	1.7%	4.2%
Cosmetic surgery and aesthetic treatment		Count	8	33	33	18	92
		% within 10. What medical procedure were you pursuing?	8.7%	35.9%	35.9%	19.6%	100.0%
		% within 3. How many family member(s) or friend(s) were travelling with you?	33.3%	34.0%	31.7%	28.1%	31.8%
		% of Total	2.8%	11.4%	11.4%	6.2%	31.8%
Obesity and gastro intestinal surgeries		Count	1	5	7	4	17
		% within 10. What medical procedure were you pursuing?	5.9%	29.4%	41.2%	23.5%	100.0%
		% within 3. How many family member(s) or friend(s) were travelling with you?	4.2%	5.2%	6.7%	6.3%	5.9%
		% of Total	.3%	1.7%	2.4%	1.4%	5.9%
Dental surgery and treatment		Count	1	10	13	6	30
		% within 10. What medical procedure were you pursuing?	3.3%	33.3%	43.3%	20.0%	100.0%
		% within 3. How many family member(s) or friend(s) were travelling with you?	4.2%	10.3%	12.5%	9.4%	10.4%
		% of Total	.3%	3.5%	4.5%	2.1%	10.4%
Infertility treatment		Count	0	6	5	0	1
		% within 10. What medical procedure were you pursuing?	0.0%	54.5%	45.5%	0.0%	100.0%
		% within 3. How many family member(s) or friend(s) were travelling with you?	0.0%	6.2%	4.8%	0.0%	3.8%
		% of Total	0.0%	2.1%	1.7%	0.0%	3.8%
Neurological treatment		Count	0	5	12	3	20
		% within 10. What medical procedure were you pursuing?	0.0%	25.0%	60.0%	15.0%	100.0%
		% within 3. How many family member(s) or friend(s) were travelling with you?	0.0%	5.2%	11.5%	4.7%	6.9%
		% of Total	0.0%	1.7%	4.2%	1.0%	6.9%
Scans/investigations and laparoscopic surgery		Count	3	7	3	6	19
		% within 10. What medical procedure were you pursuing?	15.8%	36.8%	15.8%	31.6%	100.0%
		% within 3. How many family member(s) or friend(s) were travelling with you?	12.5%	7.2%	2.9%	9.4%	6.6%
		% of Total	1.0%	2.4%	1.0%	2.1%	6.6%
Glands and urinary tract treatment		Count	0	2	1	1	4
		% within 10. What medical procedure were you pursuing?	0.0%	50.0%	25.0%	25.0%	100.0%
		% within 3. How many family member(s) or friend(s) were travelling with you?	0.0%	2.1%	1.0%	1.6%	1.4%
		% of Total	0.0%	.7%	.3%	.3%	1.4%
Eye treatment and surgery		Count	4	2	4	1	1
		% within 10. What medical procedure were you pursuing?	36.4%	18.2%	36.4%	9.1%	100.0%
		% within 3. How many family member(s) or friend(s) were travelling with you?	16.7%	2.1%	3.8%	1.6%	3.8%
		% of Total	1.4%	.7%	1.4%	.3%	3.8%
Total		Count	24	97	104	64	289
		% within 10. What medical procedure were you pursuing?	8.3%	33.6%	36.0%	22.1%	100.0%
		% within 3. How many family member(s) or friend(s) were travelling with you?	100.0%	100.0%	100.0%	100.0%	100.0%
		% of Total	8.3%	33.6%	36.0%	22.1%	100.0%

**Table L:**

1. Have you ever travelled outside your residence for medical services? * 12. Before choosing Lebanon, you were thinking of __ for your medical procedure Crosstabulation			12. Before choosing Lebanon, you were thinking of __ for your medical procedure						Total
			Amman Jordan	Dubai UAE	Istanbul Turkey	Riyadh KSA	No ther country	Other	
1. Have you ever travelled outside your residence for medical services?	Yes	Count	26	18	14	9	74	17	158
		% within 1. Have you ever travelled outside your residence for medical services?	16.5%	11.4%	8.9%	5.7%	46.8%	10.8%	100.0%
		% within 12. Before choosing Lebanon, you were thinking of __ for your medical procedure	56.5%	51.4%	48.3%	100.0%	49.7%	73.9%	54.3%
		% of Total	8.9%	6.2%	4.8%	3.1%	25.4%	5.8%	54.3%
	No	Count	20	17	15	0	75	6	133
		% within 1. Have you ever travelled outside your residence for medical services?	15.0%	12.8%	11.3%	0.0%	56.4%	4.5%	100.0%
		% within 12. Before choosing Lebanon, you were thinking of __ for your medical procedure	43.5%	48.6%	51.7%	0.0%	50.3%	26.1%	45.7%
		% of Total	6.9%	5.8%	5.2%	0.0%	25.8%	2.1%	45.7%
Total	Count	46	35	29	9	149	23	291	
	% within 1. Have you ever travelled outside your residence for medical services?	15.8%	12.0%	10.0%	3.1%	51.2%	7.9%	100.0%	
	% within 12. Before choosing Lebanon, you were thinking of __ for your medical procedure	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	15.8%	12.0%	10.0%	3.1%	51.2%	7.9%	100.0%	

**Table M:**

1. Have you ever travelled outside your residence for medical services? * 13.5. Low success rate for your-type – of- procedure performed								
Crosstab								
			13.5. Low success rate for your-type – of- procedure performed					Total
			Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	
1. Have you ever travelled outside your residence for medical services?	Yes	Count	3	11	23	31	20	88
		% within 1. Have you ever travelled outside your residence for medical services?	3.4%	12.5%	26.1%	35.2%	22.7%	100.0%
		% within 13.5. Low success rate for your-type – of- procedure performed	42.9%	47.8%	39.0%	33.0%	69.0%	41.5%
	No	Count	4	12	36	63	9	124
		% within 1. Have you ever travelled outside your residence for medical services?	3.2%	9.7%	29.0%	50.8%	7.3%	100.0%
		% within 13.5. Low success rate for your-type – of- procedure performed	57.1%	52.2%	61.0%	67.0%	31.0%	58.5%
Total	Count	7	23	59	94	29	212	
	% within 1. Have you ever travelled outside your residence for medical services?	3.3%	10.8%	27.8%	44.3%	13.7%	100.0%	
	% within 13.5. Low success rate for your-type – of- procedure performed	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	

**Table N:**

**19. What is your country of residence? \* 13.5. Low success rate for your-type – of- procedure performed**

		Crosstab						
		13.5. Low success rate for your-type – of- procedure performed						
		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Total	
19. What is your country of residence?	Algeria	Count	0	1	0	0	0	1
		% within 19. What is your country of residence?	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
		% within 13.5. Low success rate for your-type – of- procedure performed	0.0%	4.3%	0.0%	0.0%	0.0%	0.5%
	Bahrain	Count	1	1	0	0	0	2
		% within 19. What is your country of residence?	50.0%	50.0%	0.0%	0.0%	0.0%	100.0%
		% within 13.5. Low success rate for your-type – of- procedure performed	14.3%	4.3%	0.0%	0.0%	0.0%	0.9%
	Canada	Count	1	3	0	0	1	5
		% within 19. What is your country of residence?	20.0%	60.0%	0.0%	0.0%	20.0%	100.0%
		% within 13.5. Low success rate for your-type – of- procedure performed	14.3%	13.0%	0.0%	0.0%	3.4%	2.4%
	Egypt	Count	0	1	1	5	0	7
		% within 19. What is your country of residence?	0.0%	14.3%	14.3%	71.4%	0.0%	100.0%
		% within 13.5. Low success rate for your-type – of- procedure performed	0.0%	4.3%	1.7%	5.3%	0.0%	3.3%
	France	Count	1	3	1	1	0	6
		% within 19. What is your country of residence?	16.7%	50.0%	16.7%	16.7%	0.0%	100.0%
		% within 13.5. Low success rate for your-type – of- procedure performed	14.3%	13.0%	1.7%	1.1%	0.0%	2.8%
	Iran	Count	0	0	1	2	0	3
		% within 19. What is your country of residence?	0.0%	0.0%	33.3%	66.7%	0.0%	100.0%
		% within 13.5. Low success rate for your-type – of- procedure performed	0.0%	0.0%	1.7%	2.1%	0.0%	1.4%
	Iraq	Count	0	2	12	47	16	77
		% within 19. What is your country of residence?	0.0%	2.6%	15.6%	61.0%	20.8%	100.0%
		% within 13.5. Low success rate for your-type – of- procedure performed	0.0%	8.7%	20.3%	50.0%	55.2%	36.3%
	Jordan	Count	0	1	12	2	1	16
		% within 19. What is your country of residence?	0.0%	6.3%	75.0%	12.5%	6.3%	100.0%
		% within 13.5. Low success rate for your-type – of- procedure performed	0.0%	4.3%	20.3%	2.1%	3.4%	7.5%
	Kuwait	Count	1	3	7	6	2	19
		% within 19. What is your country of residence?	5.3%	15.8%	36.8%	31.6%	10.5%	100.0%
		% within 13.5. Low success rate for your-type – of- procedure performed	14.3%	13.0%	11.9%	6.4%	6.9%	9.0%
	Libya	Count	0	0	0	1	1	2
		% within 19. What is your country of residence?	0.0%	0.0%	0.0%	50.0%	50.0%	100.0%
		% within 13.5. Low success rate for your-type – of- procedure performed	0.0%	0.0%	0.0%	1.1%	3.4%	0.9%
	Morocco	Count	0	0	1	3	0	4
		% within 19. What is your country of residence?	0.0%	0.0%	25.0%	75.0%	0.0%	100.0%
		% within 13.5. Low success rate for your-type – of- procedure performed	0.0%	0.0%	1.7%	3.2%	0.0%	1.9%
	Qatar	Count	0	0	4	2	0	6
		% within 19. What is your country of residence?	0.0%	0.0%	66.7%	33.3%	0.0%	100.0%
		% within 13.5. Low success rate for your-type – of- procedure performed	0.0%	0.0%	6.8%	2.1%	0.0%	2.8%
	Saudi Arabia	Count	0	4	3	2	1	10
		% within 19. What is your country of residence?	0.0%	40.0%	30.0%	20.0%	10.0%	100.0%
		% within 13.5. Low success rate for your-type – of- procedure performed	0.0%	17.4%	5.1%	2.1%	3.4%	4.7%
	Sudan	Count	0	0	0	0	1	1
		% within 19. What is your country of residence?	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
		% within 13.5. Low success rate for your-type – of- procedure performed	0.0%	0.0%	0.0%	0.0%	3.4%	0.5%
	Syria	Count	0	2	11	12	0	25
		% within 19. What is your country of residence?	0.0%	8.0%	44.0%	48.0%	0.0%	100.0%
		% within 13.5. Low success rate for your-type – of- procedure performed	0.0%	8.7%	18.6%	12.8%	0.0%	11.8%
	Turkey	Count	0	0	1	0	0	1
		% within 19. What is your country of residence?	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
		% within 13.5. Low success rate for your-type – of- procedure performed	0.0%	0.0%	1.7%	0.0%	0.0%	0.5%
	Uganda	Count	0	0	0	1	1	2
		% within 19. What is your country of residence?	0.0%	0.0%	0.0%	50.0%	50.0%	100.0%
		% within 13.5. Low success rate for your-type – of- procedure performed	0.0%	0.0%	0.0%	1.1%	3.4%	0.9%

