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碩士論文

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Master Thesis

使用 SERVQUAL 模型提升台灣對越南患者的國際醫療服務品質
台北榮民總醫院案例研究

Enhancing Taiwan International Medical Service Quality Towards Vietnamese
Patients Using SERVQUAL Model
A Case Study from Taipei Veterans General Hospital
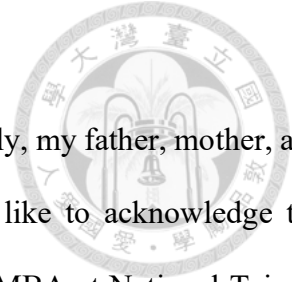
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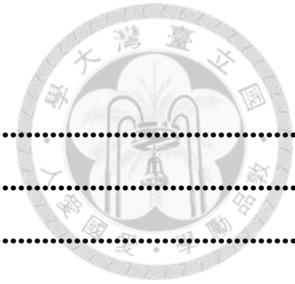
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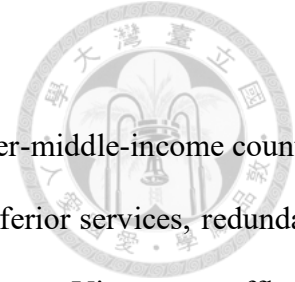
Vietnam has grown bolder in the past decades, aiming to become an upper-middle-income country by 2035. Meanwhile, the overloading nature of hospitals also causes inferior services, redundant administrative procedures, and less capable doctors. Therefore, more and more Vietnamese affluent and those of higher-middle income levels have started looking for overseas medical services. Meanwhile, under Taiwan's New Southbound Policy (NSP), Taipei Veterans General Hospital (VGH) was assigned to assist and roll out medical cooperation and assistance to Vietnam. Using SERVQUAL, a conceptual model proposed by Parasuraman in 1985, and a mixed-method approach, we interviewed 11 participants for the qualitative section while collecting 114 valid responses for our survey. Through the research, we hope to investigate patients' satisfaction with the hospital's service quality through in-depth interviews and define factors material the most to patients through surveys with prospective patients. As expected, all service quality dimensions under the SERVQUAL model (Tangibility, Reliability, Responsiveness, Assurance, Empathy) were confirmed very important to patients. At the same time, the two newly added variables Credibility and Communication are evident to be important as well. Meanwhile, Doctor referrals and Words-of-mouth are found to be the most reliable sources of references that may affect patients' consideration for overseas treatment.
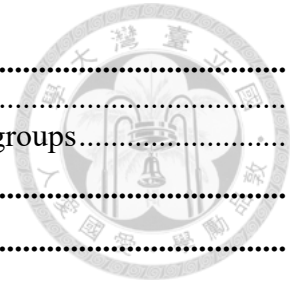
Keywords: SERVQUAL, Service Quality, Customer Satisfaction, Taiwan's Heathcare Service

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CHAPTER 1: INTRODUCTION OF THE RESEARCH

1.1. Research Problems

This study explores Taipei Veterans General Hospital (Taipei VGH) 's international medical service with a focus on Vietnam, the hospital's designated market under the Taiwan government's New Southbound Policy. Before hit by COVID-19, the hospital's international patients (both outpatient and inpatient) were on the rise, so was the number of Vietnamese patients. However, COVID-19 has halted patients from arriving in Taiwan, and the sector is covering afterward.

COVID-19 is less challenging and continuing than the long-term political impacts on Taiwanese hospitals when working with Vietnam partners. Being known for its traditional relationship and comprehensive partnership with China, Vietnam has managed to diminish all the political effects that Taiwanese businesses entities could have in the country (Huynh & Tran, 2021). Vietnam's formal recognition of the "One-China Policy" makes Taiwan less visible in Vietnam's mainstream media and public's awareness. This makes it more challenging to spread medical influence to the Vietnamese market amidst the constantly increasing competition from other regional competitors such as Japan, South Korea, or ASEAN such as Singapore, Thailand.

Therefore, the study will measure the extent to which the services provided by Taipei VGH meet the expectations of Vietnamese patients and recommend improvements towards the hospital service quality and competitiveness enhancement. The key stakeholders impacted by the study would be Vietnamese patients, who could benefit from the renewed services and more importantly, the better treatment outcomes than they could ever seek in Vietnam. For the hospital, this study tends to provide a clearer context analysis and an insight into the Vietnamese patients' perspectives

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for the understanding of the hospital management and the International Medical Service Center, the executing body of the hospital's Vietnam orientation policies.

1.2. Scope of the Study

We limit our research to the operations of the Taipei Veterans General Hospital, a public hospital in Taiwan, and its current available international medical services. We want to evaluate how consumers perceive the quality of the services provided by a renowned representative of Taiwanese medicine over various spectrums, from contacting patients, receiving patients, treatment, post-treatment care, everything that surrounds the main pillars of the SERVQUAL model. Based on this model, the study will explore customer insights from patients and their families treated at the hospital and prospective patients from Vietnam.

