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The Word-of-Mouth Effects on the Chinese Customers' Choice Intention of Medical Tourism Destination*

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Abstract

Purpose – With globalization, medical tourism has developed as a new industry, which attracts practitioners and academics to have more interest in researches on customers' behavior. This research was to investigate empirically WOM effects on the intention of Chinese customers when they select an international medical tourism destination. Interestingly, WOM effects on their choice and decision process may vary by the extent of their severity of illness.
Research design, data, and methodology – The data was collected from 1,747 potential Chinese residents in main districts of China. Moderated regression analysis was used to estimate WOM effects on Chinese customers' choice intention.
Results – Results imply that WOM determinants of tie strength, credibility, and vividness do interact with medical tourism information and affect customers' intention for health care abroad. Results also reveal that the severity of illness plays a critical moderating role in customers' decision process.
Conclusions – WOM and the severity of illness are important moderators for Chinese customers to make a decision for medical tourism. It provides some implications for service organizations for developing and implementing marketing strategies in international health care markets.

Keywords: Tie Strength, Credibility, Vividness, Severity of Illness, Medical Tourism Information, Destination Choice Intention.

JEL Classifications: I15, M16, M31, Z32.

1. Introduction

Medical tourism, a trend for undergoing medical procedures overseas has been rapidly emerging recently (Connell, 2013). With regards to financial benefit, this new sustainable growing industry has attracted practitioners and academics to investigate factors that may influence customers' behavior. Hopkins et al. (2010) indicated that high health care cost and long waiting time lead most medical tourists to seek health care overseas. On the other hand, however, Patti & Chen (2009) noted that given the specific aspects of uncertainty in international health care service, most prospective customers are lack of knowledge and experience for disease treatments in choosing medical service. Thus, customers prefer to rely on word-of-mouth (hereafter WOM) to seek information of major factors that may influence their decision (Argan, 2012).

Caballero-Danell & Mugomba (2007) supported the notion that WOM is an important driver of health care customers' decision. Especially, they emphasized that WOM effects are reflected on various determinants. Some evidences can be found in the literature. For instance, with a review of patient questionnaires, Gombeski et al. (1988) estimated that peer recommendation to a health center had the most effect on patients' patronage decision. Whereas Gelb & John on (1995) noted that WOM effects on medical care behavior is

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more complex. It is because some customers make a decision when they believed the medical tourism information while some others are more likely to accept the vivid information. Therefore, Bansal & Voyer (2000) made a conclusion that tie strength, credibility, and vividness are the critical factors that may decide WOM effects on customers' decision. However, the compounded problem is that, no empirical study is available to verify how WOM works in the health care service decision-making process. In particular, it is less clear which aspect of tie strength, credibility, and vividness is more important. Hence, this study offers new insights into WOM effects in the professional medical service context concluded that WOM determinants may interact with medical tourism information and affect customer destination choice. In addition, in order to obtain more implicated information, severity of illness, cited by Adams et al. (1991) is considered. It is expected that according to severity of illness, WOM effects on customers' decision might vary.

This issue is estimated by looking at medical tourism market in China. Currently, China is the largest and the most important single source of international medical tourism development. Under the results of a survey data, this study suggests that service managers and health care marketers should respond to the significant WOM effect that may accelerate customers' decision when they want to take a competitive advantage in medical tourism industry. The following section discusses WOM effects in the literature.

2. Literature Review

2.1. WOM in medical tourism

The terminology WOM definition is controversial in this particular area of service. According to Carl (2006), in this study, the WOM definition was considered in a wide sight. It is not only the phenomenon that customers make a communication of a service or a health facility happened online or offline informally (Arndt, 1967; Katz & Lazarsfeld, 1955; Westbrook, 1987), but also the phenomenon that the medical delivery actively utilizes its various marketing sources, examples of press releases or brochures to attract clients (Haywood, 1989).

The power of WOM is increasing when customers selecting a medical facility because of the perceived high-risk prior to consumption (Dobele & Lindgreen, 2011). Caballero-Danell & Mugomba (2007) emphasized that WOM is one of the important distributions that link medical customers to destinations in a proposed model. Yeoh et al. (2013) supported their notion and found that WOM works as the critical predictor of customers' health care behavior abroad. More importantly, Bansal & Voyer (2000) suggest that WOM effects on the medical customer behavior may be influenced by various factors such as tie strength, credibility, and vividness.