**Table O:**

10. What medical procedure were you pursuing? * 13.5. Low success rate for your-type – of- procedure performed		Crosstab					Total	
		13.5. Low success rate for your-type – of- procedure performed						
		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree		
10. What medical procedure were you pursuing?	other	Count	0	0	0	6	1	7
		% within 10. What medical procedure were you pursuing?	0.0%	0.0%	0.0%	85.7%	14.3%	100.0%
		% within 13.5. Low success rate for your-type – of- procedure performed	0.0%	0.0%	0.0%	6.4%	3.4%	3.3%
Heart surgery	Count	0	2	3	2	3	10	
		% within 10. What medical procedure were you pursuing?	0.0%	20.0%	30.0%	20.0%	30.0%	100.0%
		% within 13.5. Low success rate for your-type – of- procedure performed	0.0%	8.7%	5.1%	2.1%	10.3%	4.7%
Hip surgery	Count	0	0	1	1	1	3	
		% within 10. What medical procedure were you pursuing?	0.0%	0.0%	33.3%	33.3%	33.3%	100.0%
		% within 13.5. Low success rate for your-type – of- procedure performed	0.0%	0.0%	1.7%	1.1%	3.4%	1.4%
General surgery	Count	1	0	3	6	2	12	
		% within 10. What medical procedure were you pursuing?	8.3%	0.0%	25.0%	50.0%	16.7%	100.0%
		% within 13.5. Low success rate for your-type – of- procedure performed	14.3%	0.0%	5.1%	6.4%	6.9%	5.7%
Knee and joints surgery	Count	0	0	7	5	4	16	
		% within 10. What medical procedure were you pursuing?	0.0%	0.0%	43.8%	31.3%	25.0%	100.0%
		% within 13.5. Low success rate for your-type – of- procedure performed	0.0%	0.0%	11.9%	5.3%	13.8%	7.5%
Tumors treatment	Count	0	1	1	7	2	11	
		% within 10. What medical procedure were you pursuing?	0.0%	9.1%	9.1%	63.6%	18.2%	100.0%
		% within 13.5. Low success rate for your-type – of- procedure performed	0.0%	4.3%	1.7%	7.4%	6.9%	5.2%
Cosmetic surgery	Count	2	2	11	16	4	34	
		% within 10. What medical procedure were you pursuing?	5.9%	5.9%	32.4%	44.1%	11.5%	100.0%
		% within 13.5. Low success rate for your-type – of- procedure performed	28.6%	8.7%	18.6%	16.0%	13.8%	16.0%
Aesthetic Treatment	Count	1	4	7	14	3	29	
		% within 10. What medical procedure were you pursuing?	3.4%	13.8%	24.1%	48.3%	10.3%	100.0%
		% within 13.5. Low success rate for your-type – of- procedure performed	14.3%	17.4%	11.9%	14.9%	10.3%	13.7%
Laparoscopic surgery	Count	0	1	1	0	1	3	
		% within 10. What medical procedure were you pursuing?	0.0%	33.3%	33.3%	0.0%	33.3%	100.0%
		% within 13.5. Low success rate for your-type – of- procedure performed	0.0%	4.3%	1.7%	0.0%	3.4%	1.4%
Obesity surgery	Count	0	1	2	5	1	9	
		% within 10. What medical procedure were you pursuing?	0.0%	11.1%	22.2%	55.6%	11.1%	100.0%
		% within 13.5. Low success rate for your-type – of- procedure performed	0.0%	4.3%	3.4%	5.3%	3.4%	4.2%
Dental surgery/treatment	Count	1	5	10	4	1	21	
		% within 10. What medical procedure were you pursuing?	4.8%	23.8%	47.6%	19.0%	4.8%	100.0%
		% within 13.5. Low success rate for your-type – of- procedure performed	14.3%	21.7%	16.9%	4.3%	3.4%	9.9%
Infertility treatment	Count	0	1	2	5	0	8	
		% within 10. What medical procedure were you pursuing?	0.0%	12.5%	25.0%	62.5%	0.0%	100.0%
		% within 13.5. Low success rate for your-type – of- procedure performed	0.0%	4.3%	3.4%	5.3%	0.0%	3.6%
Neurological treatment	Count	1	0	7	1	1	20	
		% within 10. What medical procedure were you pursuing?	5.0%	0.0%	35.0%	5.0%	5.0%	100.0%
		% within 13.5. Low success rate for your-type – of- procedure performed	14.3%	0.0%	11.9%	11.7%	3.4%	9.4%
Scans/investigations	Count	0	3	1	4	2	10	
		% within 10. What medical procedure were you pursuing?	0.0%	30.0%	10.0%	40.0%	20.0%	100.0%
		% within 13.5. Low success rate for your-type – of- procedure performed	0.0%	13.0%	1.7%	4.3%	6.9%	4.7%
Gastrointestinal tract treatment	Count	0	0	0	1	2	3	
		% within 10. What medical procedure were you pursuing?	0.0%	0.0%	0.0%	33.3%	66.7%	100.0%
		% within 13.5. Low success rate for your-type – of- procedure performed	0.0%	0.0%	0.0%	1.1%	6.9%	1.4%
Urinary tract treatment	Count	0	0	2	0	1	3	
		% within 10. What medical procedure were you pursuing?	0.0%	0.0%	66.7%	0.0%	33.3%	100.0%
		% within 13.5. Low success rate for your-type – of- procedure performed	0.0%	0.0%	3.4%	0.0%	3.4%	1.4%
Blood treatment	Count	0	1	0	0	0	1	
		% within 10. What medical procedure were you pursuing?	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
		% within 13.5. Low success rate for your-type – of- procedure performed	0.0%	4.3%	0.0%	0.0%	0.0%	0.5%
Glands treatment	Count	0	0	1	0	0	1	
		% within 10. What medical procedure were you pursuing?	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
		% within 13.5. Low success rate for your-type – of- procedure performed	0.0%	0.0%	1.7%	0.0%	0.0%	0.5%
Eye treatment and surgery	Count	1	2	0	8	0	11	
		% within 10. What medical procedure were you pursuing?	9.1%	18.2%	0.0%	72.7%	0.0%	100.0%
		% within 13.5. Low success rate for your-type – of- procedure performed	14.3%	8.7%	0.0%	8.5%	0.0%	5.2%
Total	Count	7	23	59	94	29	212	
		% within 10. What medical procedure were you pursuing?	3.3%	10.8%	27.8%	44.3%	13.7%	100.0%
		% within 13.5. Low success rate for your-type – of- procedure performed	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



