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# Factors Influencing the Perceived Impacts of Medical Tourism Development on Quality of Life

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**FACTORS INFLUENCING THE PERCEIVED IMPACTS OF MEDICAL  
TOURISM DEVELOPMENT ON QUALITY OF LIFE**

by

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A dissertation submitted in partial fulfillment  
of the requirements for the

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The Graduate College

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## **ABSTRACT**

Factors Influencing the Perceived Impacts of Medical Tourism Development  
on Quality of Life

by

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A structural model is proposed and empirically examined that investigates factors influencing how residents perceive medical tourism's impact on quality of life domains and behavioral responses. A model based on social exchange is adapted as the basis of theory that medical tourism in a destination will affect community conditions and living experiences, which in turn influence residents' support for its development and tax paying behavioral intentions. Analyzed factors influencing how residents perceive medical tourism's affect on community conditions and living experiences underlying quality of life include overall community satisfaction, satisfaction with healthcare, attitudes towards medical tourism and economic performance.

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# **CHAPTER 1**

## **INTRODUCTION**

Residents' attitudes toward tourism have been a subject of research for more than 30 years. However, few studies have specifically considered tourism's impacts on quality of life (QOL) from a resident's perspective. While some studies to date in the area of community tourism and resident support for tourism development introduced the notion that residents' perceptions of community living conditions would affect both their perceptions of tourism impact and their support for incremental tourism development, tourism's influence on living conditions has not been fully linked with the attainment of particular QOL goals. Furthermore, relatively little research has attempted to examine how, for example, medical tourism enhances QOL. The connection between resident satisfaction and how residents perceive medical tourism impacts their living experiences in a given destination and support for medical tourism development may serve as an important component to extant studies.

To this end, this study is designed to address how best to measure medical tourism's impacts on domains (community conditions and living experiences) which underlay the desired QOL. Specifically it tests a theoretical model that links community residents' perceptions of medical tourism's impacts on QOL to factors related to community and healthcare satisfaction, the economy, and attitude towards medical tourism, which may in turn affect their support for development and tax paying behavioral intentions. This research is intended to provide guidance to developers, and, of course, academics for building a knowledge base of medical tourism and for the resident responses to it.

## Overview

Following the onset of the Great Recession, Las Vegas finds itself seeing in hindsight the effects of casino overdevelopment. In addition, with the rampant growth, companies cannibalized their own financial resources for new property development only to have these developments, for the most part, fail. Furthermore, as Las Vegas grew focused more on gaming development than on building communities (Moehring & Green, 2005), it followed a societal de-grouping trend detailed by Putnam (2000).

Thus, a mass wave on its way of change portends how Las Vegas plans and manages future tourism and development. Government authorities, developers, planners, and private businesses have already invested in strategic planning efforts to renovate facilities and create new businesses with the goal of generating substantial income and revenue increases from locals and outside visitors who spend money on non-gaming casino and resort related and unrelated goods and services, injecting new spending into the Las Vegas economy. Moreover, improving Las Vegas residents' quality of life is a major objective for local and state leaders (Lasvegasnevada.gov, 2014).

One response generated in Southern Nevada's annual strategic planning proposals is that of investing in development efforts for a medical tourism industry in Las Vegas (SNMIC, 2013). Healthcare expansion is identified in the model of long wave influences to boost economic activity and to spur the upgrade of local services and community infrastructure. It is no surprise, then, that new medical and wellness services are the subject of attention, with many organizations viewing them as an opportunity for future tourism and entrepreneurship (Lasvegas.medicaltourism.com, 2014).

“Medical tourism” is described by Carrera and Bridges (2006) as “travel outside one’s natural healthcare jurisdiction for the enhancement or restoration of the individual’s health through medical intervention” (p. 447). The World Health Organization (WHO, 2010) defines health as “complete physical, mental, and social wellbeing.” Thus, health influences the physical, social, psychological, emotional, spiritual, and environmental conceptual approaches to tourism (Nahrstedt, 2004). Many international outbound and domestic inbound travel promotions have emerged in popular media for “medical tourism,” intending to include necessary and elective medical (surgical and non-surgical) and alternative therapies bundled with lodging, entertainment services, food and beverage, and touring or exploring the attractions of a destination (Hall & Weiler, 1992).

Tourism authorities have enthusiastically embraced the potential of promoting Las Vegas to travelers interested in receiving general and specialty health-related services in the entertainment and luxury capital - cosmetic procedures; physical therapy; managed and senior care; rehabilitation; diagnostic services; dental services; spa and holistic treatments, to name a few (Lasvegas.medicaltourism.com, 2014). Distressed local healthcare services, senior communities, businesses, casinos, resorts, and hotels and other hospitality facilities would benefit from planning as those places attempt to renovate, introducing innovative medical and wellness amenities to attract diversified markets.

Las Vegas would be positioned, strategically, in increasingly complex national and international markets; the U.S. faces an aging population, soaring healthcare service expenses, decreasing insurance coverage, and caregiver numbers shrinking in relation to the population size, while expectations surrounding holistic care and maintenance of good health are increasing (Cormany, 2013). Furthermore, as the disproportionate

increase of private medical costs in international countries and the long waiting lists for some treatments in public hospitals in countries with socialized medicine increases outbound travel to the U.S. for medical services (Gray & Poland, 2008); Las Vegas' ability to attract travelers for healthcare services becomes a distinct advantage.

According to its promoters, creating a medical tourism industry in Las Vegas may play a significant role in introducing and propagating positive economic and social change. Important social impacts may include indirectly increasing the standard of living in communities because of the increased employment opportunities, tax revenue, and an improved healthcare system that serves tourists devolving into the local healthcare system (LVCVA, 2013). However, others feel medical tourism could result in traditional healthcare services for locals turning into commercial opportunism, resulting in varied and paradoxical effects such as tourist overcrowding, higher costs of services, diversion of public funds, decreased accessibility to healthcare services, and negative relationships between residents and tourists (Connell, 2013a).

Before Las Vegas, let alone any community, begins development of medical tourism resources, it is imperative to gain an understanding of residents' opinions regarding development. A commonly cited objective for understanding residents' opinions is that without community support, it is difficult to develop a sustainable tourism industry in a community. Therefore, as Menning (1995) notes, "development of tourism in a community is not simply a matter of matching product supply with tourist demand, local acceptability must also be considered" (p170). Furthermore, Las Vegas residents will be ultimately helpful in concluding which tourism impacts occur from medical tourism, specifically, improve QOL and which impacts are problems.

Community residents' wellbeing and healthcare needs and wants must take precedence over development for tourists. Concern with resident enjoyment and desires is necessary to maintain resident support for tourism, given that residents are in a tourism community, to stay. Furthermore, how residents perceive impacts to community QOL resulting from medical tourism may be a useful concept for evaluation of not only their support, but also their personal investment in tourism development. While there are several major topics that necessitate close attention, the principal one is the need for reliable assessment of how residents perceive medical tourism to impact QOL. It is also worthwhile to theorize the influence of those perceptions on behavioral intentions.

### **Purpose of the Study**

The purpose of this study is to (1) understand how residents perceive medical tourism to impact community QOL domains (conditions and living experiences), and (2) examine them in relationships with antecedents and consequences. Specifically, this dissertation develops an analytical framework that integrates several distinct elements, including resident cognition (e.g., perceptions of medical tourism's impacts on community conditions and living experiences), affection (e.g., attitudes toward medical tourism, overall community satisfaction, satisfaction with community healthcare services, and economic performance of medical tourism), and behavioral intentions (e.g., support for medical tourism development and willingness to pay higher taxes).

### **Research Questions**

The study thus seeks to address the following questions:

1. How do residents perceive medical tourism impacts community conditions and living experiences?

2. How do the perceived impacts of medical tourism then affect residents' behavioral intentions?
3. How does residents' satisfaction with existing healthcare affect their support for development of medical tourism?
4. How does residents' sense of overall community satisfaction affect how they perceive their community living conditions and experiences, as impacted by medical tourism, which in turn affects behavioral intentions?
5. How do residents' perceptions of medical tourism's economic performance in a destination affect how they perceive their community living conditions and experiences, as impacted by medical tourism, which in turn affect their behavioral intentions?

### **Significance of the Study**

This research carries both academic and industry implications. It adopts social exchange theory for applications of medical tourism in a community as a social and economic development strategy which can serve as a valuable tool when considering successful development of existing and future medical tourism that can ensure improved QOL for residents in the process. Research on residents' reactions to medical tourism is sparse, and this research begins to fill the significant gap (Heung, Kucukusta, & Song, 2010). Extensive research has been conducted on tourism's impacts and residents' attitudes toward tourism, which can be used to engage the understanding of how resident's perceive medical tourism's impact on QOL domains. QOL domains incorporate measures of community conditions and living experiences, which allow researchers to assess resident's perception of medical tourism impacts on the subjective

nature of community quality of life. Knowledge of resident reactions may help inform developers of negative effects of medical tourism on community living experiences, of which, specifically, have not been explored (Connell, 2013b). Understanding residents' satisfaction with the overall community and healthcare services and their perceptions of how medical tourism affects the economy and their willingness to paying increased taxes can help governments and stakeholders shape more successful economic and social development strategies.

### **Research Design and Methodology**

The study will utilize a survey design and the data will be collected using telephone interviews. The target population is Las Vegas residents affected by the changes in the community from impending medical tourism development proposals. The survey is comprised of questions aimed at testing the theoretical model, as well as situational factors and demographics.

### **Limitations and Delimitations**

This research is limited to the examination of specific elements listed in the research questions. Additionally, results may not be representative of the whole population. The theoretical model in the study is a broad overview of medical tourism impacts. Characteristics of medical tourism will likely demand flexibility in the model. A resident, for example, will likely differ in interpretation of medical tourism's impacts for hospital services, than will a spa or wellness service. The model described and tested in this dissertation is a broad overview of medical tourism that encompasses the industry at large, and does not discern between medical and wellness services. It does however;



provide a foundation upon which future models for individual medical tourism products and services can be built.

### **Definition of Key Terms**

*Attitude:* An enduring disposition to consistently respond in a given manner to various aspects of the world; composed of affective, cognitive, and behavioral components (Zikmund, Babin, Carr, & Griffin, 2012).

*Attitude Towards Tourism:* The subjective evaluation of tourism promoted for development by planners on a continuum ranging from positive to negative (Andereck & Nyaupane, 2011).

*Community:* The people living in a locality which individuals identify as where they live (Lankford & Howard, 1994).

*Community Satisfaction:* The subjective evaluation of existing features in a community by residents on a continuum ranging from positive to negative (Rahtz & Sirgy, 2001).

*Community Condition:* Objective feature, characteristic, attribute or service within a community (Sirgy & Cornwell, 2001).

*Endogenous Variable:* A variable correlated with a regression model error term. Endogenous variables violate an assumption of regression analysis and produce biased coefficients (Hair, 2010).

*Exchange:* Giving or receiving of one thing for another (Blau, 1964; Homan, 1961).

*Living Experience:* Individual's subjective evaluation of enjoyment and desirability of living in their community (Diener & Suh, 1997; Epley & Menon, 2008).

*Perception:* The understanding, awareness, and knowledge of individuals (Doxey, 1975;

Dogan, 1989).

*Perception of Tourism Impact:* A predisposition to respond in a consistently favorable or unfavorable manner toward tourism, in general (Allen, Long, Perdue & Keiselbach, 1988; Milman & Pizam, 1987).

*Resident:* An individual that resides within a county of the destination's area (Liu & Var, 1986).

*Social Exchange Theory:* A theory, in general, concerned with understanding the exchange of resources within a social structure (Thibaut & Kelley, 1959).

*Support:* The expressed support for tourism's development, improvement, and expansion (Gursoy & Rutherford, 2004).

*Willingness to Pay:* The level of financial investment by residents regarding the condition of the community and environment, and how this concern is reflected as certain involvement behaviors in development planning to ultimately protect society (Gursoy & Rutherford, 2004).

### **Organization of Dissertation**

This dissertation is comprised of five chapters. The first chapter includes an introduction, a description of the purpose and significance of the dissertation, along with the research questions, a statement of delimitations, and definition of key terms. The second chapter provides an overview of tourism impacts and a review of literature related to the dissertation topic, followed by social exchange theory tested in this dissertation, followed by a reiteration of the research questions, and related hypotheses. In the third chapter, the research methods are presented, including a description of the data collection instrument. The fourth chapter details the results of analysis. The final chapter provides a

discussion of the results, implications, limitations of the study, and recommendations for future research.

## **CHAPTER 2**

### **REVIEW OF RELATED LITERATURE**

This chapter outlines the review of the literature for the study. First, a review of literature on tourism's impacts, including economic, social, and environmental costs and benefits to local communities, is provided; which supports the need for the continued study of tourism's impacts and specifically residents' attitudes toward them. A theoretical background of the study of residents' attitudes including social exchange theory is provided, followed by a discussion of how subjective dimensions of quality of life (QOL) can be included in a social exchange framework for the study of resident reactions to tourism. Next, how residents perceive medical tourism's impact on QOL domains, including community conditions and living experiences, and their influence on behavioral intentions is presented, followed by elements concerning satisfaction with community and healthcare services, attitudes toward medical tourism, and medical tourism's economic performance. The elements support the theory that how residents perceive medical tourism to positively or negatively affect domains of QOL, their subsequent support for medical tourism development, and willingness to pay higher taxes are related to these elements. The analytical framework is presented with the associated hypotheses.

#### **Overview of Tourism's Impacts**

Tourism is an important component of both urban and rural development programs around the world (Kastarlak & Barber, 2004), and many disciplines recognize tourism as a formidable economic diversification tool, including anthropology (Farrell, 1977; Smith, 1977); economics (Archer, 1973; Peters, 1969); urban planning, (Inskip,

1988; Ioannides, 1995; Marcouiller, 1997); geography (Butler, 1974; Keogh, 1989; Murphy, 1981); sociology (Cohen, 1978; De Kadt, 1979; Turner & Ash, 1975); and architecture (Groat & Wang, 2001). Research across these disciplines has identified several issues and impacts arising from tourism.

Researchers began synthesizing the positive and negative aspects of tourism and focusing on the interrelationships of a combination of phenomena associated with tourism and systematic approaches to planning its development in the 1960s (Matheison & Wall, 1982). The complex nature of tourism delineates economic, environmental and social impacts as important components that need to be considered by decision makers involved in the planning and development process (Gee, Mackens, & Choy, 1989; Gunn, 1988; McGehee & Andereck, 2004; Murphy, 1985; Weaver, 2006).

Tourism has been found in a number of studies to generate a plethora of economic benefits including: hard currency, regional development promotion, diversification of the local economy, increase in tax base, new employment opportunities, and stimulation of community infrastructure that in turn attracts investment from non-tourism industries (Archer, 1989; Allen, Long, Perdue, & Keiselbach, 1988; Bryant & Morrison, 1980; Davis, Allen, & Cosenza, 1988; de Kadt, 1979; Jud & Krause, 1976; Liu & Var, 1986; Uysal, Pomeroy, & Potts, 1992). Public services and facilities that are established from tax revenues generated from tourists may in turn serve local residents. Tourism therefore generates the impetus to improve and further contribute to community infrastructure and public service (Belisle & Hoy, 1980; Liu & Var, 1986).

Where a tourism destination creates extra demands on local services and goods, it can also cause economic problems including inflation of goods and service needs.

Evidence of this outcome has been found in several studies (Belisle & Hoy, 1980; Haralambopoulos & Pizam, 1996; Liu, Sheldon, & Var, 1987; Liu & Var, 1986; Pizam, 1978; Ross, 1992; Tosun, 2002; Weaver & Lawton, 2001). Tourism also causes a rise in the price of land and housing. Pizam (1978), for example, found increased cost of land and housing to be a negative effect of tourism, a conclusion also supported in studies by Perdue, Long, & Allen (1990) and Pizam, (1978).

Thus, the majority of early studies on the effects of tourism have focused upon the positive economic aspects of tourism (Pizam, 1978). There are two main reasons for this. First, economic benefits, such as tax revenue and employment, are tangible and easy to measure compared to social impacts associated with tourism, such as noise, congestion, and pollution, which are relatively intangible and difficult to measure (Ap & Crompton, 1998). Second, economic impact studies are more than often commissioned by advocates to engender support for tourism; developers, community planners and regional governments seeking to maximize the economic benefits of tourism in an effort to make an argument for a development case as strong as possible (Juric, Cornwell & Mather, 2002; Uysal, et al., 1992).

Consequently, as Ap and Crompton (1998) point out, the majority of tourism impact studies have emphasized the economic benefits that accrue to a destination area and have disregarded the costs. According to Crompton and McKay (1994), much of the research, for this reason, has been methodologically flawed. De Kadt (1977) emphasizes the general failure of tourism research to incorporate a clear framework with which to determine all of the factors that should be considered in a tourism development decision-making process:

“It is easy to say that planners of tourism should maximize the benefits from tourism and minimize the costs. However, it is not possible to maximize some effects and minimize others at the same time. Trade-offs will be required and compromise will be necessary. The assessment of alternative policies implies the existence of a sound knowledge base. It is necessary that studies of tourism supply information on which sound planning decisions can be made (p.33)”.

Thus, the socio-cultural sustainability of tourism is highly contentious (Weaver, 2006) and there is extensive debate in the literature over the social cost/benefit ratio of tourism. Many studies infer that a destination has a carrying capacity and that the social cost/economic benefit balance is a matter of scale (Allen, et al. 1988; Doxey, 1976). For example, tourist saturation in a locality affects availability of labor, the amount of land suitable for tourism development, and the capacity of roads. Principal tourist attractions in destinations cause saturation, and when over-saturated, the social costs of tourism may begin to outweigh economic benefits.

Subsequently, concomitant research on the consequences of tourism concerned more with comprehensive factors has grown exponentially throughout the past three decades (Ap, 1990; Andereck, Valentine, Knopf, & Vogt, 2005; Choi & Siryakaya, 2010; Jurowski, 1994; Jurowski, Uysal, & Williams, 1997; Teye, Sirakaya, & Sonmez, 2002) and research framework has considered economic, social, cultural and physical impacts and accommodated explanations of positive and negative social aspects of

tourism across three generalized areas: 1) the services used by local residents; 2) wellbeing; and 3) lifestyles (Butler, 1974).

Several tourism impacts studies with balanced economic and social perspectives were developed in consideration of such comprehensive framework (Ap & Crompton, 1998; Lankford & Howard, 1994; Lindberg & Johnson, 1997; Liu & Var, 1986; Liu, et al., 1987; Long, Perdue, & Allen, 1990; McCool & Martin, 1994; Prentice, 1993) with a portion of studies' results evidencing that tourism can be both a cultural and social exploiter (Ap & Crompton, 1993; Cohen, 1988; Liu & Var, 1986). Research by Ap (1990) and Pizam (1978), for example, discovered tourism concentration on a destination area leading to negative social impacts from tourists and tourism in general, including local services, and relationship between community residents and tourists. Similarly, social and cultural impact studies by (Pizam, 1978), found more negative social dimensions of tourism than positive; including its ability to increase crime, robberies and vandalism, drug addiction, prostitution, and exploitation of native cultures. Furthermore, an empirical study by Ap and Crompton (1993) identified community concern with tourism's potentially negative effects in terms of increased commercialization.

Conversely, several studies have identified benefits arising from the social and cultural aspects of tourism. Those benefits include development of recreational facilities and a wider offering of leisure activities, more events, shopping opportunities, better neighborhood appearance, preservation of existing facilities, and other historical assets and a better quality of life in general (Benckendorff, Edwards, Jurowski, Liburd, Miller & Moscardo, 2009; Gursoy, Kim, Uysal, 2004; Liu & Var 1986, Madrigal, 1995; McCool & Martin, 1994; Perdue, et al., 1990; Ross, 1992).



In addition to social aspects, tourism affects the environment. The environmental impacts of tourism can manifest in both the quality of the physical environment and access to these resources (Mason & Cheyne, 2000). Natural environmental systems are sensitive to usage resulting from tourism (Murphy, 1988) and the potential negative environmental consequences can include pollution of air and water, wildlife eradication, disruption of natural habitat, plant destruction and deforestation, forest fires, trampling of vegetation, and ruination of wetlands, soil, and beaches as evidenced in studies by McGehee and Andereck (2004) and Pizam (1978). Other negative environmental impacts include increased litter, noise, building density, traffic congestion, change in community appearance, and the deterioration of natural resources (Lindberg & Johnson, 1997; Liu et al., 1987; Mason & Cheyne, 2000).

While these outcomes can further disturb a local community, a number of studies have shown that tourism has, in fact, helped to improve the environment and its planning has protected the natural and historic resources and has educated tourists about the environment (Krippendorf, 1982). A study on the environmental impacts of tourism by Jurowski (1994) focused on eco-friendly tourism development, and emphasized better outdoor leisure activities and improved nature-based recreation as a result of tourism development. Another study by McGehee and Andereck (2004) showed that tourism could preserve attributes of the natural environment that contribute directly to the preservation of natural capital and tourism. Restoration of historical buildings and monuments and an improved community appearance were also recognized by Liu, et al., (1987) and Liu and Var (1986). Additional positive impacts such as development of infrastructure and superstructure, pollution control, and public health benefits were noted

in a few studies by Liu, et al. (1987) and Mason and Cheyne (2000). According to Campbell (1999), community participation may also generate environmental benefits; when local natural resources are essential to tourism, community members are more invested in environmental conservation.

Thus, in order to minimize the costs and maximize the benefits of tourism, researchers Allen, et al. (1988) and Lankford and Howard (1994) state that an analysis of impacts needs to be systematic with respect to both socio-cultural and physical environment. Such views encourage tourism researchers to rethink traditional tourism development, which focuses on the tradeoff between economic costs and benefits, and concentrate on sustainable paradigms, which emphasize the quality of life of communities and consideration of residents' receptiveness to tourism.

