The correlation between demographic, health characteristic and medical tourism perception among Chinese tourists in Bangkok, Thailand

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Zhuang Liu and Nuchanad Hounnaklang
College of Public Health Sciences, Chulalongkorn University, Bangkok, Thailand

Abstract

Purpose - Recently, medical tourism is quietly rising all over the world. Chinese tourists have signed up through travel agencies to participate in overseas medical examinations. The purpose of this study was to investigate the correlation between demographic, health characteristic and Medical Tourism Perception (MTP) among Chinese tourists.

Design/methodology/approach - The research was a cross-sectional study. 481 Chinese tourists were recruited to participate in the study in Bangkok in 2018. The 56-item Questionnaire was used as an instrument for measuring Chinese tourists' perceptions toward medical tourism in Bangkok, Thailand. Data was analyzed by using descriptive statistics and correlation.

Findings - Among variables, gender, age, marital status, occupation, illness history, medical tourism history and insurance, did not have a correlation with MTP. Education had low negative correlation (p-value<0.05) with MTP. As the educational level of Chinese tourists has increased, their choice of Thailand as a destination for medical tourism has declined.

Originality/value - The research can be used as a guideline for tourism stakeholders and medical tourism related organizations in order to establish medical tourism policy more productively and efficiently.

Keywords Medical tourism, Chinese tourists, Thailand

Paper type Research paper

Introduction

Recently, medical tourism is quietly rising all over the world. According to the World Health Organization (WHO), by 2020, healthcare related services will be the world's largest industry, Tourism and related services are in the second place, accounting for 22.0% of global GDP when combined [1]. According to the statistics in 2016, Chinese tourists through Ctrip travel agencies signed up to participate in overseas medical examinations and other medical tourism five times as many as the previous year [2]. The report predicts that more than 500,000 Chinese tourists will travel abroad on 2016. Bangkok tourism industry developed well and was selected as the most popular tourist city in the world in 2013 [3]. Base on the number of Chinese tourist arrivals to Thailand, it is obvious that Thailand has seen an increasing number of the tourists continuously. For example, in 2016 and 2017, the number of Chinese tourists visiting Thailand accounted for 8.5 and 10 million, respectively. Also, Chinese tourists were ranked number one among international visitors to Thailand [4] (Figure 1), However, few-if any- researches about perception of Chinese tourists in Bangkok exist. Therefore, it is vital to explore their perception for medical tourism services in Bangkok, Thailand. This research uses perception as the framework and correlation coefficient approach to study the correlations between demographic, health characteristic and medical tourism perception among Chinese tourists in Bangkok, Thailand.

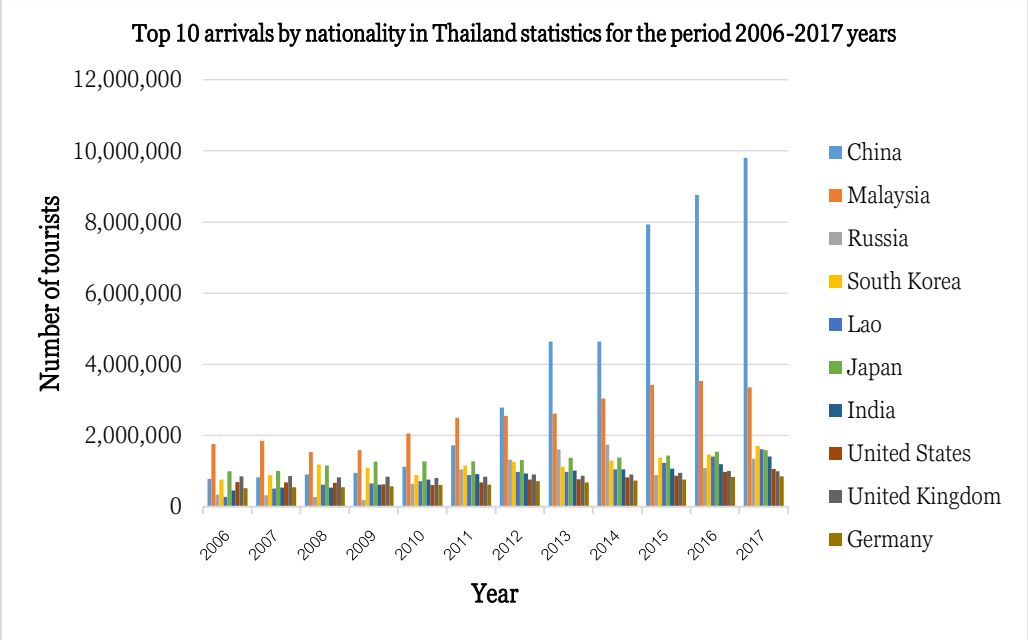

Figure 1. Top 10 arrivals by nationality in Thailand statistics for the period 2006-2017 years [4]