**Table P:**

6. Your total budget for this trip ranges between * 13.4. Treatment is Available Abroad that is Unavailable Domestically								
Crosstab								
			13.4. Treatment is Available Abroad that is Unavailable Domestically					
			Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Total
6. Your total budget for this trip ranges between	3000-5000	Count	2	7	11	7	4	31
		% within 6. Your total budget for this trip ranges between	6.5%	22.6%	35.5%	22.6%	12.9%	100.0%
		% within 13.4. Treatment is Available Abroad that is Unavailable Domestically	9.5%	7.3%	19.6%	9.6%	11.1%	11.0%
	5000-8000	Count	2	28	11	22	5	68
		% within 6. Your total budget for this trip ranges between	2.9%	41.2%	16.2%	32.4%	7.4%	100.0%
		% within 13.4. Treatment is Available Abroad that is Unavailable Domestically	9.5%	29.2%	19.6%	30.1%	13.9%	24.1%
	8000-12000	Count	9	37	22	23	13	104
		% within 6. Your total budget for this trip ranges between	8.7%	35.6%	21.2%	22.1%	12.5%	100.0%
		% within 13.4. Treatment is Available Abroad that is Unavailable Domestically	42.9%	38.5%	39.3%	31.5%	36.1%	36.9%
12000-20000	Count	6	12	9	15	8	50	
	% within 6. Your total budget for this trip ranges between	12.0%	24.0%	18.0%	30.0%	16.0%	100.0%	
	% within 13.4. Treatment is Available Abroad that is Unavailable Domestically	28.6%	12.5%	16.1%	20.5%	22.2%	17.7%	
More than 20000	Count	2	12	3	6	6	29	
	% within 6. Your total budget for this trip ranges between	6.9%	41.4%	10.3%	20.7%	20.7%	100.0%	
	% within 13.4. Treatment is Available Abroad that is Unavailable Domestically	9.5%	12.5%	5.4%	8.2%	16.7%	10.3%	
Total	Count	21	96	56	73	36	282	
	% within 6. Your total budget for this trip ranges between	7.4%	34.0%	19.9%	25.9%	12.8%	100.0%	
	% within 13.4. Treatment is Available Abroad that is Unavailable Domestically	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
Chi-Square Tests								
	Value	df	Asymptotic Significance (2-sided)					
Pearson Chi-Square	19.332 <sup>a</sup>	16	0.252					
Likelihood Ratio	19.475	16	0.245					
Linear-by-Linear Association	0.025	1	0.874					
N of Valid Cases	282							
a. 5 cells (20.0%) have expected count less than 5. The minimum expected count is 2.16.								

Table Q:

19. What is your country of residence? * 13.1. Medical Care Abroad is Cheaper than Domestic Care							
		Crosstab					
		13.1. Medical Care Abroad is Cheaper than Domestic Care					
		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Total
19. What is your country of residence?	Algeria	Count	0	1	0	0	1
	% within 19. What is your country of residence?	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
		% within 13.1. Medical Care Abroad is Cheaper than Domestic Care	0.0%	0.9%	0.0%	0.0%	0.5%
	Bahrain	Count	0	2	0	0	2
	% within 19. What is your country of residence?	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
	% within 13.1. Medical Care Abroad is Cheaper than Domestic Care	0.0%	1.9%	0.0%	0.0%	0.0%	0.9%
	Canada	Count	2	1	0	2	5
	% within 19. What is your country of residence?	40.0%	20.0%	0.0%	0.0%	40.0%	100.0%
	% within 13.1. Medical Care Abroad is Cheaper than Domestic Care	6.9%	0.9%	0.0%	0.0%	16.7%	2.4%
	Egypt	Count	0	6	0	1	7
	% within 19. What is your country of residence?	0.0%	85.7%	0.0%	0.0%	14.3%	100.0%
	% within 13.1. Medical Care Abroad is Cheaper than Domestic Care	0.0%	5.6%	0.0%	0.0%	8.3%	3.3%
	France	Count	0	0	0	6	6
	% within 19. What is your country of residence?	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
	% within 13.1. Medical Care Abroad is Cheaper than Domestic Care	0.0%	0.0%	0.0%	17.1%	0.0%	2.8%
	Iran	Count	1	2	0	0	3
	% within 19. What is your country of residence?	33.3%	66.7%	0.0%	0.0%	0.0%	100.0%
	% within 13.1. Medical Care Abroad is Cheaper than Domestic Care	3.4%	1.9%	0.0%	0.0%	0.0%	1.4%
	Iraq	Count	19	48	5	5	77
	% within 19. What is your country of residence?	24.7%	62.3%	6.5%	6.5%	0.0%	100.0%
	% within 13.1. Medical Care Abroad is Cheaper than Domestic Care	65.5%	44.9%	17.2%	14.3%	0.0%	36.3%
	Jordan	Count	0	6	3	5	16
	% within 19. What is your country of residence?	0.0%	37.5%	18.8%	31.3%	12.5%	100.0%
	% within 13.1. Medical Care Abroad is Cheaper than Domestic Care	0.0%	5.6%	10.3%	14.3%	16.7%	7.5%
	Kuwait	Count	0	4	5	8	19
	% within 19. What is your country of residence?	0.0%	21.1%	26.3%	42.1%	10.5%	100.0%
	% within 13.1. Medical Care Abroad is Cheaper than Domestic Care	0.0%	3.7%	17.2%	22.9%	16.7%	9.0%
	Libya	Count	0	1	1	0	2
	% within 19. What is your country of residence?	0.0%	50.0%	50.0%	0.0%	0.0%	100.0%
	% within 13.1. Medical Care Abroad is Cheaper than Domestic Care	0.0%	0.9%	3.4%	0.0%	0.0%	0.9%
	Morocco	Count	0	2	2	0	4
	% within 19. What is your country of residence?	0.0%	50.0%	50.0%	0.0%	0.0%	100.0%
	% within 13.1. Medical Care Abroad is Cheaper than Domestic Care	0.0%	1.9%	6.9%	0.0%	0.0%	1.9%
	Qatar	Count	0	2	1	2	6
	% within 19. What is your country of residence?	0.0%	33.3%	16.7%	33.3%	16.7%	100.0%
	% within 13.1. Medical Care Abroad is Cheaper than Domestic Care	0.0%	1.9%	3.4%	5.7%	8.3%	2.8%
	Saudi Arabia	Count	2	3	3	1	10
	% within 19. What is your country of residence?	20.0%	30.0%	30.0%	10.0%	10.0%	100.0%
	% within 13.1. Medical Care Abroad is Cheaper than Domestic Care	6.9%	2.8%	10.3%	2.9%	8.3%	4.7%
	Sudan	Count	0	1	0	0	1
	% within 19. What is your country of residence?	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
	% within 13.1. Medical Care Abroad is Cheaper than Domestic Care	0.0%	0.9%	0.0%	0.0%	0.0%	0.5%
	Syria	Count	4	16	2	3	25
	% within 19. What is your country of residence?	16.0%	64.0%	8.0%	12.0%	0.0%	100.0%
	% within 13.1. Medical Care Abroad is Cheaper than Domestic Care	13.8%	15.0%	6.9%	8.6%	0.0%	11.8%
	Turkey	Count	0	1	0	0	1
	% within 19. What is your country of residence?	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
	% within 13.1. Medical Care Abroad is Cheaper than Domestic Care	0.0%	0.9%	0.0%	0.0%	0.0%	0.5%
	Uganda	Count	0	1	1	0	2
	% within 19. What is your country of residence?	0.0%	50.0%	50.0%	0.0%	0.0%	100.0%
	% within 13.1. Medical Care Abroad is Cheaper than Domestic Care	0.0%	0.9%	3.4%	0.0%	0.0%	0.9%
	United Arab Emirates	Count	0	3	3	3	10
	% within 19. What is your country of residence?	0.0%	30.0%	30.0%	30.0%	10.0%	100.0%
	% within 13.1. Medical Care Abroad is Cheaper than Domestic Care	0.0%	2.8%	10.3%	8.6%	8.3%	4.7%
	United States	Count	0	1	0	1	3
	% within 19. What is your country of residence?	0.0%	33.3%	0.0%	33.3%	33.3%	100.0%
	% within 13.1. Medical Care Abroad is Cheaper than Domestic Care	0.0%	0.9%	0.0%	2.9%	8.3%	1.4%
	Yemen	Count	1	6	3	1	12
	% within 19. What is your country of residence?	8.3%	50.0%	25.0%	8.3%	8.3%	100.0%
	% within 13.1. Medical Care Abroad is Cheaper than Domestic Care	3.4%	5.6%	10.3%	2.9%	8.3%	5.7%
Total	Count	29	107	29	35	12	212
	% within 19. What is your country of residence?	13.7%	50.5%	13.7%	16.5%	5.7%	100.0%
	% within 13.1. Medical Care Abroad is Cheaper than Domestic Care	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