### **Residents Attitudes Toward Tourism**

The general conclusion that can be made thus far is that residents in communities will embrace tourism because they expect the economic social benefits to improve their standard of living. However, the negative economic effects of tourism such as increased living costs and tourist oversaturation may degrade residents' standard of living (Liu & Var, 1986). Moreover, economic impacts may not fully outweigh social and environmental impacts; in other words, economic benefits decline when tourism diminishes the social and physical environments (Jurowski & Gursoy, 2004; Roehl, 1999). Because tourism's positive and negative economic, social and environmental impacts dynamically change residents' community living conditions, many studies in tourism literature have focused on understanding resident attitudes toward tourism (Allen, et al., 1988; Bramwell & Lane, 1993; Gunn, 1994; Hall, 2000; Haywood, 1975;

Hunter, 1995; Inskeep, 1991; Johnson, Snepenger, & Akis, 1994; Liu, et al., 1987; Liu & Var, 1986; McCool & Martin, 1994; Middleton & Hawkins, 1998; Pearce, 2009; Perdue, et al., 1990; Sharpley, 2000).

Residents attitudes imply that there are varying levels of beliefs held by residents (Dogan, 1989; Doxey, 1975) and that their relationships to tourism's impacts may be either linear or nonlinear (Allen, et al., 1988; Milman & Pizam, 1987).

### **Theoretical Approaches**

Since the early 1970s, conceptual models and theories have attempted to explain the relationship between residents' attitudes and perceptions of tourism and its impacts (Teye, et al., 2002). These models include the Irridex (Doxey, 1975), the life cycle (Butler, 1980), compensation and conflict model (Bystrzanowski, 1989), value–attitude and value–attitude–behavior models (Lindberg & Johnson, 1997; Madrigal, 1995; Madrigal & Kahle, 1994), attribution (Pearce, 1989), social representation theory (Madrigal, 1993; Pearce, Moscardo, & Ross, 1991), exchange theory; social exchange theory (Andereck, et al., 2005; Ap, 1990, 1992; Jurowski, 1994; Jurowski, et. al, 1997; Madrigal, 1993; Pearce, et al., 1996; Perdue, et al., 1990; Teye, et al., 2002; Yoon, Gursoy, & Chen, 2001), growth machine theory (Madrigal, 1995), and dependency theory (Britton, 1989).

Among these theories and models, 'exchange theory' has been the most popular. Exchange theory has been used across many disciplines including: sociology (Wallace & Wolf, 1995); anthropology (Levi-Strauss, 1969); social psychology (Kelley & Thibaut, 1978); marketing (Bagozzi, 1978, 1981); and economics (Hendriks, 1999). A paradigm of elementary social behavior is an 'exchange', with propositions relating to variations in

the values and costs of each human to the frequency distribution of behavior among alternatives, where the values (from a mathematical sense) taken by those variables for one individual determine, in part, their values for another (Blau, 1964). The central tenet of exchange theory is that a basic form of human interaction is the exchange of social and/or material resources and that people will want to maximize the value of their exchange outcome; and the propositions of behavioral psychology apply (Kelley & Thibaut, 1978).

Exchange theory proposed by Thibaut and Kelley (1959), was originally posited by the utilitarian philosopher, political theorist, and economist, John Stuart Mill (1806–1873). Principles of utilitarianism proposed that humans rationally weigh costs against benefits to maximize material benefits (Parsons, 1937 in Turner, 1986, p. 216). Following Thibaut and Kelley, exchange theorists Homans (1961), Blau (1964), and Emerson (1969, 1976) adopted principles from utilitarian economic theory, functional anthropology theory, and behavioral psychology theory to formulate exchange theory.

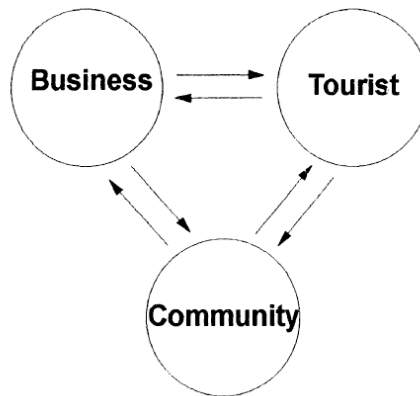
Incidentally, exchange theory brings sociology together with economics; economics as an exchange that is carried out by persons under special circumstances with built-in measures of values (Kivisto, 2011) and social exchange as a basic assumption that persons establish social associations because they expect them to be rewarding, thus will sustain interaction and expand it because they experience it to be rewarding. The fundamental distinction between social and economic exchange is that social exchange engenders diffuse obligations whereas those in economic exchange are specified in an implicit contract.

In the case of social exchange theory (SET), the reward of maximization of profit is not necessarily the motivating factor behind the exchange. While people will enter into an exchange if they feel the transaction results in a 'reward', it is neither explicitly economic gain nor maximization of profits (Kivisto, 2011). Instead, as Homans (1961) states "A social association can be seen as an exchange of activity, tangible or intangible, and more or less rewarding or costly, between at least two parties"; the exchange process includes not only money, information, and tangible goods but also non-materialistic benefits such as approval, esteem, compliance, love, joy, and affection (Turner, 1986).

Homans (1961) proposed that humans pursue more than material goals in exchanges and that sentiments, services and symbols are also exchange commodities. Symbolic exchanges provide the functional structure to meet individual and societal needs (Malinowski, 1922 in Turner 1986, p. 217- 221). The psychological needs merge with social needs where exchange relations create, reinforce and serve to regulate group morality. Structuralist exchange models provide potential explanations when the unit of analysis is a group. To complete the linkage with structuralism and community, Levi-Strauss (1969) proposed that the costs and rewards are attributed to social order (Turner, 1986). Furthermore, they acknowledge that the media of exchanges are pluralistic, i.e., individuals are likely to be evaluating a range of interacting rewards and costs in making rational decisions. In which case, social exchange principles are around operant psychology and further include the complexity of social organization (Turner, 1986). Homans (1961) argues that social structures are created and sustained by the behaviors of individuals.

Thibaut and Kelly (1959) assumed a theoretical standpoint from which to understand the larger group or community as a dyad, a point implied by individual interactions. Thus, principles derived are focused on the direct exchanges among individuals. The implications of this are based on the assumption that if the determinants of the individual's attitude towards an exchange can be explained, with psychological principles for explaining the behavior of individuals, then subsequently a community reaction to an exchange can be understood. Fishbein and Ajzen (1975) also noted the individual's social association and found that there is a strong relationship between belief, attitudes, and behavioral intentions under certain conditions and concluded that these relationships can be examined at the individual and collective level.

Thus, exchange strategy and behaviorist approaches suggest that SET provides a suitable framework for analyzing resident reactions to tourism. Tourism studied as a social exchange system is conceptualized in (Figure 1). This research is focused on the community component of the model where the unit of analysis is the individual community resident. The exchange elements include economic gain, social rewards, and costs (Matheison & Wall, 1989). An understanding of the exchanges made in those categories is critical to explaining the interaction for the factors that influence resident perception of tourism's impacts on a community and the ultimate outcome of the exchange; behavioral intentions (Jurowski, 1994).



*Figure 1.* The tourism exchange system.

Implicit in the application of (SET) in this research is a community quality of life (QOL) paradigm within an individual's rational choice; i.e. social exchange as a pursuit of rewards, where the prime entity sought, is the reward of 'improved quality of life'; where material and economic benefits in the exchange are incidental and less significant. A brief look at the frameworks by which QOL is defined provides a background on the concept and how it ties into social exchange.

Conceptual definitions implicate that the concept of QOL is a highly individual and personal construction. QOL is an intricately linked concept with an individual's life experiences and personal meaning making. However, there is diversity and ambiguity in defining QOL and over a hundred domains of QOL have been provided in the literature (Sirgy, Michalos, Ferriss, Easterlin, Patrick, & Pavot, 2006). The concept of QOL varies along objective and subjective, normative and individualized dimensions. The focus of QOL in research involving social exchange is "the subjective side" of the QOL concept.

Studies on subjective QOL focus on personal experience and perceptions about one's life quality. Subjective QOL is a broad umbrella term that covers happiness, wellbeing, and satisfaction with life (Sirgy, 2012). Sometimes, the term is used

interchangeably with “subjective well-being” (SWB) of individuals in the literature (Sirgy et. al. 2006).

SWB is an approach to explain human behavior in psychology concerned with human distress and disorder (Seligman & Csikszentmihalyi, 2000). SBW could embellish current understandings of QOL and social exchange (Sirgy, et al. 2006) by exploring specific linkages between QOL and positive psychology including resilience, flow, positive emotions, mindfulness, and living experiences (Pearce, 2009). Measurement of SWB includes two dominant theoretical approaches: (1) how a person perceives an existing situation or the events they experience in positive or negative ways; and (2) needs and the perceived events that result in fulfillment of those needs (Sirgy & Cornwell, 2001).

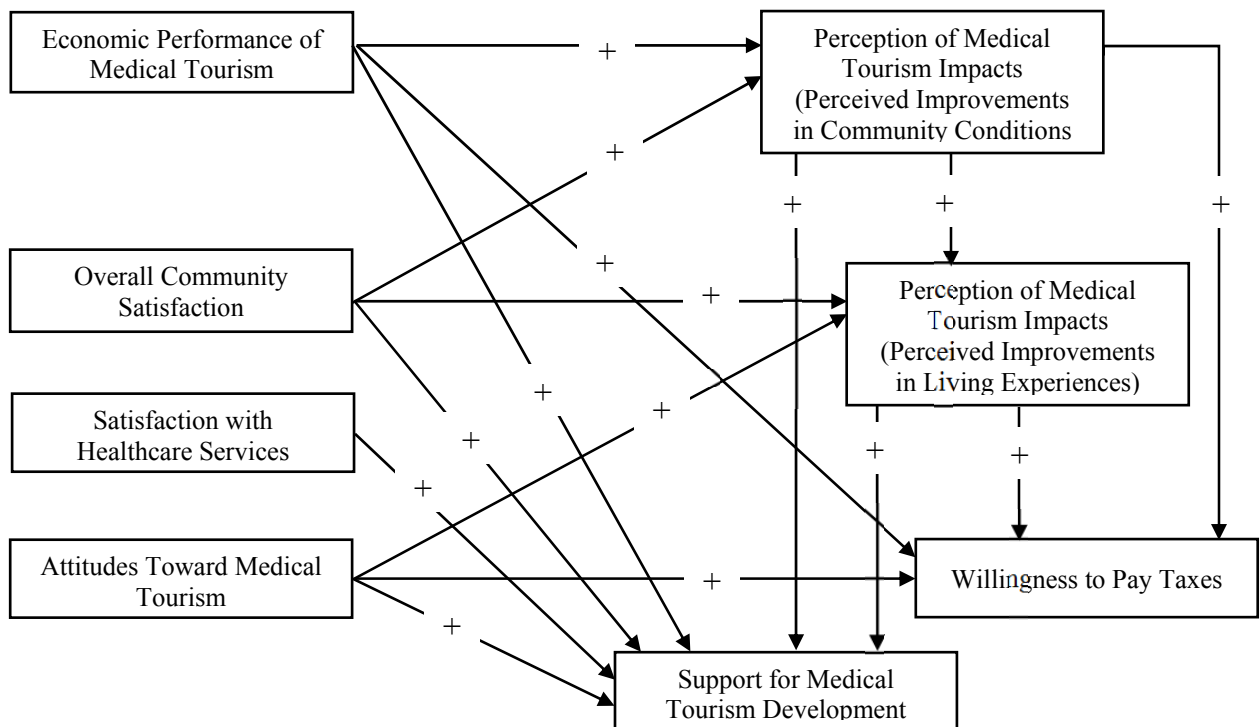
For understanding the subjective determinants of community QOL in the tourism context, locating the QOL concept within an individual’s subjective experiential realm, the link between QOL and tourism industry can be examined by including its affective and cognitive components (Genç, 2012a). Cognitions are individual perceptions or evaluations of tourism. Cognitions function as the container of one’s domain-specific interactions in the community, and life experiences. The affective view highlights normative ideals of pursuing a ‘satisfactory’ life, and preference satisfaction which emphasizes the extent to which a service or product satisfies an individuals needs, and the subjective experience view prioritizes personal evaluation, perception, and experience of the individual regardless of a normative standard or personal need (Diener & Suh, 1997). In turn, the tourism affect changes the cognition and both of them change and reshape the output which is the related behavior.



To this end, this study uses social exchange theory to investigate medical tourism's integration and applicability to quality of life studied across three dimensions : (1) cognitive (perceptions, beliefs, values); (2) affective (positive/negative); and (3) behavioral (reactions/intentions) (Carmichael, 2006).

Drawing on extant literature and the history of tourism's impacts, an SET model based on models in previous studies by Jurowski, et al. (1997), Deccio and Baloglu (1999), Ko and Stewart (2002), Gursoy and Rutherford (2004), McGehee and Andereck (2004) was adopted. In this respect, the model incorporates resident cognition (e.g, perceptions of medical tourism's impacts on community conditions and living experiences), affection (e.g., attitudes toward medical tourism, overall community satisfaction, satisfaction with community healthcare services, and economic performance of medical tourism), and behavioral intentions (e.g., support for medical tourism development and willingness to pay higher taxes).

A theoretical model was created to describe the unique features of medical tourism and impacts on QOL domains. Figure 2 consists of a visual representation of the proposed model, drawn from social exchange theory, depicting the relationship between the elements involved in the exchange.



*Figure 2.* Conceptual model of residents' responses to medical tourism and hypothesized linkages.

The model as depicted in (Figure 2) postulates that the ways in which residents perceive QOL domains; community conditions and living experiences, as impacted by medical tourism, is influenced by overall community satisfaction and economic performance of medical tourism, which ultimately would affect residents' behaviors; expressed support for development and willingness to pay taxes. The nature of existing community healthcare resources and attitudes toward medical tourism (including the basic tenets of both economic conditions and tourism infrastructure of the destination community) affect the perception of different impacts of medical tourism; which then also affect behavioral intentions.

## Quality of Life Domains

### Community Conditions

Included in the framework are the perceptions of medical tourism's impacts on community conditions that influence a resident's behavioral intentions, which largely focus on the way residents, perceive tourism changes community circumstances (Allen 1990). Researchers have argued that a better QOL may be achieved through tourism from its improvement of community conditions including infrastructure, public services, and environment (Liu, et. al., 1987). Improved QOL can also be achieved through increased employment opportunities and tax revenues from tourism that, in turn, result in higher standards of living. Conversely, negative impacts worsen community conditions such as tourist over-crowding, increased traffic, more crime, higher cost of living, higher costs of goods and services, and the relationships between tourists and residents diminish standards of living in a community for residents (Ap & Crompton, 1993; McCool & Martin, 1994). The community conditions QOL domain is comprised of indicators that individually or collectively contribute to QOL in terms of the social, economic and material benefits of the destination community (Andereck & Nyaupane, 2010; Sirgy & Cornwell, 2001; Sirgy, et al., 2000).

**Opportunities for employment.** Previous studies have shown that residents in tourism host communities perceive employment to be the greatest benefit of tourism (Davis et al., 1998). In fact, there has been little, if any empirical evidence in the literature that contests this. Many studies have identified benefits including tourism's ability to improve the economy (Peters, 1969), improve the value of property and real estate, increase investment, and expand businesses ensuing from tourism (Liu & Var,

1986). Findings of studies also suggest that residents perceive a personal economic gain in the form of improvement in their income from the jobs tourism creates and an increased standard of living (Milman & Pizam, 1988). Roehl (1999) investigated the relationships among resident's perceptions of the impacts of gaming, and residents perceived quality of life- findings of which suggest perceived job growth from tourism is positively correlated with QOL.

**Revenues for local governments.** How residents perceive tax revenues as a result of increased tourism has been contentious (Jurowski, 1994). On one hand, many studies have found that residents felt that tax revenues derived from tourism expenditures results in the lowering of their own state taxes (Davis, et al., 1988). Further many studies have found that residents felt that it was important for tourism to increase and improve tax revenues (Milman & Pizam, 1998). On the other hand, studies have found that residents were concerned that increased tourism would result in state and local taxes being raised (Long, et al., 1990; Murphy, 1983; Perdue et al., 1990; Pizam, 1978).

Many other studies have found mixed feelings towards revenues generated for local governments from tourism (Murphy, 1983; Pizam, 1978). Liu and Var (1986) found that residents expressed that tourism created a diversion of public funds. Keogh (1990) noted that residents felt that revenues from tourism should be specifically used to improve roads, local services, healthcare and schools, and reduce crime, rather than be used to promote tourism. Studies on tourism increasing property tax, generally have found that residents failed to agree that an increase was beneficial. These findings support the notion by Prentice (1993) that residents are likely to perceive improvement to quality

of life via tax expenditure from tourism positively, if they directly benefit from the industry.

**Cost of goods and services.** Increased prices of goods and services has been cited as a result of tourism and perceived both negatively and positively by residents in the literature (Keogh, 1990; Pizam, 1978). While improved standard of living has been found in some studies to be perceived as a benefit (Allen, et al., 1988), higher costs associated with improved standard of living are negatively perceived in others. Studies have shown that residents are more likely to perceive increase of costs of goods and services positive in cases where residents also perceive that incomes would improve as a result of tourism (Deccio & Baloglu, 2001; Jurowski, 1994). Negative perceptions are manifested in studies where residents felt that tourism would cause inflation directly to their local resources (Ap, 1990).

**Cost of land and housing.** Tourism can increase the value of land and housing and property taxes. Several studies have evidenced that residents perceive that they will be affected by increases in property and housing prices and assessment as a result of development. While some studies show results where resident feel that increased value is a positive improvement from tourism, other studies show results where residents perceive it to be unfair. The mixed findings suggest that opinions towards tourism' ability to improve quality of life may be contingent on whether or not residents feel that they would personally benefit from increase in real estate value as a result of tourism.

**Congestion.** A very common perception among residents has been that of tourism causing increased traffic, overcrowding from tourists, and congestion. Many studies have commonalities in their conclusions regarding these topics, culminating the finding that

residents perceive conditions in the community worsen from tourism activities associated with congestion and traffic, some of the most prevalent in the literature (Sheldon & Var, 1984). In fact, in almost all tourism impact studies, traffic problems, specifically, has been mentioned. Traffic and congestions are conditions that decrease quality of life in a community.

**Crime.** Crime has taken many forms across the literature, and has been perceived by residents in many studies as any of a variety of anti-social behaviors. The majority of studies have incorporated contextual cases of crime anywhere from increased sale and consumption of drugs to money laundering through real estate. Most research examining resident perceptions of crime, however, have found little relationship between increased crime from tourism affecting support for further development (Jurowski, 1004) and overall quality of life (Yu, 2011). On the contrary, studies have found that tourism actually facilitates a decrease in crime and improved security and public services in communities. The few studies that have found tourism to be a casual factor increasing crime were specific to the type and nature of the tourism development. For example, studies on gaming tourism have found relationships between increased crime; addiction problem behavior, prostitution and tourism (Harrill, 2004).

**Local services.** Tourism impacts public services, healthcare services, recreation and other local features. Murphy (1983) describes the varying effect of tourism on resident's perceptions of the quality and availability of community services when governments, local business, administrators and private local services are involved. Allen, et al. (1988) described a higher level of sensitivity among residents when tourism proposed a change in 'public services', concluding that satisfaction with and the

availability of services was a function of increased population size as a result of tourism. Further studies found that as tourism development increases, resident satisfaction with public services tends to decrease. Other research suggests, however, that tourism can improve local services, which in turn results in increased resident satisfaction (Ritchie, 1998).

**Relationship between residents and tourists.** Research has viewed perceptions of the relationship between residents and tourists, and the interactive effects as both a positive and negative result of tourism. While improved relationships between residents and tourists engaging in cultural exchange has been documented in some studies, other studies have shown that introducing the tourist to a local community through tourism, and tourist use of the local resources results in significantly negative relationships between residents and tourists (Kasterlak & Barber, 2012).

In summary, community QOL has been measured as a domain comprised of the sum of conditions within a community that are affected positively or negatively by tourism (Andereck & Nyaupane, 2011a). While this has been valuable for advancing study of resident QOL at the community level and contributed to tourism planning and development (Sirgy & Cornwell, 2001; Sirgy, et al., 2000), there are additional factors that should be considered by researchers to help holistically explain how tourism influences other indicators of resident QOL (Andereck & Nyaupane, 2011b). As previously mentioned, quality of life is a complex idea, wherein multidimensional and interactive domains encompass many aspects of people's lives and environments (Schalock, 2004) in different ways.

## **Community Living Experiences**

Compared to the extant research on how residents perceive tourism to improve or worsen indicators related to community conditions and the standard of living, Yu (2011) suggests a theoretical underpinning and appropriate measurement of a QOL domain including residents' perceptions of living experiences in the community in a tourism development context. Inspired by studies by Sirgy and Cornwell (2001) and Sirgy, et al., (2000) which incorporate community quality of life models, a living experience QOL domain includes subjective dimensions, emotional and value laden, encompassing factors of life satisfaction, happiness, feelings of wellbeing, and beliefs about living experiences (Diener & Suh 1997).

Few studies in tourism have directly investigated residents' perceptions of the impacts of tourism and subjective evaluation of community living experiences (McCabe & Johnson, 2013). Researchers Andereck and Nyaupane (2010) noted the resident attitudes literature pertaining to residents' QOL's failure to comprehensively depict living experience in a tourism destination. Eply and Menon (2008) and Yu (2011) also stated there is a need to further develop, refine and test indicators.