Methodology

Sample and recruitment

This is a descriptive study design, a cross-sectional study with the objective of investigate the correlation between demographic, health characteristic and MTP among Chinese tourists by using questionnaire. The population of this research is Chinese tourists were mainly sampled from the hotels where Chinese tourists often stay. According to "Hulley" [5], the recommended minimum sample size was 194 samples. In this study, 481 Chinese tourists chose from May to June 2018. Purposive sampling technique for data collection, all the research assistances must pass a unified training before collecting data, the inclusion criteria were Chinese tourists who have Chinese nationality, have the ability to read and write Chinese and willing to participate by providing informed consent, the exclusion criteria were overseas Chinese.

Instruments

The self-administrated questionnaire assessed the perception for medical tourism services by Chinese tourists in Bangkok, Thailand. This questionnaire consists of 3 parts: Part 1: General information has 4 items: Gender; Age; Marital status; Education. Part 2: Health information has 3 items: Illness history; Medical tourism history; Insurance. Part 3: Factor influencing medical tourism has 40 items which based on five-item agreement type scale. The items were scored as 1=strongly disagree, 2=disagree, 3=neutral, 4=agree and 5=strongly agree. The development process of the questionnaire for this research study can be illustrated as follows: 1) To obtain permission for using the questionnaire from the author of the medical tourism index: Scale development and validation. 2) To translate from English version questionnaire to Chinese version questionnaire by Chinese expert who are well verse with English language. 3) To back translate from Chinese language to English by English expert who are well verse with Chinese language. 4) To develop and revise questionnaire items according to 3 experts' comments and suggestion. Then, to obtain validity of measurements by using the method of "Index of Item-

Objective Congruence(IOC) [6]". Test for validity is part 3: Factor affecting medical tourism. The overall IOC score is 0.97. Therefor all 40 items are acceptable. 5) To try out the questionnaires with 30 Chinese tourists. 6) To obtain reliability of measurements, using Cronbach's alpha for reliability test [7]. After conducted Reliability statistics, the Cronbach's alpha=0.77, it means the reliability is acceptable.

Data analysis

This study design started with a descriptive study of demographic characteristics of the 481 tourists. Frequency and percentage was used to describe the demographic characteristics of tourists, health characteristics. The spearman's rank correlation coefficient was used to get correlation coefficients between education characteristic and MTP. The biserial correlation coefficient was used to obtain correlation coefficients between Gender, Marital status (married and unmarried), occupation (business and non-business), illness history (never diagnosed and ever), medical tourism history (never experienced in Thailand and ever) characteristic and MTP.

Ethical consideration

Before starting to collect data, all procedures used in this study already accepted by The Research Ethics Review Committee for Research Involving Human Research Participants, Health Sciences Group(RECCU), Chulalongkorn University. The code was (COA NO. 102/61).

Results

Demographic, health characteristics of Chinese tourists.

There were 481 participants in this study, 357 (74.2%) were non-medical tourists and 142 (25.8%) were medical tourists. Table 1 showed that in terms of gender composition, male is slightly more than female. The age structure was mostly 18-30 years old (45.4%) in the non-medical tourists group, while in the medical tourists group the proportion of tourists aged 31-40 years old (40.3%), 51 or above years old (30.6%) was dominant. The marital status of the tourists in non-medical group was 23.8% for single, 63.0% for married and 13.2% for divorce, in medical group was 12.9% for single, 80.6% for married and 6.5% for divorce. In terms of educational level, the non-medical tourists group were mainly high school (43.1%) and bachelor's degree or above (45.9%), in the medical tourists group, they were mainly high school (39.5%) and bachelor's degree or above (50.0%) too. For the health characteristic, in non-medical group, 77.3% had never been diagnosed. Whereas, in medical group, 75.0% had ever been diagnosed. As for medical tourism history in Thailand, it was found that 74.2% never had experienced the services; whereas 25.8% had experienced it. In addition, in the two group, there is no significant difference on insurance coverage.

