Do licensed nurse tour leaders motivate senior travelers to pay more for participating in guided package tours?

Abstract

The purposes of this research were to examine the travel constraints for seniors and the price sensitivity to the new service of group package tour with a licensed nurse tour leader. Both qualitative and quantitative methodologies were used. Four focus groups interviews, a pre-test, and a formal survey were conducted. A total of 503 useful questionnaires were collected. Exploratory factor analysis and confirmatory factor analysis were adopted for analyzing seniors' group package travel constraints. Three factors of intrapersonal constraint, two factors of interpersonal constraint, and 5 factors of structural constraint were identified. A particular finding, also the contribution, was the factor of "poor services of travel agency" which was different from previous study regarding individual travel. In addition to analysis of travel constraints, PSM technique was also conducted. The four key indicators: indifference price, optimal price, price stress range, and acceptable price range were identified. The lowest of acceptable price of the seniors were higher than the lowest market price. The recommendations for future research and practices were provided.

Keywords: travel constraint, price sensitivity, PSM, senior traveler, group package tour

年長的遊客是否願意多付一點費用參加有護理執照的領隊所帶的國外旅遊團

摘要

本研究之目的爲調查老人之旅遊限制與老人對參加有護理執照的領隊所帶的國外旅遊團之價格彈性，針對此研究所採用之研究方法含括質性與量化研究方法，其中包括四次焦點訪談、一次前測與一次正式問卷調查，最後共收集503份有效問卷。資料分析時共使用探索性因素分析與驗證性分析二種統計方法，分析後獲得三個個人阻礙因素、二個人際阻礙與五個結構阻礙；研究結果發現一特殊因素:不良旅行社之服務，此亦是一項新的研究發現。此外，本研究亦採用了PSM方法衡量老人對參加有護理執照的領隊所帶的國外旅遊團之價格彈性，共獲得四項指標：無差異價格、理想價格、壓力價格區間與可接受價格區間，另一項結果則顯示老人們最低可接受之價格比市場之最低價還高。最後，本研究亦提供了對未來研究與實務之建議。

關鍵詞：旅遊限制，價格彈性，PSM，老人遊客，團體旅遊

Introduction

The objectives of social tourism are defined to make tourist leisure accessible to the majority, including youth, families and elderly people, by providing an exceptional economic opportunity. It addresses that each individual has the right to rest and to engage in leisure time. The concept of social tourism has been developed as an important means to help those who have limited ability to get pleasure from leisure activities. Along with the development of transportation technologies, the increase of free leisure time, and the disposable income, presently people have more chances to participate in leisure or travel activities. Senior population has been considered a potential market niche for many leisure/travel suppliers due to their characteristics. Certainly, the availability and accessibility of vacations at reasonable, affordable prices need to be concerned. Cook, Yale, and Marqua (2010) state that due to the industrialized world' population changing, a large and growing segment of tourism consumers is mature travelers and it is significant to understand the enormous size of this market. It is estimated that the mature travelers spend 30% more than younger travelers and account for 80% of all commercial vacation travel.

Senior people have more time and flexibility to travel and additionally they will improve their quality of life through traveling (Batra, 2009). However they have many substantial constraints for traveling. Seniors' travel constraints have been studied for a long time. However the constraints are still inconsistent (Bazey, 1992; Hsu & Kang, 2009; Wu & Chen, 2004; McGuire, 1984; Fleischer & Pizam, 2002; Nimrod, 2008). The previous seniors' travel constraints are mainly studied through item-based approach. Within the items there is not any theoretical connection. In regard to this, Hung and Petrick (2010) suggest that in order to be phenomenon systematic, studying travel constraints can take the advantages of the leisure constraints model created by Crawford and Godbey (1987). Thus, a study to reexamine the seniors' travel constraints using leisure constraints model is necessary.

Of many constraints or barriers, two tourism constraints are often cited which are physical and financial problems (Huang &Tsai, 2003; Fleischer & Pizam, 2002; Feischer & Seiler, 2002; Jang & Wu, 2006; Wu & Chen, 2004). These two constraints are also the most influential factors on the participation of the international group package tour for Taiwanese seniors (Wu & Chen, 2004).

Physical ability is an important determinant for seniors to participate in traveling, especially long-day overseas traveling. Hunter-Jones and Balckburn (2007) state that

seniors are likely experience chronic illness, such as arthritis, diabetes, and heart disease than younger adults and a change in environment might pose a threat to well-established coping mechanism. A research about the illness and injury of a premium seniors' tour to Indochina found that nineteen (82%) travelers sought medical advice at least once for a total of 35 consultations during a 18-day trip (Shaw & Leggat, 2009) and this result also implies that most seniors suffer health problem during the trip. Therefore, taking care of the health of the seniors during the trip becomes an important issue.

Based on the travel/hospitality industry market, many suppliers believe that senior travelers have more disposable income and tend to purchase more when taking a tour. For example, the age group is most likely to take cruise vacations and appreciate excellent foods and better accommodations. However, they also can be price sensitive due to their limited source of income and constraints of personal thought. For example, many Chinese parents will rather save the money to their descendants than spending it for themselves. One benefits sought of participating in package tours is convenient and cheaper than individual tours. Based on Lin' s (1998) study, they reveal that in selecting a group tour, the travel agencies consider that consumers are more concerned about price, followed by itinerary, hotel rooms, the service of tour leaders and local guides. The research indicates that senior travels are very concerned for their safety while they travel and more likely to purchase package tours (Cook et al., 2010) which indeed provide escorting service for personal safety and discounted price.

The guided package tour is one of the most popular travel modes in Asia, however its service does not solve the health problem of the senior travelers during the trip. The Asian and Chinese tourists usually take the guided package tour (Wang, Hsieh, & Chen, 2002; Wang, Hsieh, Yeh, & Tsai, 2004; Wang, Hsieh, Chou, & Lin, 2007) or the all inclusive package tour for international trips in comparing to Western tourists who prefer to arrange travel activities by themselves (Hooper, 1995; Wong & Lau, 2001). According to the Tourism Bureau (2010), 8.1 million Taiwanese tourists traveled abroad by 2009 and for sightseeing purposes, almost half of the tourists participated in group package tour (Wang, Jao, Chang, & Chung, 2010). Huang and Tsai (2003) have confirmed that Taiwanese senior travelers prefer all-inclusive package tour. Despite these weaknesses, guided package tours are popular for certain market segments and especially for tourists who are advanced in age, or lack language skills, or travel alone, and for first time travelers (Mancini, 1996).

In a guided package tour, the travel agency assigns a tour leader to accompany the tourists. The performance of the tour leader has a significant influence on the perceptions of travel service quality (Wang, Hsieh, & Chen, 2002; Wang et al., 2004; Wang, et al., 2010). However, the current tour leaders in Taiwan do not have a professional medical or nursing training. They are not capable of dealing well with the accidental injuries or illness immediately during the trip. The quality service of current tour leader seems to be unable to satisfy the needs of the senior travelers in regard to their health issue. Hence a tour accompanied by a certified nurse tour leader may reduce their concerns about the physical disabilities or others. However, the costs of providing extra service will increase the price of a guided package tour which will have a negative impact on price competition in the current market. The market segmentation has been considered good marketing strategies for customer satisfaction and service quality. Providing a certified nurse tour leader can be value-added for package tours to those who need medical advices when taking a long trips to overseas. The purpose of the study is to understand whether a tour leader with a nurse license can motivate senior travelers to participate in a guided package tour with an increased price? The purposes of this study were:

1. To exam the overseas travel constraints for senior travelers
2. To exam the relationships between the services of the licensed nurse tour leader and the pricing of an outbound package tour.

Literature Reviews

Perspective travelers of aging population

Aging of the population has been an important global phenomenon. According to Rand (2001), the number of people who are 65 years and older, increased more than threefold, from approximately 130 million in 1950 (about 4 percent of global population) to 419 million (6.9 percent) in the year 2000. In addition, the number of aging population is currently increasing by 8 million per year. Dann (2001) states that approximately 10% of the world's population of 6 billion was aged 60 plus in 1999 and this percentage would have doubled by 2050. This worldwide phenomenon reflects the large demographic shift in different continents and countries, such as North America, Europe, and Asia. The older population with the age of 65+ in US will reach 54 million in 2020, and will double by 2050, comprising one-fifth of the U.S. population (Jang & Ham, 2009).

Not only in North America and Europe, but also the phenomenon exists in Asia. The proportion of those aged 65 years and over is also expected to growth more than triple by 2050 (Kinsella & Velkoff, 2001). One of the Asian countries, Taiwan (the Republic of China) is also in the trend. The population over 50 years old represents about 25.6 percent of the Taiwanese in 2006, with the population of 5.59 millions (Ministry of Interior, 2010). In addition, the population with the age over 65 has increased from 8.5 % of the whole population in 1999 up to 10.4 % in 2008.

With such a large demographic shift, the senior market has been acknowledged as one of the most important and attractive consumer segments (Greenberg, 1999; Shoemaker, 2000; Wuest, Emenheiser, & Tas, 2001; Jang & Wu, 2006). It is believed that the senior consumers will soon be one of the largest prospective segments for the market of the hospitality and travel industries (Huang & Tsai, 2003). They are the most affluent group with more disposable income and time flexibility (Bai, Jang, Cai, & O'Leary, 2001; Faranda & Schmidt, 1999; Marvel, 1999; Jang & Wu, 2006; Jang & Ham, 2009) in comparing with other segments. With a good physical shape, their lifestyle can be very active. The baby boomer generation, those who were born during the post-World War II will retire, was the healthiest, and wealthiest generation to that time in the USA generated the highest volume of travel, accounting for 44% of trips (Jang & Ham, 2009). These senior consumers spent $2.28 trillion, accounting for 52% of the total market share in the United States (Nimrod, 2008). In contrast, Taiwanese seniors who are 60 years and older also generate 11 percent of total travelers in 2001 (Jang & Wu, 2006).