**Table R:**

10. What medical procedure were you pursuing? * 13.7. Anonymity of treatment								
Crosstab								
		13.7. Anonymity of treatment					Total	
		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree		
10. What medical procedure were you pursuing?	other	Count	0	4	4	2	1	11
		% within 10. What medical procedure were you pursuing?	0.0%	36.4%	36.4%	18.2%	9.1%	100.0%
Heart surgery		% within 13.7. Anonymity of treatment	0.0%	4.6%	5.3%	2.8%	4.0%	3.9%
		Count	3	4	4	3	0	14
		% within 10. What medical procedure were you pursuing?	21.4%	28.6%	28.6%	21.4%	0.0%	100.0%
		% within 13.7. Anonymity of treatment	13.0%	4.6%	5.3%	4.2%	0.0%	5.0%
Hip surgery		Count	1	2	0	3	1	7
		% within 10. What medical procedure were you pursuing?	14.3%	28.6%	0.0%	42.9%	14.3%	100.0%
		% within 13.7. Anonymity of treatment	4.3%	2.3%	0.0%	4.2%	4.0%	2.5%
		Count	2	9	2	7	0	20
General surgery		% within 10. What medical procedure were you pursuing?	10.0%	45.0%	10.0%	35.0%	0.0%	100.0%
		% within 13.7. Anonymity of treatment	8.7%	10.3%	2.7%	9.7%	0.0%	7.1%
Knee and joints surgery		Count	5	7	5	1	1	19
		% within 10. What medical procedure were you pursuing?	26.3%	36.8%	26.3%	5.3%	5.3%	100.0%
		% within 13.7. Anonymity of treatment	21.7%	8.0%	6.7%	1.4%	4.0%	6.7%
		Count	2	5	3	1	0	11
Tumors treatment		% within 10. What medical procedure were you pursuing?	18.2%	45.5%	27.3%	9.1%	0.0%	100.0%
		% within 13.7. Anonymity of treatment	8.7%	5.7%	4.0%	1.4%	0.0%	3.9%
Cosmetic surgery		Count	1	10	17	18	4	50
		% within 10. What medical procedure were you pursuing?	2.0%	20.0%	34.0%	36.0%	8.0%	100.0%
		% within 13.7. Anonymity of treatment	4.3%	11.5%	22.7%	25.0%	16.0%	17.7%
		Count	0	4	12	16	6	38
Aesthetic Treatment		% within 10. What medical procedure were you pursuing?	0.0%	10.5%	31.6%	42.1%	15.8%	100.0%
		% within 13.7. Anonymity of treatment	0.0%	4.6%	16.0%	22.2%	24.0%	13.5%
Laparoscopic surgery		Count	1	0	1	4	1	7
		% within 10. What medical procedure were you pursuing?	14.3%	0.0%	14.3%	57.1%	14.3%	100.0%
		% within 13.7. Anonymity of treatment	4.3%	0.0%	1.3%	5.6%	4.0%	2.5%
		Count	0	3	3	4	4	14
Obesity surgery		% within 10. What medical procedure were you pursuing?	0.0%	21.4%	21.4%	28.6%	28.6%	100.0%
		% within 13.7. Anonymity of treatment	0.0%	3.4%	4.0%	5.6%	16.0%	5.0%
Dental surgery/treatment		Count	2	1	9	5	3	30
		% within 10. What medical procedure were you pursuing?	6.7%	36.7%	30.0%	16.7%	10.0%	100.0%
		% within 13.7. Anonymity of treatment	8.7%	12.6%	12.0%	6.9%	12.0%	10.6%
		Count	0	1	3	3	4	11
Infertility treatment		% within 10. What medical procedure were you pursuing?	0.0%	9.1%	27.3%	27.3%	36.4%	100.0%
		% within 13.7. Anonymity of treatment	0.0%	1.1%	4.0%	4.2%	16.0%	3.9%
Neurological treatment		Count	3	1	3	3	0	20
		% within 10. What medical procedure were you pursuing?	15.0%	55.0%	15.0%	15.0%	0.0%	100.0%
		% within 13.7. Anonymity of treatment	13.0%	12.6%	4.0%	4.2%	0.0%	7.1%
		Count	1	6	3	1	0	11
Scans/investigations		% within 10. What medical procedure were you pursuing?	9.1%	54.5%	27.3%	9.1%	0.0%	100.0%
		% within 13.7. Anonymity of treatment	4.3%	6.9%	4.0%	1.4%	0.0%	3.9%
Gastrointestinal tract treatment		Count	1	1	1	0	0	3
		% within 10. What medical procedure were you pursuing?	33.3%	33.3%	33.3%	0.0%	0.0%	100.0%
		% within 13.7. Anonymity of treatment	4.3%	1.1%	1.3%	0.0%	0.0%	1.1%
		Count	1	1	0	1	0	3
Urinary tract treatment		% within 10. What medical procedure were you pursuing?	33.3%	33.3%	0.0%	33.3%	0.0%	100.0%
		% within 13.7. Anonymity of treatment	4.3%	1.1%	0.0%	1.4%	0.0%	1.1%
Blood treatment		Count	0	1	0	0	0	1
		% within 10. What medical procedure were you pursuing?	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
		% within 13.7. Anonymity of treatment	0.0%	1.1%	0.0%	0.0%	0.0%	0.4%
		Count	0	0	1	0	0	1
Glands treatment		% within 10. What medical procedure were you pursuing?	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
		% within 13.7. Anonymity of treatment	0.0%	0.0%	1.3%	0.0%	0.0%	0.4%
Eye treatment and surgery		Count	0	7	4	0	0	11
		% within 10. What medical procedure were you pursuing?	0.0%	63.6%	36.4%	0.0%	0.0%	100.0%
		% within 13.7. Anonymity of treatment	0.0%	8.0%	5.3%	0.0%	0.0%	3.9%
		Count	23	87	75	72	25	282
Total		% within 10. What medical procedure were you pursuing?	8.2%	30.8%	26.6%	25.5%	8.9%	100.0%
		% within 13.7. Anonymity of treatment	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

**Table S:**

10. What medical procedure were you pursuing? * 13.3. Inadequate Domestic Health Insurance								
		Crosstab						
		13.3. Inadequate Domestic Health Insurance						
		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Total	
10. What medical procedure were you pursuing?	other	Count	2	0	0	5	0	7
	% within 10. What medical procedure were you pursuing?		28.6%	0.0%	0.0%	71.4%	0.0%	100.0%
	% within 13.3. Inadequate Domestic Health Insurance		10.0%	0.0%	0.0%	8.5%	0.0%	3.3%
Heart surgery	Count	2	6	1	1	0	10	
	% within 10. What medical procedure were you pursuing?		20.0%	60.0%	10.0%	10.0%	0.0%	100.0%
	% within 13.3. Inadequate Domestic Health Insurance		10.0%	6.6%	3.1%	1.7%	0.0%	4.7%
Hip surgery	Count	0	2	0	0	1	3	
	% within 10. What medical procedure were you pursuing?		0.0%	66.7%	0.0%	0.0%	33.3%	100.0%
	% within 13.3. Inadequate Domestic Health Insurance		0.0%	2.2%	0.0%	0.0%	10.0%	1.4%
General surgery	Count	1	5	2	4	0	12	
	% within 10. What medical procedure were you pursuing?		8.3%	41.7%	16.7%	33.3%	0.0%	100.0%
	% within 13.3. Inadequate Domestic Health Insurance		5.0%	5.5%	6.3%	6.8%	0.0%	5.7%
Knee and joints surgery	Count	1	12	1	2	0	16	
	% within 10. What medical procedure were you pursuing?		6.3%	75.0%	6.3%	12.5%	0.0%	100.0%
	% within 13.3. Inadequate Domestic Health Insurance		5.0%	13.2%	3.1%	3.4%	0.0%	7.5%
Tumors treatment	Count	0	5	2	4	0	11	
	% within 10. What medical procedure were you pursuing?		0.0%	45.5%	18.2%	36.4%	0.0%	100.0%
	% within 13.3. Inadequate Domestic Health Insurance		0.0%	5.5%	6.3%	6.8%	0.0%	5.2%
Cosmetic surgery	Count	2	12	5	15	0	34	
	% within 10. What medical procedure were you pursuing?		5.9%	35.3%	14.7%	44.1%	0.0%	100.0%
	% within 13.3. Inadequate Domestic Health Insurance		10.0%	13.2%	15.6%	25.4%	0.0%	16.0%
Aesthetic Treatment	Count	2	12	8	3	4	29	
	% within 10. What medical procedure were you pursuing?		6.9%	41.4%	27.6%	10.3%	13.8%	100.0%
	% within 13.3. Inadequate Domestic Health Insurance		10.0%	13.2%	25.0%	5.1%	40.0%	13.7%
Laparoscopic surgery	Count	0	0	0	3	0	3	
	% within 10. What medical procedure were you pursuing?		0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
	% within 13.3. Inadequate Domestic Health Insurance		0.0%	0.0%	0.0%	5.1%	0.0%	1.4%
Obesity surgery	Count	2	1	2	4	0	9	
	% within 10. What medical procedure were you pursuing?		22.2%	11.1%	22.2%	44.4%	0.0%	100.0%
	% within 13.3. Inadequate Domestic Health Insurance		10.0%	1.1%	6.3%	6.8%	0.0%	4.2%
Dental surgery/treatment	Count	2	10	6	2	1	21	
	% within 10. What medical procedure were you pursuing?		9.5%	47.6%	28.6%	9.5%	4.8%	100.0%
	% within 13.3. Inadequate Domestic Health Insurance		10.0%	11.0%	18.8%	3.4%	10.0%	9.9%
Infertility treatment	Count	0	2	0	6	0	8	
	% within 10. What medical procedure were you pursuing?		0.0%	25.0%	0.0%	75.0%	0.0%	100.0%
	% within 13.3. Inadequate Domestic Health Insurance		0.0%	2.2%	0.0%	10.2%	0.0%	3.8%
Neurological treatment	Count	2	15	1	1	1	20	
	% within 10. What medical procedure were you pursuing?		10.0%	75.0%	5.0%	5.0%	5.0%	100.0%
	% within 13.3. Inadequate Domestic Health Insurance		10.0%	16.5%	3.1%	1.7%	10.0%	9.4%
Scans/investigations	Count	3	4	1	1	1	10	
	% within 10. What medical procedure were you pursuing?		30.0%	40.0%	10.0%	10.0%	10.0%	100.0%
	% within 13.3. Inadequate Domestic Health Insurance		15.0%	4.4%	3.1%	1.7%	10.0%	4.7%
Gastrointestinal tract treatment	Count	0	1	0	1	1	3	
	% within 10. What medical procedure were you pursuing?		0.0%	33.3%	0.0%	33.3%	33.3%	100.0%
	% within 13.3. Inadequate Domestic Health Insurance		0.0%	1.1%	0.0%	1.7%	10.0%	1.4%
Urinary tract treatment	Count	0	2	1	0	0	3	
	% within 10. What medical procedure were you pursuing?		0.0%	66.7%	33.3%	0.0%	0.0%	100.0%
	% within 13.3. Inadequate Domestic Health Insurance		0.0%	2.2%	3.1%	0.0%	0.0%	1.4%
Blood treatment	Count	1	0	0	0	0	1	
	% within 10. What medical procedure were you pursuing?		100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
	% within 13.3. Inadequate Domestic Health Insurance		5.0%	0.0%	0.0%	0.0%	0.0%	0.5%
Glands treatment	Count	0	1	0	0	0	1	
	% within 10. What medical procedure were you pursuing?		0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
	% within 13.3. Inadequate Domestic Health Insurance		0.0%	1.1%	0.0%	0.0%	0.0%	0.5%
Eye treatment and surgery	Count	0	1	2	7	1	11	
	% within 10. What medical procedure were you pursuing?		0.0%	9.1%	18.2%	63.6%	9.1%	100.0%
	% within 13.3. Inadequate Domestic Health Insurance		0.0%	1.1%	6.3%	11.9%	10.0%	5.2%
Total	Count	20	91	32	59	10	212	
	% within 10. What medical procedure were you pursuing?		9.4%	42.9%	15.1%	27.8%	4.7%	100.0%
	% within 13.3. Inadequate Domestic Health Insurance		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