Table 1. Demographic, health characteristics of tourist (N=481)

Demography characteristics	Total n	Tourist	
		Non-medical tourist (357)	Medical tourist (124)
		n (%)	n (%)
Gender			
Male	266	195 (54.6)	71 (57.3)
Female	215	162 (45.4)	53 (42.7)

(continued)

Table 1. (continued)

Demography characteristics	Total n	Tourist	
		Non-medical tourist (357)	Medical tourist (124)
		n (%)	n (%)
Age (years)			
18-30	172	162 (45.4)	10 (8.1)
31-40	144	94 (26.3)	50 (40.3)
41-50	103	77 (21.6)	26 (21.0)
≥51	62	24 (6.7)	38 (30.6)
Marital status			
Single	101	85 (23.8)	16 (12.9)
Married	325	225 (63.0)	100 (80.6)
Divorced	55	47 (13.2)	8 (6.5)
Education			
≤Primary school	52	39 (10.9)	13 (10.5)
High school	203	154 (43.1)	49 (39.5)
≥Bachelor's degree	226	164 (45.9)	62 (50.0)
Illness history			
Never diagnosed	307	276 (77.3)	31 (25.0)
Ever	174	81 (22.7)	93 (75.0)
Medical tourism history			
Never	357	357 (100)	-
Ever	124	-	124 (100)
Overseas travel insurance			
No health insurance	202	158 (44.3)	44 (35.5)
Have health insurance	279	199 (55.7)	80 (64.5)

Table 2. MTP characteristics of tourist (N=481)

MTP characteristics	Total	Tourist	
		Non-medical tourist (357)	Medical tourist (124)
Country environment			
Min-Max	1.9-5.0	1.9-5.0	2.4-5.0
Mean (SD)	4.1 (0.73)	4.1 (0.74)	4.1 (0.71)
Tourism destination			
Min-Max	2.3-5.0	2.3-5.0	2.67-5.0
Mean (SD)	4.2 (0.62)	4.1 (0.62)	4.2 (0.64)
Medical tourism costs			
Min-Max	1.0-5.0	1.0-5.0	1.4-5.0
Mean (SD)	4.0 (0.67)	4.0 (0.67)	4.1 (0.66)
Facility and services			
Min-Max	1.0-5.0	1.0-5.0	1.2-5.0
Mean (SD)	4.1 (0.71)	4.1 (0.70)	4.1 (0.74)
Total			
Min-Max	11.4-20.0	11.4-20.0	11.5-19.8
Mean (SD)	16.4 (1.73)	16.4 (1.74)	16.5 (1.71)

MTP characteristics of tourists

Table 2 showed the 4 factors and total average scores. In the non-medical group, the total average score of the MTP was 16.4 (SD=1.74). Where as in medical group, the total average score of the MTP was 16.5 (1.71).

Table 3. Correlation coefficients between demographic, health characteristic and MTP

	Country environment	Tourism destination	Medical tourism costs	Facility and services	Total scale
Gender	0.07	-0.08	-0.02	0.01	-0.01
Age	-0.05	0.01	-0.02	-0.06	-0.05
Marital status	0.00	-0.04	0.06	-0.07	-0.02
Education	-0.01	-0.20*	-0.14*	-0.36*	-0.27*
Illness history	0.02	-0.05	0.00	0.01	0.00
Medical tourism history	0.01	-0.05	-0.03	-0.01	-0.03
Insurance	0.02	0.04	-0.08	0.06	0.00

Note: *Superscript letters indicate the probability value associated to the coefficient: $p<0.01$

Correlation coefficients between demographic, health characteristic and MTP

Cohen [8] standard was used to evaluate the correlation coefficient to determine the strength of the relationship. Correlation coefficients between 0.10 and 0.29 represent a small correlation, coefficients between 0.30 and 0.49 represent a medium correlation, and coefficients of 0.50 or above represent a large correlation or relationship. Table 3 indicated that in terms of gender, age, marital status, illness history, medical tourism history and insurance, which did not have correlation with MTP's subscales and total scale. In terms of education, it had low negative correlation with MTP total scale and MTP's subscales (Tourism Destination, Medical Tourist Costs). Furthermore, there was a medium negative correlation with MTP's subscale (Facility and Services). Highly educated tourists, their perception of choosing Thailand as a medical tourist destination has decreased.