Most baby boomers/retirees are likely to be interested in vacations that include a big amount of health food, exercise, intellectual stimulation, and the outdoor activities. They will want to travel with their relatives. Vacations have become family reunion time and all-suite hotels are well suited to meet the needs of extended family getaways. Many retirees can be single in their golden years, and are unlikely to travel alone. Package tours provide companionship for single travels to fulfill their social needs. For example, Savvy tour companies will arrange travel companion matchmaking services in order that single travelers do not forego travel for lack of a travel companion (Cook et. al., 2010). Because they are health conscious, a large group tour should be avoided since it tends to have less cohesion and attentive service. Hence, providing the following benefits can succeed in retaining and attracting senior customers:

- Discounted prices
- Attentive service (i.e., small group size)

- Safety/security information (i.e., weather; itinerary)
- Medical advice (i.e., insurance service; facilities)

The nature of guided (escorted) package tours

The package tour is also referred to as an inclusive tour which is composed of a series of integrated travel services including transport, accommodation, ground arrangements, catering, attractions, and other ancillary services. A tour operator puts all the travel services together and sells them at an inclusive price either directly or indirectly to consumers. This product in general composes some 'hard' tangible elements with a high proportion of 'soft' intangible service elements (Westwood, Morgan, Pritchard, & Ineson, 1999). The intangible nature of the package tour makes the travel agency heavily dependent upon the company's image and word of mouth. Additionally, the quality of intangible products is difficult to predict. The purchase of a package tour involves a high degree of trust by the purchaser (Holloway, 1998). Levitt (1981, p. 96) stated that "the most important thing to know about intangible products is that customers usually do not know what they are getting until they do not get it". Based on the characteristics of the package tour, the intangible products are sometimes out of the tour operators' control. Naturally, customers may have less confidence in a product if they have never tried it before.

The package tour has its popularity; it sells dreams to tourists. Since the wholesalers make provision for the mass market, their volume sales have given them a bargaining strength to keep prices down in many aspects which enable them to offer the lowest price to the general public (Lavery, 1996; Middleton & Clarke, 2001; Goeldner & Ritchie, 2003). Tour operators integrate numerous suppliers into a package and promote it to travellers in an open market. It makes good use of colourful pictures and the arrangement of an itinerary with the description of interesting and exciting places and events the travellers will experience, so as to appeal to potential travellers. The package tour attracts customers through offering prices lower than travellers would pay for these services on an itemized or individual basis (Gee et al., 1997).

There are a number of distinct advantages for the guided package tour (Mancini, 1996). First, it offers companionship, and provides more opportunities for developing friendships or romance. Second, it is usually less expensive than an individual trip using the same itinerary. Third, many services are included which are more convenient and which reduce worry for travellers. Fourth, travellers save time and hassle through the tour leader's escort, and gain learning advantages by being

conducted by the tour guides. Fifth, tourists get the feeling of safety. Many researchers believe that economy and overall convenience are the most important motives for purchasing a package tour. Quiroga (1990), in studying the characteristics of package tours in Europe, concluded that tourists (from Latin America) from age 46 are more likely to choose the guided package tour. Sheldon and Mak (1987), in studying the demand for package tours, found that American travellers were inclined to choose package tours when travelling to an unfamiliar destination.

There is no guarantee that the service will not have shortcomings and negative incidents may be out of the travel agencies' control – such as bad weather, flight delays, bad service by other providers, food poisoned, terrorism, and strikes by local unions. Moreover, it is of a highly labour intensive nature and this makes the service encounter difficult to manage and standardize. In a sense, customers' satisfaction depends more upon front-line staff than on staff at managerial level. Appropriate training to minimize conflict is a prerequisite since the cost of dissatisfaction may be greater than any benefit from satisfaction. When travel agencies are dealing with clients, it is important for the front-line personnel to recognize the clients' needs and to establish an atmosphere of harmony and mutual understanding (Horner, 1996). Lavery (1996) stated that the travel agent's (the front-line service personnel) knowledge, expertise and service, rather than the product itself become the major factors in making a sale.

Apart from service quality, the price is another important advantage for participating in a package tour. In 1999, a survey based on 4,903 questionnaires showed that the low price of the tour and the low cost of the destination are crucial factors in choosing travel destinations; Taiwanese travelers were very much price-oriented. It suggested that the travel agency should consider carefully its selection of a travel destination and quoting a price when planning a tour (Taiwan Tourism Bureau, 1999). Many evidences have shown that price rather than quality is the Taiwanese travelers' major concern in selecting a tour. Based on the market survey, travel agencies suggested that consumers in the Taipei capital city area are more independent and may be concerned about the image of the travel service, whereas consumers who are live in the centre or the southern part of Taiwan are more concerned about price and depend very much on personal relationships (Pan, 2000).

The role of the tour leader

Many empirical studies have shown that the tour leader is the most crucial person

responsible for achieving customer satisfaction. Mossberg (1995) studied a charter tour and emphasised that a tour leader's performance is a key factor to differentiate the tour from its competitors. His or her performance within the service encounter not only affects the company image, customer loyalty, and word of mouth communication but can also be used as a competitive tool. Hence, selection of an appropriate tour leader is crucial.

Many researchers suggest that to be a successful tour leader, he or she needs a wide range of versatile professional skills and a flexible personality. Mossberg (1995) suggested a good tour leader should include 8 characteristics: reliability, ability to handle complaints, willingness to take part at any time, ease of reach, ability to inform about manners and customs, ability to handle difficult situations, knowledgeable about sights, and pleasantness and helpfulness. The person is a psychologist, diplomat, flight attendant, entertainer, news reporter, orator and even translator and miracle professional (Mancini, 1996). Quiroga (1990) considered the person should be intelligent and cultured, friendly and kind, and a human person. To be successful at this job is not an easy thing to achieve. Quiroga (1990) suggested that with respect to the personal qualities of the tour guide, clarity of expression, organizing ability, working ability and stamina, self-confidence, and a good sense of humour are considered by tourists to be extremely important. In Hughes' (1991) cultural tour satisfaction study, he identified that the tour guide (tour leader) should be able to: (1) provide interesting commentaries, (2) interact with the tour members, and (3) ensure the itinerary was running smoothly. Webster (1993) noted that 'keeping the participants happy' and 'making sure that all services are provided as contracted' are the main responsibilities of the 'escort'.

One of the challenges to the tour leader is to offer a more personalized level of service to group participants. Pond (1993) suggested a few tips to help tour leaders in building rapport and maintaining cohesiveness with tour members during the tour. He considered that leadership and social skills are significant in the guiding experience. Stein stated that "so many tour leaders forget the most important, most obvious bottom line: that people are here to enjoy themselves" (Pond, 1993, p. 104). Holloway (1981) suggested that most tourists seek or expect a unique experience of some kind while on their trip and recommended that tour guides may use their dramatic skill to enhance participants' emotional feeling on the trip and make the itinerary vivid and vigorous.

Leisure constraints

Leisure constraints have been studied more extensively in leisure research than in tourism research (Jackson 1991; Huang & Hsu, 2009). The definition has also been developed along with the development of the leisure constraints study. In the early stage, the constraint was simply defined as "those barriers or blockages that inhibit continued use of a recreation service" (Backman & Crompton, 1989, p. 59). In the later stage, with the progress of the constraints study, the range of the definition has been broaden as those that inhibit people's ability to maintain or increase to a desired level to cease participating activities, to stop using public services or to have insufficient enjoyment with current activities (Jackson & Scott, 1999). The definition of constraints is refined as the factors that inhibit people's ability to participate in a new activity, to maintain or increase frequency of participation and/or to lead to negative impacts on the quality of a leisure experience (Nadirova & Jackson, 2000; Hung & Petrick, 2010). As travel is a part of leisure activity, the definition of travel constraints is defined as the constraints that cause inability of people to participate in a travel activity, to maintain or increase frequency of participation and to/or lead to negative impacts on the quality of the travel experiences.

Leisure constraints study has been developed as a model through many significant contributions (e.g., Crawford, Jackson, & Godbey, 1991; Godbey, 1985; Iso-Ahola & Mannell, 1985; Jackson & Dunn, 1988; Jackson & Serle, 1985) and the development of the model has gone through three stages according to the comprehensive review and analysis of Hung and Petrick (2010). The model of the first stage is proposed by Crawford and Godbey (1987) which includes three constraints dimensions: intrapersonal, interpersonal, and structural. The intrapersonal constraints are related to individual psychological conditions, such as personality, interest and attitude toward leisure. The interpersonal constrains are the interaction between the participant and others, for example, his or her family or friends. The structural constrains are caused from external factors in the environment, such as lack of facilities, money, or transportation etc.

On the second stage of the constraints study, the model of the first stage is expanded to a hierarchical model contributed by Crawford et al. (1991). This hierarchical model connects the three constraints dimensions in a sequential order. The intrapersonal constraints are the antecedent of the interpersonal constrains, and the interpersonal constraints act as the intervening constraints of the intrapersonal and the structural constraints. The intrapersonal constraints affect leisure preferences while structural

constraints influence participation.

Regardless of those constraints have decreased the opportunities for leisure participation, overcome of those constraints is not impossible (Crompton & Kim, 2004; Hubard & Mannel, 2001). Crawford et al. (1991) argued that leisure participation depends on negotiating with different constraint factors heavily and is arranged sequentially. People tend to seek solutions through the negotiation with multiple constraint factors for participating in leisure activities. This is also the core concept of the third stage that focuses on helping people overcome problems of nonparticipation with useful strategies of negotiation. In the case of outbound group package tour, the seniors may worry about their health during the trip so they have lower intention to participate in the tour. To minimize this constraint, a tour leader with a nurse license may reduce this worry and participate in the tour.

Travel constraints for senior travelers

Travel barriers have been used to identify the reasons why people do not go travelling (Blazey, 1987; 1992; Huang & Tsai, 2003; Sparks & Pan, 2009). Based on the leisure constraints study, several research in different kinds of tourism, such as nature tourism, ski tourism, cruise tourism, has applied the leisure constrains conceptual model to travel constraints study in order to analyze travel constraints systematically (Gilbert & Hudson, 2000; Hudson, 2000; Nyaupane & Andereck, 2010; Pennington-Gray & Kerstetter, 2002; Huang & Hsu, 2009; Hung & Petrick, 2010).