1.3. Research Aims and Objectives

This research aims to suggest a renewal model for the hospital based on two key research objectives:

Objective 1: Defining service quality dimensions material the most to patients through surveys with prospective patients.

Objective 2: Investigate quality of those service dimensions provided and the level of patient satisfaction perceived towards those services through in-depth interviews with patients having treatment at the hospital and the International Medical Service Center staff.

Insights gained from this study could also be applied in the future context of Taiwan's medical sector, as public hospitals in Taiwan are now open to catering to an international clientele.

1.4. Importance and Significance of the Study

This research aims to shed some light on the current state of international medical services of hospitals in Taiwan, focusing on the Vietnamese market. By analyzing the case of Taipei Veterans

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General Hospital, a top-notch public hospital in Taiwan, we aim to address the common problems for other hospitals in Taiwan. The service gaps defined through our model analysis could pave the way for further research and future recommendations, acting as a referral channel for other hospitals for future actions.
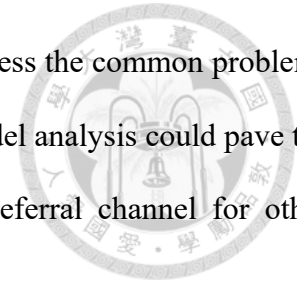
1.5. Structure of the Thesis

Here is a summary of each chapter of the thesis.

Chapter 1 provides general knowledge and background information of the research.

Chapter 2 discussed relevant concepts to be used throughout the thesis such as service quality, the SERVQUAL model, perceptions, customer satisfaction, the scope and objective of the research.

Chapter 3 provides literature related to the research topic, the foundations for our extending discussions and analysis. The literature mentioned is the premise for designing our research model and methodologies in the following chapters.

Chapter 4 is to present and prove our arguments set in the research questions We carried out a mix of qualitative and quantitative studies where data will be collected through in-person interviews and self-completed questionnaires.

Chapter 5 discusses the research findings collected by analyzing customer responses and answers collected through the online survey. It investigates the constructs and declares if they are supported or rejected by employing the data.

Chapter 6 brings discussions onto a higher level by pointing out the limitations of the research and a conclusion through what has been collected, while wrapping up with a suggestion for further study and recommendations.

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CHAPTER 2: BACKGROUND INFORMATION
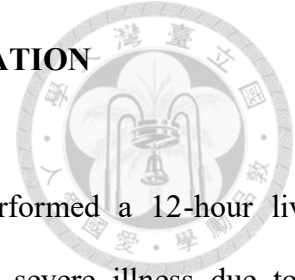
2.1. Taipei Veterans General Hospital

In July 2020, Taipei Veterans General Hospital (Taipei VGH) performed a 12-hour liver transplantation for a 9-month-old Vietnamese baby who suffered a severe illness due to a congenital disease. The patient's family has traveled a long way from Vietnam's capital city of Hanoi, despite countless hardships, to Taipei for this major emergent operation. Under the permission of the Taiwan Ministry of Health and Welfare, Taipei Veterans General Hospital has initiated the 16-day miracle to admit the patient under the highest protection. The baby, after the surgery, recovered quickly. The baby's mother shared they had already considered other hospitals and nations for the treatment, such as Japan, Thailand, and India. After rounds of consideration, they chose Taipei Veterans General Hospital, a top-notch public hospital in Taipei. Established in 1958 and administered by the Taiwan Veterans Affairs Council, the Taipei Veterans General Hospital (臺北榮民總醫院) is a national first-class medical center in Taiwan.

The hospital has been well-known for its professions in various aspects, especially for its leading expertise in complicated surgeries (organ transplantation and orthopedics), and cancer treatment techniques. It holds many records in Taiwan. It has been designated by the Ministry of Health and Welfare to take charge of the Vietnam market under the "One Country, One Center" project, based on its already-established connections with hospitals in Vietnam, by assisting Vietnamese hospitals in performing several types of complicated operations including liver transplants and cardiovascular surgeries, expanding networks through a biomedical industrial chain, seminars, and signing MOUs with health facilities there.
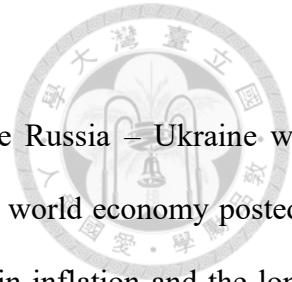
2.2. Vietnamese economy and its healthcare sector
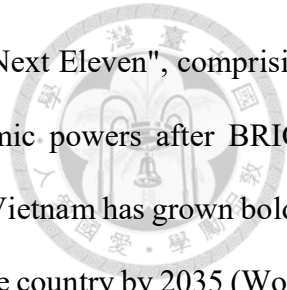
In 2022, the global economy stagnated amid mega-trends such as the Russia – Ukraine war, lingering effects of COVID-19, high inflation, and slowed growth. The world economy posted a gloomy figure of 2.9% growth in GDP. In response to efforts to contain inflation and the long-lasting effects of political events, global economic growth is expected to hover around 1.7% in 2023 (World Bank, 2023). Meanwhile, Vietnam registered an impressive economic growth figure by having GDP grow by 8% year on year in 2022, the highest throughout Southeast Asia, following the 7.1 percent average over 2016-2019. The increase was driven by a rebound of domestic consumption post-COVID-19 and the deceleration of the Vietnam Dong to stimulate exports. The country was also among the few to record growth despite the devastating effects of COVID-19.