2.1.1. Tie strength

Tie strength is often defined as the intensity associated with an interpersonal or impersonal relationship between the source and the receiver (Duhan et al., 1997). Granovetter (1973) emphasizes that the importance of tie strength effects on choice decision process. Based on the empirical research, Frenzen & Nakamoto (1993) estimated that strong ties have more influential than weaker ties (Chung & Tsai, 2009). Ye et al. (2011) adopted a case study and highlighted that WOM referrals from friends or relatives are the positive pull factors to motive health customers to take a cosmetic procedure overseas.

2.1.2. Credibility

As another promising construct, credibility refers to the extent when one perceives a source or message as believable, true, or factual (Wang et al., 2008; Wilson & Sherrell, 1993). In general, when a recommendation is perceived as an expert or trustworthy, it has a positive effect on purchasing decision (Aronson et al., 1963). Hu & Sundar (2010) and Wang et al. (2008) have estimated the effect of credibility on medical tourism information and treatment intention. An interview result indicated that customers are more likely to accept the advice when they believe it (Dobele & Lindgreen, 2011).

2.1.3. Vividness

Curiously, the positive WOM effect that can increase the acceptance of a message is attributable to vividness (Herr et al., 1991). It is related to the degree that whether message is expressed emotionally or transferred in a spatial way (Mangold et al., 1999; Nisbett & Ross, 1980). In general, vividly described information is more impactful on customer's decision as compared to the message addressed pallidly (Kisielius & Sternthal, 1986; Nisbett & Ross, 1980). Experimental results estimate this argument that vivid information can increase WOM effects on customers (Herr et al., 1991).

2.2. Medical tourism information

Medical tourism customers seek service abroad to satisfy their demands of medical treatment and international travel. Thus, factors associated with the two dimensions are the key determinants for a successful medical facility.

2.2.1. Medical characteristics

Of medical characteristics, scholars such as Herrick (2007), Smith & Forgione (2007), and Zhang et al. (2013) insist that high medical quality and low medical cost are the important alternatives to attract clients to particular medical facilities. Additionally, Connell (2006) suggest that medical

reputation can also increase customer benefit.

According to Grönroos (1984), technical quality and functional quality are the two legitimate constructions relevant to a medical delivery. In the medical service environment, technical quality is closely associated with the technical accuracy of diagnostic and healing procedures. Functional quality is defined as the manner in the process when the medical service is delivered to the customers (Babakus & Mangold, 1992; Parasuraman et al., 1985; Zhang et al., 2013). McAlexander et al. (1994) suggest that service quality works as a significant predictor of customer purchase intention. Empirical evidence has been provided by Gooding (2000). As another alternative variable to achieve a differential advantage over competitors, medical cost, has attracted more scholars to pay attentions currently (Burkett, 2007; Herrick, 2007). Gooding (2000) defined it as the out-of-pocket cost, excluding insurance cost or other third party payers (Zhang & Lee, 2015; Zhang et al., 2013). In understanding customers' medical delivery-seeking behavior, cost is the important factor (Yip et al., 1998). Furthermore, Heung et al. (2010) emphasized that reputation of the facilities in a destination and/or the location of these organizations within the country may also have effects on the choice of a destination (Connell, 2006; Keh & Xie, 2009). Most scholars (e.g., Herbig & Milewicz, 1995) accept the definition of reputation that it is an attribute of an entity consisted with time (Nguyen & Leblanc, 2001). As a strategic asset of medical service, medical reputation works as a critical moderator for gaining competitive advantage sustainably (Berkowitz & Flexner, 1981). Especially, through an interview survey, Ye et al. (2011) found that the host country that has a good medical reputation would have a high chance to get customers' early adoption of that service.

2.2.2. Attractiveness

Along with medical factors, attractiveness of a destination is often the important factor that can attract customers for traveling (Vengesayi, 2010). It is referred to the evaluations of medical customers about the ability of the host country to satisfy their needs (Mayo & Jarvis, 1981). In terms of the literature, scholars usually explain how attractiveness encourages people to travel in a certain area through five subcategories, which are attraction, facility, travel cost, accessibility, and social environment (Gearing et al., 1974; Kozak & Rimmington, 1998; Middleton, 1988; 1998; Mill & Morrison, 1992).