Among the studies of senior travel constraints, most studies use simple items of barrier or constraints without a systematic approach like leisure constraints studies mentioned before. In addition, the barriers of the senior travelers are also not consistent in different research. For instance, Lee and Tideswell (2005) studied Korean senior leisure travel constraints and found six barriers which are: too old to travel, lack of travel information, guilty about traveling, not financially affordable, and unsupported by spouse. Hsu and Kang (2009) studied Chinese urban (Shanghai and Beijing) mature travelers' constraints and the results demonstrated that age, family obligation, living with child(ren), and self-rated health are the major constraints. Hunter-Jones and Blackburn (2007) studied seniors' travel barriers based on self-assessed health and found several different constraints, such as injection, humidity, airport stress, jet lag, deep vein thrombosis, being subjected to an insurance lottery, and alongside risks different types of destination. A study of west Australian seniors' travelers showed that falling ill, doctor availability, theft, personal security

and peace of mind, safety, and hygiene and sanitation as the highest concerns (Kim, Wei, & Ruys, 2003). The study by Wu and Chen (2009) found that Taiwanese senior travel barriers included perceived risks, time commitment, and personal reasons are the main constraints. In addition, Huang and Tsai's (2003) study of Taiwanese seniors' travel behavior found 10 different travel barriers which are generally related to information, time, budget, accompany, health, and unattended. Nimrod (2008) found the main constraints for retired senior travelers are limited income, health limitations, care-giving burden, and lack of traveling partners. In contrast, Blazey (1992) found 32 retirees' travel constraints. Mcquire (1984) used factor analysis to analyze data and gain five constraints factors: external resource; time; approval; ability/social; and, physical well-being. Fleischer and Pizam (2002) concluded that expense, time convenience, health status, and perceived disability are the most cited constraints.

In addition to the item-based senior travel barriers, Wu and Chen (2004) tried to adopt the three dimension conceptual model: intrapersonal, interpersonal, and structural to study the relationship between socio-demographic factors and outbound travel constraints of Taiwanese seniors. They successfully demonstrated that different socio-demographic groups have different travel constraints. Five factors were found which include perceived travel constraints, accompany and information, health and responsibility, other people, and economic issues. However, this study was based on the sample in one city therefore the result does not represent Taiwanese seniors.

In summary, past studies show that travel constraints are fragmentary or various respectively, depending on the situations. The leisure constraint model is recognized as a useful tool for travel constrains. Taiwanese senior's outbound group package travel constraints have not been completely studied. Hence, this study will use leisure constraints model to examine Taiwanese seniors' travel constraints.

Price sensitivity and price-sensitivity measurement (PSM)

Senior people have a higher elasticity of demand than the average younger customers (Marvel, 1999) and the income of seniors has been identified as one the main travel constraints (Nimrod, 2008; Huang & Tsai, 2003; Fleischer & Pizam, 2002). Therefore, pricing for this segment is a critical issue for the tourism industries. Pricing is particularly an important determinant for purchasing which should be determined carefully in service industry because of several reasons: firstly, the consumers may refer price as a proxy of quality (Zeithaml, Bitner, & Gremler, 2006); secondly, price is the only marketing tool to generate revenue within marketing mix (Kotler, Bowen,

& Makens, 2006; O'Connor, 2003; Shoemaker, Lewis, & Yesawich, 2006); and lastly, price is a powerful force in attracting attention and increasing sales (Shoemaker et al., 2006). However, many enterprises in tourism industry simply set prices by marking up a variable cost by percentage, intuition, or by trial-and-error (Raab, Mayer, Kim, & Shoemaker, 2009; Lewis & Shoemaker, 1997) without concerning consumers' perception of price (Raab et al., 2009). .

Pricing for services is difficult from the perspective of customers. According to Zeithaml and Bitner (1996), most customers usually do not have accurate or sufficient references for pricing; customers use price as an indicator of quality; and monetary price is not the single relevant cost. An appropriateness of a service or product customer judges is based on three different traditions: the price last paid, the price most frequently paid, or the average of all prices customers have paid for similar offerings (Zeithaml & Bitner, 1996). However to judge the price appropriateness of a service in regard to reference price is more difficult than a product. Consumers have much more sense about a product price such as a television set or a bicycle, than a service, such as a hotel room, a dish in restaurant, or a package tour. Customers usually lack a firm reference for comparison for the price of service. Thus, a price with a range seems to be more sense for customers than an exact price (Lewis & Shoemaker, 1997). Furthermore, price also signals the quality of the service to the consumers. For example, in the case of airlines, customers would perceive that first class provides better service quality than economy class because first class price is much higher. In addition, price perception can also act as a role to alert the value of a service/product, and customers consider price-value relationship much more important than just monetary price (Rabb et al., 2009; Lewis & Shoemaker, 1997; Zeithaml, Bitner, & Gremler, 2006).

To measure the price-value relationship, a powerful technique called price-sensitivity measurement (PSM) was introduced by Andre Gabor and Clive Granger in 1996, and recommended by Lewis and Shoemaker (1997) for hospitality industry. PSM reveals how price affect consumers' perception of product value (Lewis & Shoemaker, 1997; Rabb et al., 2009). In order to measure the relationship between price and value, and construct the acceptable range of price for customers, the consumers are asked four questions (Lewis & Shoemaker, 1997, p. 47):

1. At what price on the scale do you consider the product/service to be cheap?
2. At what price on the scale do you consider the product/service to be expensive?

3. At what price on the scale do you consider the product/service to be too expensive, and that you would not consider buying it?
4. At what price on the scale do you consider the product/service too cheap, and that you would question its quality?

Based on the answers of the questions, four curves are drawn respectively (see Figure 1) which are too cheap, too expensive, not cheap, and not expensive. The range between A and D in Figure 1 is the range of acceptable price which is also perceived as appropriate price zone. When the price is too low, the consumers will question the quality of the product or service. In contrast, when the price is too high, the consumers will feel expensive. On the other hand, the price stress range (B and C) refers to the optimal pricing points at which an equal number of customers feel price cheap (B) or expensive (C). The technique of PSM has been successfully used in practice. Taco Bell used value-pricing to measure the perception of customers with its 59-cent value menu and this pricing strategy caused a rise of sales by 50 percent in two years to $2.4 billion (Zeithamal & Bitner, 1996).

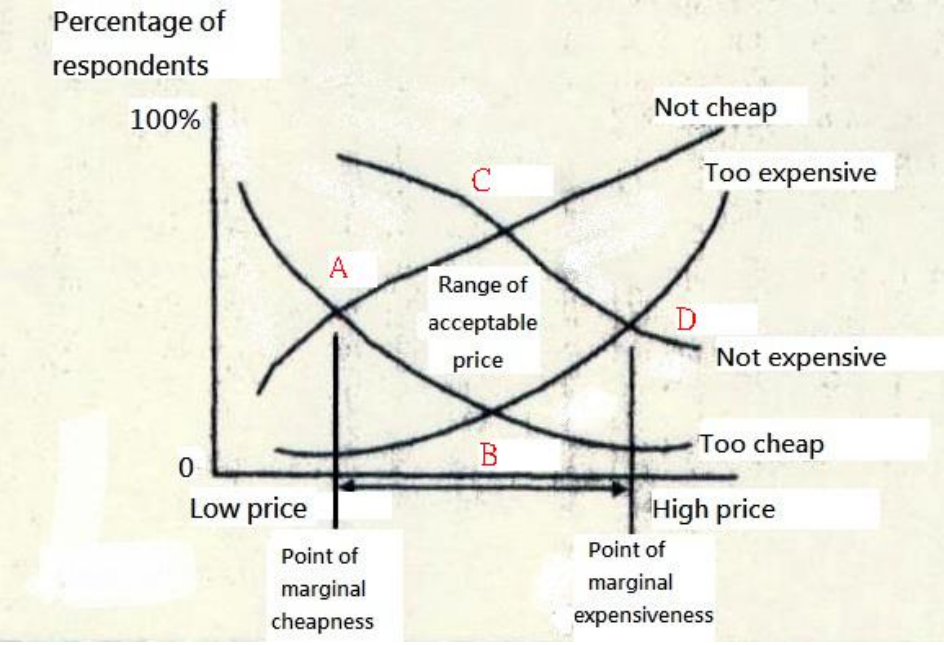

Figure 1. Price Sensitivity Measurement
Source: Lewis and Shoemaker, 1997

PSM is easy to use and is useful for measuring bundle products such as adding sour creams for a meal or a meal including a soft drink. However, it has a major disadvantage that it is extremely sensitive to outlying data. In addition, the results need to have a benchmark in order to compare with the value (Lewis & Shoemaker,

1997). For example, Lewis and Shoemaker (1997) conducted a research using PSM to measure the price sensitivity about hotel price of the meeting participants. Unfortunately, the results did not provide a confident evidence to prove the correction of the results because they are short of a price benchmark for the comparison.

Methodologies

The study consists of two main purposes: 1. To examine Taiwanese senior travel constrains based on leisure constraints conceptual model. 2. To exam the relationships between the services of the licensed nurse tour leader and the pricing of an outbound package tour. In terms of the first purpose, both qualitative and quantitative methodologies were used while the travel constraints of seniors are fragmentary in the literature and acceptable price range for a new service: the tour leader with a nurse license is unknown. A focus group interview was used to collect the constraints raw data based on leisure constraints conceptual model because travel constraints of seniors are inconsistent in the literature and this needs to be explored. Interview method is an appropriate method at the beginning stage of a research and this is frequently used in studying Taiwanese seniors' travel behavior such as Huang and Tsai (2003), Jang and Wu (2006), and Wu and Chen (2004). Following the interview, a pilot study and a main survey of quantitative method were used in order to examine the senior travel constraints using leisure constraints conceptual model.