Figure 1

Global economic growth in 2022
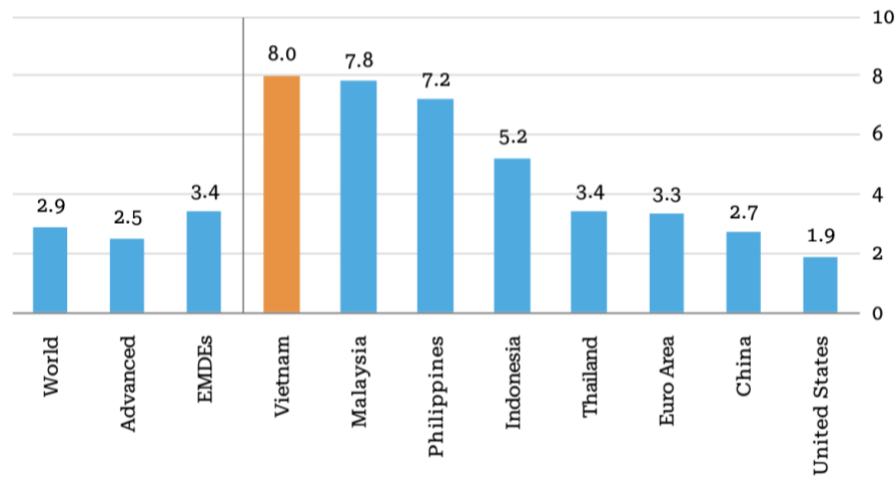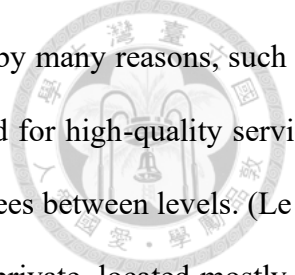
The World Bank (2023, March 14). Taking Stock: Harnessing the potential of the services sector for growth. https://elibrary.worldbank.org/doi/abs/10.1596/39524

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Regarding international assessment, Vietnam is enlisted in the "Next Eleven", comprising emerging economies that have the potential to become future economic powers after BRICS countries (Brazil, Russia, India, China, and South Africa) (Thuy, 2022). Vietnam has grown bolder in its development aspirations, aiming to become an upper-middle-income country by 2035 (World Bank, 2023). The country is now home to a socialist-oriented market economy and largely developed a consumer society while household consumption levels expanded dramatically. In the next decade, Vietnam's middle class is expected to grow, spreading out geographically and becoming more diverse. (McKinsey & Company, 2021).
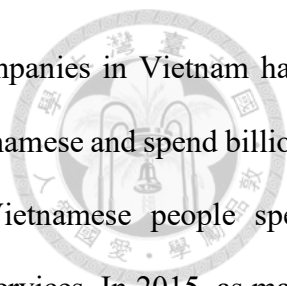
According to McKinsey, over the next decade, as many as 36 million consumers may join Vietnam's consuming class, defined as consumers who spend at least $11 a day in purchasing power parity (PPP) terms (Deteil et al., 2021). At the same time, however, new diseases brought in by changing lifestyles towards unhealthier patterns and air pollution represent a significant threat to people's health. In Vietnam, cardiovascular disease is the leading killer while diabetes is increasing; overweight and obesity are low, but the trend is worrisome. Cancer has also become a popular cause of death. In 2018, Vietnam's cancer patients per 100,000 people was 151.4, ranked 19 in Asia and 5th in Southeast Asia. (Nguyen & Trevisan, 2020). Following economic reforms initiated in 1986, the Vietnamese health financing system has been remarkably improved towards being more inclusive, such as healthcare for the poor and children under six years old. However, public expenditure is still low, and the total budget for health has not yet met the actual needs. In addition, user-fee for service was introduced to improve finance for the healthcare system, which has caused an increase in out-of-pocket payments. Health insurance coverage is another issue that additionally contributes to the high out-of-pocket spending on healthcare services (Le et al., 2010).

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Over-crowding in high levels of health facilities may be caused by many reasons, such as limitation of health service quality in lower levels, expectation and need for high-quality service of users, convenience of transportation, and low differences in hospital fees between levels. (Le et al., 2010). There are 1,531 hospitals, 86 percent public and 14 percent private, located mostly in metropolises such as Hanoi, Ho Chi Minh City, and Da Nang (Phan et al., 2018). Large public hospitals usually operate at their 120-200% capacity, with patients sharing beds a regular sight.