Attraction is the primary factor that can pull tourists to a destination, which includes natural or man-made resources, music and handcrafts, culture, heritage, and so on (Vengesayi, 2008, 2010). Without attraction, it is difficult to estimate why prospective travelers select one country over another (Crouch & Ritchie, 1999). Facility, including roads, accommodation, and others, which is named as infrastructure (Jin et al., 2012; Middleton, 1988; 1998; Vengesayi, 2008), is the second important group of attractiveness for predicting customer behavior. It is a key motivator for tourist visitation (Ritchie & Crouch, 2000). Travel cost, augmented by health cost and time cost, refers to the cost of transportation services and the ground component cost from accommodation food or beverage alcohol in the travel processes (Kozak & Rimmington, 1998). Since decades, travel cost is always the important predictor in the decision-making process. Stevens (1992) has noted that when selecting a destination, it plays a critical role. Associated with time taken and cost to go to a destination, accessibility is quickly becoming a prime consideration of destination selection process (Middleton, 1988, 1998). With a survey data, Var et al. (1985) found that customers are more likely to select a country for medical care when it is easier to get to the destination or when the information can be accessible easily. Finally, social environment refers to peace, safety, and security in a destination (Vengesayi, 2008). Potential customers prefer to visit a destination that they believed to be safe (Cavlek, 2002). This suggestion was supported by Heung et al. (2010), and they have highlighted that social environment in the destination is the determinant for health care tourists to accept the service.

2.3. Choice intention

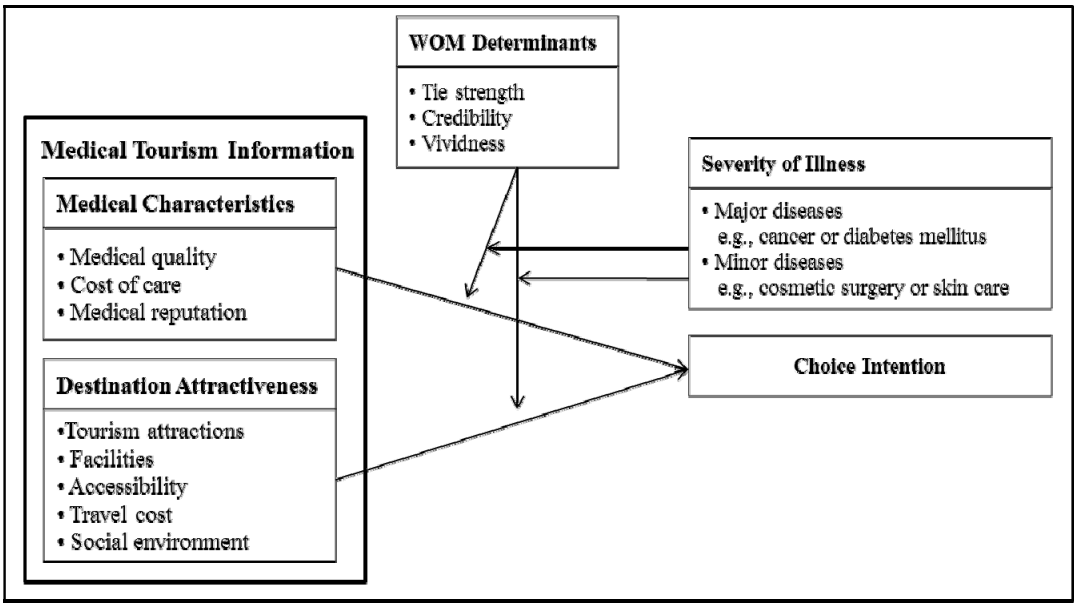
While understanding medical customers' behavior, intention has been becoming important. It is because intention is used as a leading indicator for predicting the customers' actual purchasing behavior (Fishbein & Ajzen, 2010). Various actions can be concluded into intention, example of making favorable comments about the medical organization (Boulding et al., 1993), recommending the facility (Parasuraman et al., 1994), or remaining higher loyal to the delivery (LaBarbera & Mazursky, 1983; Rust & Zahorik, 1993). Hence, Zeithaml et al. (1996) conclude a multidimensional construct of these indicators that comprises WOM communication, buying intention, price sensitivity, and complaint behavior. Accordingly, two specific intentions, which have direct and critical effects on the success of a health care facility, have been considered in this present study. They are the actual buy intention and willingness to make a recommendation of the health service to other potential customers.