Sample selection

There is an inconsistence in defining the senior people in many researches. Researchers have various reasons to define the age of senior people while they select the samples for their study. Firstly, "after the age of 55, the constraints change drastically and in different directions…" (Fleisch & Pizam, 2002, p.113). Secondly, the official retirement age is 55 years old for women and 60 years old for men in China (Hsu & Kang, 2009). Thirdly, the 55 five years or more is recognized as a senior by the American Association of Retired Persons (AARP) (Bai, Jang, Cai, & O'Leary, 2001). Fourthly, Hunter-Jones and Blackburn (2007) adopted 55 years as the age of seniors. Finally, some consider age 60 years and older (Lee & Tideswell, 2005; Jang & Wu, 2006) and age 50 years and older (Blazey, 1992) are seniors. Since there is no any particular criterion for defining the senior group, this study used retirement age - 65 (Hsu & Kang, 2009) - as the cutting-point to select the samples. It is believed that this age will be appropriate for this study due to the deterioration in health and easy to cause a disease during a vacation travel. These seniors may have obvious

travel constrains related to health and be more sensitive with the price of travel products.

Several studies regarding Taiwanese seniors' travel behavior suggested that in practice, the convenience sampling method is more appropriate when the population is difficult to randomly approach. In addition, this sampling method is recommended to combine with purposively selected places such as elderly activity institutions or the senior service centers in the city (Jang & Wu, 2006; Huang & Tsai, 2003). However, these studies gained the respondents only from one or two cities with a narrow scope. This study focused on the whole nation and the list of the whole institutions was available so the simple random sampling method was used to select the institutions. In addition, the proportion of each city's seniors to total is different (New Taipei City 24%; Taipei City 24%, Taichung City 17%, Tainan City 15%, and Kaohsiung City 20%, (Ministry of Interior, 2012)) therefore the quota sampling method was also adopted.

There are five metropolitan cities: New Taipei City, Taipei City, Taichung City, Tainan City, and Kaohsiung City and in total they represent about 60% of total population of Taiwan. The senior population of these five cities had a proportion of 56% to total seniors in Taiwan (Ministry of Interior, 2012). Among these five cities, there were 209 public elderly activity institutions or senior service centers (Ministry of Education, 2012). Thus, places of data collection were based on the public elder activity institutions and the senior service centers of these five cities.

For selecting the samples of the interview and pre-test, a purposive sampling method was used to select the institutions located in Taichung. To select the samples, the convenient sampling method was conducted and 36 samples were selected for the interviews, and 66 samples for the pretest.

To conduct the formal survey, firstly, the simple random sampling method was used to draw the institutions and four institutions of each city were drawn. Secondly, the quota and convenient sampling methods were used. Based on the proportion of senior population of each city to total Taiwanese seniors, different numbers of samples were selected (120 for New Taipei City, 120 for Taipei City, 85 for Taichung City, 75 for Tainan City, and 100 for Kaohsiung City).

Data collection

The data collection lasted for seven months from March to September 2012. A total of four focus group interviews were implemented. All participants were the members of the public elder activity institutions, and volunteer for the focus group interviews. Each focus group consisted of 5 to12 participants and lasted 40 to 60 minutes. In order to attract the seniors to participate in the interview, a gift was prepared which was worth about NTD 50.

Following the interview, a pretest was conducted. Totally, 70 questionnaires were issued and 66 questionnaires were returned, for a response rate of 94%, and all of these questionnaires were useful questionnaires. Based on the results of the pretest, the formal survey questionnaires were developed and five graduate students were assigned to issue the questionnaires in five cities. The gift strategy was still used but two kinds of gift were provided to be selected, one of which was environmental friendly chopsticks and the other was multi-use pen. Both were worth about 30 NTD. According to the assigned sample number for each city, 511 questionnaires were issued and 8 questionnaires were not useful so the useful questionnaire response rate was 98.4%. Two reasons may explain why the response rate is high. First, the face to face interview was conducted if the interviewees were unable to read. Second, the students reminded the respondents to check the questionnaire again when all questions were completed and returning the questionnaire.

Instrument

Senior travel constraints: Most travel constrains of seniors are fragmental and is not systematically grouped. An item pool needs to be generated to measure the specific constraints through multiple techniques suggested by Echtner and Ritchie (1993). These techniques consist of three approaches. Firstly, through a comprehensive literature review, a list of items is generated. Secondly, through the interviews, additional items will then be added into the item list. Finally, a panel of experts will review the complete item list.

Based on the first approach, a comprehensive literature was reviewed and a list of items related to seniors' travel constraints was generated (See Table 1).

In the second approach, the interviews were carried out. Three questions were stated as follows:

1. What are your “intrapersonal constraints” to participate in overseas group package travel?
2. What are your “interpersonal constraints” to participate in overseas group package travel?
3. What are your “structural constraints” to participate in overseas group package travel?

Table 1. Seniors’ travel constraints from literature

Dimension	Author	Constraints
Intrapersonal	Lee & Tideswell, 2005	I am too old to travel
	Blazey, 1992; Lee & Tideswell, 2005; Mcquire, 1984	I feel guilty when I am traveling
	Hus & Kang, 2009	Self rated health
	Blazey, 1992	Prefer US destinations
	Blazey, 1992	Risk/afraid of terrorism at some destinations
	Blazey, 1992	Prefer making own arrangement
	Blazey, 1992	Prefer previously visited places
	Blazey, 1992	Prefer destination within 300 miles
	Blazey, 1992	Not aware of trips designed for me
	Blazey, 1992	Afraid of certain forms of transportation
	Blazey, 1992; Mcquire, 1984	Afraid of making a mistake/ afraid to make mistake by going to a disappointing place/ waste money
	Huang & Tsai, 2003	Fear of hassles
	Blazey, 1992; Mcquire, 1984	No interested in travel or going away
Interpersonal Constraints	Lee & Tideswell, 2005	Other people tell me I am too old to travel
	Mcquire, 1984	Family and friends would not approve
	Lee & Tideswell, 2005; Mcquire, 1984	My spouse dislikes travel
	Hus & Kang, 2009	Living with children
	Blazey, 1992; Mcquire, 1984; Nimrod, 2008; Huang and Tsai, 2003; Wu & Chen, 2004	Lack a travel company/ partners/ no appropriate partners

	Blazey, 1992	Friends do not travel
	Wu & Chen, 2004	No one invites me
Structural Constraints	Lee & Tideswell, 2005; Blazey, 1992; Mcquire, 1984; Huang and Tsai, 2003	I have difficulty getting travel information/ lack of travel information
	Lee & Tideswell, 2005; Blazey, 1992; Fleisch and Pizam, 2002; Nimrod, 2008; Huang and Tsai, 2003	Income/I cannot afford to spend money on travel/ insufficient money/ limited income/ financial considerations
	Fleischer & Pizam, 2002; Mcquire, 1984	Time convenience
	Blazey, 1992; Mcguire, 1984; Huang and Tsai, 2003	No time to travel
	Blazey, 1992; Nimrod, 2008; Huang and Tsai, 2003	Health status/ health limitations/ physical ability
	Blazey, 1992	Lack of physical energy
	Blazey, 1992; Mcquire, 1984	Lack luggage, travel clothing, etc.
	Hus & Kang, 2009; Huang and Tsai, 2003	Age
	Hus & Kang, 2009; Wu & Chen, 2004	Family obligations
	Blazey, 1992	Consult a travel agent
	Blazey, 1992; Mcquire, 1984	Travel interrupts normal routine
	Blazey, 1992	Travel requires too many decisions
	Blazey, 1992; Mcquire, 1984; Wu & Chen, 2004	Too busy doing other things/ too much planning
	Mcquire, 1984	need to work
	Blazey, 1992	Airline travel presents difficulties
	Blazey, 1992	Have a disability
	Blazey, 1992; Mcquire, 1984	Lack transportation to and from point of departure
	Nimrod, 2008	Care-giving burden
	Huang and Tsai, 2003	Fear of leaving home unattended
	Huang and Tsai, 2003	Dietary considerations
	Blazey, 1992	Have had problems staying in hotels or motels

Several new items were generated such as for intrapersonal constraint: “It is not suitable for me to go traveling during Ghost Month.”, “I am used to sleep in own bed.”, and “I do not get used to share room with strangers”. For interpersonal constraint, several new items were found: “I need to look after grandchildren.”, and “Fortuneteller told me it was bad day to go travelling.” For structural constraints some new constraints were identified: “I had bad experiences with tour leader, travel agency or accommodation services.”, “I do not sleep well when I am away from home.”, “I will be missing home when I am away from home”.

The results of the interviews were combined with the literature reviews and new constraints were added into the questionnaires of the survey. A total of 55 items for travel constraints, four items for price sensitivity discussed in the literature review (Lewis & Shoemaker, 1997; Raab et al., 2009) about the tour to Shanghai, Suzhou, and Hangchow in Mainland China, and questions about basic socio-demographic such as age, marital status, education, gender, residency, economic resource, and travel experience. The scale for measuring the constraints was five points Likert scale, from totally disagree, disagree, normal, agree, to totally agree (Wu & Chen, 2004). In order to check the appropriateness of the questionnaire, the questionnaire was sent to three experts who are Taiwanese and familiar with the subject of senior travel behavior. Several minor wordings were suggested to modify.

A pretest was conducted and 66 useful questionnaires were returned. To select the valid and reliable items, item analysis and exploratory factor analysis were conducted. As a result, two items were not significant which are “I am afraid of certain kind of vehicle.”, and “I do not have suitable clothes for travelling.” However, it may be caused by the small sample sized so these two items were still kept for the formal survey. A total of 55 items for travel constraints were remained. Hence, the design of the formal survey questionnaire was completed regarding the results of the pretest.