Meanwhile, in terms of administration, the shortage of medical doctors in central-level medical centers and the absence of a digital, comprehensive, and inclusive health management information system are the issues while the budget for the healthcare system is not meeting the actual needs. These together have caused patients' dissatisfaction with long waiting-time but also negative medical staffs who must work under stressful conditions. According to World Health Organization (WHO), the number of doctors in Vietnam per 10000 population was 7.44 in 2017 and has decreased by 4% compared to 20(7.75). This index is much lower than Singapore (24), Thailand (18), and Malaysia (15). Moreover, most doctors choose to work in higher-level hospitals and urban areas of Vietnam, where the medical facilities and resources are more advanced (WHO, 2022). The overloading nature of hospitals also causes inferior services, redundant administrative procedures, and less capable doctors. Therefore, more and more affluent Vietnamese and people belonging to higher-middle income levels have started looking for overseas medical services if they can afford them, especially for high-technological treatments and those of advanced techniques: Cancer treatment, organ transplantation, orthopedics, and so on.

The WHO defines international medical service (IMS) as seeking medical services abroad, whereas Lunt et al. (2011) terms the movement of patients across borders in the pursuit of medical

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treatment and health as medical tourism. Many private and tourist companies in Vietnam have started offering services in which patients can be transferred to their Vietnamese and spend billions of dollars on overseas medical services a year. In 2017 alone, Vietnamese people spent approximately USD 2 billion to travel abroad for high-quality medical services. In 2015, as many as 40,000 Vietnamese people went abroad for medical treatment and spent around $1 billion, according to statistics from the European Chamber of Commerce in Vietnam (Euro Cham, 2016). Vietnamese people often seek medical treatment from Asia countries, namely Singapore, Thailand, and Malaysia in Southeast Asia, or in countries and territories with leading medical sectors in Asia such as Korea, Taiwan, and Japan. Of these destinations, Singapore is the top, most popular choice among Vietnamese patients for cancer and advanced techniques. The Parkway Health system in Singapore attracts nearly 10,000 Vietnamese annually, while the National Hospital of Singapore welcomed 2,000 people in 2017 (Nguyen, 2017).

2.3. Healthcare in Taiwan

Taiwan has been ranked 16th in Medical Tourism Index (MTI) for 2020-2021 out of 46 destinations in the world (Medical Tourism Association, 2021). The island nation is also an incubation for research and development of high-quality medical interventions. Nearly 382,000 foreigners came to Taiwan for medical services in 2019, with an increase of 330% from 2009, which created an output value of over $4.5 billion (Lai et al., 2023). Nevertheless, international medical services in Taiwan have been insufficiently researched. Lai, in his 2023 release, confirmed:

> To date, only three studies have investigated the quality of IMS in Taiwan. Two studies explored the perceptions and experiences of medical tourists who sought health examinations and general surgery in Taiwan, whereas the other study tested a model for

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cultivating cultural sensitivity. However, all the studies only focused on patients' perceptions and not on the perceptions or experiences of healthcare personnel to improve the quality of IMS. (Lai et al., 2023, p.2)
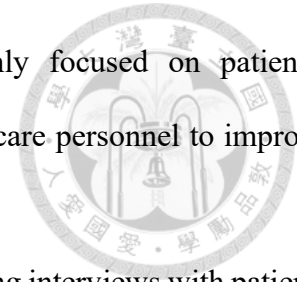
This study, therefore, extends the current research by incorporating interviews with patients, their relatives, and international medical staff. Through the case study of Taipei VGH, we hope to draw out how customer satisfaction is linked to service quality using SERVQUAL, a conceptual model of service quality developed by Parasuraman et al., 1985.

2.4. New Southbound Policy (NSP) and "One Country, One Center" Project

Incepted in 2018 by the Taiwanese Government, the New Southbound Policy (NSP) aimed at furthering Taiwan's comprehensive influences in Asian and Southeast Asian countries over various fields. NSP partner countries have been amounting to 18 countries for now.

Within the Taiwan Medical and Healthcare Regional Partnership, an arm of the New Southbound Policy, the Ministry of Health and Welfare (MOHW) launched the "One Country, One Center" project, where a Taiwanese medical center was paired up with a partner country. Each medical center had to set up its cooperation frameworks with the country it works with, thereby promoting Taiwanese medical advancements to the destination, benefiting from the market, and enhancing Taiwan's image in the regional and global arena. Among the seven participating countries, India, Indonesia, Thailand, Malaysia, Philippines, Vietnam, and Myanmar, Vietnam is among the most populous and with the highest potential (MOHW, 2018).