Living experiences are concerned with people's own perceptions and how they feel about their life situation and community QOL, and pay attention to values and beliefs that people have which shape those perceptions. Diener, Suh, Lucas, and Smith (1999) describe a broad category of phenomena that includes people's emotional responses, domain satisfactions and subjective evaluation of life satisfaction and life experiences as "how and why people experience their lives in positive ways, including cognitive judgments and affective reactions" (p.277). Sirgy and Cornwell (2001) first established



important domains for explaining individual lives in a community. Epley and Menon's (2008) representative group of living experience indicators contribute to the study's dimensions of positive psychology and include (1) livability; (2) desirability of the community; and, (3) satisfaction with overall quality of life. Yu (2011), then studied individual residents lives in the context of tourism development by incorporating life experiences as indicators within a tourism-related community QOL impact scale. Building on these, and in light of a thorough review of QOL tourism literature, this research explores living experiences in an effort to understand residents' subjective evaluations in the context of medical tourism impacts on QOL. The research also investigates specific linkages between improved community conditions and improved wellbeing, for which the following hypothesis is developed:

*H1. Medical tourism's perceived improvement to community conditions is positively associated with Medical tourism's perceived improvements to living experiences*

### **Behavioral Intentions**

The underlying assumption in this study is that how residents perceive medical tourism to impact community QOL domains (conditions and living experiences) is an antecedent of behavioral variables (Andereck & Vogt, 2000; Ap, 1992b; Dyer, Gursoy, Sharms, & Carter, 2007; Getz, 1994; Gursoy & Rutherford, 2004; Jurowski, et al., 1997; Ko & Stewart, 2002; McGehee & Andereck, 2004; Perdue, et al., 1990; Vargas-Sánchez, Porrás-Bueno, & Plaza-Mejía, 2011). Readiness to perform a given behavior has long been a focus of interest in consumer behavior and tourism research. How residents perceive tourism's impacts to improve or worsen QOL domains forms the basis of their reaction (Pearce, 2009). According to SET (Thibaut & Kelley, 1959), resident behavioral

intention is the most proximal determinant of resident behavior and behavioral intentions are themselves predicted by residents' attitudes (Fishbein & Ajzen, 1975).

### **Support for Tourism Development**

Several studies have found evidence confirming the direct and indirect relationships between attitudes toward tourism and the perceived positive/negative tourism impacts and residents' subsequent support for tourism development (Dyer, et al., 2007; Gursoy, et al., 2002; Gursoy & Rutherford, 2004; Ko & Stewart, 2002; Vargas-Sánchez, et al., 2009). In previous studies, resident support for tourism development has generally measured residents' behavioral intentions, including the opposition to or endorsement of various forms of tourism development, additional tourism development, and/or specific tourism projects (Andereck & Vogt, 2000; Jurowski, 1994) and is considered as an ultimate endogenous (dependent) variable. Results have indicated that residents support tourism development when they perceive tourism to improve the economy in their community (Allen, et al., 1992; Perdue, Long & Allen, 1987), as well as that they will support tourism development when tourism is perceived to be a social development strategy.

Variance in resident support has been found on the basis of type of tourism (Jurowski, 1994), type of development (Andereck & Vogt, 2000) level of development (Allen, Long, Perdue & Keiselbach, 1988), state of the local economy (Gursoy & Rutherford, 2004), geographic region (Milman & Pizam, 1987), and resident characteristics (O'Leary, 1976). Mason & Cheyne (2000) indicated, however, that most studies had not been conducted prior to tourism development- when it was not seen to be a significant economic area of activity for the community (p. 392). In this respect, very

little research has been conducted on resident support for proposed or future development (Keogh, 1990).

Thus, the relationship between planning stages and the dynamic and complex nature of tourism and the basis on which residents draw conclusions about supporting additional tourism development remains unclear. Furthermore, there is a need for studies to explore the relationship between resident attitudes and support for tourism product development (Andereck & Vogt, 2000). Following this, it is apparent that there is a distinct lack of research on support for medical tourism development. Research on resident attitudes and support for various types of tourism development gained prominence in the 1980s and has included eco-tourism, nature-tourism, adventure tourism, recreation-based tourism, cruise-ship tourism, historic/heritage tourism, cultural tourism, event tourism, sports tourism, and gaming tourism (Ritchie 1988). The proliferation of studies by Andereck and Vogt (2000) Ryan, Scotland, and Montgomery, (1998), Dyer, Aberdeen and Schuler (2003), Ko and Stewart (2002), Perdue, Long, & Kang (1999), provides strong testimony to the importance and legitimacy of research on resident support for tourism development. However, medical tourism and its development is an area that has not yet been investigated in the resident attitude literature. Because of this, there is little understanding of how medical tourism positively or negatively affects residents in a tourism destination, and their subsequent reactions.

Therefore, how residents' perceive medical tourism impacts QOL domains can serve as a useful concept for evaluation of resident support for its development, and the conceptual and empirical perspectives from the literature led to the following hypotheses:

*H2a. Medical tourism's perceived improvement to community conditions is positively*

*associated with residents' support for medical tourism development*

*H2b. Medical tourism's perceived improvement to community living experiences is positively associated with residents' support for medical tourism development*

### **Willingness to Pay Taxes**

Aside from supporting development to address community economic and social changes, residents can also act by personally investing in economic and tourism development in their community. 'Personal investment' has been cited in the literature as a recurring theme in urban planning and has been historically connected to global or localized economic shifts (Wilmot, 2009). Bridger, Krannich and Luloff (2002) noted resident's willingness to pay higher taxes in response to modernization and industrialization in the 1960's, a 1970's population resurgence in rural areas and industrial expansion, and a shift back to economic decline and population loss in the 1980's. Thus, 'tourism dependent' communities are driven by economic tourism demands and research argues that for many residents in tourism communities, the primary motivations to invest in an areas development and pay higher taxes include lifestyle changes from tourism; enhanced quality of life, location-specific amenities, and improved residential satisfaction (Knapp & Graves, 1989).

While negative impacts from tourism in communities suggest increased cost of living, property values, traffic, crime, congestion, increased housing costs and limited job market will force residents to move out of tourism communities in order to sustain a livelihood (Perdue, et al., 1999), increasing tourism, employment, better community appearance, recreation, and public services may be a strong predictor for residents paying higher taxes in a community. Economic and lifestyle opportunities represent potential

influence on enjoyment and desirability of living in a community and resident personal investment patterns (Gursoy, Jurowski, Uysal, 2002).

Previous studies in planning, have extensively studied behavioral intentions and empirically established a correlation between tourism related community attributes and resident investment (Gursoy & Rutherford, 2004). Gursoy & Rutherford (2004) discovered a relationship between resident investment in tourism, and support for its development when tourism was defined in terms of state of the economy and economic improvement. Andereck and Vogt (2000) suggested residents may be willing to pay higher taxes in exchange for economic development. Based on the support for measures based on the theories of resident behavioral response to tourism, the following hypotheses were proposed:

*H3a. Medical tourism's perceived improvement to community conditions is positively associated with willingness to pay higher taxes*

*H3b. Medical tourism's perceived improvement to community living experiences is positively associated with willingness to pay higher taxes*

### **Factors Influencing How Residents Perceive Medical Tourism's Impact on QOL and Their Behavioral Intentions**

#### **Overall Satisfaction with Community**

Nunkoo and Ramkissoon (2010a, 2010b) suggest that overall community satisfaction, satisfaction with community conditions, and satisfaction with community services predict resident support for additional tourism development. It has also been posited that community satisfaction should be discussed within the tourism development framework by Ko and Stewart (2002). Residents' levels of satisfaction with community become a factor affecting their quality of life when they are not satisfied (Vargas-

Sanchez, et al., 2009). Therefore, the study of tourism should involve directly investigating residents' satisfaction with community as an antecedent of support for tourism development, keeping in mind that improvement in resident satisfaction with the community is expected from tourism. Overall satisfaction with a community also influences the way in which residents may positively or negatively perceive the impacts of medical tourism on their community living conditions and experiences. Based on the relationships in previous literature, the following hypotheses were developed:

*Hypothesis 4a. Residents' overall satisfaction with the community is positively associated with support for medical tourism development*

*Hypothesis 4b. Residents' overall satisfaction with the community is positively associated with medical tourism's perceived improvement to community conditions*

*Hypothesis 4c. Residents' overall satisfaction with the community is positively associated with medical tourism's perceived improvement to community living experiences*

### **Satisfaction with Healthcare**

Previous studies on residents' satisfaction with community have investigated residents' perceptions of their community by using importance and satisfaction scales on various community services and attributes; including public services and civic institutions, formal education, environment, recreation opportunities, economics, citizen involvement, government, social opportunities, and medical services (Allen & Beattie, 1984; Allen, et al., 1987; Allen, et al., 1988). A study by Ko & Stewart (2002) investigated resident's satisfaction with medical services using measures including both composite indicators of individual healthcare services as well as overall satisfaction with healthcare. Included in measurement were satisfaction ratings with hospitals,

doctors/dentists, and other services. The study supports the notion that satisfaction with community services plays a significant role in the way impacts from tourism on QOL are perceived. The aim of this study is to focus on the community attribute of healthcare in order to explain how residents' levels of satisfaction with healthcare services in the community, influence support for medical tourism development. It is posited that residents' levels of satisfaction with community healthcare predict support for medical tourism development; in other words, residents will support medical tourism when they are satisfied with their community healthcare services (Vargas-Sanchez, et al., 2009).

The associated hypothesis is:

*Hypothesis 5. Residents' overall satisfaction with the community healthcare services is positively associated with support for medical tourism development*

### **Attitudes Toward Medical Tourism**

Attitudes are defined as “a state of mind of an individual toward a value” (Allport, 1966) and “an enduring predisposition toward a particular aspect of one’s environment” (Ajzen & Fishbein, 1977). Attitudes are an appropriate measurement to explore the relationships between residents and tourism in a community; attitudes are residents’ feelings towards tourism’s potential to achieve the community’s long-term goals and measure adaptation to tourism on an embracement-withdrawal continuum for both social and economic planning strategy. Models in the tourism literature have typically been concerned with addressing one of the following factors: resident perceptions of tourism impacts, resident attitudes toward tourism, and characteristics of residents that potentially relate to attitudes toward tourism (McDougall, Munro, Richie, & Goeldner, 1987).

In this light, a study by Gursoy, Jurowski, and Uysal (2002) indicated that

residents in regions with depleted resources are likely to express attitudes towards embracing tourism to mitigate economic decline. A poor existing economic situation in a community is likely to influence economic benefits associated with tourism and influence support for tourism development. Thus, the more positively tourism's potential economic performance is perceived, the more positive expressed attitudes will be (Liu & Var, 1986; Sheldon & Var, 1984). Furthermore, studies have suggested that how residents perceive social benefits of tourism is related to the embracement of tourism (Cooke, 1998). Nunkoo and Ramikisson (2012) discovered, for example, positive and negative reactions in resident attitudes toward tourism when tourism was defined in terms of importance across social and political factors and improvement of overall community image.

Measurement of resident attitudes toward the social benefits, tourism growth, community image, role of government and authorities in promoting tourism, and anticipated economic performance of tourism and the basis on which residents draw conclusions of the impacts from tourism on quality of life, determine if residents are willing supporting tourism development. The results of previous studies infer that residents' positive or negative attitudes and perceptions of tourism are related to the type of tourism and its potential to improve the economy (Deccio & Blaoglu, 2001). Similarly, residents' attitudes and their influence on endorsement of tourism development are related to tourism that provides numerous social benefits (Ap, 1990). For example, residents in Turkey acknowledge a willingness "to put up with some inconvenience in exchange for tourist money" (Var, Kendall & Tarakcoglu, 1985:654). Another study by Jurowski (1994) showed that residents' attitudes towards tourism were favorable when it promised social benefits such as improved recreation opportunities and public services



Conceptually, attitudes toward medical tourism relate to an individual resident's values, with different residents holding different values perceptions of medical tourism's ability to benefit their community. Based on the theories proposed in the prior discussion, three additional hypotheses are proposed:

*Hypothesis 6a. Residents' attitudes toward medical tourism are positively associated with support for medical tourism development*

*Hypothesis 6b. Residents' attitudes toward medical tourism are positively associated with willingness to pay taxes*

*Hypothesis 6c. Residents' attitudes toward medical tourism are positively associated with medical tourism's perceived improvement to living experiences*

### **Economic Performance**

Improvement to the economy has been seen as one of the most visible and powerful motivations for desiring any tourism development in a community (Pizam 1978). Previous studies have confirmed that residents who perceive economic improvement are most likely to support the development (Allen et al. 1993; Hall, 1998; Jurowski 1994; Jurowski, et al., 1997; Lindberg & Johnson, 1997; Liu & Var, 1986; Pizam, 1978; Sheldon & Var, 1984). Therefore, the study developed the two additional hypotheses:

*Hypothesis 7a. Medical tourism's economic performance is positively associated with support for medical tourism development*

*Hypothesis 7b. Medical tourism's economic performance is positively associated with willingness to pay taxes*

*Hypothesis 7c. Medical tourism's economic performance is positively associated with*

## **Summary of Chapter 2**

The review of literature delineated the most salient impacts of tourism including economic, social, and environmental costs and benefits that are involved in the exchange process of residents of communities where tourism development is proposed. The most applicable impacts to community living standards, identified in the literature as indicators of a community QOL domain, were discussed. The prevailing issue, which developed out of the literature, was resident perception of the impacts on their quality of life including the subjective evaluation of not only community conditions, but also positive psychology related to tourism. QOL and community living experiences including enjoyment and desirability are presented. The following discussion suggests that residents will evaluate tourism in terms of social exchange. Hence, it is assumed that residents are seeking tourism for their community in order to satisfy their economic, social, and psychological needs and to improve the quality of life will positively support tourism development. The chapter introduced Homans's (1961) behaviorist approach to exchange theory, economic strategy developed by Blau, (1964), and Subjective wellbeing (Diener, Suh, Lucas & Smith, 1999) offering guidance for developing an explanation of why residents in communities react to tourism the way they do. Therefore, the objective of synthesizing SET and SWB is to explain why individual residents develop positive or negative perceptions of medical tourism impacts on quality of life and their subsequent reactions.

## **CHAPTER 3**

### **RESEARCH METHODOLOGY**

This chapter contains an explanation of the methods used to answer the research questions and to analyze the structural model of the study. The chapter begins with a summary of the research questions and hypotheses, followed by a discussion of structural equation modeling and descriptions of the population sample, the development of the survey instrument, and data collection methods. The next sections contain explanations of the theoretical constructs and a discussion of the statistical methods used to test the hypotheses. The chapter concludes with a delineation of the limitations of the study.

#### **Introduction**

In the preceding chapters, the research questions and the relationship between elements that affect residents' perceptions of the impacts of medical tourism on quality of life (QOL) domains (community conditions and living experiences) and their influence on support for development and willingness to pay higher taxes were introduced. The elements of scale included overall community satisfaction, satisfaction with community healthcare services, attitudes towards medical tourism, and economic performance. A structural equation model (SEM) showed the interaction of the variables and revealed confirmation of the hypothesized causal relationships.

The information needed for the study was collected in Las Vegas, Nevada, through administration of a survey via telephone interviews. A stratified random sample of residents in the 48 Las Vegas zip codes resulted in the collection of representative data from residents affected by medical tourism development.

## **Research Hypotheses**

The hypotheses and SEM were tested to determine how Las Vegas residents' perceptions of the impacts of medical tourism on QOL domains affect their behavioral intentions and how various elements affect their perceptions. The following hypotheses, reiterated from Chapter 2, served to inform this study:

- H1. The perceived improvement to community conditions due to medical tourism is positively associated with its perceived improvements to living experiences.
- H2a. The perceived improvement to community conditions due to medical tourism is positively associated with residents' support for medical tourism development.
- H2b. The perceived improvement to community living experiences due to medical tourism is positively associated with residents' support for medical tourism development.
- H3a. The perceived improvement to community conditions due to medical tourism is positively associated with willingness to pay higher taxes.
- H3b. The perceived improvement to community living experiences due to medical tourism is positively associated with willingness to pay higher taxes.
- H4a. Residents' overall satisfaction with the community is positively associated with perceived improvement to community conditions due to medical tourism.
- H4b. Residents' overall satisfaction with the community is positively associated

with perceived improvement to community living experiences due to medical tourism.

H4c. Residents' overall satisfaction with the community is positively associated with support for medical tourism development.

H5. Residents' overall satisfaction with the community healthcare services is positively associated with support for medical tourism development.

H6a. Residents' attitudes toward medical tourism are positively associated with support for medical tourism development.

H6b. Residents' attitudes toward medical tourism are positively associated with willingness to pay taxes.

H6c. Residents' attitudes toward medical tourism are positively associated with perceived improvement to living experiences due to medical tourism.

H7a. The economic performance of medical tourism is positively associated with support for medical tourism development.

H7b. The economic performance of medical tourism is positively associated with willingness to pay taxes.

H7c. The economic performance of medical tourism is positively associated with improvements to community conditions.

### **Structural Equation Modeling**

To examine the dynamic nature of the relationships, an analytic technique that could reveal the interaction of variables and confirmation of hypothesized causal relationship was chosen. The SEM was used to model the relationships between the elements, the perceived impacts of medical tourism on QOL domains, and behavioral

intentions. The SEM with a variation of regression analysis served to test a causal model based on a theoretical framework. The causal associations were based on the tenets of social exchange theory. Hair (2010) explained assumptions of causation, asserting that although correlation does not imply causation, causation manifests itself in correlation. When correlational data were combined with an explicit theory of cause and effect, the SEM revealed evidence of the cause of residents' behavioral intentions. Thus, in this study, correlational data were the means to provide evidence of the theoretically derived relationships.

The primary use of SEM is to separate the correlations among the variables into causal and noncausal components. The arrow at the end of the lines depicts progressive, causal linkages between the variables. The direction of the arrow indicates the direction of the causal relationship, if one exists. Each linkage implicitly represents a hypothesis tested by estimating the magnitude of the relationship. A SEM is, therefore, an appropriate method to confirm the causal relationships of variables and to examine the extent to which variables interact. The method is particularly appropriate for applications in nonexperimental data where variables such as an individual's attitude cannot be manipulated (Hair, 2010).

The main proposition in this study was that expressed support for medical tourism development and willingness to pay increased taxes are functions of residents' perceptions of the impact of medical tourism on the QOL domains of community conditions and living experiences, their overall satisfaction with community, their satisfaction with community healthcare services, their attitudes toward medical tourism, and economic performance. The SEM was a description of the logical flow of factors

that affect residents' behavioral intentions and included the primary cause variable (perceptions), the effect variables (behavioral intentions), and other variables that previous research suggested affect both the presumed cause and the presumed effect. The analysis resulted in estimates of the causal effects hypothesized to exist.

In the SEM, overall satisfaction with community, satisfaction with community healthcare services, attitudes toward medical tourism, and economic performance were the exogenous variables (i.e., variables not predicted by any other variables in the model). These variables were considered partial causes of residents' perceptions of the impact of medical tourism on QOL and its influence on behavioral intentions. The arrows led from the exogenous variable to the impact variable that was thought to be at least partially caused by the preceding variable.

The other variables in the model were considered intervening endogenous variables (i.e., the dependent variables in at least one causal relationship). The endogenous variables in the model consisted of the impacts of tourism on the QOL domains of conditions and living experiences. These became the dependent variables in the causal relationships with the exogenous variables, intervening between the exogenous variables and the ultimate dependent variable.

The ultimate dependent variable, behavioral intentions, included expressed support for medical tourism development and willingness to pay taxes. These variables were thought to be causally affected, both directly and indirectly, by the exogenous variables. The indirect effect of the variables on behavioral intentions was contingent upon the manner in which they resulted in modifying residents' perceptions of the impact

of medical tourism on QOL domains. The total effect on behavioral intentions consisted of both indirect and direct effects.

## **Research Design**

### **Sample and Data Collection**

The geographic location for the study was the Las Vegas, Nevada, metropolitan area located in Clark County. The selection of this tourism destination was based on the local interest in promoting business opportunities and the development of healthcare services in an effort to attract medical tourists. Prior to survey data collection, a series of focus groups hosted by the researcher included faculty from UNLV and members of the SNMIC and LVCVA tourism and regional economic development authorities. During the focus groups, participants provided feedback about question development for the survey. They responded to questions about what they understood the survey questions to mean and whether anything else should be included. Participants were encouraged to speak openly not only about survey development but also about other issues concerning local interest in promoting medical tourism development; political constraints; stakeholders; and other tourism, wellness, and recreational opportunities to stimulate the Las Vegas economy and improve the QOL of residents.

After the focus groups, 100 e-mail addresses were selected randomly from directories from the Las Vegas metropolitan area. The individuals in this group received an e-mail asking them to complete the survey online. The e-mail contained a link to the survey on Qualtrics™. Feedback from the survey resulted in revisions both in the style of the questionnaire and in the addition of other items.



The primary means of data collection was telephone interviews conducted by the UNLV Cannon Survey Center (CSC). The CSC is located on the campus of the UNLV within the Division of Educational Outreach and has served the university and the State of Nevada since 1977. The center provides the management, staff, and facilities required to carry out all phases of telephone interviews and to handle surveys involving local, state, regional, national, or targeted populations. The CSC is committed to providing a broad range of research expertise (particularly survey methodologies) and capabilities to the campus community, city and county (public and private) agencies, the State of Nevada, and other regional and national clients and can tailor sample and study designs to meet the specific needs of researchers.

The population of the study consisted of residents within the 48 Las Vegas zip codes who were 18 years old or older. A sample size of 250 to 400 individuals was required for surveys to yield results that could be generalized at +/- 5.0 percentage points at the 95% confidence interval. The sample was purchased from Survey Sampling Inc. This company maintains a database of “working blocks,” a set of 100 contiguous numbers identified by the first two digits of the last four digits of a telephone number. After blocks are verified to contain residential phone numbers, one can randomly generate telephone numbers from each block, allowing for the inclusion of unlisted numbers and newly listed numbers not included in the most recently published telephone directories. This RDD methodology was augmented with a cellular telephone frame to include approximately 25% of the 18- to 34-year-old demographic.

The CSC staff conducted the survey, using randomized-digit dialing techniques to select respondent households located throughout Clark County and information

developed using the most current telephone exchange data available. The CSC staff employed a computer-aided telephone (CATI) facility with approximately 24 stations. CATI technology allows interview questions to be recalled in programmable sequences and displayed for each interviewer on a video display terminal. Interviewers enter the answers they receive from the interviewees directly into their computers. The CATI system serves to promote scientific and technical rigor by eliminating a separate data entry step, thereby minimizing data processing errors. The CATI system also serves to reduce interviewer errors through its capabilities in controlling the order in which interviewers ask questions and in skipping questions not applicable to particular respondents based on their earlier responses. To maintain the safety and integrity of the data, the CSC server was not connected to the Internet.