Price sensitivity: in addition to the travel constraint instrument, the measurement of price sensitivity was also provided and based on four questions (Lewis & Shoemaker, 1997; Raab, Mayer, Kim & Shoemaker, 2009) but the description of questions was changed to fit into the purpose of this research that is to examine the price sensitivity of seniors to a tour with a licensed nurse tour leader. Before the questions, a comprehensive description was stated: “This case is based on a five-day tour to Shanghai, Soochow, and Hangchow, and this tour will be guided by a tour leader who has a nurse license. The current price range of this tour with a regular tour leader is between 11,000 and 37,000.” To use the tour to China of visiting Shanghai, Soochow,

and Hangchow as example was under the consideration that these cities are famous in Taiwan and this tour is a popular group package tour in the market. The respondents would be more familiar to it. The price range was provided because in the interview many participants responded that they did not have any cue about the price of this tour. The price range was gained by a market price investigation on internet. The four questions were as follows:

1. At what price do you consider the tour to be cheap?
2. At what price do you consider the tour to be expensive?
3. At what price do you consider the tour to be too expensive, and that you would not consider buying it?
4. At what price do you consider the tour too cheap, and that you would question its quality?

Results

Senior group package travel constraints

To analyze the data, SPSS 15.0 and Amos 18.0 were used to process quantitative data and the statistics tool of factor analysis and confirmatory factor analysis were applied to analyzing the senior travel constraints.

A descriptive analysis was implemented to analyze the demographic profile of respondents (See Table 2). Among 503 useful questionnaires, the proportion between male and female was little different, for female 53.9%, and for male 46.1%. The age was between 65 and 70 or over. Two major groups were age 65 (28.2%) and 70 or over (21.7%). The other age groups were between 7.2% and 14.9%. The major education groups were senior high school (35.6%) and junior high school (33.4%) and these two groups generated 69% from total. In contrast, only 9.9% respondents held a degree of university or above. The distribution of the inhibit cities was as follows: Taipei City (23.7%), New Taipei City (23.9%), Taichung City (17.5%), Tainan City (15.1%), and Kaohsiung City (19.9%). This distribution was almost identical as assigned sample numbers regarding quota sampling. Most seniors were living with their spouse (53.3%) and 32% was living with their children. Living alone was 13.1%. The major financial resources were from own pensions or savings (69.4). However, 26.8% of their incomes were from the support of families.

Table 2 **Socio demographic characteristics of the respondents**

Characteristics	**Category**	**Frequency n= 503**	**Percentage (%)**
Sex			
	Male	232	46.1
	Female	271	53.9
Age			
	65	28.2	28.2
	66	14.9	14.9
	67	14.3	14.3
	68	13.7	13.7
	69	7.2	7.2
	70 or above	21.7	21.7
Living status			
	Living with spouse	268	53.3
	Living alone	66	13.1
	Living with children	163	32.4
	Other	6	1.2
Education			
	Junior high school or below	168	33.4
	Senior High school	179	35.6
	Technology college	106	21.1
	University	48	9.5
	Post graduate	2	2
Income source			
	Pension (monthly)	80	15.9
	Pension	134	26.6
	Own savings	135	26.8
	Families	135	26.8
	Other	19	3.8
Living city			
	Taipei City	119	23.7
	New Taipei City	120	23.9
	Taichung City	88	17.5
	Tainan City	76	15.1
	Kaohsiung City	100	19.9

Exploratory factor analysis of Intrapersonal constraint

An exploratory factor analysis with varimax rotation was conducted to identify the underlying factors in the data, and the items associated with each factor of intra personal constraint. To determine the appropriateness of the factor analysis, the Kaiser-Meyer-Olkin measure of sampling adequacy and the Bartlett's test of sphericity were both applied, and it was found that the 9 item sample was adequate for factor analysis, when KMO was larger than 0.5 and Bartlett's test of sphericity was significant (KMO= 0.75, and Bartlett's test of sphericity, $p<.001$). Four factors with eigenvalues larger than one were extracted and the total variance that was explained was 64.37%. A total of 9 out of 17 items of intrapersonal constraint were identified and had factor loadings over 0.5 (See Table 3, 4).

Table 3 **Descriptive statistics of intrapersonal constraint**

No.	Variable	n=503	
		Mean	Std. Deviation
1	Not aware of trips designed for me	3.49	.994
2	Afraid to make mistake by going to a disappointing place/ waste money	3.53	1.094
3	Afraid not to get used to foreign food	3.27	1.091
4	Only sleep well in own bed	3.17	1.153
5	Feel guilty to travel abroad	2.60	1.182
6	Too many things to do	3.05	1.118
7	Not interested in traveling abroad	2.65	1.153
8	Consider self health situation	3.59	1.033
9	Be afraid of destination environment where may cause health problems	3.37	0.999

The factors were labeled based on the common theme for the items that were loading for each factor. They were labeled as follows: 'Uncertainty of traveling abroad', 'Not interested in traveling abroad', and 'Health concern'. A Cronbach's alpha coefficient was also calculated to assess the internal reliability. The alpha coefficients for each of the factors ranged from 0.68 to 0.75 which were much higher than the acceptable level of alpha > 0.5 (see Table 4).

Table 4 **Exploratory factor analysis of Intrapersonal and reliability**

Factors	Factor loading	Eigenvalue	Explained variance (%)	Cronbach's alpha
Factor 1: Uncertainty of traveling abroad		3.200	19.982	.721
Afraid to make mistake by going to a disappointing place/ waste money	.784			
Afraid not to get used to foreign food	.733			
Not aware of trips designed for me	.689			
Only sleep well in own bed	.642			
Factor 2: Not interested in traveling abroad		1.727	18.920	.754
Feel guilty to travel abroad	.820			
Not interested in traveling abroad	.767			
Too many things to do	.748			
Factor 3: Health concern		1.110	13.765	.676
Consider self health situation	.856			
Be afraid of destination environment where may cause health problems	.853			
KMO: 0.75				
Bartlett's test of sphericity (p<.001)				
Total explained variance: 64.37.% / Cronbach's alpha: .734				

Confirmatory factor analysis of Intrapersonal constraint

Following the EFA, the CFA using maximum likelihood estimation was used to test the model fit of the constructs gained from EFA, composite (construct) reliability, convergent validity and discriminant validity.

After conducting CFA by using maximum-likelihood measurement, three factors gained from the EFA remained, and the indices of the model fit for intrapersonal constraints were presented (See Table 5). The p-value of chi-square was significant (p<.000) but the normed chi-square was 2.733 which was lower than 5. The other indices of GFI (0.974), AGFI (0.946), NFI (0.947), IFI (0.966), CFI (0.965) and RMESA (0.059) fully satisfied the requirements for the model fit (>.9). To evaluate the model fit, we needed to see overall indices, not just one (Huang, 2004; Sweeney & Soutar 2001). As a result, although the chi-square test was not successful, the overall model fit was still appropriate.

The validity and reliability of the factors were also calculated. The convergent validity was confirmed by the significant standardized loadings. The average extracted variance (AVE) of factors was found to be lower than 0.5. However, all factor

loadings in the exploratory factor analysis were larger than 0.5, indicating that the convergent validity was acceptable. The discriminant validity was also confirmed as the AVE of each factor was larger than the squared correlation between each pair of the two factors and therefore the constructs were found to be valid (See Table 6). The composite (construct) reliability of different factors was also calculated and the composite (construct) reliabilities ranged from 0.71 to 0.76 which were larger than the required 0.5.

Table 5 **Model fit of intrapersonal constraint**

Measures	X^2	p-value	X^2/DF	GFI	AGFI	NFI	IFI	CFI	RMSEA
	60.13	.000	2.733	.974	.946	.947	.966	.965	.059

Table 6 **Discriminant validity of intrapersonal constraint**

	Average extracted variance	Uncertainty of traveling abroad	Not interested in traveling abroad	Health concern	Prestige
Uncertainty of traveling abroad	.390	1			
Not interested in traveling abroad	.511	.598	1		
Health concern	.591	.166	.334	1	

Explore factor analysis and its reliability of interpersonal constraint

Following the same procedure as above, explore factor analysis of interpersonal constraint was conducted. The results showed that the analysis was appropriate when KMO was larger than 0.5 and Bartlett's test of sphericity was significant (KMO= 0.88, and Bartlett's test of sphericity, $p<.001$). Two factors were extracted and the total variance that was explained was 68.15%. A total of 11 out of 12 items of inter personal constraint were identified and had factor loadings over 0.5 (See Table 7, 8). These two factors were labeled as "Direct interpersonal constraint" and "Indirect interpersonal constraint". A Cronbach's alpha coefficient was also calculated to assess the internal reliability. The alpha coefficients for each of the factors ranged from 0.886 to 0.906 which were much higher than the acceptable level of alpha > 0.5 (See Table 8)

Table 7 **Descriptive statistics of interpersonal constraint**

No.	Variable	n=503	
		Mean	Std.

			Deviation
1	My spouse does not like traveling abroad	2.62	1.138
2	My friends do not agree with me of travel abroad	2.55	1.119
3	My spouse does not want to accompany me to travel abroad	2.54	1.137
4	My spouse's health is not in good condition	2.63	1.160
5	Doctor recommends me not to travel abroad for health reason	2.69	1.167
6	My family do not agree with me of traveling abroad	2.65	1.105
7	The travel agents recommends me not to travel abroad	2.42	1.108
8	I was not invited to travel abroad	3.09	1.171
9	My friends do not travel abroad	3.04	1.188
10	I cannot find partner to travel abroad together	3.13	1.165
11	According to the indications of fortunetellers I cannot travel abroad	2.67	1.271

Table 8 **Exploratory factor analysis of interpersonal and reliability**

Factors	**Factor loading**	**Eigenvalue**	**Explained variance (%)**	**Cronbach's alpha**
Factor 1: Direct interpersonal constraints		5.442	40.243	.906
My spouse does not like traveling abroad	.845			
My friends do not agree with me of travel abroad	.818			
My spouse does not want to accompany me to travel abroad	.806			
My spouse's health is not in good condition	.803			
Doctor recommends me not to travel abroad for health reason	.754			
My families do not agree with me of traveling abroad	.734			
The travel agents recommends me not to travel abroad	.709			
Factor 2: Indirect interpersonal constraints		1.727	18.920	.886
I was not invited to travel abroad	.878			
My friends do not travel abroad	.851			
I cannot find partner to travel abroad together	.840			
According to the indications of fortunetellers I cannot travel abroad	.808			
KMO: 0.88				
Bartlett's test of sphericity ($p<.001$)				
Total explained variance: 68.15% / Cronbach's alpha: .896				

Confirmatory factor analysis of interpersonal factor

In order to examine the appropriateness of the constructs gained from the EFA, the

CFA using maximum likelihood estimation was used to test the model fit of the constructs, composite (construct) reliability, convergent validity and discriminant validity.