Based on established ties with institutions in Vietnam, Taipei Veterans General Hospital (VGH) teamed up with Taichung and Kaohsiung Veterans General Hospitals and National Yang Ming Chiao Tung University, to execute the New Southbound project:

To date, we have introduced more than 40 health-related enterprises to the target nation. Apart from that, to maintain a close partnership, we have signed MOU with 24 Vietnamese institutions and 9 institutions in other Southeast Asian countries. (Taipei Veterans General Hospital, https://vghtpeimsc.tw)
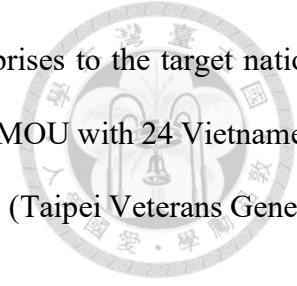
The "One Country, One Center" has entered its 5th year, with half of the execution challenged by the onset of the novel coronavirus (COVID-19). International travel and people-to-people exchanges have been halted following social distancing and border closure until recently, pushing Taiwanese hospitals involved in the project to move towards an internet-based model, therefore, slowing down the set procedures. For those factors, Taiwanese hospitals usually struggle to penetrate the Vietnamese market despite having several advantages, such as an advanced medical sector hitting many Asia records, a well-trained medical workforce, and a strategic geographical location towards Vietnam.

CHAPTER 3: LITERATURE REVIEW
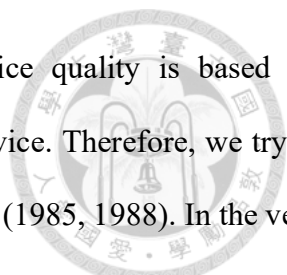
3.1. Service quality and customer satisfaction

Lewis and Booms (1983, p.100) defined service quality as "a measure of how well the service level delivered matches customer expectations. Delivering quality service means conforming to customer expectations on a consistent basis", while Eshghi defined service quality as the "overall assessment of a service by the customers" (Eshghi et al., 2008, p.121). Satisfied consumers create positive will and words-of-mouth. As "service quality is the most important factor ensuring consumer satisfaction" (Sabat et al., 2017, p.1), measuring customer satisfaction is a reliable way to assess service quality.

Services in the healthcare sector have several unique characteristics that make them far different from other types of services and products. Healthcare is "a rare service that people need but does not necessarily want" (Berry & Bendapudi, 2007, p.1). Healthcare involves lives and humanitarian grounds that make it so special, while outcomes cannot guarantee that customers are satisfied with overall service quality. Customer satisfaction, therefore, sometimes will not be reliant merely on the outcomes but other factors. Within the scope of this study, customer satisfaction implies a complicated mixture of perceived experiences, needs, and satisfaction regarding services delivered by the hospital. We try to figure out what factors are most material to patients and to what extent those factors were completed by the hospital.

3.2. Theoretical framework
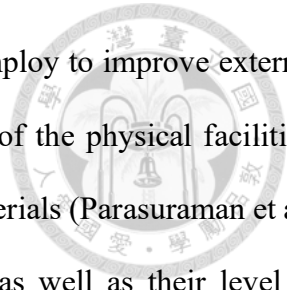
Unlike tangible goods, which are more easily described and measured by marketers, the complexity of human behaviors and various tastes makes it difficult to assess service, which is "intangible and does not result in the ownership of anything" (Kotler, 1988, p.322).

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Parasuraman (1985) stated that customer perception of service quality is based on comparing their expectations with their perceptions of the delivered service. Therefore, we try to exploit the popular SERVQUAL model developed by Parasuraman et al. (1985, 1988). In the very first edition in 1985, Parasuraman stated that consumer criteria to assess service quality fell on ten overlapping dimensions of the SERVQUAL model, including Reliability, Responsiveness, Competence, Access, Courtesy, Communication, Credibility, Security, Understanding, and Tangibles. Different analyses later suggested consolidations of several dimensions into two broader categories labeled Assurance and Empathy, while Tangibles, Reliability, and Responsiveness remained intact throughout the refinement process. (Zeithaml, et al., 1990, p.25). While the five dimensions have been recognized throughout many papers, researchers have agreed on some additional dimensions. Elliot, Hall, and Stiles (1992) claimed that Competence, Credibility, and Communication impact consumers and of relative importance to perceived service quality. Additionally, our in-depth interviews with the patients who have gone through treatment at the hospital suggested seven elements in the medical context (Assurance, Empathy, Tangibles, Reliability, Responsiveness, and two additional dimensions of Credibility and Communications). Therefore, we suggest adding Credibility and Communication to our study. We develop the first broader research question as follows:

RQ1: What is the contribution of individual SERVQUAL dimensions on consideration of seeking overseas medical treatment in Vietnam?

To better investigate the research question, we combined every aspect of the SERVQUAL model into an overall service quality assessment.