## Appendix 7: Normality tests results

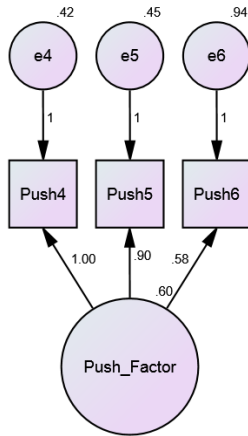
Tests of Normality						
	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Medical Care Abroad is Cheaper than Domestic Care	.318	212	.000	.844	212	.000
Length of Waiting Time for Domestic Treatment	.230	212	.000	.894	212	.000
Inadequate Domestic Health Insurance	.276	212	.000	.866	212	.000
Treatment is Available Abroad that is Unavailable Domestically	.276	212	.000	.875	212	.000
Low success rate for your-type – of- procedure performed	.262	212	.000	.879	212	.000
Home doctor recommendation	.221	212	.000	.899	212	.000
Anonymity of treatment	.243	212	.000	.894	212	.000
Proximity to country of residence	.267	212	.000	.876	212	.000
Typography and climate in Lebanon	.245	212	.000	.893	212	.000
Government policies and laws in Lebanon	.209	212	.000	.891	212	.000
Political Stability in Lebanon	.226	212	.000	.880	212	.000
Combining medical treatment with vacation	.266	212	.000	.866	212	.000
Availability of shopping centers	.227	212	.000	.894	212	.000
Airline routes and frequency	.246	212	.000	.884	212	.000
Availability of travel agencies medical packages	.176	212	.000	.909	212	.000
Availability of medical institutions' brokers	.206	212	.000	.898	212	.000
Ease of collecting visa	.275	212	.000	.870	212	.000
Advertising in home country	.207	212	.000	.895	212	.000
Language and cultural similarity	.294	212	.000	.831	212	.000
Access to information	.329	212	.000	.813	212	.000
Proximity of accommodation to medical center	.281	212	.000	.855	212	.000
Lebanon's reputation in medical services / word of mouth	.272	212	.000	.795	212	.000
International accreditation of Lebanon's medical institutions	.240	212	.000	.860	212	.000
Reputation of a particular medical provider in Lebanon	.230	212	.000	.833	212	.000
Experience and reputation of a particular medical doctor	.240	212	.000	.829	212	.000

More guaranteed results and higher success rate for your-type – of- procedure performed in Lebanon	.294	212	.000	.760	212	.000
Price of medical care in Lebanon	.179	212	.000	.908	212	.000
Value of medical care for price in Lebanon	.291	212	.000	.831	212	.000
Your health insurance covers treatment in Lebanon	.336	212	.000	.806	212	.000
Prices of tourist good and services in Lebanon	.219	212	.000	.896	212	.000
Quality of Medical institution	.243	212	.000	.805	212	.000
Medical procedure	.283	212	.000	.755	212	.000
Medical doctor	.325	212	.000	.732	212	.000
Medical staff	.240	212	.000	.809	212	.000
Quality of facilities	.218	212	.000	.825	212	.000
Quality of after-care	.252	212	.000	.854	212	.000
Privacy	.261	212	.000	.802	212	.000
Prices of medical services	.227	212	.000	.876	212	.000
Proximity of the medical institution to other areas	.283	212	.000	.837	212	.000
Airlines	.269	212	.000	.828	212	.000
Accommodation	.287	212	.000	.784	212	.000
Local transportation	.250	212	.000	.882	212	.000
Money exchange and transfer services	.284	212	.000	.837	212	.000
Food and beverage	.260	212	.000	.791	212	.000
Shopping experience	.268	212	.000	.813	212	.000
Prices of daily consumer product	.216	212	.000	.886	212	.000
Attractions and Leisure activities	.213	212	.000	.840	212	.000
Friendliness of local community	.250	212	.000	.805	212	.000
Safety and stability	.330	212	.000	.814	212	.000
Weather	.255	212	.000	.813	212	.000
Ease of trip planning	.267	212	.000	.815	212	.000
You are satisfied with the tourism products and services received in Lebanon	.293	212	.000	.812	212	.000
You are satisfied with the medical services received in Lebanon	.278	212	.000	.748	212	.000
You are satisfied with the prices you paid for tourism and medical products and services in Lebanon	.272	212	.000	.870	212	.000
You are satisfied with the overall experience in Lebanon	.365	212	.000	.721	212	.000
You are willing to come back to Lebanon for medical services in the next two years	.289	212	.000	.781	212	.000

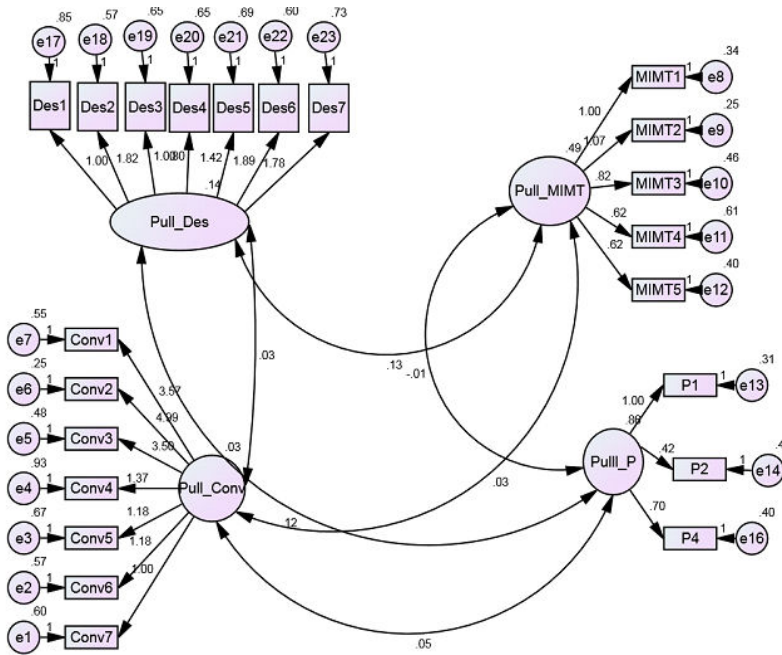
You are willing to come back to Lebanon for leisure tourism in the next two years	.239	212	.000	.859	212	.000
You would recommend Lebanon to a friend of colleague	.320	212	.000	.757	212	.000