After conducting CFA by using maximum-likelihood measurement, two factors gained from the EFA remained, and the indices of the model fit for interpersonal constraint were presented (See Table 9). The p-value of chi-square was significant ($p<.000$) but the normed chi-square was 3.290 which was lower than 5. The other indices of GFI (0.957), AGFI (0.924), NFI (0.965), IFI (0.975), CFI (0.975) and RMESA (0.068) fully satisfied the requirements for the model fit (>.9). As a result, although the chi-square test was not successful, the overall model fit was still appropriate.

The validity and reliability of the factors were also calculated. The convergent validity was confirmed by the significant standardized loading. The average extracted variance (AVE) of factors was significant, higher than 0.5. The discriminant validity was also confirmed as the AVE of each factor was larger than the squared correlation between this pair of the two factors and therefore the constructs were found to be valid (See Table 10). The composite (construct) reliability of different factors was also calculated and the composite (construct) reliabilities ranged from 0.901 to 0.903 which was larger than the required 0.5.

Table 9 **Model fit of interpersonal Constraint**

Measures	X^2	p-value	X^2/DF	GFI	AGFI	NFI	IFI	CFI	RMSEA
	121.74	.000	3.290	.957	.924	.965	.975	.975	.068

Table 10 **Discriminant validity of interpersonal constraint**

	Average extracted variance	Direct interpersonal constraint	Indirect interpersonal constraint
Direct interpersonal constraint	.724	1	
Indirect interpersonal constraint	.833	.444	1

Exploratory factor analysis and its reliability of structural constraint

Exploratory factor analysis of structure constraint was conducted. The results showed that the analysis was appropriate when KMO was larger than 0.5 and Bartlett's test of sphericity was significant (KMO= 0.80, and Bartlett's test of sphericity, $p<.001$). Five

factors were extracted and the total variance that was explained was 76.02%. A total of 14 out of 26 items of structural constraint were identified and had factor loadings over 0.5. These two factors were labeled as “Poor service of travel agency”, “Helpless during the trip”, “Uncomfortableness during the trip”, “Limitation of time”, and “Family obligation”. A Cronbach’s alpha coefficient was also calculated to assess the internal reliability. The alpha coefficients for each of the factors ranged from 0.783 to 0.877 which were much higher than the acceptable level of alpha > 0.5 (See Table 11, 12).

Table 11 **Descriptive statistics of structural constraint**

No.	Variable	n=503	
		Mean	Std. Deviation
1	Bad experience with local guide’s services	3.14	1.096
2	Bad experience with tour leader’s services	3.08	1.111
3	Bad experience with travel agency’s services	3.12	1.039
4	No transportation to the meeting point of the tour	2.54	1.029
5	Physical incapability	2.56	1.043
6	Worries about that no one will take care of me	2.67	1.058
7	Serious home sick during the trip	3.21	1.025
8	Insomnia during the trip	3.23	1.061
9	Uncomfortableness of long distance flight	3.26	1.084
10	No time to travel abroad	3.21	1.043
11	No appropriate time to travel abroad	3.23	1.084
12	No physical strength to go traveling abroad	3.21	1.025
13	Responsibility of taking care of others	3.09	1.079
14	Responsibility of looking after the family	2.92	1.112

Table 12 **Exploratory factor analysis of structural constraint and reliability**

Factors	**Factor loading**	**Eigenvalue**	**Explained variance (%)**	**Cronbach’s alpha**
Factor 1: Poor service of travel agency		4.977	17.249	.849
Bad experience with local guide’s services	.894			
Bad experience with tour leader’s services	.858			
Bad experience with travel agency’s services	.836			
Factor 2: Helpless during the trip		1.819	15.819	.802
No transportation to the meeting point of the tour	.842			

Physical incapability	.811			
Worries about that no one will take care of me	.791			
Factor 3: Uncomfortableness during the trip		1.449	15.223	.809
Serious home sick during the trip	.814			
Insomnia during the trip	.796			
Uncomfortableness of long distance flight	.783			
Factor 4: Limitation of time		1.373	15.205	.783
No time to travel abroad	.863			
No appropriate time to travel abroad	.824			
No physical strength to go traveling abroad	.656			
Factor 5: Family obligation		1.025	12.524	.849
Responsibility of taking care of others	.903			
Responsibility of looking after the family	.876			
KMO: 0.799				
Bartlett's test of sphericity (p<.001)				
Total explained variance: 76.02% / Cronbach's alpha: .860				

Confirmatory factor analysis of structural constraint

Following the same procedure, the CFA using maximum likelihood estimation was used to test the model fit of the constructs, composite (construct) reliability, convergent validity and discriminant validity. As a result, five factors were confirmed, and the indices of the model fit for interpersonal constraint were presented (See Table 13). The p-value of chi-square was significant (p<.000) but the normed chi-square was 2.515 which was lower than 5. The other indices of GFI (0.957), AGFI (0.929), NFI (0.951), IFI (0.970), CFI (0.970) and RMESA (0.055) fully satisfied the requirements for the model fit (>.9). As a result, although the chi-square test was not successful, the overall model fit was still appropriate.

The validity and reliability of the factors were also calculated. The convergent validity was confirmed by the significant standardized loading. The average extracted variance (AVE) of factors was significant, higher than 0.5. The discriminant validity was also confirmed as the AVE of each factor was larger than the squared correlation between each pair of the five factors and therefore the constructs were found to be valid (see Table 14). The composite (construct) reliability of different factors was also calculated and the composite (construct) reliabilities ranged from 0.787 to 0.880 which was larger than the required 0.5.

Table 13 **Model fit of structure constraint**

Measures	X^2	p-value	X^2/DF	GFI	AGFI	NFI	IFI	CFI	RMSEA
	160.954	.000	2.515	.957	.929	.951	.970	.970	.055

Table 14 **Discriminant validity of structure constraint**

	Average extracted variance	Poor service of travel agency	Helpless during the trip	Uncomfort-ableness during the trip	Limitation of time	Family responsi-bility
Poor service of travel agency	.843	1				
Helpless during the trip	.759	.369	1			
Uncomfort-ableness during the trip	.744	.395	.343	1		
Limitation of time	.719	.441	.476	.557	1	
Family responsibility	.861	.193	.343	.333	.542	1

Price sensitivity of group package tour with licensed nurse tour leader

To analyze the price sensitivity, four graphs of the price sensitivity need to be created. These four graphs were “the Indifference Price (IDP)”, “Optimal Pricing Point (OPP)”, “Stress Price Range”, and “Range of acceptable prices” (Lewis & Shoemaker, 1997; Raab et al, 2009). In order to draw the graphs, the graphic function of Excel was used to help with plotting the cumulative distributions of the price sensitivity. The program of drawing these four graphs were developed by Kotze who based on Shoemaker’s method. Shoemaker is also one of the original authors of price sensitivity applied in hospitality industry (Lewis & Shoemaker, 1997).

Four graphs were drawn and all prices shown in the four graphs were expressed in New Taiwan dollars (NTD). The prices were rounded up or down to the closest whole dollar value. Figure 1 plotted the cumulative distribution of responses for “Cheap” and “Expensive” with their intersection “Indifference Price” based on the question 1 and 2 stated in instrument. The IDP was approximately 22,500NTD and this indicated the pricing point at which an equal amount of customers feel that the price is as cheap as it is expensive (Lewis & Shoemaker, 1997; Raab et al, 2009).

In addition, the cumulated percentage regarding IDP was also established. A low percentage for IDP indicates a high level of price consciousness. In contrast, a high IDP indicates a large difference within the respondents in regard to price (Lewis & Shoemaker, 1997; Raab et al, 2009). In the case of this research, IDP was approximately 16% which indicated a fairly “high” level of price consciousness by

senior travelers.

Figure 2 plotted the cumulative distribution of responses for “too cheap” and “too expensive” with their intersection representing the optimal pricing point (See Figure 2). The OPP was approximately 20,500NTD and it indicates that the purchase resistance is at its lowest (Raab et al, 2009).

Figure 3 was a combination of senior travelers’ responses to questions 1 to 4 and this was also the combination of Figure 1 and 2. In this graph, two points were shown which were IDP and OPP. The distance between IDP and OPP was stress price range (in this case: 2000NTD) which means whether the senior travelers experience over the price they pay for the tour. The smaller the distance, the lower the price consciousness is (Lewis & Shoemaker, 1997; Raab et al, 2009). The results showed that the stress level for senior travelers were high when the senior travelers are likely to pay for the tour is lower than indifference price which they viewed as cheap.