Discussion

It can be seen from the demographic characteristics' result of this study that there was no significant difference in gender composition among Chinese medical tourists who came to Thailand. However, a study found that more than 50.0% of Chinese tourists who went to Korea to receive medical services were women, and 36.5% received plastic surgery [9], medical plastic surgery programs are favored by most women. Although the demand of medical plastic surgery for men has gradually increased in recent years, compared with the demand of women, men still belong to a small number of demand groups. In addition, South Korea's plastic surgery technology is playing a leading role in the world, and widely recognized, its reputation more than other countries. For example, in China, the tourists want to obtain a high level of plastic surgery services, an expert would be imported from South Korea to perform the surgery. It can be seen that Chinese people have a very high recognition degree of Korea's plastic surgery technology. It is possible be this is one of the reasons why there are gender composition differences among Chinese medical tourists in Thailand and Korea. In addition, with the change of modern social concept, the status and income of women have been increasing, and their demand for tourism products has gradually tended to be individualized. The health examination and beauty items in the medical tourism market meet the needs of the female market, and stimulate the continuous expansion of the female market in the medical tourism market [10]. Additionally, there was difference in age group between non-medical tourists group and medical tourists group, the medical tourism group is dominated by middle-aged tourists. At present, the middle aged 35-55 years old is a group of people with a certain wealth accumulation in China, but the pressure of life is greater, the decline of their physiological function and bad psychological state leading to serious attention in terms of health and security [10]. Besides, there

is little difference between medical and non-medical tourist groups in terms of insurance coverage, which may be due to the fact that China does not currently provide relevant overseas medical insurance. At present, most of the insurance provided by outbound travel is in favor of personal safety accidents, while Chinese residents' medical insurance can only be used in China [11]. This study revealed that MTP has occurred during and after the tourists received the corresponding medical services. The study combined the theory of the main factors that influencing medical tourism as a theoretical model [12]. It is based on country environment factors, tourism destination factors, medical tourism costs factors and facility and services factors. The result is similar to the previous findings of the Korea Tourism Organization (KTO) [13], that Chinese tourists are mainly focus on facility and services. From the study of Korean Healthcare Industry [14], which conducted a survey of China's medical tourism market. The result is also similar to our study. Chinese tourists are also very concerned about the medical tourism costs, facility and service. Considering the correlation between health characteristic and MTP among Chinese tourists. The study found that among those highly educated tourists, their perception of choosing Thailand as a medical tourist destination has decreased, which indicated that they chose Thailand as a medical tourism destination that were not because of the factors such as advanced medical facility, good quality medical service, low medical treatment costs, etc. in Thailand. Nowadays, the international medical tourism market has been developed, and many countries have become international medical tourism destinations such as South Africa, Southeast Asia, Latin America, Middle East, etc. [10]. The Cript report [2] reported that the top 10 most popular tourism destinations for medical tourism among Chinese tourists are as follows: 1. Japan, 2. South Korea, 3. The United States, 4. Taiwan, 5. Germany, 6. Singapore, 7. Malaysia, 8. Switzerland, 9. Thailand and 10. India. The result is similar to the previous findings of the Ji Yun Yu [15], that most of Chinese medical tourists who went Japanese and Korean are mainly high education background. Based on the above conditions, people have a wider choice of destinations for overseas medical tourism, especially those with high-level education background. This study uses the translated English questionnaire as a research tool, even though the questionnaire is translated into Chinese by experienced experts, but because of the language and culture of different countries, so there is no guarantee that every word, every sentence can be expressed precisely in the process of translation. Due to the use of the purposive sampling technique, it can lead to vulnerability to errors in judgment by researcher and low level of reliability and high levels of bias.

Conclusion

The sample size based on this study is large enough to make a small effect significant. Thus, it is too premature to make a conclusion that the correlation is statistically significant but not practically relevant. From the results, we found that among those highly educated tourists, their perception of choosing Thailand as a medical tourist destination has decreased, which indicated that they chose Thailand as a medical tourism destination that were not because of the factors such as advanced medical facility, good quality medical service, low medical treatment costs, etc. in Thailand. However, the Chinese tourists' perception for medical tourism in Bangkok, Thailand, which have no correlation with their gender, age, marital status, occupation, illness history, medical tourism history and insurance.

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Corresponding author

Nuchanad Hounnaklang can be contacted at: nhounnaklang@yahoo.com