2.4. Severity of illness

Importantly, depending on medical customers' specific needs such as severity of illness or medical produces, the adoption extent of destination sources may vary (Adams et al., 1991; Connell, 2013). Medical produces not only include minor disease such as cosmetic surgery and skin care, but also major disease such as cancer and diabetes mellitus (Yu & Ko, 2012). Customers in need of a liver transplant will be more likely to make a decision in a different way to the one who requires an aesthetic surgical procedure (Heung et al.,

2010). Zhang et al. (2013) have provided evidences to support this suggestion that severity of illness plays a moderating role in medical destination choice process.

Consequently, to predict medical customer's choice intention, a proposed research model is depicted in <Figure 1> to explore WOM effects on medical tourism decision process in an international market. It is proposed that WOM determinants joint with each factor of medical tourism information, and make affection on customer intentions of the medical country. Additionally, such effects of WOM may vary according to severity of illness.



<Figure 1> Research Model

3. Methodology

3.1. Data collection

All the constructed items were adapted from the literature. Some amendments are made to fit the objective of this present study. The original constructs were in English. The native professional researcher translated them into Chinese. With a pilot test, first, the questionnaire was distributed to the thirty Chinese graduate students studied in Korea. And then reflecting the results from the pilot test, the revised questionnaires were distributed to the major regions of Beijing, Shanghai, Jiangsu, Guangzhou in China. Among 2,500 potential respondents, 1,747 usable surveys are collected for this study, which had a 69.88 percent completion rate.

3.2. Measures

The choice intention to select the country as a medical destination is used to represent the dependent variable. It is measured by a three-item with a 5-point Likert scale. In terms of Fishbein & Ajzen (2010) and Zeithaml et al. (1996), these items are the actual choice intention of the referred destination, the selection confidence, and the recommendation intention of the medical country to others. The independent and control variables are also measured with multiple questions, using 5-point Likert scale.

3.2.1. WOM determinants

Tie strength was measured based on the study of Frenzen & Davis (1990). Closeness, intimacy, support, and association were used to measure it (Bansal & Voyer, 2000). Credibility was measured by three items according to Wilson & Sherrell (1993), which are honest, expertise, and trustworthiness. Vividness was measured by a scale from Herr et al. (1991). They are constructed by vividness, interest, affirmation, and novelty.

3.2.2. Medical characteristics

Medical quality is a key predictor of a medical organization's success (McAlexander et al., 1994). Among the traditional measurements of SERVQUAL (Parasuraman et al., 1985, 1988), the five items are used to measure it. The items are the general up-to-date equipment level, the

general convenience of the facility, the service level in general, the physicians' diagnostic skill level, and the general procedural accuracy and the effectiveness level. A single item was used to measure the average medical cost (Gooding, 2000). According to Nguyen & Leblanc (2001), medical reputation was constructed by a three-item: the medical reputation of collogues/friends and family, the reputation as compared with the competitors, and the general health reputation in the market.

3.2.3. Attractiveness

Under the research of Vengesayi (2008), attraction was measured by four items, which are the variety of cultural attraction, cultural heritage, ethnic groups and cultures, and creational attractions. Facility was measured by a four-item (Jin et al., 2012). The items are transportation (e.g., airport and high way etc.), the local food and beverage attractiveness, the accommodations (e.g., hotels and resorts etc.) attractiveness, and the shopping opportunities. A single item was used to measure travel cost, which is the average travel cost but medical cost. According to Jin et al. (2012), three items are used to measure accessibility. They are the accessibility to get the host country information, the access to go to the host country, and the country's geographical location. Four items are employed to measure social environment, the local people's attitudes, the travelling safety, the socially and politically stable level in general, and the openness and passion level (Vengesayi, 2008, 2010).