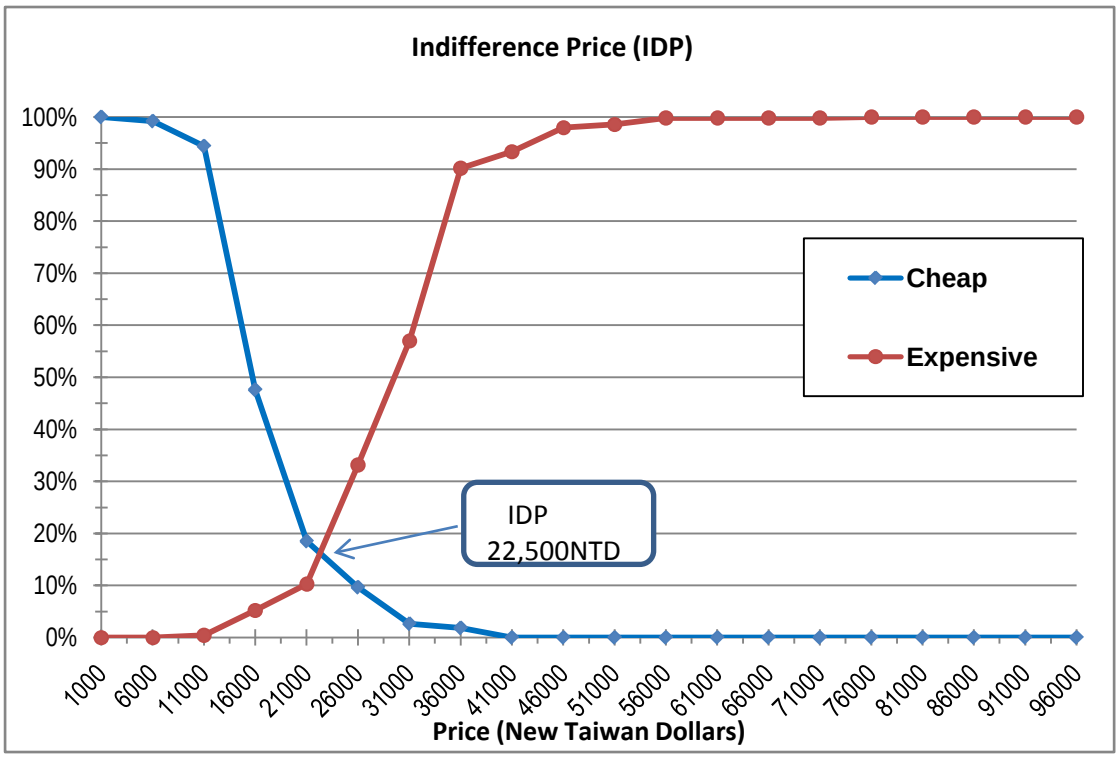

Figure 1: The Cumulative Distribution of Responses for “Cheap” and “Expensive” With the Intersection of the Two Graphs Representing the Indifference Price

According to the technique of Lewis and Shoemaker (1997), the data needs to be reinterpreted so that the distribution of “cheap” and “expensive” are reversed to

describe the prices at which the room value is “not cheap” and “not expensive”. Four plots were established and the points of the point of marginal expensiveness (PME) and the point of marginal cheapness (PMC) were identified. The difference between PME and PMC is the range of acceptable price. The smaller the range is, the greater the sensitivity to price. The results indicated that the range between PME (31,800NTD) and PMC (14,700) was 17,100NTD (See Figure 4). When the price is over PME, the consumers would not purchase because it is too expensive to buy. On the other hand, the consumer would consider the quality of goods and not purchase the goods when the price is lower than PMC.

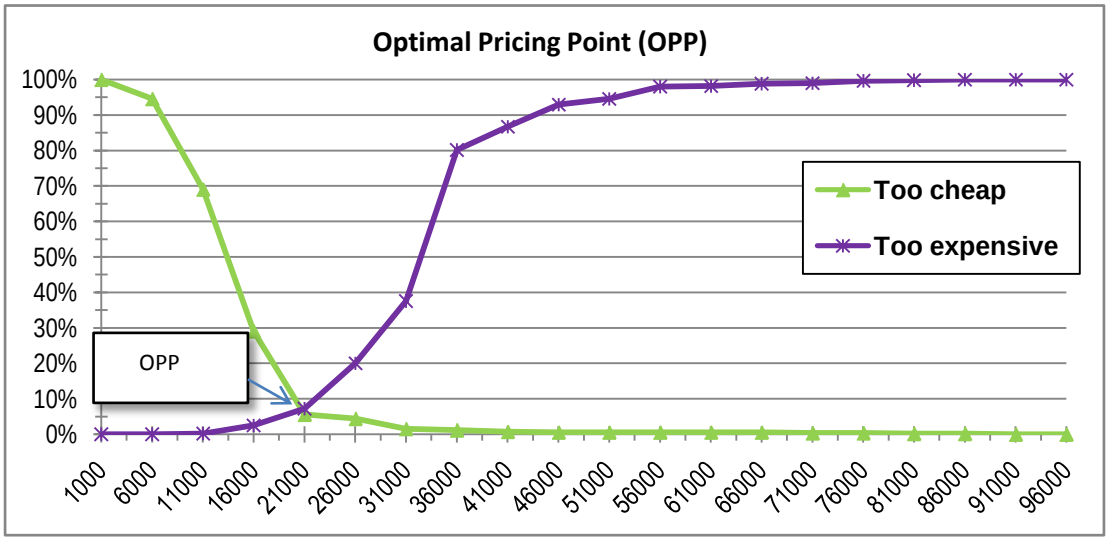

Figure 2: The Cumulative Distributions of Responses for “Too Cheap” and “Too Expensive” With an Intersection of the Two Graphs Representing the Optimal Pricing Point

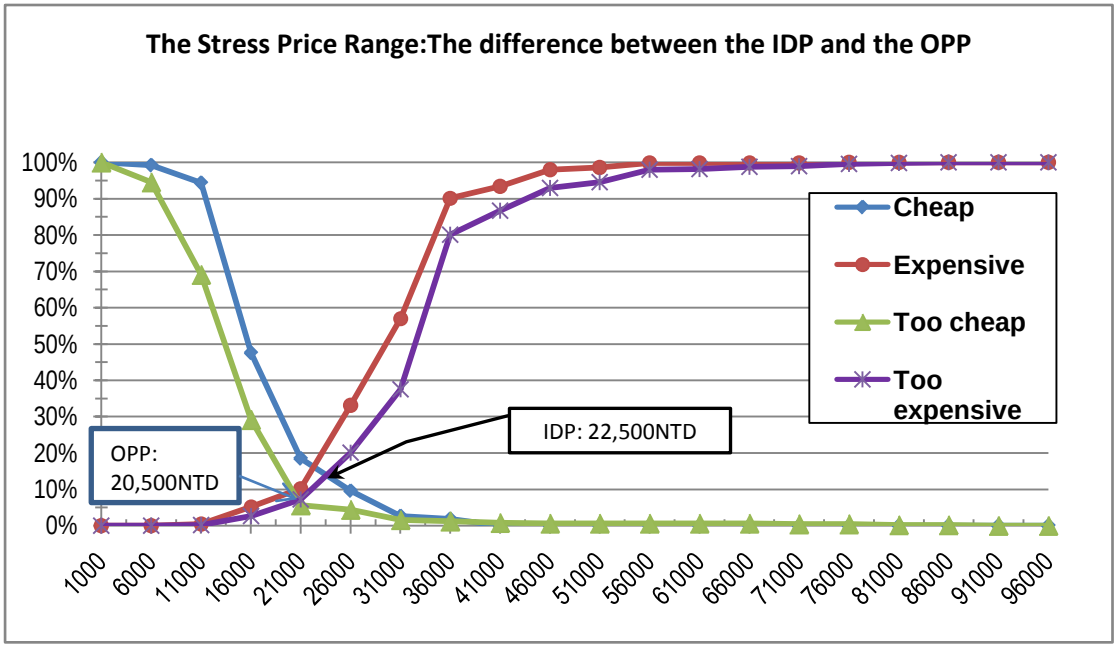

Figure 3: Combined Cumulative Distribution of Responses to "Cheap" and "Expensive" as well as "Too Cheap" and "Too Expensive". The Difference between the IDP and the OPP is the Stress Price Range.

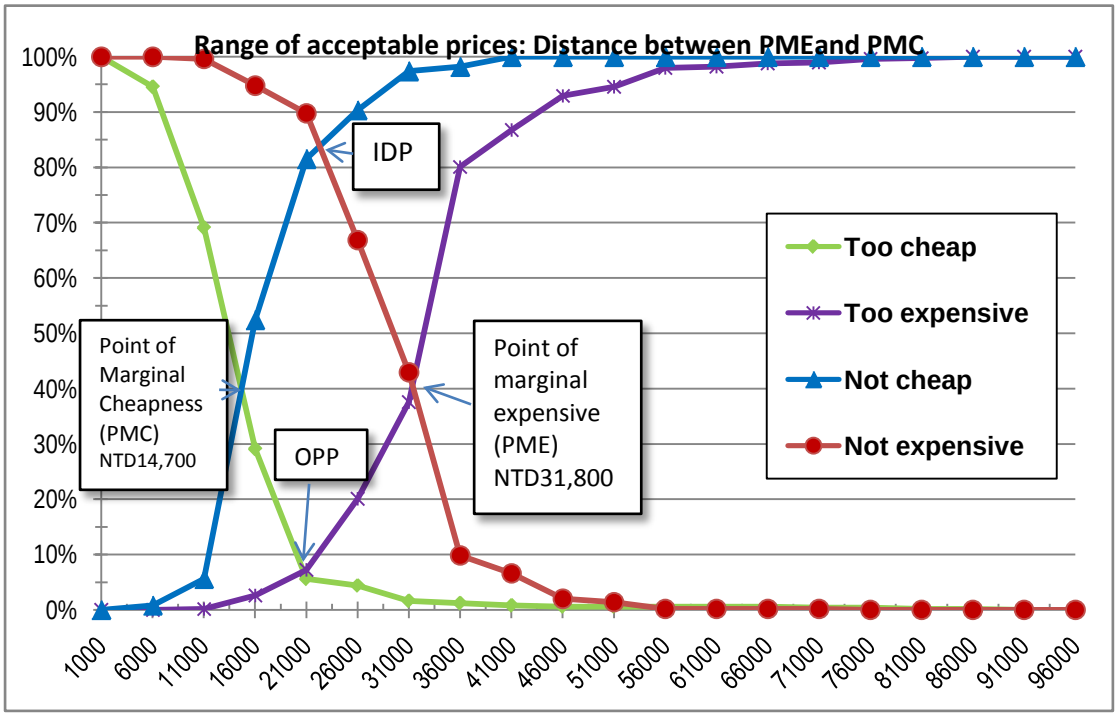

Figure 4 Range of acceptable price

Discussion and Conclusion

Seniors' group package tour constraints

The results of the study showed that the senior travel constraints under the group package tour concept are partially different from previous studies. In contrast, several constraints of previous research are also confirmed. In the intrapersonal constraint construct, three factors: uncertainty of traveling abroad, not interested in traveling abroad, and health concern; and 11 constrains are found. These three factors are not beyond previous studies. However, to look at into the details some constraints show that the different backgrounds of the respondents are important. In Blazey's research (1992), "Risk/afraid of terrorism at some destination" was an intrapersonal constraint. However, this was not a concern for Taiwanese seniors because most people in Taiwan do not have the living experience dealing with terrorism. Taiwanese seniors worry more about the destination's hygiene regarding the health. Further, previous studies are more based on the travel type of self arranged travel. However, most Taiwanese seniors travel abroad in group package tour. The participants of group package tour do not have much freedom during the trip and need

to compromise with the itinerary of the tour. In addition, they do not know much about what they will eat and where they will sleep. Even more, they need to pay lump sum money before the trip. These uncertain things also reflect on the results of this study.