Interviewers were a demographically diverse group, including some who spoke Spanish, trained to administer surveys via telephone. All interviewers were certified by the Collaborative Institutional Training Initiative in Human Subjects Research and Ethics. All staff conducting the study received training in handling any emerging issues or changes in the survey protocol that became necessary. Neither students nor volunteer staff conducted interviews. Prior to fieldwork, the telephone interviewers attended a training session specific to the survey instrument and the study, including the importance of maintaining strict confidentiality; general principles of survey administration; interviewing procedures, including how to probe with survey questions and specific guidelines for probing for numbers; and the precoded questions and qualitative open-ended questions included in the instrument. In addition, the training session included material on how interviewers could maximize respondent cooperation.

CSC interviewers placed calls to the randomly selected numbers on various days of the week, including weekends, between 9:00 a.m. and 9:00 p.m. Interviewers were to make up to seven attempts to contact the individual at each number, placing these calls on different days of the week. All respondents were given the opportunity to complete the survey at another time by scheduling a time convenient for them. Each interview was anticipated to last between 15 and 20 minutes. A CSC field supervisor or senior interviewer monitored the interviewing process.

Prior to answering the survey questions, interviewers thanked respondents for taking part in the survey and verbally communicated the informed consent, as shown in (Appendix B) which was approved by the UNLV Institutional Review Board (IRB; see Appendix A for the notice of IRB approval and modification approval, Protocol 1310-4582). The informed consent described an overview of the respondents' rights during the research process. Respondents who did not agree with the terms in the informed consent process were directed to the end the phone call and thanked for their time. Respondents who agreed to the terms proceeded with the interview (Appendix C).

### **Survey Instrument**

The survey instrument used in the interviews contained several components. The first part of the survey addressed overall satisfaction with the community and included general content questions concerning QOL, satisfaction, wellbeing, and important issues about conditions in the community. The second part addressed residents' attitudes; residents were asked about their feelings toward medical tourism, in general, and its role in the economy. The third section addressed perceptions of the impact of medical tourism; residents were asked whether both community conditions and living experiences

in the community would improve or worsen as a result of medical tourism. The fourth section addressed the level of support residents would give to medical tourism development. The fifth part concerned satisfaction with community healthcare services overall. The sixth section addressed residents' willingness to pay taxes in Las Vegas to support medical tourism and economic development and their perceived economic performance of medical tourism. In the final section, participants responded to demographic questions concerning age, gender, occupation, employment status, highest level of education, ethnicity, income, and length of residence in the community. Table D1 in Appendix D contains an overview of the research scales utilized in the study.

## **Variables**

### **Dependent Variables**

The two dependent variables in this study were support for medical tourism development and willingness to pay taxes. To measure support for medical tourism development, the survey contained the following question adapted from studies by Jurowski (1994) and Gursoy and Rutherford (2004): "How much do you oppose or support the following types of development?" Participants used a 5-point Likert-type scale (1=*strongly oppose*; 5=*strongly support*) to indicate their level of support for medical and wellness tourism development. Medical and wellness tourism development could be tested individually and collectively as an ultimate dependent variable in the SEM.

To measure willingness to pay taxes, the survey contained two statements adapted from a study by Gursoy and Rutherford (2004). Participants' responses to whether they would be willing to pay higher taxes in exchange for economic and medical tourism development indicated their personal investment in medical tourism. Participants used a

5-point Likert-type scale (1=*strongly disagree*; 5=*strongly agree*) to indicate their level of agreement with the following statements: “I would be willing to pay higher taxes if it would bring more tourism development to Las Vegas” and “I would be willing to pay higher taxes if it would bring more economic development to Las Vegas.”

### **Intervening Endogenous Variables**

A thorough review of the literature on the impact of tourism resulted in the development of the items used to measure residents’ perceptions of the impact of tourism on the QOL domains of community conditions and community living experiences. Items in studies by Andereck and Nyaupane (2011a), Andereck and Vogt (2000), Epley and Menon (2008), Gursoy and Rutherford (2004), Jurovski (1994), King et al. (1993), Ko and Stewart (2002), McGehee and Andereck (2004), Perdue, Long and Allen (1990), Sirgy and Cornwell (2001), Vargas-Sánchez, Porrás-Bueno, and Plaza-Mejía (2011), and Yu (2011) were content analyzed to determine which impact items to test. Participants in the present study were asked to indicate whether they agreed or disagreed with the following statement: “If the volume of tourists coming to Las Vegas increases, do you believe that the following will get better or worse?” They used a 5-point Likert-type scale (1=*much worse*; 5=*much better*) to respond to each of the impact items identified in each domain.

**Community conditions.** Five items adapted from a study by Andereck and Nyaupane (2011b) were used to measure the residents’ perceptions concerning the impacts of tourism on economic community conditions: (a) employment opportunities, (b) revenues from tourists for governments, (c) the cost of goods and services, (d) the cost of land and housing, and (e) local economies. Three items were measures of

economic benefits: employment opportunities, revenues from tourists for governments, and local economies; two items could be considered either economic costs or benefits: the cost of goods and services and the cost of land and housing.

Twelve items adapted from Jurowski (1994) and Gursoy and Rutherford (2004) were used to measure residents' perceptions of the social impacts of tourism. These items included (a) opportunities for recreation, (b) the crime rate, (c) community service, (d) image of the community, (e) the relationship between residents and tourists, (f) the number of facilities and services residents can use, (g) neighborhood appearance, and (h) traffic congestion. One item was considered a social benefit (opportunity for recreation). Two items were considered social costs (traffic congestion and crime rate). The remaining items could be considered either social benefits or costs. Opportunities for healthcare services, availability of healthcare services, cost of healthcare services, and quality of healthcare services were added to community conditions based on face validity from a study by Sirgy and Cornwell (2001).

**Community living experiences.** To measure residents' living experiences in a tourism community, two indicators concerned dimensions of positive psychology (the livability and desirability of the community); and another indicator pertained to residents' overall QOL. These items were adopted from studies by Epley and Menon (2008) and Yu (2011).

### **Exogenous Variables**

The study contained four exogenous variables: (a) overall community satisfaction, (b) satisfaction with community healthcare services, (c) attitudes towards medical

tourism, and (d) economic performance. Each has been described briefly in the following sections.

**Overall community satisfaction.** The measurement of overall satisfaction with community was adopted from a study by Rahtz and Sirgy (2000). Participants were asked to indicate their sentiment or affect toward the Las Vegas community and their satisfaction with community by responding to six questions. Participants used 5-point Likert-type scales to respond to these items:

- “How would you rate Las Vegas as a desirable place to live?” (1=*very undesirable*; 5=*very desirable*)
- “To what extent do you find Las Vegas to be an enjoyable place to live?” (1=*very unenjoyable*; 5=*very enjoyable*)
- “When thinking about conditions in the Las Vegas Area, are they getting worse/about the same/or getting better?” (1=*much worse*; 5=*much better*)
- “In the years to come, do you believe that conditions in Las Vegas will be worse than they are today/about the same as today/ better than today?” (1=*much worse*; 5=*much better*)
- “Overall, how satisfied are you with the quality of life in Las Vegas?” (1=*very dissatisfied*; 5= *very satisfied*).

**Satisfaction with community healthcare services.** Overall satisfaction with community healthcare services was measured with three items adopted from a study by Rahtz and Sirgy (2000):

- “In general, how satisfied are you with the overall quality of healthcare available in this area?”

- “How satisfied are you with the overall quality of healthcare that you personally have received in the area?”
- “How satisfied, would you say, most of your friends, neighbors, and other family members living in the area are with the overall quality of healthcare available in this area?”

Participants used a 5-point Likert scale (1=*very dissatisfied*; 5=*very satisfied*) to respond.

Eight items adapted from a study by Ko and Stewart (2002) were used to measure satisfaction levels with existing community attributes. Participants used a 5-point Likert scale (1=*very dissatisfied*; 5=*very satisfied*) to indicate their level of satisfaction with each of the following items: (a) public health services, (b) private health clubs and recreation services, (c) hospital services, (d) emergency services, (e) dental services, (f) rehabilitations services, (g) spa and wellness services, (h) medical specialties, (i) healthcare education, and (j) public recreation services.

**Attitudes towards medical tourism.** Attitudes toward medical tourism were measured by questions adapted from McGehee and Andereck (2004). Respondents used a 5-point Likert scale (1=*strongly disagree*; 5=*strongly agree*) to indicate their level of agreement with the following statements about future health tourism in Las Vegas:

- “Medical Tourism could be one of the most important industries for Las Vegas.”
- “Additional Medical tourism would help Las Vegas grow in the right direction.”
- “The Medical tourism industry could play a major economic role in Las Vegas.”



- “I would be happy and proud to see tourists coming to see what Las Vegas has to offer for healthcare services.”
- “I support Medical tourism having a vital role in Las Vegas.”
- “Medical Tourism holds great promise for Las Vegas’ future.”
- “The tourism organization of Las Vegas’ and government should do more to promote medical tourism.”
- “I favor building new health services and facilities that will attract medical tourists.”
- “Las Vegas should plan and manage the growth of medical tourism.”

**Economic performance.** To measure residents’ perceptions of the potential for an improved economy in Las Vegas resulting from an increase in the amount of tourists visiting the Las Vegas area and a medical tourism industry, items adopted from Nunkoo and Ramkission (2011b) and Wong et al. (2011) were used. Participants used a 5-point Likert scale (1=*strongly disagree*; 5=*strongly agree*) to respond to the following items:

- “Medical tourism will help deal with Las Vegas current economic challenges.”
- “Medical tourism will help deal with Las Vegas’ future economic challenges.”
- “Medical tourism will help deal with unemployment in Las Vegas.”

### **Reliability and Validity of the Data**

Construct and internal reliability issues were addressed for each of the variables included in the survey instrument. Reliabilities were estimated using Chronbach’s alpha to test the internal consistency of items relating to each of the constructs within the

developed questionnaire. As suggested by Hair (2010), when tested, constructs had to have coefficients higher than .80, although many researchers suggest coefficients higher than .70 are acceptable. To ensure construct validity, only scales developed and used in sound past studies and published in reputable journals were used (Andereck & Nyaupane, 2011a; Gursoy & Jurovski, 2004; Gursoy & Rutherford, 2004; Ko & Stewart, 2002; McGehee & Andereck, 2004; Rahtz & Sirgy 2000; Sheldon & Var, 1984; Sirgy & Cornwell, 2001; Yu, 2011).

Further analysis involved the testing of hypotheses. Frequencies and descriptive statistics were examined. A hypothesized path model was tested and estimates for linkages produced, which were represented in a graphic model. The strategy of the research was to generate estimates of the extent to which the perceived impacts from tourism accounted for relationships among constructs and support for health tourism development. The relationships pertinent to the study were the coefficients between exogenous and dependent variables.

### **Data Analysis**

Data analysis was a multistage process. First, descriptive statistics and distributions were assessed. Next, the underlying constructs measuring Las Vegas residents' perceptions of the impacts of medical tourism on theorized quality of life domains were verified using an exploratory factor analysis (EFA). All constructs in the proposed model were validated by using a confirmatory factor analysis (CFA). SEM was conducted using Stata 13 (maximum likelihood method) to test the proposed model. Multiple measures were used to assess the fit between the model and the data, including normed chi-square ( $\chi^2/df$ ), critical function index (CFI), Tucker Lewis Index

(TLI) and root-mean-square error approximation (RMSEA), all of which were suggested in the literature for single group analysis (Hair, Black, Babin, Anderson, & Tatham, 2006).

### **Limitations of the Research**

This research had some limitations. First, its focus was on factors important to individuals within the Las Vegas communities. Second, the study was limited to the examination of specific elements listed in the research questions. Third, results might not be representative of the whole population because of hard-to-reach respondents and lack of a nonresponse bias check. Fourth, telephone surveys could result in measurement errors for a couple of reasons. Time-constrained telephone interviews could potentially affect participants' responses. Finally, given the length of some of the statements and the complicated nature of the topics, respondents might not have comprehended the questions or answered the questions carefully.

## **CHAPTER 4**

### **RESULTS**

This chapter contains a description of the hypotheses testing and the results of the study. Following an overview of data screening and a profile of the survey respondents is a brief description of structural equation modeling, the statistical technique employed in analyzing the study data. A discussion of the results ensues, followed by a summary of the overall results.

#### **Data Screening**

The overall response rate for the telephone interviews was 9% (11.4% on landlines and 6.5% on wireless phones). The proportion of interviews collected from the wireless sampling frame was 38% of all completed interviews. Of the 451 participants who consented to the telephone interview, 314 qualified to continue the survey after they responded positively to being an English-speaking member of a household in Las Vegas and to being 18 years of age or older.

Data were then examined for the individual relationships among the variables. According to Hair (2006), after coding and collecting, data should be checked for accuracy, normality, and validity. Data examination included the evaluation of missing data, approaches for dealing with missing data, identification of outliers, and the testing of assumptions of the multivariate analysis (i.e., assessing individual variables versus the variate, normality, homoscedasticity, and linearity).

Twenty-three of the 314 completed interviews received codes for missing data. These participants either refused to respond or responded with “I don’t know” to various

questions. These cases were deleted on a list-wise basis, resulting in a total of 291 cases for further analysis ( $n = 291$ ).

Next, descriptive statistics and distributions were assessed. Data were screened for skewness and kurtosis, univariate outliers, and multivariate outliers using Cook's distance. Assessments revealed two skewed variables, one at -1.22 and one at -1.03. Variables exceeding 1.0 were considered skewed. However, these skewness levels were judged not to be harmful to the model. Four variables revealed kurtosis approaching 4.5. The model yielded significant results with and without log transformations performed on the variables to correct kurtosis. Therefore, the analysis included all untransformed variables. Although it is important to meet assumptions, Cohen (1988) asserted that generally even substantial deviation from assumptions will result in little error or interference if data are treated as if assumptions are valid.

### **Profile of Respondents**

The demographic characteristics of respondents have been shown in Table D2 in Appendix D. Demographic data collected for each respondent consisted of gender, age, household, length of residence, employment status, occupation, income, education, ethnicity, and willingness to pay higher taxes. Respondents resided within the 48 zip codes in Las Vegas, Nevada. In terms of gender, 44.33% of the respondents were male; 55.67% were female. The majority of respondents were middle aged or older. The largest percentage of households reported was single adult living alone (32.30%), followed by married couples with children (30.24%), and married couples living without children (22.34%). The majority of the respondents (53.61%) had lived in Las Vegas more than 12 years; only 4% had lived there less than one year. In terms of employment

status, 40.29% of the respondents indicated they were employed full-time, 35.16% were retired, and 7.33% were unemployed. Respondents represented a wide range of occupations, with the largest group (20.44%) engaged in professional, scientific, or technical occupations and the smallest group (.73%) engaged in jobs in the field of information. The question concerning income received the highest number of respondents refusing to answer (13.40%). The majority of respondents were represented in one of three income brackets: less than \$15,000 per year (15.81%), \$30,000–\$45,000 per year (17.87%), and over \$90,000 per year (16.5%). The majority of the respondents (72.32%) had either attended or graduated from college or had completed graduate degrees; 27.68% had high school educations or less. Ethnically, the majority of respondents (60.14%) were White /Caucasian. Only 9.97% had Hispanic or Latino backgrounds. The majority of respondents (54.66%) also indicated they were willing to pay higher taxes to bring more medical tourism development to Las Vegas. However, 16.15% of the respondents neither agreed nor disagreed with that statement.

Using a 5-point Likert-type scale (1 = *very dissatisfied*; 5 = *very satisfied*), respondents also indicated their satisfaction with various healthcare services in Las Vegas. These services included public health, private commercial health clubs and recreation, hospitals, emergency services, dental, spa and wellness, rehabilitation services, medical specialties, healthcare education, and public recreation. In general, residents were satisfied with the services they had experience using in Las Vegas. The average satisfaction scores ranged from 3.28 to 3.93. Satisfaction scores for spas and wellness services were the highest ( $M = 3.93$ ;  $SD = .76$ ). Respondents were least

satisfied with healthcare education ( $M = 3.28$ ;  $SD = 1.04$ ). A summary of the means has been reported in Table 1.

Table 1

*Las Vegas Residents' Satisfaction with Healthcare Services*

Type of healthcare service	<i>M</i>	<i>SD</i>	No. of responses
Public health	3.46	.95	150
Private/commercial health clubs and recreation	3.84	.79	184
Hospitals	3.60	1.13	254
Emergency	3.55	1.16	238
Dental	3.73	1.02	252
Spa/wellness	3.93	.76	171
Rehabilitation facilities	3.52	1.09	138
Medical specialties	3.68	.97	229
Healthcare education	3.28	1.04	199
Publically funded recreation (social, cultural, sports/fitness)	3.70	.94	214

Note.  $n = 291$

Table D3 (Appendix D) shows the statistics concerning the respondents' perceptions of the impacts medical tourism may have on community conditions and living experiences, willingness to pay higher taxes, support for medical tourism development, overall community satisfaction, satisfaction with healthcare, economic performance of medical tourism, and attitudes toward medical tourism. Respondents perceived the most positive impact to the community to be opportunities for recreation ( $M = 3.81$ ;  $SD = .76$ ) and number of healthcare facilities ( $M = 3.81$ ;  $SD = .71$ ). Community conditions perceived to have the least positive impact from medical tourism were cost of goods and services ( $M = 3.32$ ;  $SD = .80$ ) and cost of land and housing ( $M = 3.32$ ;  $SD = .93$ ). In terms of living experiences, the majority of respondents indicated medical tourism will impact all three indicators positively: (a) the desirability of living in

Las Vegas ( $M=3.64$ ;  $SD = .84$ ), (b) the quality of life in Las Vegas ( $M = 3.62$ ;  $SD = .78$ ), and (c) the enjoyment of living in Las Vegas ( $M = 3.59$ ;  $SD = .75$ ).

The data indicated the majority of respondents were willing to pay higher taxes to bring medical tourism development to Las Vegas ( $M = 3.20$ ;  $SD = 1.10$ ) and were supportive of medical tourism development ( $M = 3.65$ ;  $SD = .81$ ). Respondents also indicated they were satisfied with the overall quality of life in Las Vegas ( $M = 3.90$ ;  $SD = .97$ ) and found Las Vegas to be both an enjoyable ( $M = 4.09$ ;  $SD = .87$ ) and a desirable place to live ( $M = 3.85$ ;  $SD = .99$ ). Although respondents did not perceive either the improving or worsening of overall community conditions at present ( $M = 3.09$ ;  $SD = .92$ ), they did anticipate marginal improvement in community conditions in the future ( $M = 3.34$ ;  $SD = .90$ ). The majority of the respondents indicated overall satisfaction with healthcare available in Las Vegas and believed their friends and family members were generally satisfied as well: (a) general quality of healthcare ( $M = 3.29$ ;  $SD = 1.22$ ), (b) availability of healthcare ( $M = 3.70$ ;  $SD = 1.11$ ), and (c) satisfaction of friends and family with healthcare ( $M = 3.13$ ;  $SD = 1.10$ ).

Respondents perceived medical tourism positively in terms of helping with current economic challenges ( $M = 3.50$ ;  $SD = .88$ ), future economic challenges ( $M = 3.64$ ;  $SD = .84$ ), and unemployment ( $M = 3.72$ ,  $SD = .86$ ). They also expressed positive attitudes toward medical tourism, with the most positive attitudes being the vital role medical tourism may in Las Vegas in the future ( $M = 3.81$ ;  $SD = .81$ ) happy and proud to see medical tourists coming to see what Las Vegas has to offer ( $M = 3.81$ ;  $SD = .81$ )



## **Structural Equation Modeling and Test of Hypotheses**

The analysis of the study data involved several steps. First, the underlying constructs measuring Las Vegas residents' perceptions of the impacts of medical tourism on theorized QOL domains were verified using an exploratory factor analysis (EFA). Next, constructs in the proposed model were validated by using a confirmatory factor analysis (CFA). Finally, a path analysis was performed to estimate the relationships among the observed variables and to test all the proposed hypotheses (Acock, 2013). For these analyses, maximum likelihood estimation was used. Finally, indirect effects were measured by multiplying the standardized path coefficient from exogenous variables to intervening variable by the path coefficients leading from the same intervening variables to the dependent variables. The total effect of the variables is the sum of the direct effect and indirect effect path coefficients.

### **Exploratory Factor Analysis**

To detect scale dimensionality, an exploratory factor analysis with principal component method and varimax rotation was conducted for Las Vegas residents' perceptions of the impacts of medical tourism on quality indicators for both community conditions and community living experiences. The Kaiser-Meyer-Olkin measure of sampling adequacy (KMO MSA) was calculated to confirm that factor analysis was an appropriate technique, using Stata 13.0 with an acceptance level set at 0.7 (Hair et al., 2010). Bartlett's test of sphericity was also performed, with a rejection criterion of 0.05 (Hair et al., 2010).

The KMO MSA for the items was .947, which was determined before conducting the analysis. According to Hair et al. (2010), a KMO level over 0.8 is meritorious and

data will factor well based on correlation and partial correlation measures. The results of Bartlett's test of sphericity indicated rejection of the null hypothesis that the correlation matrix was an identity matrix ( $\chi^2 = 2299.04, p < .001$ ). This indicated sufficient correlation between the variables to continue with the factor analysis.

An initial principal components analysis with varimax rotation was conducted on the 20 impact scale items using a minimum value of 1.0 for eigenvalues to determine if factors loaded on their initial theorized construct. A cut-off loading value of 0.5 was specified for item inclusion to prevent crossloading. Four components were discovered during the first factoring process, employing latent root and scree test criteria. A review of the differences between the items included in the factors revealed that the two items loading solely into Factor 4 generated a Cronbach's alpha score of below .70. Based on that determination, a further factor analysis was conducted, specifying three factors.