## Appendix 8: Initial CFA AMOS figures for model's constructs

### Push factors model

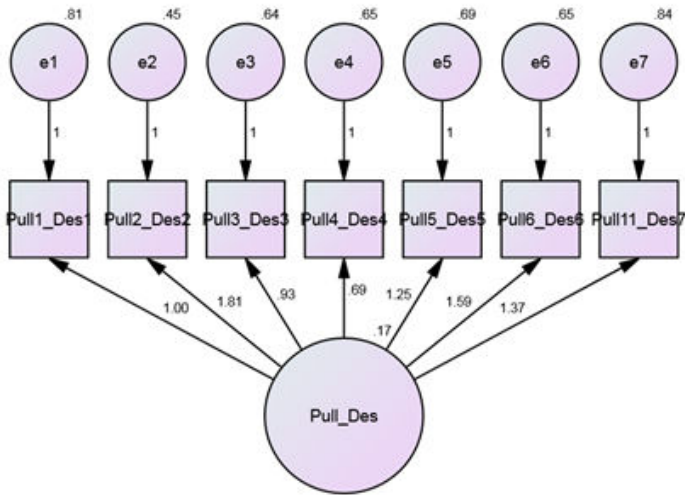


### Pull factors model

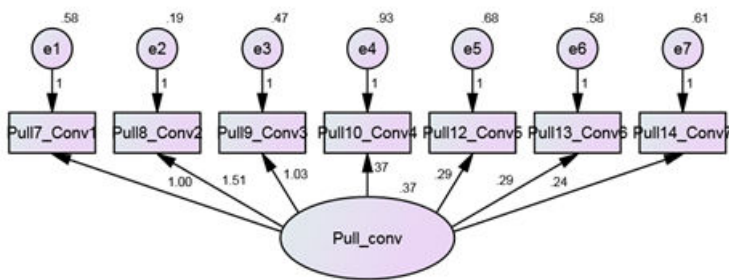




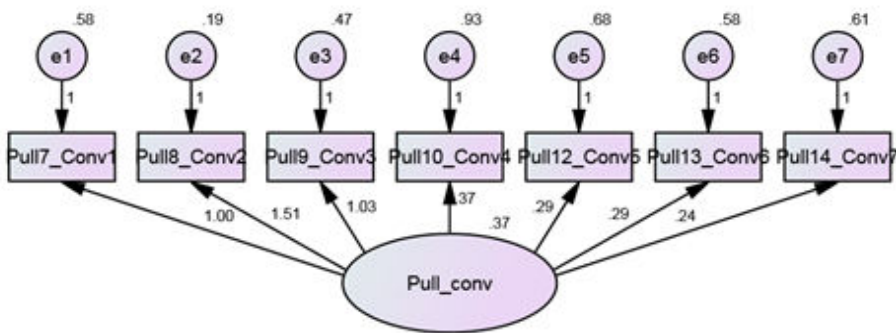
### Destination pull model



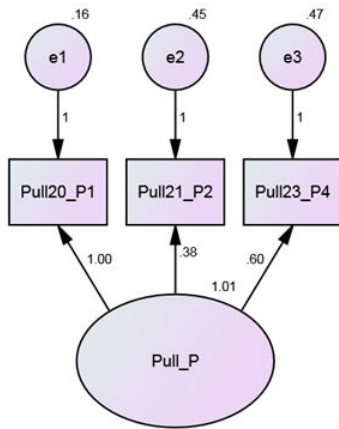
### Convenience pull model



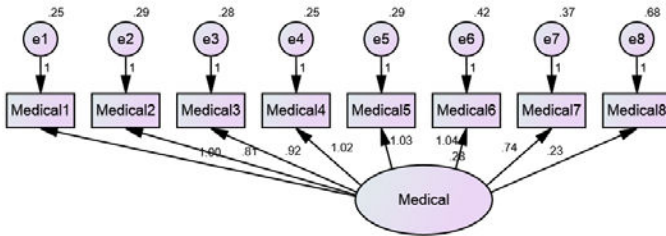
### Medical institutions and medical treatment pull model



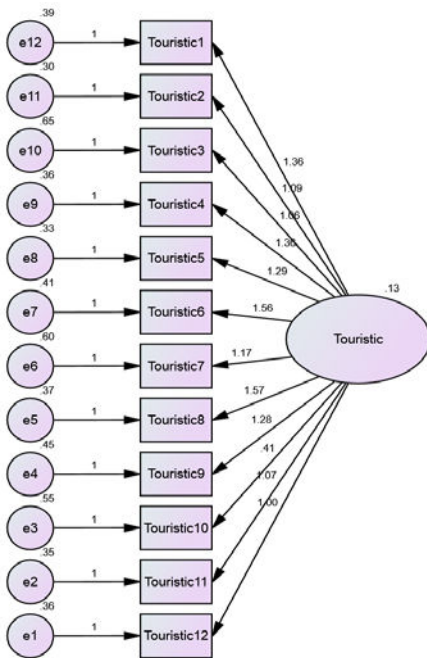
### Price pull model



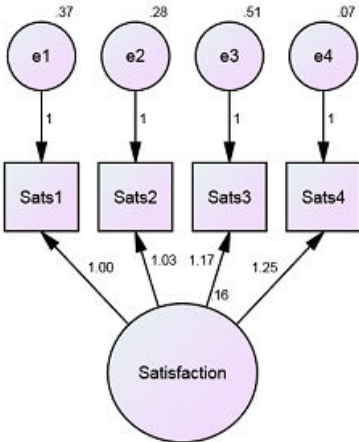
### Medical feedback model



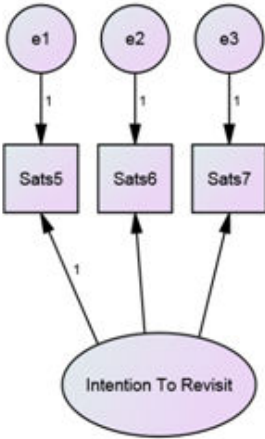
### Touristic feedback model



**Satisfaction model**



**Intention to revisit**



## Appendix 9: Covariance modifications for the measurement constructs

<b>Pull Factors Model</b>					
Error	Associated with		Error	Associated with	P-value
e21	Combining medical treatment with vacation	<-->	e23	Advertising in home country	***
e21	Combining medical treatment with vacation	<-->	e22	Availability of shopping centers	0.023
e22	Availability of shopping centers	<-->	e23	Advertising in home country	***
e19	Government policies and laws in Lebanon	<-->	e20	Political Stability in Lebanon	***
e10	Reputation of a particular medical provider in Lebanon	<-->	e11	Experience and reputation of a particular medical doctor	***
e18	Typography and climate in Lebanon	<-->	e19	Government policies and laws in Lebanon	0.001
e17	Proximity to country of residence	<-->	e18	Typography and climate in Lebanon	***
e17	Proximity to country of residence	<-->	e21	Combining medical treatment with vacation	***
e9	International accreditation of Lebanon's medical institutions	<-->	e11	Experience and reputation of a particular medical doctor	0.009
<b>Destination Pull Model</b>					
Error	Associated with		Error	Associated with	P-value
e1	Proximity to country of residence	<-->	e5	Combining medical treatment with vacation	***
e5	Combining medical treatment with vacation	<-->	e7	Advertising in home country	0.005
e5	Combining medical treatment with vacation	<-->	e6	Availability of shopping centers	***
<b>Medical Institutions and Medical Treatment Pull Model</b>					
Error	Associated with		Error	Associated with	P-value
e3	Reputation of a particular medical provider in Lebanon	<-->	e4	Experience and reputation of a particular medical doctor	***
e1	Lebanon's reputation in medical services	<-->	e4	Experience and reputation of a particular medical doctor	0.04
e4	Experience and reputation of a particular medical doctor	<-->	e5	More guaranteed results and higher success rate for your-type – of- procedure performed in Lebanon	0.072
<b>Medical Feedback Model</b>					
Error	Associated with		Error	Associated with	P-value
e6	Quality of after-care	<-->	e7	Privacy	***
e2	Medical procedure	<-->	e5	Quality of facilities	***
e3	Medical doctor	<-->	e5	Quality of facilities	***
e2	Medical procedure	<-->	e7	Privacy	0.011
<b>Touristic Feedback Model</b>					
Error	Associated with		Error	Associated with	P-value
e6	Shopping experience	<-->	e5	Food and Beverage	0.002
e4	Money exchange and transfer services	<-->	e1	Airlines	***
e2	Accommodation	<-->	e1	Airlines	0.002
e12	Ease of trip planning	<-->	e11	Weather	0.016
e9	Friendliness of local community	<-->	e2	Accommodation	0.03
<b>Satisfaction Model</b>					

Error	Associated with		Error	Associated with	P-value
e4	You are satisfied with the overall experience in Lebanon	<-->	e2	You are satisfied with the medical services received in Lebanon	0.004
e5	You are willing to come back to Lebanon for medical services in the next two years	<-->	e1	You are satisfied with the tourism products and services received in Lebanon	***
e4	You are satisfied with the overall experience in Lebanon	<-->	e3	You are satisfied with the prices you paid for tourism and medical products and services in Lebanon	***
e6	You are willing to come back to Lebanon for leisure tourism in the next two years	<-->	e5	You are willing to come back to Lebanon for medical services in the next two years	***
e6	You are willing to come back to Lebanon for leisure tourism in the next two years	<-->	e2	You are satisfied with the medical services received in Lebanon	0.001

## Appendix 10: Variance Estimation

	<b>Estimate</b>	<b>C.R.</b>	<b>P</b>
Pull_Conv	0.903	7.244	***
Pull_MIMT	0.525	6.465	***
Pulll_Price	0.755	5.883	***
Pull_Des	0.514	4.52	***
Push_Factor	0.524	4.888	***
e41	0.032	2.79	0.005
e42	0.178	5.543	***
e47	0.035	2.774	0.006
e51	0.053	3.842	***
e3	0.496	9.032	***
e4	0.118	1.533	0.125
e5	0.58	8.673	***
e6	0.3	6.979	***
e7	0.314	7.324	***
e8	0.468	8.927	***
e10	0.389	9.34	***
e11	0.42	5.115	***
e12	0.456	9.31	***
e13	0.334	5.848	***
e15	0.71	8.43	***
e18	0.686	7.548	***
e19	0.571	6.411	***
e20	0.76	7.438	***
e21	0.499	6.29	***
e22	0.397	5.337	***
e23	0.922	9.415	***
e24	0.369	9.792	***
e25	0.346	9.59	***
e26	0.451	9.479	***
e27	0.378	9.011	***
e28	0.591	9.703	***
e29	0.38	8.798	***
e30	0.351	9.379	***
e31	0.377	9.399	***
e32	0.318	9.484	***
e33	0.415	9.482	***

e34	0.249	9.033	***
e35	0.249	8.549	***
e36	0.252	8.332	***
e37	0.261	9.193	***
e38	0.221	6.85	***
e39	0.456	9.767	***
e40	0.371	9.729	***
e43	0.298	9.066	***
e44	0.255	8.97	***
e45	0.511	9.5	***
e46	0.151	8.496	***
e48	0.141	7.681	***
e49	0.33	6.964	***
e50	0.258	7.703	***