The major constraints for intrapersonal constraint is “Afraid of making a mistake by going to a disappoint place/ waste money” and “Not aware of trips designed for me” which are included in the most important factor “Uncertainty of traveling abroad”. Many Taiwanese seniors are also as same as other seniors that they feel guilty or not interested in traveling abroad (Blazey, 1992; Lee & Tideswell, 2005; Macquire, 1984). These constraints may be caused by the dependent income source that about 27% of the respondents are dependent on families’ financial support. Taiwan is very much a family orientation society. When the senior thinks that he/she demands a foreign travel which costs a lot of money and this may increase the financial burden of the family he/she might “feel guilty” and, therefore, is “not interested in traveling abroad”.

Taiwanese seniors are also constrained by interpersonal relationships. This constraint can be categorized into two factors: “Direct interpersonal constraints” and “Indirect interpersonal constraints”. The results indicate that the attitude and health condition of spouse, and the direct suggestion of others play an important role in the decision of traveling abroad. Previous studies of Lee and Tideswell (2005) and Macquire (1984) have shown that “spouse dislikes travel” is a constraint for seniors. In addition to this finding, this study found that spouse does not want to accompany and his/her health condition will be considered as a constraint. It seems that Taiwanese seniors are intended to travel with their spouse together. When the spouse “dislike” travel, does not agree, “does not want to accompany” him/her or his, or her spouse is “not able to” go traveling, the senior will stop traveling.

In addition to the influences of spouse, Taiwanese seniors were constrained by many direct suggestions from different people such as doctor, families, and even travel agents. The seniors are also influenced by the experts and families. Previous study shows that the opinions of “friends” are important for seniors to go traveling or not (Macquire, 1984). However, this study demonstrates that friends’ disagreement is not important to Taiwanese seniors’ travel decision.

Another factor of interpersonal constrain is “Indirect interpersonal constraints”. The results found that Taiwanese seniors are also influenced by friends passively when

their friends do not invite him/her, do not travel abroad, or they cannot find travel partner. To combine the spouse influences in the factor one, it seems the seniors also expect to travel with friends, however, if the spouse does not show positive attitude or participate in, the seniors will not go traveling.

An interesting finding in interpersonal constraint is that the opinions of god are important to the seniors. In the interviews, many seniors who believe in god described how they decided to go traveling. They often go to temple to pray and ask god's opinions before the trip. In addition, they also believe in destiny. They go to the fortuneteller to ask if this year for him/or her is good or bad year to travel abroad. If the answer is negative, he/she will look for knowing about how to avoid the bad things so that he/she can accomplish the wish of traveling.

The final constraint is structural constraint. The structural constraint consists of the most constrains in comparing to the other two constraints. This study identified five factors for the structural constraint. In addition to the structural constraints found in the previous literature such as time (Blazey, 1992; Fleischer & Pizam, 2002; Huang & Tsai, 2003; Macquire, 1984), family obligation (Hus & Kang, 2009; Wu & Chen, 2004), and inconvenience of the trip (Blazey, 1992; Huang & Tsai, 2003; Macquire, 1984) several interesting constraints were found regarding the characteristics of group package tour. The satisfaction with the tour is very much related to the service quality of the tour. The group package tour usually provides the service of tour leader and local tour guide which are not necessary for self arranged tour. Hence, the bad group package service experiences provided by the travel agency become a hurdle for seniors to go traveling. Further, sensitive physical or mental reactions to strange place are also the concerns for Taiwanese seniors such as serious home sick and insomnia during the trip.

The family obligation constraint seems a particular constraint for Asian seniors. This study further confirms the findings of Hus and Kang (2009) and Wu & Chen (2004) that Asian seniors feel that they have the obligation to take care of families and other people if needed. In the interviews, many participants argued that the day care for children is too expensive and unreliable. They would like to take care of their grandchildren during the day and reduce the financial burden of their children. The sense of family obligation of Asian seniors has become a unique constraint in terms of the research findings in Asia.

In conclude, this study has confirmed different factors for each of the three main

senior travel constraints: intrapersonal, interpersonal, and structural by using confirmatory factor analysis. This study provides a different perspective of travel constraint in regard to group package tour. Seniors travelers concern the uncertainties in terms of the characteristics of group package tour in intrapersonal constraint. In the interpersonal constraint, Taiwanese seniors are very much relied on the traveling attitudes and the participation of their spouse, and many experts and families' recommends are also the direct interpersonal constraints. The accompanying of friends is important but their suggestions are minor to the seniors.

The structural constraint provides the most factors. The most important factor of five factors is poor services of travel agency which indicates the fundamental differences between group package tour and self arranged tour. This finding also extends the literature of senior travel constraints. This study has confirmed again that family obligation is a unique structure constraint for Asian seniors.

This research contributes to well establishing senior travel constraints constructs. Many findings are new to the literature in terms of the senior group package tour. This study consists of a larger base of sampling which includes the entire Taiwan. However, the samples were selected only from five major metropolitan cities. Hence, the interpretation of the findings must be careful. In addition, many questions are remained after the study. The uncertainty about group package tour seems an important intrapersonal constraint factor. What are the uncertainties and how they are caused demand a further research. Poor travel agency services are major structural constraints. The managers of travel agency need to reconsider the service quality of the group package tour in regard to the seniors' travel service needs.

Price sensitivity to licensed nurse travel leader

In order to investigate the price sensitivity of senior group package tourists to the tour: Shanghai, Soochow, and Hangchow with a licensed nurse travel leader, the PSM was used and the results showed that PSM was successfully applied to analyze the acceptable price range of a new travel product. Generally, four key indicators and their values were identified which are indifference point (22,500NTD), the optimal pricing point (20,500NTD), the stress price range (2,000NTD which is the difference between IDP and OPP), and the range of acceptable price (17,100NTD which is the difference between PME (31,800NTD) and PMC (14,700NTD)). In addition, the acceptable price range is larger than the market price 11,000NTD and 37,000.

The results of the research provide much meaningful marketing information for the travel agency with regard to pricing this travel product. According to the findings, the travel agency had better set the price between 14,700NTD and 31,800NTD when this price range is acceptable to the seniors. The seniors may consider its quality as poor when the price is lower than 14,700NTD. On the contrary, the seniors may think the price is too expensive to buy if it is over 31,800NTD. The optimal price point for seniors is 20,500. Hence, if the price is between 20,500NTD and 14,700NTD, the seniors will buy immediately because it is cheap to them. This implies that many promotional activities of travel agency are not necessary because the seniors will buy it anyhow.

When the price stress range (2,000NTD) is not large, the price consciousness of seniors is low. However, the optimal price (22,500NTD) is lower than the indifference price (normal price) and this indicates that the seniors may feel they need to pay higher price than their optimal price. Thus, they experience the stress of the price. To ease the uncomfortable feelings, the travel agency may need to communicate with the seniors that the quality of the travel is higher than the other regular travels. In addition, the price range from 22,500NTD and 31,800NTD is considered expensive by the seniors. In this case the travel agency may inform the potential customers about the benefits gained from the licensed nurse travel leader and set the price closer to 31,800NTD (PME). For the reasons, the group package tour with a licensed nurse travel leader is a new service without any comparison in the current market and the price under 31,800NTD is acceptable.

An important finding of this research is that the difference of price range between the results of this study and market price range. The PMC of this study is 14,700NTD but the current lowest market price is 11,000NTD. This implies that the seniors appreciate the new travel service: a licensed nurse travel leader and they expect to pay 3,700NTD more than the regular tour with the lowest price. However, the highest market price of the tour (37,000NTD) is 5,200NTD more than the PME (31,800NTD). This can be explained that the highest market price was not designed for the normal seniors but other different market segments, or wrong pricing for seniors.

In general, PSM provides a tool to exercise pricing strategy based on the perceived value of the customers. Price becomes a range, instead of a fixed number. Hence, price setting is more flexible and has the company have the opportunity to save the costs of unnecessary promotional efforts and to earn a higher premium through setting appropriate price. More important is that PSM is able to a method to measure the

acceptable price range for a brand new service or product. This study demonstrates PSM is a useful technique for price setting and extends the research setting from hospitality (Raab et al, 2009; Lewis & Shoemaker, 1997) to tourism. However, it is necessary to provide a benchmark when doing survey and this helps very much with answering the questionnaires and interpreting the difference of price range between the acceptable price of research target group and the market price.

Although PSM appears to be useful in this case, some limitations need to be considered. First, the samples of this research are from Taiwan therefore the results can only be interpreted for the Taiwan market. Second, the respondents are seniors over 65 years hence the results are only suitable for the Taiwanese seniors. Finally, PSM has been seldom applied in hospitality and tourism. It is suggested more tests for PSM in different settings such as theme park, airlines, etc. are necessary.

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