During the second processing of the data, principal components analysis was performed, specifying a three factors solution. The minimum value of 1.0 was used for eigenvalues, and a cut-off loading value of 0.5 was used to specify item inclusion. One item, cost of healthcare services, was not retained in the analysis due to low communality. Based on .5 criterion, no items were cross-loaded on the factors. The three factors explained 61.39% of the variance. Cronbach's alpha indicated a sufficient level of reliability for Factor 1 (.88), Factor 2 (.88), and Factor 3 (.82), all well above the 0.70 cutoff suggested by Hair et al. (2010).

The eight items loading into Factor 1 (community services, opportunities for recreation, opportunities for healthcare services, quality of healthcare, availability of healthcare, and number of healthcare facilities residents can use) were labeled Perceived

Improvements to Community Services. The five items loading into Factor 2 (desirability of living in Las Vegas, enjoyment of Living in Las Vegas, relationship between residents and tourists, overall quality of life, and overall image of Las Vegas) were labeled Perceived Improvements to Community Living Experiences. The eight items loading into Factor 3 (opportunities for employment, local economy, revenue for governments from tourists, cost of land and housing, cost of goods and services, neighborhood appearance, crime, and traffic) were labeled Perceived Improvements to Standards of Living.

The evolution of Factors 1 and 3 in this study was very similar to those found in many studies in the tourism literature manifesting factors related to tourism's impacts on the economic (i.e., standards of living) and social (i.e., community services) dimension of a community (Gursoy & Rutherford, 2004). Factor 3 emerged as suggested by studies by Sirgy (2000), Yu, (2011) and Epley and Menon (2006) comprising of indicators from a wellbeing taxonomy, for assessment of tourism-related community positive psychology and experiences. Table 2 contains the results of the principal component analysis.

### **Confirmatory Factor Analysis**

A confirmatory measurement model specifying the posited relations of observed variables to the underlying constructs was conducted next. Items identified through the exploratory factor analysis were utilized in the CFA. However, before testing the overall model, the scales used to measure each construct were assessed individually for unidimensionality. Constructs with unacceptable fits were restructured by deleting the indicators shown not to preserve the unidimensionality of the measurement (Gursoy & Rutherford, 2004). Fit statistics, modification indices, and coefficients were used to

identify those indicators. Assessing each construct individually and deleting the indicators causing offending estimates resulted in a decrease of indicators in some of the constructs.

Table 2

*Exploratory Factor Analysis of Measures Regarding the Perceived Impact of Medical Tourism*

Survey item	Factor 1: Community services	Factor 2: Community living experiences	Factor 3: Community Standards of living
Employment opportunities	.41	.26	.52
Local economy	.26	.30	.68
Revenues from tourists for governments	.48	.05	.58
The cost of goods and services	.14	.39	.65
The cost of land and housing	.12	.11	.73
Community services	.51	.30	.42
Crime rate	.45	.28	.80
Traffic and congestion	.35	.13	.70
Neighborhood appearance	.33	.38	.52
Image of Las Vegas	.33	.54	.26
Relationship between residents and tourists	.47	.56	.40
Opportunities for recreation	.53	.20	.41
Opportunities for healthcare services	.61	.24	.24
Quality of healthcare	.78	.25	.27
Number of healthcare facilities residents can use	.75	.44	.12
The cost of healthcare services	.33	.43	.35
The availability of healthcare	.69	.30	.17
The desirability of living in Las Vegas	.38	.74	.25
The quality of life in Las Vegas	.39	.79	.21
The enjoyment of living in Las Vegas	.21	.83	.22
Eigenvalue	8.52	7.52	8.50
% of Total Variance	23.14%	19.88%	18.36%
Chronbach's Alpha	( $\alpha = .88$ )	( $\alpha = .88$ )	( $\alpha = .82$ )
The Bartlett's test of sphericity (significance level)			.947
Kaiser-Meyer Olkin			.000

Note. Extraction method: Principal component analysis. Rotation method: Varimax

The number of indicators used to assess attitudes toward medical tourism decreased from nine to five variables. An examination of standardized residual covariances showed high collinearity between the following statements:

- Medical tourism could be one of the most important industries for Las Vegas.
- Medical tourism could play a major economic role in Las Vegas.
- I support medical tourism having a vital role in Las Vegas.
- Medical tourism holds great promise for Las Vegas's future.

Therefore, these four items were removed from further analysis.

The number of indicators used to measure overall satisfaction decreased from five to four variables. An examination of standardized residual covariance showed high collinearity between (a) conditions in Las Vegas in the future and (b) conditions in Las Vegas. Therefore, conditions in Las Vegas was removed. The construct was then retested with modification indices obtained to rebuild the model to acknowledge the covariance between two measurement error terms.

The number of indicators used to measure perceived improvements to standards of living decreased from eight to six. An examination of standardized residual covariance showed negative correlations and high collinearity among the following indicators: (a) crime rate (b) traffic (c) cost of land and housing, and (d) cost of goods and services indicators. Modification indices suggested the CFA model would improve by removing crime and traffic indicators causing offending estimates. The construct was then rebuilt and tested with crime and traffic indicators removed and a covariance path between: (a) cost of land and housing and (b) cost of goods and services indicators. The items that remained in the analysis have been presented in Table D4 (Appendix D).

A full reformulated measurement model was then tested using a CFA. The CFA was applied to evaluate the measurement model validity and to explore composite construct reliability, average variance extracted, convergent validity, and discriminant validity of eight constructs. The composite reliabilities indicate internal consistency, meaning all the measures consistently represent the same latent construct (Fornell & Larcker, 1981; Hair et al., 2006). The acceptable range of composite reliability is .70 or higher. As shown in Table D4 (Appendix D), all of the composite reliabilities were above .70. The variance extracted estimate is a measurement of the amount of variance captured by a construct in relation to the variance due to random measurement error (Bagozzi & Yi, 1993; Fornell & Larcker, 1981; Hair et al., 2006). An average variance extracted of .5 or higher is a good rule of thumb, suggesting adequate convergence (Hair et al., 2006). The variance extracted estimates for each factor reached acceptable levels. Convergent validity was assessed from the measurement model by determining for each indicator whether the estimated pattern coefficient on its posited underlying construct factor was significant (greater than 2 times the standard error). Loadings were at least .5 and higher. In addition, all loadings were significant, as required for convergent validity.

Discriminant validity is the extent to which a construct is distinct from other constructs. Discriminant validity was present in the model, as the variance-extracted estimates of constructs were greater than the squared correlation estimate between the constructs (Hair et al., 2006). Another measure of reliability is the indicator reliability. Unlike the former reliability measures, no cut-off point exists for indicator reliability to determine the acceptability of specified indicators (shown in Table D4). The CFA model was tested using maximum likelihood and assessment of overall model fit statistics.

Table 3 summarizes the fit statistics of the measurement model as operationalized in Stata 13.0.

Table 3

*Fit Statistics for Confirmatory Factor Analysis*

	$\chi^2$	$\chi^2/df$	RMSEA <sup>a</sup>	SRMR <sup>b</sup>	CFI <sup>c</sup>	TLI <sup>d</sup>
Final measurement model	chi2(414) = 861.388, Prob > chi2 = 0.000	2.08	.04	.028	.97	.99
Target value	—	2–3	$\leq 0.08$	$\leq 0.1$	$> 0.90$	$> 0.90$

*Note.* <sup>a</sup> RMSEA = Root mean square error approximation; <sup>b</sup> SRMR = standardized root mean squared; <sup>c</sup> CFI = comparative fit index; <sup>d</sup> TLI = Tucker Lewis Index.

All of the fit indices except the  $\chi^2$  value indicated the proposed measurement is acceptable. Because the model, composite construct reliability, average variance extracted, convergent validity, and discriminant validity all met the acceptable criteria (Fornell & Larcker, 1981; Hair et al., 2006; Kline, 2010), hypotheses testing and structural equation modeling ensued.

**Structural Model**

The SEM analysis was performed on 291 survey respondents using the Stata 13.0 statistical package. Maximum likelihood parameter estimation was selected for the analysis over other estimation methods (i.e., maximum likelihood with missing values, asymptotically distribution-free) because the missing data were deleted on a list-wise bases and data were distributed normally (Hair, 2010). The purpose of specifying the structural model was to assign the relationships among the constructs. Figure 3 shows the path diagrams of the measurement and structural models of the constructs. There were a total of 19 paths investigated to examine the causal relationship between

constructs. Seven constructs were multi-item scales accounting for both random and systematic error. Two items in the model were single-item measures with error constrained to 0. According to Bergkvist and Rossiter (2007), single-item measures are appropriate in predictive validity and can be valid in models when measured among multiple-item measures. The most widely employed single-item constructs in attitudes research are concrete behavioral variables which can be validly measurable by a single item under specific circumstances. Bergkvist and Rossiter (2007) demonstrated that single-item measures demonstrate equally high predictive validity as multiple-item measures, which is in contrast to the classic psychometric argument that multiple-item measures are more valid than single-item measures for all types of constructs used in SEM analysis.

A correlation table for the model constructs is shown in Table 4. Standardized path coefficients with a significance level of .05 or better were judged to be significant. Table D5 (Appendix D) contains a summary of the model relationships specified in the initial model. All path hypotheses were tested. The exogenous variables were (a) economic performance, (b) attitudes toward medical tourism, (c) overall community satisfaction, and (d) satisfaction with healthcare. The intervening endogenous variables were (a) perceived improvements of medical tourism to living standards, (b) perceived improvements of medical tourism to community services, and (c) perceived improvements of medical tourism to living experiences. The following behavioral responses were the ultimate endogenous, or dependent, variables: (a) willingness to pay higher taxes and (b) support for medical tourism development. All other variables were



loaded onto the two ultimate endogenous variables. In addition, a correlation path was specified between intervening endogenous and endogenous dependent variables.

Table 4

*Correlations of Variables*

	Comm Sat <sup>a</sup>	Health Sat <sup>b</sup>	MedAtt <sup>c</sup>	Econ <sup>d</sup>	Improve LS <sup>e</sup>	Improve CS <sup>f</sup>	Improve LE <sup>g</sup>	WTP Tax <sup>h</sup>	Support <sup>i</sup>
CommSat	1.0								
HealthSat	.37	1.0							
MedAtt	.22	.15	1.0						
Econ	.20	.21	.66	1.0					
ImproveLS	.26	.10	.56	.53	1.0				
Improve CS	.23	.20	.57	.62	.69	1.0			
ImproveLE	.39	.18	.62	.57	.67	.72	1.0		
WTPTax	.16	.14	.44	.40	.36	.41	.41	1.0	
Support	.11	.10	.41	.27	.21	.27	.25	.24	1.0

*Note.* <sup>a</sup> CommSat = overall community satisfaction; <sup>b</sup> HealthSat = satisfaction with healthcare; <sup>c</sup> MedAtt = attitudes toward medical tourism; <sup>d</sup> Econ = economic performance; <sup>e</sup> ImproveLS = perceived improvements to community living standards; <sup>f</sup> ImproveCS = perceived improvements to community services; <sup>g</sup> ImproveLE = perceived improvements to living experience; <sup>h</sup> WTPTax = willingness to pay taxes; <sup>i</sup> Support = support for medical tourism development

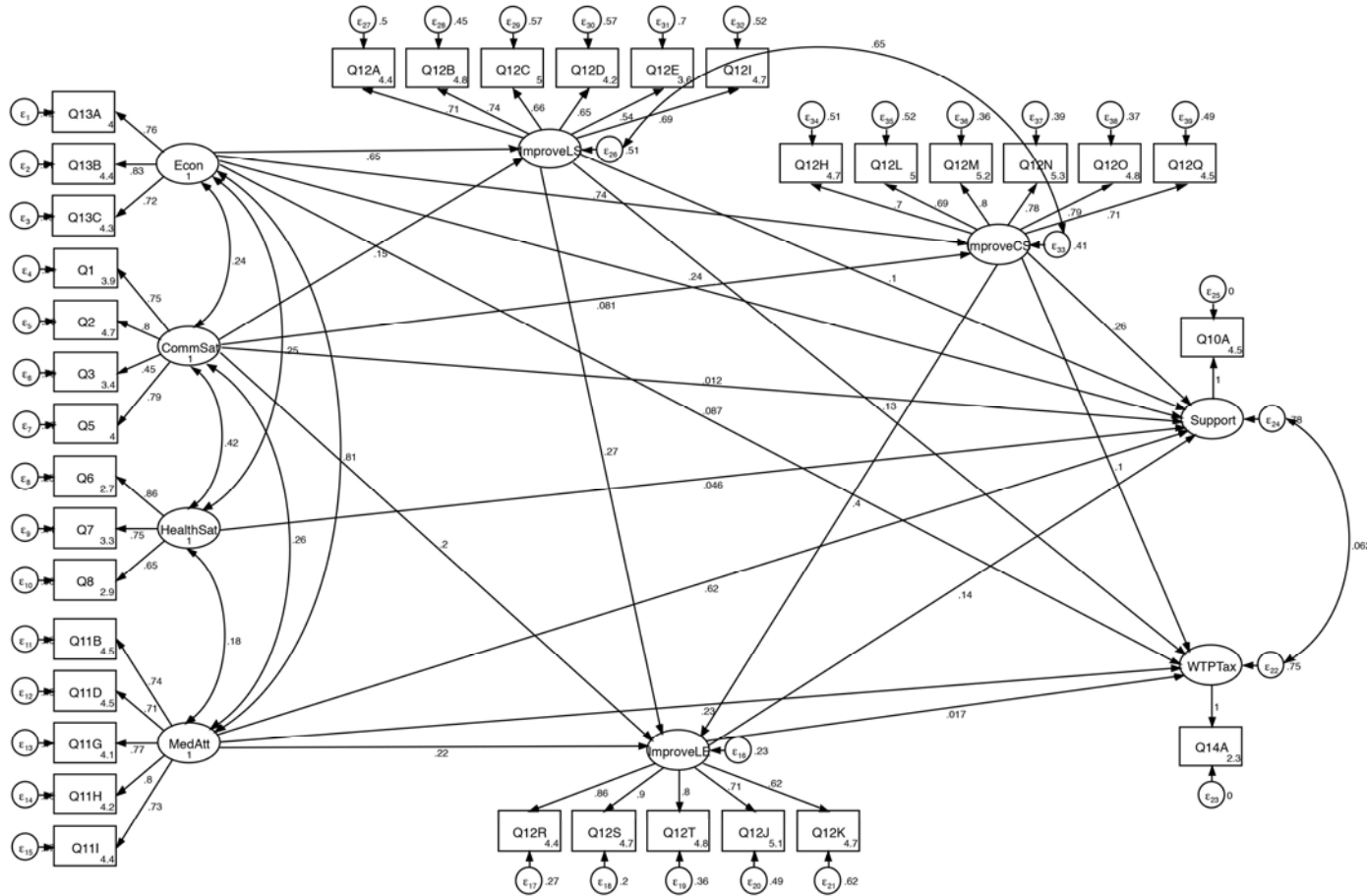
Figure 3 shows the hypothesized theoretical model as it was initially empirically operationalized in Stata 13.0. Following analysis, fit statistics were assessed (Table 5). Results revealed that the hypothesized model was a fit to the data

Table 5

*Fit Statistics for Original Hypothesized Model*

	$\chi^2$	$\chi^2/df$	RMSEA <sup>a</sup>	SRMR <sup>b</sup>	CFI <sup>c</sup>	TLI <sup>d</sup>
Final measurement model	chi2(501) = 865.57, Prob > chi2 = 0.000	1.73	.05	.05	.92	.92
Target value	—	2–3	≤0.08	≤0.1	>0.90	>0.90

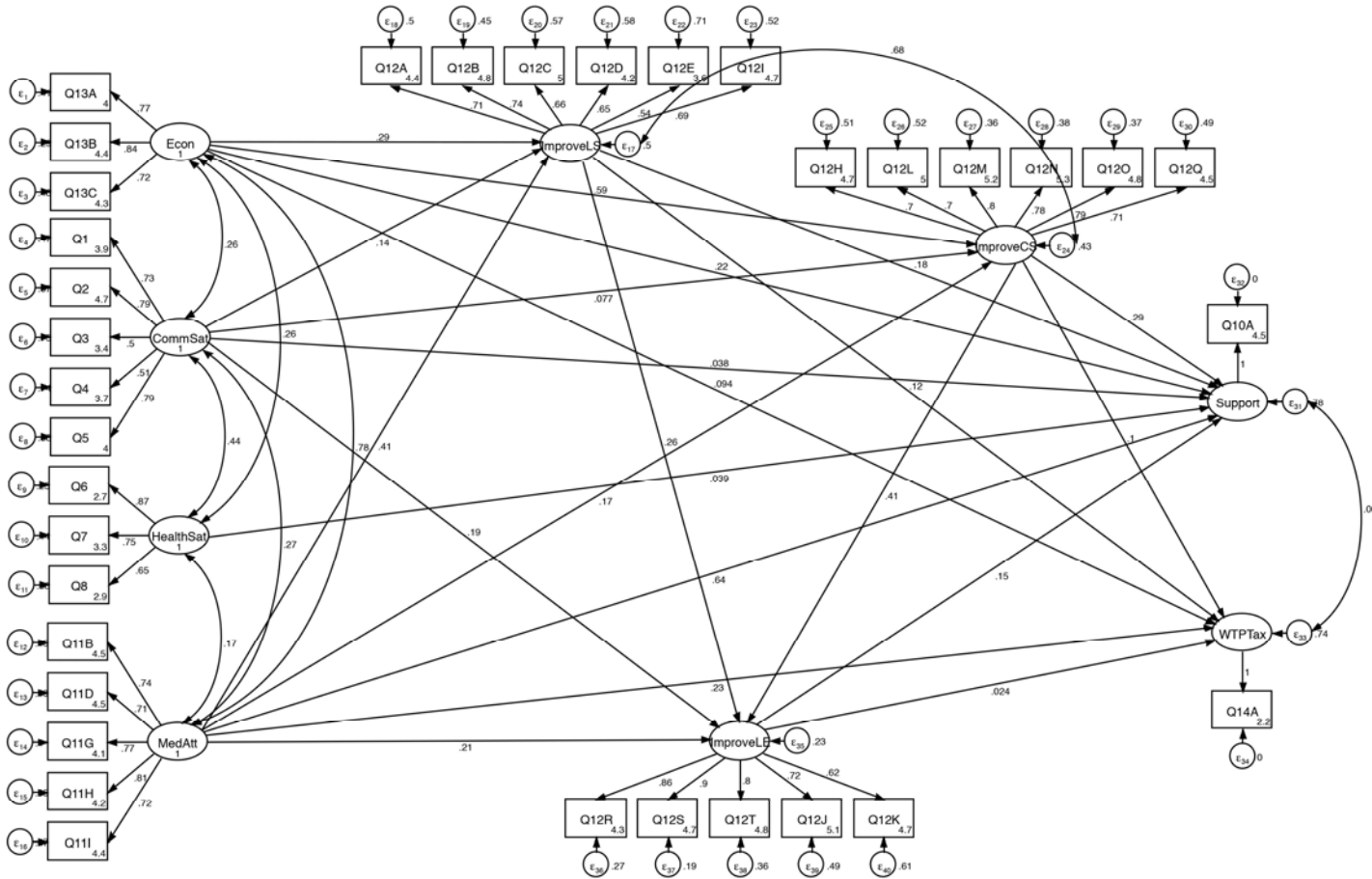
*Note.* <sup>a</sup> RMSEA = Root mean square error approximation; <sup>b</sup> SRMR = standardized root mean squared; <sup>c</sup> CFI = comparative fit index; <sup>d</sup> TLI = Tucker Lewis Index.



Economic performance = Econ	Perceived improvements to living experience = ImproveLE
Overall community satisfaction = CommSat	Perceived improvements to community living standards = ImproveLS
Satisfaction with healthcare = HealthSat	Willingness to pay higher taxes = WTPTax
Attitudes toward medical tourism = MedAtt	Support for medical tourism development = Support
Perceived improvements to community services = ImproveCS	

Figure 3. Theoretical model as initially operationalized in Stata 13.0

Modification indices indicated by this assessment resulted in reducing  $\chi^2$  statistics with the addition of two paths: (a) attitudes toward medical tourism  $\rightarrow$  medical tourism's perceived improvements to standards of living and (b) attitudes toward medical tourism  $\rightarrow$  medical tourism's perceived improvements to community services. Although these paths were not in the original theoretical model, their addition to operationalize the model was theoretically defensible. Jurowski (1994) evidenced that residents' attitudes toward tourism influenced the way they perceived both economic and social impacts to a community. These modifications were conducted in a step-wise manner, adding regression paths one after the other to ensure that each path contributed to improving the fit of the model. Figure 4 shows the re-specified structural model. The SEM relationships in the re-specified model have been summarized in Table D6 (Appendix D).



Economic performance = Econ	Perceived improvements to living experience = ImproveLE
Overall community satisfaction = CommSat	Perceived improvements to community living standards = ImproveCS
Satisfaction with healthcare = HealthSat	Willingness to pay higher taxes = WTPTax
Attitudes toward medical tourism = MedAtt	Support for medical tourism development = Support
Perceived improvements to community services = ImproveCS	

Figure 4. Re-specified structural model as operationalized in Stata 13.0.

Fit statistics computed following assessment indicated the specified model was a good fit to the data (see Table 6). The re-specified model showed a small improvement in model fit over the hypothesized model (see Table 7).

Table 6

*Fit Statistics for Re-specified Model*

	$\chi^2$	$\chi^2 / df$	RMSEA	SRMR	CFI	TLI
Fit statistics	chi2(532) = 939.859 Prob > chi2 = 0.00	1.76	.04	.046	.92	.93

Note. <sup>a</sup> RMSEA = Root mean square error approximation; <sup>b</sup> SRMR = standardized root mean squared; <sup>c</sup> CFI = comparative fit index; <sup>d</sup> TLI = Tucker Lewis Index.