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Tangibility is "the 'visible' aspects of the service businesses employ to improve external customer satisfaction" (Panda & Das, 2014). Tangibility is comprised of the physical facilities, equipment, and the appearance of the personnel and communication materials (Parasuraman et al., 1985). To quantify the importance of Tangibility to foreign patients as well as their level of satisfaction towards Tangibility, 7 survey questions and interview questions under Tangibility is constructed based on these individual aspects, and respondents are asked to rate their level of satisfactions over these aspects, or to rate the level of importance of these aspects (on 5-point scale) to them. Different sectors and types of services employ different types of tangibles. For example, private schools use well-functioning management software and building and competitive pedagogic resources to deliver a satisfied perception from parents. Similarly, the entertainment industry employs numerous visual and audio systems and musical instruments that maximize spectators' satisfaction. The most significant milestone in defining service quality belongs to Parasuraman et al. (1988) where assessment domains of service quality were found. Tangibility has been unchanged throughout various SERVQUAL model refinements and has been identified as a key component of service quality (Panda, 2014).
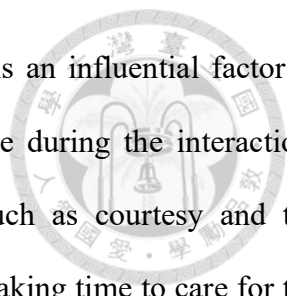
Reliability refers to the ability of a service provider to provide the given service dependably and accurately. Parasuraman (1985, p.7) states that reliability involves "consistency of performance and dependability." While tangibility is visible to the customers, reliability is more "into the back office" (Zainal, 2011, p.14), which includes accuracy in billing, keeping records correctly, and performing the service at the designated time. That means reliability is derived from customer expectation that the service is accomplished accurately and timely, in the same manner, every time. To measure the importance of Reliability to Vietnamese patients as well as their level of

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satisfaction over this dimension, we asked them to rate the above sub-sections in respective questions using 5-point scale.

Responsiveness refers to the "willingness of service providers to help customers and provide prompt services" (Parasuraman et al., 2008), i.e., how quickly and engaging the hospital is in satisfying the patients. WHO (2003) sponsored a paper on the framework for measuring responsiveness, which can be viewed from two angles. First, the medical service end-users are portrayed as consumers with excellent responsiveness, perceived attract more consumers. Secondly, "responsiveness is related to safeguarding patients' rights to adequate and timely care" (Darby et al., 2000, p.3). According to Silva, responsiveness may include dignity, confidentiality, autonomy, prompt attention, etc. (Darby et al., 2000). We developed 8 different questions equivalent to these aspects to see how the patients perceive the hospital's responsiveness and their satisfaction to it.

Assurance refers to the hospital's professionalism and competencies to deliver customer services (Zygiaris et al., 2022). This dimension includes expertise and competence to perform the service, courtesy and respect to the customer, efficient communication with the customer. We developed 2 broad questions to ask the patients about their perspectives and rate the hospital's performance as well. According to Wu et al. (2015), these skill sets can trigger feelings of safety and comfort in patients; therefore, they are more likely to return if they feel confident in the medical staff's ability to address their demands. Thus, Assurance has a significant contribution to the perception of service quality.

Empathy refers to how individualized caring and attention are paid to every customer (Vuori, 1987). It includes the medical staff's efforts to understand patients' needs and the sensitivity and compassion they could share with the patient. Much research by Carman (1990),

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Finn &. Lamb (1991) and Fitzpatrick (1991) suggested that empathy is an influential factor in customer satisfaction as it makes the customer feel valued and unique during the interaction. Murray et al. (2019) listed the qualities that constitute empathy, such as courtesy and the understanding of medical staff to the specific needs of the patients and taking time to care for the patients during the service delivery process, and these aspects were brought into interview questions and rated by the patients on how they are satisfied with the hospital's provided services. These were later translated into 4 specific questions that we used to interview and survey patients.

Credibility: Credibility involves "trustworthiness, believability, and honesty" (Rashid et al., 2011, p.44). According to Buttle (1995), contributing factors to Credibility include the establishment's name and reputation, the personal characteristics of the contacting staff, and interaction with the customer. We asked patients whether they have heard of the hospital's reputations, and quality of interactions initiated by the contacting staff…over 6 specific questions. Several scholars, including April and Pather (2008), cited Credibility as one of the most important dimensions in e-commerce SMEs. Another study by Paul and Alain (1996) investigated the cultural aspect of service quality and included Credibility. Rashid et al. (2011) also applied Credibility in their model to explore the influence of this dimension on medical service quality in Malaysia.

Communication: According to Parasuraman, Communication entails "keeping customers informed in a language they can understand and listening to them" (Parasuraman, 1985). It includes explaining the service and the costs, trade-offs for the service, and assuring consumers how to handle a problem. To measure the impact of Communication to patients' perceptions, we incorporated these aspects onto 4 questions asked and the patients were required to rate their agreeableness and level of satisfaction to these aspects. Cai and Jun (2003) mentioned

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communication as a dimension in their research on internet users' perceptions of online service quality. However, limited studies have been on communication as a service quality dimension, especially in healthcare.