## Appendix 11: Spearman's rho between push and pull variables

Push variable	Pull variable	rho	p value	Interpretation
Medical care abroad is cheaper than domestic care	Ease of collecting visa	-.358	.000	B
Medical care abroad is cheaper than domestic care	Lebanon's reputation in medical services / word of mouth	-.307	.000	D
Medical care abroad is cheaper than domestic care	Price of medical care in Lebanon	.523	.000	A
Medical care abroad is cheaper than domestic care	Prices of tourist goods and services in Lebanon	.460	.000	A
Inadequate domestic health insurance	Lebanon's reputation in medical services / word of mouth	-.294	.000	D
Inadequate domestic health insurance	International accreditation of Lebanon's medical institutions	-.256	.000	D
Inadequate domestic health insurance	Reputation of a particular medical provider in Lebanon	-.258	.000	D
Treatment is available abroad that is unavailable domestically	Price of medical care in Lebanon	-.275	.000	D
Treatment is available abroad that is unavailable domestically	Prices of tourist good and services in Lebanon	-.328	.000	D
Low success rate for your-type-of-procedure performed	More guaranteed results and higher success rate for your-type – of-procedure performed in Lebanon	.243	.000	C
Low success rate for your-type-of-procedure performed	Price of medical care in Lebanon	-.256	.000	D
Low success rate for your-type-of-procedure performed	Prices of tourist good and services in Lebanon	-.327	.000	D
Anonymity of treatment	Ease of collecting visa	-.252	.000	D

### Interpretation

- A- A moderate positive correlation between the two variables, which is statistically significant
- B- A fairly weak negative correlation between the two variables, which is statistically significant
- C- A weak positive correlation between the two variables, which is statistically significant
- D- A weak negative correlation between the two variables, which is statistically significant



## Appendix 12: A selection of widely used fit indices and their cutoff criteria

Indexes	Shorthand	General rule for acceptable fit if data are continuous	Categorical data
Absolute/predictive fit			
Chi-square	$\chi^2$	Ratio of $\chi^2$ to $df \leq 2$ or 3, useful for nested models/model trimming	
Akaike information criterion	AIC	Smaller the better; good for model comparison (nonnested), not a single model	
Browne–Cudeck criterion	BCC	Smaller the better; good for model comparison, not a single model	
Bayes information criterion	BIC	Smaller the better; good for model comparison (nonnested), not a single model	
Consistent AIC	CAIC	Smaller the better; good for model comparison (nonnested), not a single model	
Expected cross-validation index	ECVI	Smaller the better; good for model comparison (nonnested), not a single model	
Comparative fit			
Normed fit index	NFI	Comparison to a baseline (independence) or other model $\geq .95$ for acceptance	
Incremental fit index	IFI	$\geq .95$ for acceptance	
Tucker–Lewis index	TLI	$\geq .95$ can be $0 > TLI > 1$ for acceptance	0.96
Comparative fit index	CFI	$\geq .95$ for acceptance	0.95
Relative noncentrality fit index	RNI	$\geq .95$ , similar to CFI but can be negative, therefore CFI better choice	
Parsimonious fit			
Parsimony-adjusted NFI	PNFI	Very sensitive to model size	
Parsimony-adjusted CFI	PCFI	Sensitive to model size	
Parsimony-adjusted GFI	PGFI	Closer to 1 the better, though typically lower than other indexes and sensitive to model size	
Other			
Goodness-of-fit index	GFI	$\geq .95$ Not generally recommended	
Adjusted GFI	AGFI	$\geq .95$ Performance poor in simulation studies	
Hoelter .05 index		Critical N largest sample size for accepting that model is correct	
Hoelter .01 index		Hoelter suggestion, $N = 200$ , better for satisfactory fit	
Root mean square residual	RMR	Smaller, the better; 0 indicates perfect fit	
Standardized RMR	SRMR	$\leq .08$	
Weighted root mean residual	WRMR	$< .90$	$< .90$
Root mean square error of approximation	RMSEA	$< .06$ to $.08$ with confidence interval	$< .06$

Source: Shreiber et al., 2006

### Appendix 13: Rotated Component Matrices for each subset

Push variables	Component		
	1	2	3
13.4. Treatment is Available Abroad that is Unavailable Domestically	.809		
13.5. Low success rate for your-type – of- procedure performed	.850		
13.6. Home doctor recommendation	.576		
13.3. Inadequate Domestic Health Insurance		.636	
13.7. Anonymity of treatment		.809	
13.1. Medical Care Abroad is Cheaper than Domestic Care			.083
13.2. Length of Waiting Time for Domestic Treatment			.870

Three- variables push	Component
	1
13.4. Treatment is Available Abroad that is Unavailable Domestically	.834
13.5. Low success rate for your-type – of- procedure performed	.825
13.6. Home doctor recommendation	.648

Pull variables	Component						
	1	2	3	4	5	6	7
14.10. Ease of collecting visa	.417						
14.15. Lebanon's reputation in medical services / word of mouth	.749						
14.16. International accreditation of Lebanon's medical institutions	.841						
14.17. Reputation of a particular medical provider in Lebanon	.731						
14.19. More guaranteed results and higher success rate for your-type – of- procedure performed in Lebanon	.639						
14.18. Experience and reputation of a particular medical doctor	.622						
14.7. Airline routes and frequency		.742					
14.8. Availability of travel agencies medical packages		.856					
14.9. Availability of medical institutions' brokers		.784					
14.20. Price of medical care in Lebanon			.834				
14.21. Value of medical care for price in Lebanon			.698				
14.23. Prices of tourist good and services in Lebanon			.705				

14.2. Typography and climate in Lebanon				.611			
14.5. Combining medical treatment with vacation				.847			
14.6. Availability of shopping centers				.747			
14.3. Government policies and laws in Lebanon					.729		
14.4. Political Stability in Lebanon					.789		
14.22. Your health insurance covers treatment in Lebanon					.627		
14.1. Proximity to country of residence						.813	
14.11. Advertising in home country						.403	
14.12. Language and cultural similarity							.529
14.13. Access to information							.759
14.14. Proximity of accommodation to medical center							.747

Three-factors pull variables	Component		
	1	2	3
14.1. Proximity to country of residence	.424		
14.2. Typography and climate in Lebanon	.335		
14.10. Ease of collecting visa	.559		
14.11. Advertising in home country	.517		
14.12. Language and cultural similarity	.539		
14.13. Access to information	.369		
14.14. Proximity of accommodation to medical center	.353		
14.15. Lebanon's reputation in medical services / word of mouth	.810		
14.16. International accreditation of Lebanon's medical institutions	.747		
14.17. Reputation of a particular medical provider in Lebanon	.655		
14.18. Experience and reputation of a particular medical doctor	.494		
14.19. More guaranteed results and higher success rate for your-type – of- procedure performed in Lebanon	.641		
14.5. Combining medical treatment with vacation		.653	
14.6. Availability of shopping centers		.592	
14.20. Price of medical care in Lebanon		.779	
14.21. Value of medical care for price in Lebanon		.509	
14.23. Prices of tourist good and services in Lebanon		.735	
14.3. Government policies and laws in Lebanon			.608
14.4. Political Stability in Lebanon			.599
14.7. Airline routes and frequency			.533
14.8. Availability of travel agencies medical packages			.639
14.9. Availability of medical institutions' brokers			.603

14.22. Your health insurance covers treatment in Lebanon			.551
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Perceived medical quality	Component	
	1	2
15.1. Quality of Medical institution	.770	
15.2. Medical procedure	.644	
15.3. Medical doctor	.716	
15.4. Medical staff	.763	
15.5. Quality of facilities	.777	
15.6. Quality of after-care	.735	
15.7. Privacy	.640	
15.8. Prices of medical services		.717
15.9. Proximity of the medical institution to other areas		.759

Perceived touristic quality	Component		
	1	2	3
15.10. Airlines	.661		
15.11. Accommodation	.584		
15.13. Money exchange and transfer services	.640		
15.14. Food and beverage	.695		
15.15. Shopping experience	.605		
15.20. Weather	.686		
15.21. Ease of trip planning	.587		
15.12. Local transportation		.746	
15.16. Prices of daily consumer product		.678	
15.17. Attractions and Leisure activities		.497	
15.18. Friendliness of local community			.486
15.19. Safety and stability			.861

Satisfaction and intention to revisit	Component
	1
16.1. You are satisfied with the tourism products and services received in Lebanon	.687
16.2. You are satisfied with the medical services received in Lebanon	.701
16.3. You are satisfied with the prices you paid for tourism and medical products and services in Lebanon	.599

16.4. You are satisfied with the overall experience in Lebanon	.803
16.5. You are willing to come back to Lebanon for medical services in the next two years	.695
16.6. You are willing to come back to Lebanon for leisure tourism in the next two years	.720
16.7. You would recommend Lebanon to a friend of colleague	.801

## **Appendix 14: The Lebanese sociological structure and the role of the Diaspora**

The sociological structure of Lebanon is categorized around the parameter of religious affiliation (Saadeh, 1992, P. 20). Previously, there were three main religions in Lebanon; Christianity, Islam which includes Druze and Judaism. Furthermore, the religious groups were divided into a total of 18 sects dispersed in various villages, towns and cities of the 25 districts of Lebanon. The Doha agreement of 2009, represented two religious groups; Christians and Muslims. The two groups are divided into 11 politically-represented sects.