4. Results

4.1. Socioeconomic characteristics of respondents

The sample profile is addressed in <Table 1>. Among all the 1,747 respondents, 60.0 percent were female while 40.0 percent were male. In the age groups, more than half of the sample were in their twenties (55.7 percent) and in their thirties they were 30.6 percent. While considering education, most respondents had a Bachelor degree (58.4 percent). And there were 32.4 percent those had the Master or Ph.D. degree. The average monthly income of the respondents was categorized as follows (exchange rate: 1:6.3): less than US$316.999 (23.9 percent), US$317-US$793.999 (31.8 percent), US$794-US$1,269.999 (26.8 percent), US$1,270-US$1,586.999 (10.1 percent), and more than US$1,587 (7.3 percent).

4.2. Exploratory factor analysis and reliability analysis

The exploratory factor analysis (EFA) is a class of procedures primarily conducted for data reduction in this study. Principal component analysis is used with varimax rotation. As addressed in <Table 2>, the factor loadings and the variance extracted values are greater than 0.5, and the eigen values are greater than 1, thus indicating the high convergent validity (Hair et al., 2006). All of the derived variables are proved to be highly reliable under the reliability guidelines of 0.6 (Nunnally, 1967). Hence, an adequate level of internal consistency exists in each construct.

<Table 1> Demographic characteristics

Variables	Sub Variables	Frequency	Percentage
Gender	Female	1049	60.0
	Male	698	40.0
Age	20~29	973	55.7
	30~39	535	30.6
	40~49	166	9.5
	50~59	56	3.2
	60 or older	17	1.0
Education	Less than high school degree	160	9.2
	Undergraduate	1021	58.4
	Graduate	566	32.4
Average monthly income (exchange rate: 1:6.3)	Less than US$316.999	418	23.9
	US$317-US$793.999	556	31.8
	US$794-US$1,269.999	468	26.8
	US$1,270-US$1,586.999	177	10.1
	More than US$1,587	128	7.3
Total		1747	100.0

4.3. WOM effects

Moderated regression analysis (MRA) is carried out to estimate the interaction effect of tie strength, credibility, and vividness in international medical tourism destination selection process. The findings estimated in <Table 3> reveal that each model has goodness of fit according to F statistic values, ranged from 14.752 ($p<0.001$) to 143.404 ($p<0.001$). Coefficient of determination R^2 is usually used to estimate the prediction of the regression model, whose value is associated with the number of independent variables. The more the number of independent variables are, the greater the value of R^2 is (Malhotra, 2007). Thus, the value of R^2 is not the key indicator in this study.

To the Chinese respondents who are seeking medical service overseas, the moderator of credibility, does matter in the relationships between medical quality information and their intentions to select a destination. It is because the increment of F statistic between steps 2 and 3 is positively significant in both situations of major disease ($\triangle F=2.742$, $p<0.1$) and minor disease ($\triangle F=4.175$, $p<0.05$). Whether the disease is serious or not, credibility interacts with medical quality information provided by sources and affects customers' intentions for medical tourism destination selection. The implication is that customers can be easily persuaded by the reference with higher trustworthiness.

<Table 2> Exploratory factor analysis and reliability analysis

Variables[b]	Items	Cronbach's Alpha	Eigen value	Extracted variance (%)[c]	Factor loading
Medical characteristic information of the host countrya provided by source					
Medical quality	The up-to-data equipment level	0.796	1.804	0.536	0.689
	The convenience facility level in general				0.602
	The service level (e.g., the medical facility affiliated facilities) in general				0.607
	The physician diagnosis skill level in general				0.720
	The procedure accuracy and effectiveness level in general				0.721
Medical reputation	The health reputation of the country among the information provider's colleagues and friends	0.774	1.369	0.578	0.617
	The health reputation compared to its competitors				0.585
	The health reputation in the market				0.622
Destination attractiveness information of the host country[a] provided by source					
Attraction	The variety of the cultural attractions	0.761	4.231	0.538	0.663
	The variety of the cultural heritage				0.726
	The variety of the ethnic groups and cultures				0.722
	The variety of the recreational attractions				0.600
Facility	The transportation attractiveness (e.g., airport and high way etc.)	0.714	2.377	0.502	0.547
	The local food and beverage attractiveness				0.621
	The accommodations attractiveness (e.g., hotels and resorts etc.)				0.631
	The shopping opportunities				0.513
Accessibility	The accessibility to get the country information	0.630	1.598	0.505	0.687
	The accessibility to go to the country				0.688
	The country's geographical location				0.504
Social environment	The local people	0.769	3.130	0.581	0.626
	The traveling safety				0.686
	The socially and politically stable level				0.678
	The openness and passion level				0.574
WOM characteristics evaluations by respondents					
Tie strength	Your relationship with the recommendation source	0.856	2.093	0.701	0.774
	Your likelihood to share a personal confidence with the information provider				0.790
	Your likelihood to extend an everyday assistance with the information provider				0.791
	Your likelihood to spend the free time with the information provider				0.801
Credibility	The honesty	0.756	1.253	0.611	0.667
	The expertise				0.600
	The trustworthiness				0.683
Vividness	The vividness	0.802	1.488	0.637	0.727
	The interest				0.762
	The affirmation				0.573
	The novelty				0.747
Customer choice intention					
Choice intention	The real visit to the host country for your health care	0.631	1.046	0.514	0.520
	The confident on your choice of the country				0.599
	The preference to recommend the country to others positively				0.557