While attempting to defining factors linked to service quality perceived by patients, we also try to quantify perceived service quality towards customers though SERVQUAL dimensions. We proposed that customers place a high premium on service quality as a critical determinant of satisfaction. Therefore, we applied the SERVQUAL model to investigate how its dimensions increase the perceived service quality, increasing customer satisfaction. What needs to be improved? What are consistently satisfactory? Therefore, we proposed the second research question:

RQ2: The hospital's perceived service quality and dimensions that need improvements.

3.3. Criticisms of the SERVQUAL Model

While there is growing popularity and widespread of SERVQUAL, the model has been criticized on both conceptual, methodological, and inter-predive grounds (Moolla & Plessis, 1997). Also, while examining the usefulness of the SERVQUAL model, Finn and Lamb (1997) found out that the SERVQUAL model is not appropriate in retail as it does not capture the essence of service quality construct in retailing. Meanwhile, in a study by Gagliano and Hathcote (1994), the five determinants in SERVQUAL did not factor out as expected or translated into other words. The construct items do not always load on to the five dimensions proposed by Parasuraman (Ko & Chou, 2020). Despite the criticisms about the disadvantages and validity of the SERVQUAL, we believe that the model still works for our context of hospitals as it helps management understand their services better and know where they could provide something to facilitate customer satisfaction.

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CHAPTER 4: RESEARCH METHODOLOGIES

The study involves combining Qualitative (QUAL) and Quantitative (QUAN) techniques in a sequential order to answer research questions proposed in the research. While in the QUAL design perspective, we captured the perceived service quality and level of satisfaction from patients who already went through treatment at Taipei VGH, the QUAN design allows us to know more about what drive prospective patients towards their decision of overseas medical treatment and whether dimensions mentioned in the QUAL segment are impacting to their perceptions towards medical services offered by hospitals like Taipei VGH.

4.1. Participants

We recruited two separate populations for the respective QUAL and QUAN analyses. For the Qualitative section (QUAL), the target population for this study involves Vietnamese patients who already received treatment at the hospital in the past ten years. Respondents were recruited from the treatment history of Taipei Veterans General Hospital (Taipei VGH) with different types of treatment and through the author's network in Taiwan.

From January 2018 until May 2023, the total number of Vietnamese inpatients at Taipei VGH (with hospitalization) was 54 (Taipei Veterans General Hospital, 2023). We asked for permission from Taipei VGH's International Medical Service Center to get patients' contacts and wrote emails to them asking for interview agreements. We tried to diversify patients' backgrounds to have an unbiased approach by recruiting different demographics, types of diseases, and outcomes (failed or successful). We also requested interviews from 2 IMSC staff to gain deeper insight into patients' overall satisfaction. Using semi-structured questionnaires, we conducted audio

calls to 11 respondents, 9 of them patients. The interviewees were asked to explicate service quality

dimensions that they feel are crucial to meeting their customer needs (See Appendix 1).
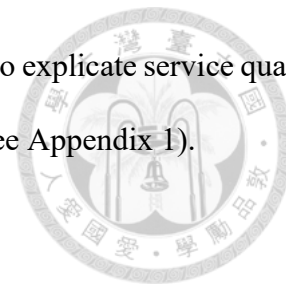
Table 1

Demographics of the interviewees

Variables	List	Frequency	Percentage
Age Groups	25-35	2	**18%**
	35-45	5	**46%**
	45 and above	4	**36%**
Gender	Male	3	**30%**
	Female	8	**70%**
Level of Education	College and Under	1	**9%**
	Bachelor	5	**46%**
	Master	4	**36%**
	Above	1	**9%**
Occupation	Doctor	1	9%
	Corporate staff	2	18.2%
	Freelancer	2	18.2%
	Unemployed	2	18.2%
	Public officer	4	36.4%
Income	Under 10,000	1	9%
	10,000 - 35,000	4	36.4%
	35,000 - 70,000	3	27.3%
	Above 70,000	3	27.3%
Length of stay in Taiwan	Less than 2 weeks	1	9%
	2 weeks – 3 months	2	18.2%
	3-6 months	2	18.2%
	Over 6 months	4	36.4%
Medical costs	Under 20,000	1	9%
	20,000 - 70,000	1	9%
	70,000 - 140,000	3	27.3%
	Above 140,000	4	36.4%

The results of the interviews were used to complement a Quantitative model employed in the study, which included a self-administered survey design. For this part, we sent out questionnaires to 167 people who are Vietnamese of the middle-income class, over 18 years old, and collected 114 responses saying they have planned or considered overseas medical treatment. We recruited the respondents using convenient sampling through social media group discussions on cancer, organ transplantation, and health check-ups, as well as from individual referrals and the author's network. 114 respondents (68.3%) have ever sought or planning to seek overseas medical treatment, while 53 respondents (31.7%) reported probably considering seeking overseas medical treatment after this survey. The mean age of the respondents was 37.6 years (standard deviation 8.4 years, median 37 years, interquartile range 32-41 years), ranging from 19 to 61 years.