Table 7

*Comparison of Fit Statistics for Hypothesized and Re-specified Models*

Model	$\chi^2$	$\chi^2 / df$	RMSEA	SRMR	CFI	TLI
Hypothesized	chi2(501) = 865.57; prob > chi2 = 0.00	1.73	.05	.053	.92	.92
Respecified	chi2(233) = 646.67; prob > chi2 = 0.00	1.76	.04	.046	.92	.93
Target value		2-3	$\leq 0.08$	$\leq 0.1$	$> 0.90$	$> 0.90$

Note. <sup>a</sup> RMSEA = Root mean square error approximation; <sup>b</sup> SRMR = standardized root mean squared; <sup>c</sup> CFI = comparative fit index; <sup>d</sup> TLI = Tucker Lewis Index.

The analysis explained several relationships among the specified variables in the model. As shown in the model results in Table D6, the path from overall community satisfaction to perceived improvements from medical tourism to community services (H4b) was not significant ( $p > .05$ ). This suggests that resident levels of satisfaction with the existing conditions of the community and favorable opinions towards promoting medical tourism do not affect whether or not the residents believe medical tourism will

improve community services. However, the path from economic performance of medical tourism to perceived improvements from medical tourism to community services (H7c1) was strong (standardized coefficient = .58) and significant ( $p < .01$ ), and the added path for attitudes toward medical tourism to perceived improvements for medical tourism to community services was moderate (standardized coefficient = .17) and significant ( $p < .05$ ), indicating that if residents have favorable attitudes towards medical tourism and think it will improve the economy, then they also expect improvements to community services.

The path from overall community satisfaction to support for development was not significant ( $p > .05$ ), but the path from overall community satisfaction to perceived improvements from medical tourism to standards of living (H4a) was moderate (standardized coefficient = .14) and significant ( $p < .01$ ). The path from attitudes toward medical tourism to perceived improvements from medical tourism to standards of living, the other of the two added paths, was strong (standardized coefficient = .40) and significant ( $p < .01$ ). These relationships suggest that residents' levels of satisfaction with the existing conditions in their communities and their favorable opinions regarding the promotion of medical tourism affect how they perceive medical tourism to improve community standards of living.

The path from economic performance of medical tourism to perceived improvements from medical tourism to standards of living (H7c) was moderate (standardized coefficient = .28) and significant ( $p < .01$ ). This indicates that the relationship between economic performance of medical tourism and the perceived improvement to community services may be modified by the perceived improvement

from medical tourism to living standards.

Of the five paths to willingness to pay higher taxes, four were not significant ( $p > .05$ ): (a) perceived improvements from medical tourism to standards of living to willingness to pay higher taxes (H3a1), (b) perceived improvements from medical tourism to community services to willingness to pay higher taxes (H3a2), (c) perceived improvements from medical tourism to living experiences to willingness to pay higher taxes (H3a3), and (d) economic performance of medical tourism to willingness to pay higher taxes (H7b). Therefore, residents' perceptions of improvements from medical tourism to the economic, social and wellbeing community dimensions do not seem to influence residents' willingness to pay higher taxes. However, the path from attitudes towards medical tourism to willingness to pay higher taxes (H6b) was moderate (standardized coefficient = .23) and significant ( $p < .05$ ). This path indicates that residents are willing to pay higher taxes to support medical tourism if they have positive feelings towards medical tourism, in general.

Similarly, the path from attitudes toward medical tourism to support for medical tourism development (H6a) was strong (standardized coefficient = .63) and significant ( $p < .01$ ). However, the remaining five other paths to support for medical tourism were not significant ( $p > .05$ ): (a) perceived improvements from medical tourism to standards of living to support for medical tourism development (H2a1), (b) perceived improvements from medical tourism to community services to support for medical tourism development (H2a2), (c) economic performance of medical tourism to support for medical tourism development (H7b), (d) perceived improvements from medical tourism to living experiences to support for medical tourism development (H2b),

As with the behavioral variable willingness to pay higher taxes, the potential of medical tourism to improve the economy, standards of living, and community services and wellbeing in a community does not seem to be a factor affecting levels of resident support for the development of medical tourism. But generally positive feelings about medical tourism regarding its development and promotion affects support for medical tourism development. The hypothesized path from satisfaction with healthcare to support for medical tourism development (H5) also was not significant ( $p > .05$ ), indicating that residents' satisfaction with existing community healthcare services is not a factor affecting their positive endorsement of medical tourism development.

Several factors affect the way residents perceived the impacts of medical tourism to living experiences, as evidenced by the following paths: (a) the strong (standardized coefficient = .40) and significant path ( $p < .01$ ) from perceived improvements from medical tourism to standards of living to perceived improvements from medical tourism to living experiences (H1a1), (b) the moderate (standardized coefficient = .26) and significant path ( $p < .01$ ) from perceived improvements from medical tourism to community services to perceived improvements from medical tourism to living experiences (H1a2), (c) the moderate (standardized coefficient = .19) and significant path ( $p < .01$ ) from overall community satisfaction to perceived improvements from medical tourism to living experiences (H4b), and (d) the moderate (standardized coefficient = .21) and significant path ( $p < .01$ ) from attitudes toward medical tourism to perceived improvements from medical tourism to living experiences (H6c). These paths indicate that residents perceive improvement to their living experiences from medical tourism if they also perceive that medical tourism results in improved standards of living and



community services. Levels of resident satisfaction with the overall community also seem to affect perceived improvement from medical tourism to community living experiences. Finally, residents' favorable opinions regarding promoting medical tourism in their communities are a driver of their perceptions of the ability of medical tourism to improve living experiences in the community.

Overall, the results showed that the positive economic performance of medical tourism, overall community satisfaction, favorable attitudes towards medical tourism, are factors affecting residents' perceptions of improvement to standards of living, community services and living experiences due to medical tourism. Perceptions of improvement to standards of living, and improvement to community services from medical tourism are both factors which influence residents perception of improvements to living experiences. While none of the intervening endogenous variable had a direct impact on the endogenous behavioral variables, the exogenous variable, attitudes towards medical tourism, affected resident behavior, including both support for its development and willingness to pay taxes. The results of the study indicate that there is some support for the overarching hypothesis that the elements included as variables in the model positively affect behavioral responses. The direct, indirect, and total effects of the model are summarized in Tables 8–10. The hypotheses and results of the testing appear in Table D7 (Appendix D).

Table 8

*Direct Effects of the Structural Equation Model*

Path	Path coefficient <sup>a</sup>	$p > z$
Economic performance of medical tourism → Perceived improvements from medical tourism to community services	.48	.00**
Overall community satisfaction → Perceived improvements from medical tourism to community services	.31	.28 <sup>ns</sup>
Perceived improvements from medical tourism to standards of living → Willingness to pay higher taxes	.34	.60 <sup>ns</sup>
Perceived improvements from medical tourism to community services → Willingness to pay higher taxes	.41	.31 <sup>ns</sup>
Perceived improvements from medical tourism to living experiences → Willingness to pay higher taxes	.49	.18 <sup>ns</sup>
Attitudes toward medical tourism → Willingness to pay higher taxes	.63	.02**
Perceived improvements from medical tourism to standards of living → Support for medical tourism development	.03	.82 <sup>ns</sup>
Perceived improvements from medical tourism to community services → Support for medical tourism development	.01	.94 <sup>ns</sup>
Perceived improvements from medical tourism to living experiences → Support for medical tourism development	.56	.75 <sup>ns</sup>
Economic performance of medical tourism → Support for medical tourism development	.01	.98 <sup>ns</sup>
Overall community satisfaction → Support for medical tourism development	.13	.83 <sup>ns</sup>
Attitudes toward medical tourism → Support for medical tourism development	.67	.00**
Perceived improvements from medical tourism to standards of living → Perceived improvements from medical tourism to living experiences	.05	.70 <sup>ns</sup>
Perceived improvements from medical tourism to community services → Perceived improvements from medical tourism to living experiences	.04	.70 <sup>ns</sup>
Overall community satisfaction → Perceived improvements from medical tourism to community living experiences	.15	.71 <sup>ns</sup>
Attitudes toward medical tourism → Perceived improvements from medical tourism to community living experiences	.10	.72 <sup>ns</sup>

Note. <sup>a</sup>Entries are standardized estimates (standard errors).

\* =  $p < .05$ ; \*\* =  $p < .01$ ; <sup>ns</sup> =  $p > .05$

Table 9

*Indirect Effects of the Structural Equation Model*

Path	Path coefficient <sup>a</sup>	$p > z$
Perceived improvements from medical tourism to standards of living → Willingness to pay higher taxes	.05	.70 <sup>ns</sup>
Perceived improvements from medical tourism to community services → Willingness to pay higher taxes	.04	.70 <sup>ns</sup>
Economic performance of medical tourism → Willingness to pay higher taxes	.15	.03**
Overall community satisfaction → Willingness to pay higher taxes	.40	.35 <sup>ns</sup>
Attitudes toward medical tourism → Willingness to pay higher taxes	.50	.11 <sup>ns</sup>
Perceived improvements from medical tourism to standards of living → Support for medical tourism development	.05	.70 <sup>ns</sup>
Perceived improvements from medical tourism to community services → Support for medical tourism development	.04	.73 <sup>ns</sup>
Economic performance of medical tourism → Support for medical tourism development	.02	.68 <sup>ns</sup>
Overall community satisfaction → Support for medical tourism development	.18	.48 <sup>ns</sup>
Attitudes toward medical tourism → Support for medical tourism development	.15	.47 <sup>ns</sup>
Economic performance of medical tourism → Perceived improvements from medical tourism to community living experiences	.04	.73 <sup>ns</sup>
Overall community satisfaction → Perceived improvements from medical tourism to community living experiences	.07	.71 <sup>ns</sup>
Attitudes toward medical tourism → Perceived improvements from medical tourism to community living experiences	.10	.72 <sup>ns</sup>

Note. <sup>a</sup> Entries are standardized estimates (standard errors).

\* =  $p < .05$ ; \*\* =  $p < .01$ ; <sup>ns</sup> =  $p > .05$

Table 10

*Total Effects for the Structural Equation Model*

Path	Path coefficient <sup>a</sup>	<i>p</i> > <i>z</i>
Economic performance of medical tourism → Perceived improvements from medical tourism to community services	.48	.00**
Overall community satisfaction → Perceived improvements from medical tourism to community services	.31	.28 <sup>ns</sup>
Perceived improvements from medical tourism to standards of living → Willingness to pay higher taxes	.17	.29 <sup>ns</sup>
Perceived improvements from medical tourism to community services → Willingness to pay higher taxes	.21	.14 <sup>ns</sup>
Economic performance of medical tourism → Willingness to pay higher taxes	.35	.00**
Overall community satisfaction → Willingness to pay higher taxes	.40	.35 <sup>ns</sup>
Attitudes toward medical tourism → Willingness to pay higher taxes	.82	.00**
Perceived improvements from medical tourism to standards of living → Support for medical tourism development	.02	.92 <sup>ns</sup>
Perceived improvements from medical tourism to community services → Support for medical tourism development	.03	.85 <sup>ns</sup>
Perceived improvements from medical tourism to living experiences → Support for medical tourism development	.89	.74 <sup>ns</sup>
Economic performance of medical tourism → Support for medical tourism development	.02	.80 <sup>ns</sup>
Overall community satisfaction → Support for medical tourism development	.22	.90 <sup>ns</sup>
Attitudes toward medical tourism → Support for medical tourism development	.86	.00 <sup>ns</sup>
Perceived improvements from medical tourism to standards of living → Perceived improvements from medical tourism to community living experiences	.05	.70 <sup>ns</sup>
Perceived improvements from medical tourism to community services → Perceived improvements from medical tourism to community living experiences	.04	.78 <sup>ns</sup>
Economic performance of medical tourism → Perceived improvements from medical tourism to community living experiences	.03	.70 <sup>ns</sup>
Overall community satisfaction → Perceived improvements from medical tourism to community living experiences	.20	.69 <sup>ns</sup>
Attitudes toward medical tourism → Perceived improvements from medical tourism to community living experiences	.22	.72 <sup>ns</sup>

*Note.* <sup>a</sup> Entries are standardized estimates (standard errors).

\* = *p* < .05; \*\* = *p* < .01; <sup>ns</sup> = *p* > .05

## **Summary**

This chapter contained the results of the empirical analysis stemming from the research questions stated in chapter 1 and the theoretical model described in chapter 2 and 3. In general, the theoretical model was shown to be valid, with two regression path additions supplementing the original hypotheses. Overall, the results showed that the positive relationships existed between economic performance of medical tourism, overall community satisfaction, attitudes towards medical tourism, and improvement to standards of living, community services and living experiences. Improvement to standards of living, and community services were factors affecting residents' perceptions of improvement from medical tourism to living experiences. Attitudes towards medical tourism affected residents' behavioral responses, including both support for the development of medical tourism and willingness to pay higher taxes.

## **CHAPTER 5**

### **CONCLUSION**

This chapter provides a discussion of the results of this study, which created a conceptual framework in which researchers can organize and investigate medical tourism. The empirical findings are reviewed in relation to their relevance to the study's theoretical model and practical implications are presented. An overview of the study's limitations and suggestions for future research conclude the chapter.

#### **Discussion and Implications**

The purpose of this research was to develop a model that investigated resident perceptions of medical tourism impacts from community quality of life (QOL) perspectives. From the literature, subjective QOL domains of residents in Las Vegas, as impacted by medical tourism, were evaluated to determine how they influence residents' behaviors. The domains are: (1) community conditions and (2) community living experiences. After a thorough literature review and based on suggestions of experts in the area of tourism planning and healthcare industries in Las Vegas, an instrument was proposed to measure the influences of economic performance of medical tourism, overall satisfaction with the community, satisfaction with healthcare, and attitudes towards medical tourism, on community QOL domains and resident behaviors. The proposed measurement instrument, using data gathered from Las Vegas area community residents, was tested by an analysis involving first an EFA followed by a CFA, then a structural equation model. Results confirmed the dimensional nature of residents' attitudes towards medical tourism, economic performance of medical tourism, overall satisfaction with the community and healthcare system; however, an exploratory factor analysis suggested that

three domains can measure community QOL, instead of using two. Therefore, the final proposed model utilized two domains to measure how resident's perceive medical tourism to impact community conditions (standards of living and community services) and one domain to measure how resident's perceive medical tourism to impact community living experiences. All of the reliability and validity scores were above acceptable levels. This research demonstrated the need to refine tourism impact indicators and determine what should be included in a conceptual framework when measuring dimensions of subjective QOL.

Overall, the study's results show that residents perceive that medical tourism creates more community QOL benefits than costs. This finding indicates that residents do not see medical tourism as development that creates social problems and is a testament to the importance placed on the benefits provided to the community by the prospect of improved economy, employment opportunities, standards of living, expanded healthcare system, community services, improved image and desirability of living in a community.

### **Hypotheses Discussion**

Hypothesis 1 stated that medical tourism's perceived improvement to community conditions is positively associated with medical tourism's perceived improvements to living experiences. This has been supported by the data, as evidenced by the significant and positive path relationships from perceived improvements to living standards to both perceived improvements to community services and perceived improvements to living experiences. Positive relationships between the intervening variables means that residents who perceive that indirect economic and social benefits will flow to the community from medical tourism will also perceive an improvement in the experiential

aspects of a community (i.e. wellbeing). Results are aligned with findings in past research by Liu, Sheldon, and Var (1987) where improved QOL was perceived by residents through increased employment opportunities and tax revenues from tourism that, in turn, results in higher standards of living and findings by Allen, Long, Perdue, and Keiselbach (1988) where residents perceived that better QOL may be achieved through tourism from its improvement to community conditions including infrastructure and public services. This study explained tourism QOL in a context of medical tourism development's impact on a representative group of community conditions and their influence on residents' subjective evaluation of domain satisfactions and positive psychology in terms of community living experiences.

Hypothesis 2 stated: (a) Medical tourism's perceived improvement to community conditions is positively associated with residents' support for medical tourism development; and, (b) Medical tourism's perceived improvement to community living experiences is positively associated with residents' support for medical tourism development. This hypothesis was not supported with statistical significance, indicating a certain level of comparability between these domains. Several studies have found evidence confirming the direct and indirect relationships between the perceived positive/negative tourism impacts on a community and residents' subsequent support for tourism development (Dyer, Gursoy, Sharma, & Carter, 2007; Gursoy, Jurowski, & Uysal, 2002; Gursoy & Rutherford, 2004; Ko & Stewart, 2002), thus it was expected that Hypothesis 2 could be confirmed. The data did not support this proposition.

Hypothesis 3 stated: (a) Medical tourism's perceived improvement to community conditions is positively associated with willingness to pay higher taxes; and, (b) Medical



tourism's perceived improvement to community living experiences is positively associated with willingness to pay higher taxes. Examination of previous literature showed that correlation exists between community attribute improvements from tourism and resident investment (Gursoy & Rutherford, 2002), as well as evidence of residents' willingness to pay higher taxes when lifestyle changes from tourism included enhanced quality of life, location-specific amenities, and improved residential satisfaction (Knapp & Graves, 1989). However, no statistical significance was detected to support this indication.

Hypothesis 4 stated: (a) residents' overall satisfaction with the community is positively associated with their support for medical tourism development, (b) residents' overall satisfaction with the community is positively associated with medical tourism's perceived improvement to both community conditions; and, (3) residents' overall satisfaction with the community is positively associated with medical tourism's perceived improvement to living experiences. Despite Nunkoo and Ramkissoon's (2010a, 2010b) study providing evidence that overall satisfaction with community conditions and satisfaction with community services predicts resident support for additional tourism development, the data did not support H4a. The data did, however, support H4b; overall satisfaction with a community positively influenced the way in which residents perceive improvements to community conditions due to medical tourism. Similarly, the data supported H4c in that overall satisfaction with a community positively influenced the way in which residents perceived improvements to community living experiences due to medical tourism. This finding confirms the proposition made by both Ko and Stewart (2002) and Uysal (2012) that community satisfaction could be significant factor

influencing how residents perceive and negative impacts in a tourism framework.

Hypothesis 5 stated that residents' overall satisfaction with the community healthcare services is positively associated with support for medical tourism development. Although it was posited, based on a study by Vargas- Sanchez, Plaza Mejia, and Porras-Bueno, (2009) that residents will support tourism when they are satisfied with community attributes, the study failed to find any significance between residents' levels of satisfaction with healthcare services in the community and their support for medical tourism development.

Hypothesis 6 stated: (a) Residents' attitudes toward medical tourism are positively associated with support for medical tourism development; (b) Residents' attitudes toward medical tourism are positively associated with willingness to pay taxes and (c) Residents' attitudes toward medical tourism are positively associated with medical tourism's perceived improvement to living experiences. The data completely supported Hypothesis 6. This is not surprising, given the long history of research on residents' attitudes confirming correlations between attitudes towards tourism and positive or negative perceptions of impacts from tourism, and behaviors variables. Hypothesis 6a is consistent with findings by Jurowski (1994) in that residents' attitudes positively influence their endorsement of tourism development. Hypothesis 6b is consistent with previous studies in planning that empirically established a correlation between tourism related community attributes and resident investment (Gursoy & Rutherford, 2002). Hypothesis 6c is consistent with the proposition by (Clark & Hunter 1992) that tourism offering lifestyle opportunities represents potential influence on enjoyment and desirability of living in a community.

The two path additions, as suggested by modification indices to improve overall model fit, were both significant and support the following post-hoc hypothesis: Attitudes toward medical tourism are positively associated with medical tourism's perceived improvement to community conditions. The first path indicated that favorable attitudes towards medical tourism will influence how resident's perceive improvement to living standards from medical tourism and second path indicated attitudes towards medical tourism are positively associated with perceived improvement to community services. Both of these hypotheses are supported by previous studies evidencing that residents' attitudes towards tourism influence how they perceive both its social benefits, such as improved recreation opportunities and public services and economic conditions such as employment, local economy, and revenues from tourists for governments (Jurowski, 1994)..

Hypothesis 7 stated: (a) Medical tourism's economic performance is positively associated with support for medical tourism development; (b) Medical tourism's economic performance is positively associated with willingness to pay taxes; and, (c) 7c. Medical tourism's economic performance is positively associated with improvements to community conditions. Hypothesis 7a and 7b were both, not supported. This is contrary to previous research, results of which have indicated that residents support tourism development when they perceive tourism to improve the economy in their community (Allen, Hafer, Long, & Perdue, 1992; Perdue, Long & Allen, 1987), as well as that they will invest in tourism development when tourism is perceived

Previous studies have also confirmed Hypothesis 7c, that tourism's economic improvement influences the way residents perceive tourism will positively or negatively

impact various community conditions (Allen et al. 1993; Jurowski 1994; Jurowski, Uysal, & Williams, 1997; Hall, 1989; Lindberg & Johnson, 1997; Liu & Var, 1986; Pizam, 1978; Sheldon & Var, 1984). In fact, improvement to the economy has been regarded as one of the most visible and powerful motivations for influencing residents perceptions of the impacts for any tourism development in a community in the literature (Pizam 1978).

### **Theoretical Implications**

This study makes several noteworthy contributions to extant resident attitude literature. As is shown in the literature review, there is extensive resident attitude research in tourism, but little research that specifically addresses QOL (Yu, 2011) and even sparser research investigating the impact of medical tourism on communities (Genc, 2012a). This study thus contributes to the literature by creating a foundational structural model to describe subjective QOL community dimensions in a medical tourism context and to evaluate their effect on residents' behavioral response. The model broadens the scope of Jurowski (1994), Deccio and Baloglu (2001), and Gursoy and Rutherford's (2004) social exchange models, respectively, by showing how impacts from tourism affect residents' quality of life and tax paying behaviors.

When considering the significance of structural model paths, it should be recognized that the conceptual model tested here is a network of social exchanges. By definition, the various characteristics are linked. Medical tourism may be perceived as beneficial by residents, if its development results in a fulfillment of economic, social or psychological needs. Tourism and development in general, may not be beneficial, but if residents perceive that medical tourism's benefits outweigh the costs, then they may be more likely to engage in an exchange.