[a] the host country: the referred country such as the USA, Korea, Singapore, Thailand, Japan, or others.
[b] KMO: 0.934, Bartlett's Test of Sphericity: 40,455.201 ($p < 0.001$); total variance extracted: 55.844%.
[c] Extraction Method: Principle Component Analysis.

<Table 3> Moderating role of WOM according to severity of illness

Variable		Major disease			Minor disease		
Credibility	Medical quality	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3
	R^2	0.063	0.165	0.170	0.137	0.269	0.273
	Adj. R^2	0.061	0.161	0.164	0.136	0.267	0.270
	F	31.293***	45.435***	31.319***	124.170***	143.404***	97.384***
	△F	31.293***	55.861***	2.742†	124.170***	140.465***	4.175*
Tie strength	Medical reputation	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3
	R^2	0.031	0.108	0.111	0.092	0.196	0.201
	Adj. R^2	0.029	0.104	0.106	0.091	0.194	0.197
	F	14.752***	27.905***	19.205***	79.385***	95.249***	65.143***
	△F	14.752***	39.818***	1.718	79.385***	100.953***	4.160*
Tie strength	Attraction	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3
	R^2	0.056	0.127	0.133	0.061	0.169	0.169
	Adj. R^2	0.054	0.123	0.127	0.059	0.166	0.166
	F	27.201***	33.595***	23.542***	50.428***	79.095***	52.730***
	△F	27.201***	37.822***	3.127†	50.428***	101.287***	0.168
Tie strength	Social environment	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3
	R^2	0.113	0.164	0.166	0.123	0.197	0.202
	Adj. R^2	0.111	0.160	0.161	0.121	0.194	0.199
	F	58.868***	45.062***	30.566***	109.071***	95.390***	65.590***
	△F	58.868***	27.835***	1.481	109.071***	71.819***	5.009*
Credibility	Attraction	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3
	R^2	0.056	0.168	0.168	0.061	0.243	0.246
	Adj. R^2	0.054	0.164	0.163	0.059	0.241	0.243
	F	27.201***	46.407***	30.961***	50.428***	125.068***	84.646***
	△F	27.201***	62.020***	0.225	50.428***	187.655***	3.123†
Credibility	Facility	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3
	R^2	0.092	0.189	0.200	0.076	0.241	0.241
	Adj. R^2	0.090	0.186	0.194	0.075	0.239	0.238
	F	46.623***	53.762***	38.256***	64.154***	123.741***	82.393***
	△F	46.623***	55.410***	6.063*	64.154***	169.488***	0.011
Vividness	Attractions	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3
	R^2	0.056	0.142	0.142	0.061	0.188	0.192
	Adj. R^2	0.054	0.138	0.136	0.059	0.186	0.189
	F	27.201***	38.016***	25.320***	50.428***	90.055***	61.641***
	△F	27.201***	46.172***	0.079	50.428***	121.878***	4.099*

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001.

The moderation effect of credibility can also be found in the relationships between facility information and customer intentions to select the country when the disease is serious ($\triangle F=6.063$, $p<0.05$). Oppositely, for customers who seek minor disease treatment, credibility works as a moderator in the relationship between reference of attraction and customer destination selection intention ($\triangle F=3.123$, $p<0.1$). These results indicate that credible information results in stronger persuasion and can increase the demands of customers to select the referred country across severity of illness. Different marketing strategy should be considered.