The pre-civil war front-stage discussion on the analysis of the Lebanese sociological structure, linked sectarianism with social class or what is called "class-sect". According to which, there is a sectarian structure and class structure in Lebanon which often intersect. However, this relationship seem to have gradually diminished in the post-war discussions and debates on the Lebanese sociological structure wherein class is no longer an important determinant of sectarian divisions. According to Michel Chiha, sects have replaced classes in the Lebanese main social division (Majed, 2017).

It is of significant importance to study and analyze the role played by the Lebanese Diaspora in shaping the post-war Lebanese economy as well as the post-war sociological depiction of the Lebanese society. The Lebanese abroad maintained a link with their home country; particularly with their family, village or town and religious and political affiliation. Over the last three decades, the remittances of the Lebanese Diaspora reached to 46% of the Gross Domestic Product. This contribution tended to peak during war times. For example, in 1990 the remittances reached 60% of GDP while in 2004, a period of economic stability, they made 13.5% of GDP. The economic power of the Diaspora was evident not only in remittances but also in capital investments and in shaping political elites and powers. The 'war lords' of 1975-

1990 war used to pay visits to their supporters abroad. More recently, political leaders such as the late Rafiq Hariri and the former prime-minister Najib Meqati emerged from the diasporic sphere.

Moreover, the fading of the class-based categorization in the sphere of sectarianism cannot be complete without considering the element of Lebanese immigrants and the return of immigrants. It has been argued that the development of Christian and Shiite bourgeoisie can be attributed to the return of immigrants of these sects. The Shi'a community for example has witnessed a class transformation over the past 60 years from being mainly an agricultural community to being involved in major capitalist investments and having strong political representation. Thus, the recent transformation in the sociological structure of the Lebanese society and the formation of middle class and upper class is significantly influenced by the Lebanese Diaspora and the role it played (Khater, 2001).

The Lebanese government has been paying an increasing attention to the Diaspora. The latest accomplishment in this regard was developing an overseas voting operation that was able to involve the Lebanese expats in 2018 parliamentary elections (Haboush and Obeid, 2018). Likewise, the Lebanese Diaspora has established, throughout the years, several organizations, associations and clubs in various countries such as Argentina, Brazil, Australia, Belgium and others. These associations sustain official ties with Lebanon through the Ministry of Foreign Affairs and Immigrants.

It is critical to mention the extended regional affiliation in the Lebanese sociological and political structure which is an important matter with respect to tourism. It is argued that the Lebanese citizens are rather members of religious "communities" as they are bounded by religious judiciary courts which rules the social aspects of their lives such as birth, death, marriage,

divorce, custody as well as others (Majed, 2017). Accordingly, religious communities affiliate themselves socially and culturally with influential regional nations of parallel religious belief (Saadeh, 1992 pp. 81-84). Moreover, article 95 of the Lebanese constitution accentuated the socio-political rigidity. According to which, hierarchical preeminence in the government depends on the size of the representing social community. Thus, sectarian leaders of Lebanon have worked along these lines to gain regional political collaboration and backing. This has destabilized the Lebanese political climate and left its traces on tourism. For example, as the political authority represented by Hezbollah, which is mostly Shiite, increased in the past years, the political relations with Saudi Arabia and other GCC countries aggravated and travel bans to Lebanon were imposed.

However, when it comes to medical tourism, sociological influence seems to have weakened. As when it comes to one's life, religious and cultural affinities become surmountable issues. Despite the decrease in total number of tourists arrivals in years 2012 and 2013, Lebanon sustained an attractive position for regional medical tourists.



## Appendix 15: Selected approval letters for data collection (Hotel-Dieu De France Medical Center and Beirut Rafik Hariri International Airport)



Beyrouth, le 30 mai 2017

### Comité d'éthique

Pr Georges Halaby, *Président*  
Pr Michel Scheuer s.j.  
Dr Georges Abi Tayeh  
Dr Georges Dabar  
Pr Nasri Diab  
Mlle Soha Abdel Malak  
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Pr Sami Richa  
Pr Marek Cieslik s.j.  
Dr May Fakhoury  
M. Ayad Wakim

Madame Samar NOAMAN  
Université Paris I  
Panthéon - Sorbonne

**Dossier CEHDF 996** (numéro à rappeler dans toute correspondance)

**Titre du protocole**: Tourisme médical : comprendre les comportements de consommations des voyageurs et enjeux stratégiques pour le Liban.

Chère Collègue,

Lors de sa réunion du 25 mai, le Comité a pris acte de votre courrier daté du 19/05 ; ce courrier était accompagné du protocole de l'étude et d'un questionnaire.

Après en avoir délibéré, le Comité estime à l'unanimité que cette étude ne soulève aucune objection d'ordre éthique ; il vous notifie donc bien volontiers son accord et vous autorise à utiliser le questionnaire proposé.

*Tous les membres du Comité étaient présents à cette réunion, à l'exception du Pr. Georges HALABY, de Mlle Soha ABDEL MALAK, du Dr Jad HABIB et du Pr. Marek CIESLIK, excusés. Le Comité agit en concordance avec les « Bonnes Pratiques Cliniques » (GCP) décrites dans la « Déclaration d'Helsinki » (version d'octobre 2013) et les « Lignes directrices internationales d'éthique pour la recherche biomédicale impliquant des sujets humains » du Conseil des Organisations internationales des Sciences médicales (CIOMS) avec la collaboration de l'Organisation mondiale de la santé (OMS).*

Avec nos meilleures salutations.

Professeur Georges HALABY  
Président



Michel SCHEUER  
Académicien

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إحالة

ربطاً: كتاب رقم ٨/٥٤٢٦ تاريخ ٢٠١٧/٧/٧ صادر عن رئاسة مطار رفيق الحريري الدولي يتعلق حول السماح للمدرسة سمر عبد الحافظ نعمان إجراء مقابلات مع المسافرين لزوم بحث للجامعة وذلك بتاريخ ٢٠١٧/٧/١٠

تعاد إلى

جانب رئاسة مطار رفيق الحريري الدولي - بيروت

- للفضل بالتسلم، مع الموافقة للمدرسة سمر عبد الحافظ نعمان على إجراء مقابلات مع المسافرين (خارج المنطقة المحرمة) دون تصوير، على أن يتم مرافقتها من قبل عنصر يعين على همة فرع الإستقصاء في حينه

خلدة في ٢٠١٧/٧/١٠  
العميد جورج دوط  
قائد جهاز أمن المطار



تحال إلى  
- فرع الإستقصاء/ للمقتضى

التسلم / ليبلغ أصحاب  
الشرطة بالموافقة  
مع التمدد بالتفويضات  
الأمنية أعلاه

مطار رفيق الحريري الدولي - بيروت  
شخص المطار  
المهندس فادي الحسن

11 JUL 2017

## **MEDICAL TOURISM: UNDERSTANDING CONSUMPTION BEHAVIOUR OF TRAVELLERS AND STRATEGIC ISSUES FOR LEBANON**

Une littérature de fond sur le tourisme médical a été attribuée aux motivations des touristes médicaux. Des académiciens ont étudié les expériences des touristes médicaux et leur niveau de satisfaction. Néanmoins, le lien entre ces deux concepts a rarement été examiné dans la littérature sur le tourisme médical. Ainsi, cette étude examine les motivations des touristes médicaux destinées pour le tourisme médical, et l'effet de ces motivations sur leur perception de la qualité, de la satisfaction, et de l'intention de revisiter. En outre, l'étude vise à explorer les différentes caractéristiques des touristes médicaux qui rendent à des classements différents. L'objectif est d'étudier les caractéristiques qui attirent les touristes médicaux vers la destination, pour améliorer leurs expériences et leurs satisfactions en matière de tourisme médical. Les implications de la recherche s'étendent au niveau de l'entreprise et au niveau national. Les résultats peuvent aider les gestionnaires impliqués dans les entreprises de tourisme médical, notamment les cliniques, les centres médicaux, les hôtels et les agences de voyages, à réaffecter leurs ressources et à mettre en œuvre les pratiques recommandées susceptibles d'améliorer leurs performances et d'attirer d'autres touristes. Au niveau national, les conclusions sont importantes pour les décideurs clés dans les domaines du tourisme et de la santé. Les résultats et les recommandations peuvent aider à accroître l'attractivité de la destination et à améliorer l'expérience du tourisme médical, ce qui se traduirait par des avantages économiques pour la destination dans son ensemble.

**Keywords:** medical tourism, medical tourist, destination, push motivation, pull motivation, perceived quality, satisfaction.

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