Consequently, the results can be used to address planning and development issues. Lankford and Howard (1994) and Ap (1992a) noted that the level of influence in decision-making and control of the tourism development process may affect the outcomes of tourism and behavioral controls. Residents directly influences tourists' positive or negative experiences (Jurovski, 1994), which, in turn, influences their likelihood of returning to a destination and dissemination of recommendations (Carmichael, 2006). Understanding of resident's opinions; how medical tourism impacts QOL and favorable endorsement of medical tourism and tax paying behavior, will help tourism stakeholders predict behavioral outcomes, thus shaping more successful strategies for community development, tourist service delivery and economic performance (Guiry & Vequist, 2010).

### **Practical Implications**

As stated earlier in this dissertation, medical tourism is a rapidly expanding niche industry driven by the growing number of aging and affluent patients at rates that surpass the availability of quality healthcare resources. It has been estimated that the worldwide medical travel market is growing at a rate of 15-25% and in the next decade health and wellness travel is expected to grow to \$100 billion. With the great variation in the complexity, delivery, accreditation and overall quality of experience in medical facilities abroad and the increasing popularity of domestic health and wellness travel within the United States for consumers seeking alternative therapies and second opinions from qualified United States providers, it should be noted that more countries and medical providers recognize the opportunity and potential for new business in the U.S.; and Las Vegas is one of the first markets positioned to attract medical tourism to consumers.

From a practical standpoint, this dissertation will help create awareness of residents' reactions when introducing Las Vegas as a medical tourism destination with the intention of promoting it as a premier medical tourism destination in the United States and the world by 2020.

Initial research before undertaking the study discovered that several Las Vegas medical providers have already been engaged in promoting their services to travelers. It will become important for them to recognize and use the results of this dissertation; endorsement of medical tourism by the Las Vegas resident population, for competitive positioning.

Results and resident endorsement of medical tourism may also be included in government and tourism administrators strategic planning and marketing efforts, including Las Vegas' international air traffic capacity, the numerous medical conventions and the Affordable Care Act's focus on prevention and wellness literature, reports from Las Vegas Convention and Visitors Authority, the Las Vegas Global Economic Alliance, University of Nevada, Las Vegas (UNLV) and industry advocate Las Vegas HEAL.

Resident willingness to pay higher taxes in exchange for medical tourism gives state officials who have pledged to promote economic development in the medical industries information about potential return on investment for expenditures on incentives that will attract medical industry businesses to Las Vegas. Furthermore, state education official who plan to open an M.D. granting medical school at UNLV may benefit of knowledge about residents who are willing to pay higher taxes.

As medical providers are looking towards marketing to potential tourists results of this dissertation may serve to communicate and create awareness of how changes in their

healthcare service offerings affect residents, in terms of cost, availability, and quality.

Acknowledgement of the effect of medical traveler and resident relationships will also be important to advertise in order to support the growing demand for healthcare services in Las Vegas and the potential capacity issues to service large numbers of both residents and medical travelers, alike. Competition among residents and tourist could be a barrier to medical tourism's success, therefore, results of the dissertation may facilitate efforts to increase the number of local doctors, though, which could also improve medical tourism .

Another important practical aspect of this dissertation is that it provides a first-hand perspective of satisfaction with Las Vegas' existing healthcare resources. Las Vegas reputation as the Entertainment Capital of the World has led to skepticism regarding its medical credibility. In fact, Las Vegas may not appear credible in the health and wellness travel space and therefore may not be taken seriously when entering the market. For medical tourism to be successful in Las Vegas, new messaging will have to be created to attract health and wellness travelers. Las Vegas' brand image currently does not support anything regarding health or wellness, so knowledge of residents who are satisfied with existing healthcare attributes in Las Vegas will be important for understanding and developing positive healthcare reputation and destination brand images. The results of this dissertation are pro-active towards a targeted communication strategy identifying the areas with which residents are satisfied and in which Las Vegas has a potential to excel.

Too often, development planning in destinations is undertaken without thought given to reinserts or community quality of life. This dissertation contributes to an important strategic plan development, and is part of a community-wide initiatives over the past year that has involved more than 140 experts in the Las Vegas medical, wellness

, travel, regional economic development city and community planning industries. The process was designed to explore many questions associated with medical tourism in Las Vegas impacts on local communities and suggests that medical will, from resident's perspectives positively enhance quality life; both conditions (standards of living and community services) and living experiences (wellbeing) in Las Vegas.

### **Limitations**

Several limitations are identified that were encountered throughout the research process. The limitations however, are in of themselves, research opportunities that merit future investigation.

First, low response rate was one of the primary limitations of the study due to the time and budgetary restraints. Data collection of this research resulted in a total of 314 usable surveys and an overall response rate of 9%. This is relatively lower than other studies on resident attitudes appearing in the literature, which employ mail-survey methods for data collection.

A second and evident limitation of the study stems from the sample from which the data is derived. On one hand, the mean age of the sample of respondents was 51 years old, on the high end of Las Vegas Residents, however, the 45-54 years age group seems to the have greatest representation among healthcare service users. The sample may be skewed toward a slightly older age group, thus being not entirely representative of the full resident population.

In addition, because respondents were from the United States and the study was conducted within the context of a U.S. tourism destination and healthcare system, the results may not be necessarily generalizable worldwide.



The survey instrument, as well, holds limitations. The first limitation common to most surveys is that they measure the respondents' self-expressed intention, but not their actual behavior. Actual behaviors can be different from self-expressed intentions. Because of the exploratory nature of this study, the difference between behavior and intention does not pose much threat to the conclusion that residents would be willing to pay higher taxes and support medical tourism development. Medical tourism which is viewed positively with the impetus to provide improved economic and social conditions in a community and evoke positive attitudes in residents is also likely to generate positive actual behavior in the same direction.

This research extensively reviewed quality of life literature and residents attitude studies to retrieve indicators of quality of life affected by tourism. However, the ways of tourism influencing community quality of life may be showing a degree of context sensitive.

The survey was designed to elicit respondents feelings and sentiments regarding generalized medical tourism when they completed the questionnaire in order to avoid conflicting responses – that is, to ensure some responses were not affected by specific feelings about one type one healthcare service offering, included in medical tourism, over another. Similarly, satisfaction with existing healthcare in the community was measured broadly to avoid conflicting responses. To accomplish this goal, respondents were asked to answer questions based on the overall satisfaction with collective healthcare services. It is possible that responses were skewed toward the positive given that the respondents did not discern between individual services.

Additionally, the survey did not investigate residents' support for adding specific types of medical tourism services to the destination so the instrument was unable to examine how residents respond to changes in the healthcare system and support development of specific services (e.g. spa, dental, cosmetic, nutrition, fitness, etc.).

Furthermore, certain potential moderators were not captured, which may carry important practical implications. Theorized situational moderators may vary based on demographics or personal and situations factors such as a respondents' personal economic benefit, individual state of health, or frequency of use of a healthcare service included in the medical tourism resource at the time of survey. It is possible that healthcare service users had undue influence over the results of this study. The absence of distinguishing between responses from users vs. non-users of healthcare services means that comparisons of support for medical tourism and service healthcare service dependency were not made in this study and the model is therefore unable to explain how healthcare service utilization and satisfaction dimensions influence perceived impacts to community services and behavioral intentions

### **Future Research**

As an emerging sub-sector of the tourism industry, medical tourism remains an open field of study for researchers. Research in traveler behavior in medical tourism is also sparse, and there are many models of consumer behavior that may be adapted to lessen the gap. Extant research and theory in economics, subjective quality of life variables can be used to enhance the understanding of not only residents, but also tourist reaction and responses to medical tourism development in destinations.

A comparison of respondents, both travelers and residents, who have experienced medical tourism services and those who have never used medical tourism services, would also advance knowledge in the field.

This research's broad look at medical tourism destination development and relationship with quality of life and resident responses, permits for more detailed inquiry into specific medical tourism offerings and their relationship to the economy, community satisfaction and behavior. Additionally in future research, the perceptions of medical tourism's impacts to quality to life could be investigated with moderating factors, such as tourism resource utilization and demographic, personal and situational factors. Information pertaining to specific characteristics of the physical development of medical tourism and impacts on community may also apply to the medical tourism development support model, including facility development, building renovation, planning efficiency and neighborhood appearance.

The results indicated that economic dependency on tourism has somewhat less of an influence on residents perceptions of medical tourism impacts and Quality of Life, than originally hypothesized. This study measured support for tourism development in a community where tourism was already in place and a significant contributor to the economy, thus the underlying assumption of this relationship is that residents who already economically benefit from existing tourism may be likely to focus more on social benefits associated with additional tourism. Nevertheless, the economic benefits from medical tourism were found to influence resident behavior to a certain extent directly and indirectly. Whereas a myriad of effects from medical tourism may improve resident quality of life, it is suggested that future research should consider not only direct benefits

from medical tourism, but also indirect benefits. The possible measurement approach could be to collect resident evaluations of personal benefits such as health improvement, and personal economic gain.

The theorized structural model included a path between living experiences and behavioral response, which suggests that positive psychological associations in a destination play a critical factor involved in the overall tourism exchange. In future research, Social Exchange models should incorporate more experiential qualities and community atmospherics through a mediating positive physiological effect to investigate more subjective wellbeing drivers of behaviors. Information pertaining to specific subsectors of medical tourism and servicescape may also apply to influence on individual wellbeing, including satisfaction with experience, and atmospherics. In addition, models of consumer behavior patterns and preferences can be incorporated into medical tourism research, to help build knowledge that can shape a destination's development mission.

The effects of medical tourism services in private business-tourist transactions is also a potential channel for economic impact research. Further, applications of research in a medical tourism service provider environment provides a notable new realm into which researchers can extend current paradigms, as well as inform medical tourism facilitators and operators of avenues for improving healthcare service satisfaction.

There are a plethora of opportunities for investigating further specific aspects of the medical tourism destination development. With the cost of healthcare increasing and availability of insurance increasing, healthcare is quickly increasing, and thus the U.S. market for the health tourism is rapidly growing. The economic implications of these variables should also be further explored, as the cost of implementing certain healthcare

service factors may outweigh the financial gains from development. Compilation of empirical evidence to document the impact of medical tourism and tourism spending in destinations will enhance both academic and industry understanding of the relatively new field.

### **Summary**

By testing the social exchange theoretical model presented in Chapter 2, the results of this dissertation demonstrated a clear relationship between economic performance, overall community satisfaction, and attitudes towards medical tourism, medical tourism's impact on quality of life domains and behavioral responses. Despite the limitations outlined, this research establishes a foundational model from which several practical tourism planning implications have been derived and upon which many new channels for future research may be built.

APPENDIX A

IRB Approval Form



**Social/Behavioral IRB – Exempt Review  
Deemed Exempt**

**DATE:** October 14, 2013

**TO:** Dr. Seyhmus Baloglu, Hotel College

**FROM:** Office of Research Integrity – Human Subjects

**RE:** Notification of IRB Action

Protocol Title: Assessing Resident Support for Medical Tourism Development in Las Vegas  
Protocol # 1310-4582

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This memorandum is notification that the project referenced above has been reviewed as indicated in Federal regulatory statutes 45CFR46 and deemed exempt under 45 CFR 46.101(b)2.

**PLEASE NOTE:**

Upon Approval, the research team is responsible for conducting the research as stated in the exempt application reviewed by the ORI – HS and/or the IRB which shall include using the most recently submitted Informed Consent/Assent Forms (Information Sheet) and recruitment materials. The official versions of these forms are indicated by footer which contains the date exempted.

*Any* changes to the application may cause this project to require a different level of IRB review. Should any changes need to be made, please submit a **Modification Form**. When the above-referenced project has been completed, please submit a **Continuing Review/Progress Completion report** to notify ORI – HS of its closure.

If you have questions or require any assistance, please contact the Office of Research Integrity - Human Subjects at [IRB@unlv.edu](mailto:IRB@unlv.edu) or call 895-2794.

APPENDIX B

Informed Consent



EXEMPT RESEARCH STUDY  
INFORMATION SHEET

Department of Hospitality Administration

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**TITLE OF STUDY: Assessing Resident Support for Medical Tourism Development in Las Vegas**

**INVESTIGATOR(S) AND CONTACT PHONE NUMBER: Dr. Seyhmus Baloglu, Ph.D., William F. Harrah College of Hotel Administration, 702-895-3932**

**[seyhmus.baloglu@unlv.edu](mailto:seyhmus.baloglu@unlv.edu) Courtney S. Suess, Assoc. AIA, 702-370-9068**

**[suessc@unlv.nevada.edu](mailto:suessc@unlv.nevada.edu)**

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UNLV's Cannon Survey Center will verbally convey the following consent process during the telephone interview:

“Hi, my name is \_\_\_\_\_. I am calling from the Cannon Survey Center at the University of Nevada-Las Vegas. We are not selling anything, nor are we asking for donations. We also do not have your name, nor will we ask for your name. Your household has been selected to participate in a research study about tourism development in Clark County. May I speak with the man or the woman of the house who is at least 18 years of age? While you will not directly receive any benefits by participating in this study, the information will also be asked of hundreds of other people in Las Vegas and may be used to better understand the locals' attitudes towards tourism development. Your answers are important and vital to the success of this study. Results from the study may be used to provide information about the opinions of residents to government agencies and other groups that influence tourism development and policies.

Your participation is entirely voluntary and your responses will be kept completely confidential. This interview is easy to complete and takes approximately 20 minutes of your time. You can stop the interview at any time and may refuse to answer any question. Do you understand what I have said thus far? You are encouraged to ask questions about

this study at the beginning or any time during the research study. May we include your opinions in the study?"

This study includes only minimal risks. For questions regarding the rights of research subjects, any complaints or comments regarding the manner in which the study is being conducted, respondents may contact **the UNLV Office of Research Integrity – Human Subjects at 702-895-2794, toll free at 877-895-2794, or via email at [IRB@unlv.edu](mailto:IRB@unlv.edu)**



## APPENDIX C

### Survey Instrument

#### **OVERALL COMMUNITY WELLBEING**

**1. How would you rate Las Vegas as a desirable place to live?**

- Very undesirable
- Undesirable
- Neither undesirable nor desirable
- Desirable
- Very desirable

**2. To what extent do you find Las Vegas to be an enjoyable place to live?**

- Very unenjoyable
- Unenjoyable
- Neither unenjoyable or enjoyable
- Enjoyable
- Very Enjoyable

**3. When thinking about conditions in Las Vegas, are they getting worse/about the same/or getting better?**

- Much Worse
- Worse
- About the Same
- Better
- Much Better

**4. In the years to come do you believe that conditions in Las Vegas will be worse than today/about the same as today/ better than today?**

- Much Worse
- Worse
- About the Same
- Better
- Much Better

**5. Overall, how satisfied are you with the quality of life in Las Vegas?**

- Very Dissatisfied
- Dissatisfied
- Neutral
- Satisfied
- Very Satisfied

**SATISFACTION WITH HEALTHCARE**

**6. In general, how satisfied are you with the overall quality of healthcare available in Las Vegas?**

- Very Dissatisfied
- Dissatisfied
- Neutral
- Satisfied
- Very Satisfied

**7. How satisfied are you with the overall quality of healthcare you personally have received in Las Vegas?**

- Very Dissatisfied
- Dissatisfied
- Neutral
- Satisfied
- Very Satisfied

**8. How satisfied, would you say, most of your friends, neighbors and other family members living in the area are with the overall quality of healthcare available in Las Vegas?**

- Very Dissatisfied
- Dissatisfied
- Neutral
- Satisfied
- Very Satisfied

**9. How satisfied you are with the following healthcare services in Las Vegas?**

	Very Dissatisfied	Dissatisfied	Neutral	Satisfied	Very Satisfied
Public Health Services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Private/commercial health clubs and recreation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hospitals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Emergency Services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dental services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Spa and Wellness Services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rehabilitation Facilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Medical Specialties	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Healthcare Education	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Publicly funded recreation (social, cultural, sports/fitness)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**SUPPORT FOR MEDICAL TOURISM DEVELOPMENT**

**10. Please indicate how much you oppose or support the following types of development for tourism in Las Vegas:**

	Strongly Oppose	Oppose	Neutral	Support	Strongly Support
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Medical Tourism Services (e.g. required and elective procedures and treatments, cosmetic surgery, physical therapy, diagnostics, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Spas and Wellness Tourism Services (e.g. Spa treatments and Mental Health, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**ATTITUDES TOWARDS MEDICAL TOURISM**

**11. Please indicate how much you agree or disagree with the following statements about medical tourism development in Las Vegas:**

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
Medical tourism could be one of the most important industries for Las Vegas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Additional medical tourism would help Las Vegas grow in the right direction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Medical tourism industry could play a major economic role in Las Vegas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would be happy and proud to see tourists coming to see what Las Vegas has to offer for Medical services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I support Medical tourism having a vital role in Las Vegas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Medical holds great promise for Las Vegas' future	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The tourism organizations of Las Vegas' government	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

should do more to promote medical tourism					
I favor building new tourism facilities which will attract Medical tourists	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Las Vegas should plan and manage the growth of medical tourism	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**PERCEPTION OF MEDICAL TOURISM IMPACTS ON COMMUNITY**

**CONDITIONS AND LIVING EXPERIENCES**

**12. If the number of tourists coming to Las Vegas as a result of medical tourism increases, do you believe the following will improve or worsen for you?**

	Much Worse	Worse	About the Same	Better	Much Better
Employment opportunities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Local economy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Revenues from tourists for governments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The cost of goods and services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The cost of land and housing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Traffic congestion	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The crime rate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Community services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Neighborhood appearance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Image of Las Vegas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Relationship between residents/tourists	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Opportunities for recreation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Opportunities for healthcare services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Number of healthcare facilities/services residents can use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Quality of healthcare	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The cost of healthcare services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Availability of healthcare	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Desirability of living in Las Vegas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The quality of life in Las Vegas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Enjoyment of living in Las Vegas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**ECONOMIC PERFORMANCE OF MEDICAL TOURISM**

**13. Please indicate how much you agree or disagree with the following statements about the future of the economy in Las Vegas**

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
Medical tourism will help deal with current economic challenges facing Las Vegas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Medical tourism will help deal with future economic challenges facing Las Vegas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Medical tourism will help deal with unemployment in Las Vegas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**WILLINGNESS TO PAY TAXES**

**14. Please Indicate how much you agree or disagree with the following statements:**

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
I would be willing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

to pay higher taxes /assessments if it would bring more medical tourism development to Las Vegas					
I would be willing to pay higher taxes /assessments if medical tourism would bring more economic development to Las Vegas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**DEMOGRAPHICS**

**15. How long have you lived in the Las Vegas area:**

	Less than a year	1-3 Years	4-6 years	7-9 Years	10-12 years	13-15 years	More than 15 Years
Your Community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**16. Please indicate your gender**

- Male
- Female

**17. Are you of Hispanic or Latino background?**

- Yes
- No

**18. Please indicate the year you were born:**

**19. Please indicate your zip code:**

**20. Which of the following would you identify as your race?**

- White/Caucasian
- Black/ African/American
- Asian/ Pacific Islander
- American Indian or Alaskan Native
- Multiracial
- None of these

**21. Which of the following best describes your household?**

- Single adult living alone or with other single adults
- Single adult living with children or dependents
- Married couple living without children or dependents at home
- Married couple living with children or dependents at home

**22. What was the last level of school you completed?**

- Grade School
- High School
- Some College
- College
- Graduate School

**23. Which of the following best describes your employment situation?**

- Employed full-time
- Employed part-time
- Temporarily Laid off
- Retired
- Unemployed
- Student
- Homemaker

**24. Which of the following best represents your occupation?**



- Forestry
- Mining
- Utilities
- Construction
- Manufacturing
- Wholesale trade
- Retail trade
- Transportation or warehousing
- Information
- Finance or insurance
- Real estate, rental, leasing
- Professional, scientific, or technical services
- Management of companies, enterprises
- Admin, support, waste management, or remediation services
- Educational services
- Healthcare or social assistance
- Arts, entertainment or recreation
- Accommodation or food services
- Other

**25. Which of the following best represents your income?**

- Less than \$15,000
- \$15,000- less than \$30,000
- \$30,000- less than \$45,000
- \$45,000- less than \$60,000
- \$60,000- less than \$75,000
- \$75,000- less than \$90,000
- More than \$90,000

## APPENDIX D

### Miscellaneous Tables

Table D1

*Structure of Research Scales*

Factor	Dimension	Indicator	Measurement	Source
Resident characteristics	Demographics	Sex, age, education, employment, and income, ethnicity, occupation		Sheldon & Var, 1984; Um & Crompton, 1987
	Length of residence	Years lived in the community		
Willingness to pay taxes	Personal investment in medical tourism development	I would be willing to pay higher taxes/ assessments if it would bring more medical tourism development to Las Vegas.  I would be willing to pay higher taxes/ assessments if medical tourism would bring more economic development to Las Vegas.	5-point Likert-type scale (1= <i>strongly disagree</i> ; 5= <i>strongly agree</i> )	Gursoy & Rutherford, 2004
Economic performance	Perceived economic performance of medical tourism	Medical tourism will help deal with Las Vegas's current economic challenges.  Medical tourism will help deal with Las Vegas's future economic challenges.  Medical tourism will help deal with unemployment in Las Vegas.	5-point Likert-type scale (1= <i>strongly disagree</i> ; 5= <i>strongly agree</i> )	Nunkoo & Ramkisson, 2012b; Wong et al., 2011

Table D1 (continued)