Moreover, effects of attraction information on customer destination choice intentions moderated by tie strength is verified in the situation of serious disease ($\triangle F=3.127$, $p<0.1$). Good rapport between information providers and customers, it could increase the effects of attraction message on the decision of customer for serious disease treatment. However, when the disease is not serious, tie strength interacts with medical reputation ($\triangle F=4.160$, $p<0.05$) or social environment ($\triangle F=5.009$, $p<0.05$), and affect customer choice of medical tourism destination. To customers for disease treatment such as skin care, they should be encouraged to seek information from those who have a close relationship with the customers like parents and friends.

Additionally, for customers seeking minor disease treatment like skin care, vividness plays an important moderating role in the choice decision process ($\triangle F=4.099$, $p<0.05$). These results indicate that when the messages of attraction are transferred vividly, which may increase the intention of customers to select the referred country.

5. Conclusions

The objective of this research was to investigate WOM effects on choice intention of Chinese customers for medical tourism overseas. With a survey data collected from China, we found some interesting conclusions.

5.1. Overview of the findings

With the numerous findings of the research, the most important of which is consist with the literature by Bansal & Voyer (2000) and Gelb & Johnson (1995), that WOM is an important moderator in the medical tourism decision process. Extremely, such WOM effects are determinate by tie strength, credibility, and vividness. Moreover, some WOM determinant effects vary depending on severity of illness significantly. For instance, customers, who have a stronger tie with the information provider, prefer to adopt attraction information in the situation of serious disease. However, the same effect of tie strength does not matter when the disease is not serious. It does matter in the relationships between medical reputation and choice intention or the relationships between social environment and intention to select the referred country. Furthermore, moderation effects of credibility work in the decision process whether the disease is serious or not. However, when it is minor disease, the impacts of attraction approved by sources on customer intentions are moderated by credibility. For serious disease treatment customer, interaction effect of credibility exists in the relationships between facility information and customer intentions. Finally, vividness interacts with attraction information and affects customer selection intention when they want to take a minor disease treatment. All these results provide support for the prior notions estimated by Adams etc. (1991) that customer decision varies across severity of illness.

5.2. Implications for global medical tourism industry

Medical tourism managers or marketers can use the results of this study to develop their implications in the following ways. In the decision process of medical tourism destination choice, first, WOM can be used as an important moderator to influence customers' decision. This finding suggests that marketers can use WOM as a promotional tool to attract more new customers for industry development. In particular, for medical marketers, it is necessary to make an effort to initiate WOM advertising. Furthermore, to increase WOM effectiveness, it is useful to make an attempt to focus on the determinants of tie strength, credibility, and vividness. For example, credibility is found to be interacted with medical quality and affects customer intentions to select an international medical tourism destination. To attract more potential Chinese customers, it is effective to improve the trustworthiness or expert of the reference for advertising medical quality. This is because in most situations for disease treatment, customers always seek the destination from those they believe. As another effective strategy to bring more new clients, a closed relationship WOM recommendation system should be considered to be established. It is because tie strength works well in the choice decision process. Moreover, managers should be suggested to consider making the advertising emotionally. That is because interesting message and vivid information can attract customers and hold their attention, and in turn influence their judgment.

Second, the moderating role of severity of illness has been confirmed in this study. Medical facility managers therefore should use the factor as a descriptor to segment the Chinese medical tourism market, and different strategy should be made for each target to take a competitive advantage in this industry.

5.3. Limitations and future research

Some limitations exist in this study for generalizing the

findings, which, however, can provide directions for future research. Retrospective data are recognized as being the first limitation of the study. The Chinese potential customers were involved from the main regions in China. However, the population in China is multicultural and it cannot be represented by a single group. For the generalization of the findings, it is necessary to use a sample drawing from all regions of China in the future research.

Another possible limitation is associated with the moderators those may affect WOM effects. These variables were selected because they have been verified as salient (e.g., Wilson & Sherrell, 1993). However, some other factors such as information providers' knowledge level (e.g., Bansal & Voyer, 2000) and WOM communication language (Gelb & Johnson, 1995) are also likely to work as a moderator in the choice decision process. Thus, to better understand WOM effects, future study is required to investigate the effects of these factors on customers when selecting a medical care service overseas.

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