Factor	Dimension	Indicator	Measurement	Source
Overall community satisfaction	Wellbeing	How would you rate Las Vegas as a desirable place to live?	5-point Likert-type scale (1= <i>very undesirable</i> ; 5= <i>very desirable</i> )	Rahtz & Sirgy, 2000
		To what extent do you enjoy living in Las Vegas?	5-point Likert-type scale (1= <i>very unenjoyable</i> ; 5= <i>very enjoyable</i> )	
		When thinking about conditions in Las Vegas, are they getting worse, staying about the same, or getting better?	5-point Likert-type scale (1= <i>much worse</i> ; 5= <i>much better</i> )	
		Overall, how satisfied are you with the quality of life in this community?	5-point Likert-type scale (1= <i>very unsatisfied</i> ; 5= <i>very satisfied</i> )	
Impacts of medical tourism on quality of life	Community conditions	Traffic congestion	5-point Likert-type scale (1= <i>much worse</i> ; 5= <i>much better</i> )	Andereck & Nyaupane, 2001a; Jurowski, 1994; Gursoy & Rutherford, 2004; Sirgy & Cornwell, 2001
		Litter		
		Cost of land and housing		
		Crime rate		
		Cost of goods and services		
		Relationship between residents and tourists		
		Community services		
		Local economy		
Revenue from tourists for governments				

Table D1 (continued)

Factor	Dimension	Indicator	Measurement	Source
		Employment opportunities		
		Opportunities for recreation		
		Opportunities for healthcare services		
		Quality of healthcare		
		Availability of healthcare		
		Overall image of Las Vegas		
		Cost of healthcare services		
	Community living experiences	Enjoyment of living in Las Vegas		Epley & Menon 2008; Yu, 2011
		Desirability of living in Las Vegas		
		Overall quality of life in Las Vegas		
Support for tourism	Medical tourism	How much do you support or oppose medical tourism development in this community?	5-point Likert-type scale (1= <i>strongly oppose</i> ; 5= <i>strongly support</i> )	Jurowski, 1994; Gursoy & Rutherford, 2004
	Wellness tourism	How much do you support or oppose wellness tourism development in this community?		
Attitudes toward tourism	Medical tourism	Medical tourism could be one of the most important industries for Las Vegas.  Additional medical tourism would help Las Vegas grow in the right direction.	5-point Likert-type scale (1= <i>strongly disagree</i> ; 5= <i>strongly agree</i> )	McGehee & Andereck, 2004

Table D1 (continued)

Factor	Dimension	Indicator	Measurement	Source
		The medical tourism industry could play a major economic role in Las Vegas.		
		I would be happy and proud to see medical tourists coming to see what Las Vegas has to offer.		
		I support medical tourism having a vital role in Las Vegas.		
		Medical tourism holds great promise for Las Vegas's future.		
		The tourism organizations of Las Vegas and government should do more to promote medical tourism.		
		I favor building new medical tourism facilities that will attract tourists.		
		Las Vegas should plan and manage the growth of medical tourism.		
Satisfaction with community attributes	Healthcare services	In general, how satisfied are you with the overall quality of healthcare available in Las Vegas?  How satisfied are you with the overall quality of healthcare that you personally have received in Las Vegas?	5-point Likert-type scale (1= <i>very dissatisfied</i> ; 5= <i>very satisfied</i> )	Ko & Stewart, 2002; Rahtz & Sirgy, 2000;

Table D1 (continued)

Factor	Dimension	Indicator	Measurement	Source
		<p>How satisfied would you say most of your friends, neighbors, and other family members living in the area are with the overall quality of healthcare available in Las Vegas?</p>		
		<p>How satisfied are you with the following services in Las Vegas?</p>		
		<ul style="list-style-type: none"> <li>• Hospitals</li> </ul>		
		<ul style="list-style-type: none"> <li>• Medical doctors</li> </ul>		
		<ul style="list-style-type: none"> <li>• Emergency services</li> </ul>		
		<ul style="list-style-type: none"> <li>• Spa and wellness services</li> </ul>		
		<ul style="list-style-type: none"> <li>• Dental services</li> </ul>		
		<ul style="list-style-type: none"> <li>• Medical specialties</li> </ul>		
		<ul style="list-style-type: none"> <li>• Public health services</li> </ul>		

Table D2

*Demographic Profile of Respondents*

Demographic		<i>f</i>	% ( <i>n</i> = 291)
Gender	Male	129	44.33
	Female	162	55.67
Age (years)	Older than 75	18	6.20
	60–75	81	27.80
	45–59	56	19.20
	30–44	82	28.20
	18–29	35	12.00
	Refused to respond	11	3.80
Household	Single adult living alone or with other single adult	94	32.30
	Single adult living with children	37	12.71
	Married couple living without children	65	22.34
	Married couple living with children	88	30.24
	Refused to respond	7	2.41
Length of residence	Less than a year	12	4.12
	1-3 years	36	12.37
	4-6 years	29	9.97
	7-9 years	25	8.59
	9-12 years	27	9.28
	More than 12 years	135	53.61
	Refused to respond	27	9.28
Employment status	Employed full-time	110	40.29
	Employed part-time	28	10.26
	Unemployed	20	7.33
	Temporarily laid off	3	1.10
	Retired	96	35.16
	Other	10	3.66
	Refused to respond	6	2.00

Table D2 (continued)

Demographic		<i>f</i>	% ( <i>n</i> = 291)
Occupation	Utilities	1	0.73
	Construction	5	3.65
	Manufacturing	2	1.46
	Transportation/warehousing	4	2.92
	Information	1	0.73
	Finance or insurance	4	2.92
	Real estate, rental, leasing	6	4.38
	Professional, scientific, or technical	28	20.44
	Management of companies, enterprises	3	2.19
	Administration, support, waste management	5	3.65
	Educational services	15	10.95
	Healthcare, social assistance	17	12.41
	Arts, entertainment, or recreation	8	5.84
	Accommodation or food services	12	8.76
	Other	25	18.25
	Refused to respond	1	0.73
Income (yearly)	Less than \$15,000	46	15.81
	\$15,000– less than \$30,000	39	13.40
	\$30,000—less than \$45,000	52	17.87
	\$45,000—less than \$60,000	28	9.62
	\$60,000—less than \$75,000	22	7.56
	\$75,000—less than \$90,000	14	4.81
	\$90,000 or more	47	16.15
	Refused to respond	39	13.40
	Don't know	4	1.37
Education	Grade school	4	1.38
	High school	76	26.30
	Some college	96	33.22
	College	72	24.91



Table D2 (continued)

Demographic		<i>f</i>	% ( <i>n</i> = 291)
	Graduate school	41	14.19
	Refused to respond	0	0.00
Ethnicity	White/Caucasian	175	60.14
	Black/African American	34	11.68
	Asian/Pacific Islander	25	8.59
	Native American/Alaskan Native	2	0.69
	Multiracial	22	7.56
	None of these	30	10.31
	Refused to respond	3	1.030
Hispanic background	Yes	48	9.97
	No	243	87.71
Willingness to pay higher taxes for medical tourism development	Strongly agree	55	18.90
	Agree	104	35.75
	Neither agree nor disagree	47	16.15
	Disagree	79	26.12
	Strongly disagree	9	3.09

Table D3

*Means and Standard Deviations for Survey Measures*

Topic	Survey item	<i>M</i>	<i>SD</i>	
Perceived impacts of medical tourism				
• Community conditions	Employment opportunities	3.65	.84	
	Local economy	3.60	.75	
	Revenues from tourists for governments	3.75	.76	
	The cost of goods and services	3.32	.80	
	The cost of land and housing	3.32	.93	
	Traffic congestion	2.42	.82	
	The crime rate	2.85	.76	
	Community services	3.45	.73	
	Neighborhood appearance	3.40	.72	
	Image of Las Vegas	3.77	.74	
	Relationship between residents/tourists	3.34	.71	
	Opportunities for recreation	3.81	.76	
	Opportunities for healthcare services	3.80	.73	
	Number of healthcare facilities residents can use	3.81	.71	
	Quality of healthcare	3.70	.76	
	The cost of healthcare services	3.24	.88	
	The availability of healthcare	3.60	.80	
	• Community living experiences	Desirability of living in Las Vegas	3.64	.84
		The quality of life in Las Vegas	3.62	.78
		Enjoyment of living in Las Vegas	3.59	.75
Willingness to pay taxes	I would be willing to pay higher taxes/assessments if it would bring more medical tourism development to Las Vegas.	3.20	1.10	
Support for tourism development	How much do you support or oppose medical tourism development in this community?	3.65	.81	
Overall community satisfaction	How would you rate Las Vegas as a desirable place to live?	3.85	.99	
	To what extent do you enjoy living in Las Vegas?	4.09	.87	
	When thinking about conditions in Las Vegas,	3.09	.92	

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	are they getting worse/about the same/or getting better?		
	In the years to come do you think conditions in Las Vegas, will be getting worse/about the same/or getting better?	3.34	.90
	Overall, how satisfied are you with the quality of life in Las Vegas?	3.90	.97
Satisfaction with healthcare	In general, how satisfied are you with the overall quality of healthcare available in Las Vegas?	3.29	1.22
	How satisfied are you with the overall quality of healthcare that you personally have received in Las Vegas?	3.70	1.11
	How satisfied, would you say, most of your friends, neighbors, and other family members living in the area are with the overall quality of healthcare available in Las Vegas?	3.13	1.10
Attitudes towards medical tourism	Medical tourism could be one of the most important industries for Las Vegas.	3.49	.95
	Additional Medical tourism would help Las Vegas grow in the right direction.	3.70	.83
	The medical tourism industry could play a major economic role in Las Vegas.	3.69	.88
	I would be happy and proud to see medical tourists coming to see what Las Vegas has to offer.	3.78	.84
	I support medical tourism having a vital role in Las Vegas.	3.81	.81
	Medical tourism holds great promise for Las Vegas's future.	3.63	.85
	The tourism organizations of Las Vegas and government should do more to promote medical tourism.	3.57	.86
	I favor building new medical tourism facilities which will attract tourists.	3.61	.86
	Las Vegas should plan and manage the growth of medical tourism.	3.66	.84
Economic performance	Medical tourism will help deal with Las Vegas's current economic challenges.	3.50	.88
	Medical tourism will help deal with Las Vegas's future economic challenges.	3.64	.83
	Medical tourism will help deal with unemployment in Las Vegas.	3.72	.86

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Table D4

*Confirmatory Factor Analysis*

Constructs and indicators	Loadings <sup>a</sup>	Indicator reliability	Error variance <sup>b</sup>
Economic performance ( $\alpha = .81$ ; $\rho = .82$ ; AVE=.61) <sup>c</sup>			
• Medical tourism will help deal with current economic challenges facing Las Vegas.	.74	.55	.45
• Medical tourism will help deal with future economic challenges facing Las Vegas.	.89	.79	.21
• Medical tourism will help deal with unemployment in Las Vegas.	.69	.48	.52
Attitudes toward medical tourism ( $\alpha = .90$ ; $\rho = .87$ ; AVE=.57)			
• Additional medical tourism would help Las Vegas grow in the right direction.	.73	.53	.47
• I would be happy and proud to see medical tourists coming to see what Las Vegas has to offer.	.69	.48	.52
• The tourism organizations of Las Vegas and government should do more to promote medical tourism.	.78	.61	.39
• I favor building new medical tourism facilities which will attract tourists.	.81	.66	.34
• Las Vegas should plan and manage the growth of medical tourism.	.74	.55	.45
Overall community satisfaction ( $\alpha = .80$ ; $\rho = .80$ ; AVE=.50)			
• How would you rate Las Vegas as a desirable place to live?	.76	.58	.42
• To what extent do you find Las Vegas to be an enjoyable place to live?	.81	.66	.34
• In the years to come do you believe that conditions in Las Vegas will be worse than today/about the same as today/better than today?	.51	.26	.74
• Overall, how satisfied are you with the quality of life in Las Vegas?	.78	.47	.53

Table D4 (continued)

Constructs and indicators	Loadings <sup>a</sup>	Indicator reliability	Error variance <sup>b</sup>
Satisfaction with healthcare ( $\alpha = .80$ ; $\rho = .80$ ; AVE=.58)			
• In general, how satisfied are you with the overall quality of healthcare available in Las Vegas?	.86	.74	.26
• How satisfied are you with the overall quality of healthcare you personally have received in Las Vegas?	.76	.58	.42
• How satisfied, would you say, most of your friends, neighbors and other family members living in the area are with the overall quality of healthcare available in Las Vegas?	.64	.41	.59
Perceived improvements to living standards ( $\alpha = .82$ ; $\rho = .83$ ; AVE=.48)			
• Employment opportunities	.69	.48	.52
• Local economy	.81	.66	.34
• Revenues from tourists for governments	.67	.45	.55
• The cost of goods and services	.61	.37	.63
• The cost of land and housing	.51	.26	.74
• Neighborhood Appearance	.68	.46	.54
Perceived improvements to community services ( $\alpha = .87$ ; $\rho = .88$ ; AVE=.56)			
• Community services	.68	.46	.54
• Opportunities for recreation	.82	.67	.33
• Opportunities for healthcare services	.80	.64	.36
• Quality of healthcare	.80	.64	.36
• Number of healthcare facilities residents can use	.70	.49	.51
• The availability of healthcare	.66	.44	.56
Perceived improvements to living experiences ( $\alpha = .88$ ; $\rho = .83$ ; AVE=.58)			
• Image of Las Vegas	.66	.44	.56
• Relationship between residents/tourists	.60	.36	.64
• The desirability of living in Las Vegas	.92	.85	.25
• The quality of life in Las Vegas	.81	.66	.34
• The enjoyment of living in Las Vegas	.82	.67	.33

*Note.* <sup>a</sup> Entries are standardized values; all statistically significant ( $p < .01$ ). <sup>b</sup> Error variance entries are standardized. <sup>c</sup>  $\alpha$  = Cronbach's alpha of reliability;  $\rho$  = composite construct reliability; AVE = amount of variance extracted. The average variance estimates (AVEs) ranged between 0.48 and 0.61.

Table D5

*Structural Equation Model Relationships: Hypothesized Model*

Path	Path coefficient <sup>a</sup>	<i>p</i> > <i>z</i>
Economic performance of medical tourism → Perceived improvements from medical tourism to standards of living (H7c1)	.65(.05)	.00**
Overall community satisfaction → Perceived improvements from medical tourism to standards of living (H4a)	.15(.06)	.00**
Economic performance of medical tourism → Perceived improvements from medical tourism to community services (H7c2)	.74(.04)	.00**
Overall community satisfaction → Perceived improvements from medical tourism to community services (H4b)	.08(.05)	.00**
Perceived improvements from medical tourism to standards of living → Willingness to pay higher taxes (H3a1)	.13(.10)	.34 <sup>ns</sup>
Perceived improvements from medical tourism to community services → Willingness to pay higher taxes (H3a2)	.10(.11)	.52 <sup>ns</sup>
Perceived improvements from medical tourism to living experiences → Willingness to pay higher taxes (H3b)	.02(.08)	.89 <sup>ns</sup>
Economic performance of medical tourism → Willingness to pay higher taxes (H7b)	.09(.15)	.55 <sup>ns</sup>
Attitudes toward medical tourism → Willingness to pay higher taxes (H7b)	.23(.10)	.05*
Perceived improvements from medical tourism to standards of living → Support for medical tourism development (H2a)	.10(.08)	.48 <sup>ns</sup>
Perceived improvements from medical tourism to community services → Support for medical tourism development (H2a)	.25(.09)	.13 <sup>ns</sup>
Perceived improvements from medical tourism to living experiences → Support for medical tourism development (H2b)	.14(.10)	.34 <sup>ns</sup>
Economic performance of medical tourism → Support for medical tourism development (H7a)	.24(.09)	.14 <sup>ns</sup>
Overall community satisfaction → Support for medical tourism development (H4d)	.01(.07)	.88 <sup>ns</sup>
Satisfaction with healthcare → Support for medical tourism development (H5)	.04(.07)	.52 <sup>ns</sup>
Attitudes toward medical tourism → Support for medical tourism development (H6a)	.62(.08)	.00**

Table D5 (continued)

Path	Path coefficient <sup>a</sup>	<i>p</i> > <i>z</i>
Perceived improvements from medical tourism to standards of living → Perceived improvements from medical tourism to living experiences (H1a1)	.27(.07)	.00**
Perceived improvements from medical tourism to community services → Perceived improvements from medical tourism to living experiences (H1a2)	.40(.09)	.00**
Overall community satisfaction → Perceived improvements from medical tourism to living experiences (H4c)	.20(.04)	.00**
Attitudes toward medical tourism → Perceived improvements from medical tourism to living experiences (H6c)	.23(.06)	.00**

*Note.* <sup>a</sup> Entries are standardized estimates (standard errors). \* *p* < .05; \*\* *p* < .01; <sup>ns</sup> *p* > .05

Table D6

*Structural Equation Model Relationships: Re-specified Model*

Path	Path coefficient <sup>a</sup>	$p > z$
Economic performance of medical tourism → Perceived improvements from medical tourism to standards of living (H7c1)	.28(.08)	.00**
Overall community satisfaction → Perceived improvements from medical tourism to standards of living (H4a)	.14(.06)	.00**
Attitudes toward medical tourism → Perceived improvements from medical tourism to standards of living (added path)	.40(.06)	.00**
Economic performance of medical tourism → Perceived improvements from medical tourism to community services (H7c2)	.58(.05)	.00**
Overall community satisfaction → Perceived improvements from medical tourism to community services (H4b)	.07(.06)	.15 <sup>ns</sup>
Attitudes toward medical tourism → Perceived improvements from medical tourism to community services (added path)	.17(.10)	.05*
Perceived improvements from medical tourism to standards of living → Willingness to pay higher taxes (H3a1)	.12(.08)	.40 <sup>ns</sup>
Perceived improvements from medical tourism to community services → Willingness to pay higher taxes (H3a2)	.10(.09)	.14 <sup>ns</sup>
Perceived improvements from medical tourism to living experiences → Willingness to pay higher taxes (H3b)	.02(.10)	.40 <sup>ns</sup>
Economic performance of medical tourism → Willingness to pay higher taxes (H7b)	.09(.10)	.14 <sup>ns</sup>
Attitudes toward medical tourism → Willingness to pay higher taxes (H6b)	.23(.10)	.05*
Perceived improvements from medical tourism to standards of living → Support for medical tourism development (H2a1)	.18(.08)	.24 <sup>ns</sup>
Perceived improvements from medical tourism to community services → Support for medical tourism development (H2a2)	.29(.12)	.11 <sup>ns</sup>
Perceived improvements from medical tourism to living experiences → Support for medical tourism development (H2b)	.15(.11)	.31 <sup>ns</sup>



Table D6 (continued)

Path	Path coefficient <sup>a</sup>	$p > z$
Economic performance of medical tourism → Support for medical tourism development (H7a)	.22(.09)	.14 <sup>ns</sup>
Overall Community Satisfaction → Support for medical tourism development (H4d)	.03(.08)	.64 <sup>ns</sup>
Satisfaction with healthcare → Support for medical tourism development (H5)	.05(.06)	.88 <sup>ns</sup>
Attitudes toward medical tourism → Support for medical tourism development (H6a)	.63(.13)	.00**
Perceived improvements from medical tourism to standards of living → Perceived improvements from medical tourism to living experiences (H1a1)	.26(.09)	.00**
Perceived improvements from medical tourism to community services → Perceived improvements from medical tourism to living experiences (H1a2)	.40(.08)	.00**
Overall community satisfaction → Perceived improvements from medical tourism to living experiences (H4c)	.19(.04)	.00**
Attitudes toward medical tourism → Perceived improvements from medical tourism to living experiences (H6c)	.21(.06)	.00**

Note. <sup>a</sup> Entries are standardized estimates (standard errors). \* =  $p < .05$ ; \*\* =  $p < .01$ ; <sup>ns</sup> =  $p > .05$ .

Table D7

*Summary of the Results of Hypotheses Testing*

Hypothesis	Statement	Result
Hypothesis 7c1	Economic performance of medical tourism will positively influence perceived improvements from medical tourism to standards of living.	Supported
Hypothesis 4a	Overall community satisfaction will positively influence perceived improvements from medical tourism to standards of living.	Supported
Hypothesis (added)	Attitudes toward medical tourism will positively influence perceived improvements from medical tourism to standards of living.	Supported
Hypothesis 7c2	Economic performance of medical tourism will positively influence perceived improvements from medical tourism to community services.	Supported
Hypothesis H4b	Overall community satisfaction will positively influence perceived improvements from medical tourism to community services.	Not supported
Hypothesis (added)	Attitudes toward medical tourism will positively influence perceived improvements from medical tourism to community services.	Supported
Hypothesis H3a1	Perceived improvements from medical tourism to standards of living will positively influence willingness to pay higher taxes.	Not supported
Hypothesis H3a2	Perceived improvements from medical tourism to community services will positively influence willingness to pay higher taxes.	Not supported
Hypothesis H3b	Perceived improvements from medical tourism to living experiences will positively influence willingness to pay higher taxes.	Not supported
Hypothesis H7b	Economic performance of medical tourism will positively influence willingness to pay higher taxes.	Not supported
Hypothesis H6b	Attitudes toward medical tourism will positively influence willingness to pay higher taxes.	Supported
Hypothesis H2a1	Perceived improvements from medical tourism to standards of living will positively influence support for medical tourism development.	Not supported
Hypothesis H2a2	Perceived improvements from medical tourism to community services will positively influence support for medical tourism development.	Not supported
Hypothesis H2b	Perceived improvements from medical tourism to living experiences will positively influence support for medical tourism development.	Not supported

Table D7 (continued)

Hypothesis	Statement	Result
Hypothesis H7a	Economic performance of medical tourism will positively influence support for medical tourism development.	Not supported
Hypothesis H4d	Overall community satisfaction will positively support for medical tourism development.	Not supported
Hypothesis H5	Satisfaction with healthcare will positively influence support for medical tourism development.	Not supported
Hypothesis H6a	Attitudes toward medical tourism will positively support for medical tourism development.	Supported
Hypothesis H1a2	Perceived improvements from medical tourism to community services will positively influence perceived improvements from medical tourism to living experiences.	Supported
Hypothesis H4c	Overall community satisfaction will positively influence perceived improvements from medical tourism to living experiences.	Supported
Hypothesis H6c	Attitudes toward medical tourism will positively influence perceived improvements from medical tourism to living experiences.	Supported

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