Table 2

Sociodemographic characteristics of the participants (N=167)

Character	All (n=167)	Seek overseas medical treatment		P value
		Ever/yes (n=114)	Probably (n=53)	
Age	37.6 (8.4)	38.0 (8.5)	36.7 (8.1)	0.324
Gender (female)	109 (65.3)	77 (67.5)	32 (60.4)	0.365
Marital status				
Single	31 (18.6)	18 (15.8)	13 (24.5)	0.386
Married	129 (77.2)	91 (79.8)	38 (71.7)	
Divorced	7 (4.2)	5 (4.4)	2 (3.8)	
Occupation				
Public officer	70 (41.9)	45 (39.5)	25 (47.2)	0.749
Corporate employee	59 (35.3)	39 (34.2)	20 (37.7)	
Self-employed	22 (13.2)	18 (15.8)	4 (7.5)	
Unemployed	8 (4.8)	6 (5.3)	2 (3.8)	
Retired	4 (2.4)	3 (2.6)	1 (1.9)	
Others/student	4 (2.4)	3 (2.6)	1 (1.9)	
Residential area				

Northern Vietnam	83 (49.7)	55 (48.2)	28 (52.8)	0.014*
Central Vietnam	51 (30.5)	33 (28.9)	18 (34.0)	
Southern Vietnam	17 (10.2)	10 (8.8)	7 (13.2)	
Overseas	16 (9.6)	16 (14.0)	0	
Educational level				
College and under	13 (7.8)	5 (4.4)	8 (15.1)	0.032*
University graduate	98 (58.7)	65 (57.0)	33 (62.3)	
Master	40 (24.0)	33 (28.9)	7 (13.2)	
PhD and above	12 (7.2)	9 (7.9)	3 (5.7)	
Others	4 (2.4)	2 (1.8)	2 (3.8)	
Family income (per year)				
Under US$10,000	80 (47.9)	50 (43.9)	30 (56.6)	0.232
US$10,000 - US$35,000	62 (37.1)	43 (37.7)	19 (35.8)	
US$35,000 - US$70,000	21 (12.6)	17 (14.9)	4 (7.5)	
Above US$70,000	4 (2.4)	4 (3.5)	0	

Note: The categorical variables were expressed as number (percentage, %), and were compared using Pearson Chi-square tests (i.e., gender) or Fisher's exact tests (i.e., marital status, occupation, residential area, educational level, family income). Continuous variable (i.e. age) was expressed as mean (standard deviation), and was compared using independent t test. Statistical significance was determined by a two-sided p value < 0.05.

4.2. Data Collection Method

4.2.1. Qualitative analysis

Research Instrument

A semi-structured questionnaire was designed based on the relevant literature related to SERVQUAL dimensions (Appendix 1). One-on-one interviews were categorized into two main groups: patients receiving treatment at Taipei VGH and staff working there. This approach gave us the autonomy to explore ideas based on respondent reverts. According to DeJonckheere & Vaughn

(2019, p.1), semi-structured in-depth interviews are "the most frequent qualitative data source in health services research". Audio recordings were transcribed for the study.

In the semi-structured interview process, the fixed questions are designed as open-ended and thought-provoking, leaving spaces for further discussions and follow-up questions. The interviewer explained the purpose of the study and pledged to the participants that the data would be recorded, stored for academic purposes only, and kept confidential. For the second part, more in-depth and critical questions were bought up to explore the interviewees' thoughts on different aspects of service quality served by the hospital. To bring about a comprehensive approach to the research, the following fixed questions were all addressed during the interview with a flexibly adjusted sequence:

Q1: Please describe your situation before coming to Taiwan for treatment, how you chose Taiwan and TVGH for your treatment.
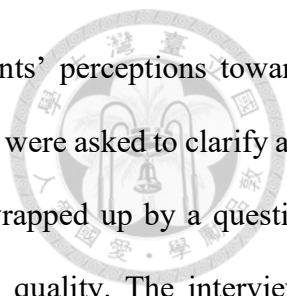
Q2: How do you assess the medical facilities at Taipei VGH general? In what ways that facilities contribute to your treatment?

Q3: How was the reliability of service in comparison Vietnam? Were you informed and aware of what to do/what the medical staff did to you?

Q4: What was your impression of the first contact with the medical staff at Taipei VGH? How did the hospital help you in aiding your stay in Taipei? To what extent that are basic needs for medical stay in Taipei met?

Q5: How do you assess the level of professionalism of the service? Have you ever been suspicious about doctors' explanations, treatment and so on?

Q6: How do you describe your relationship with the nurses/doctors?

The primary purpose was to garner an understanding of the participants' perceptions towards different aspects of the medical service quality delivered by TVGH. They were asked to clarify any specific details coming up during the talk. Then each interview was wrapped up by a question asking them to provide any recommendations for the hospital service quality. The interviews generally lasted for about 40 minutes to 1 hour.
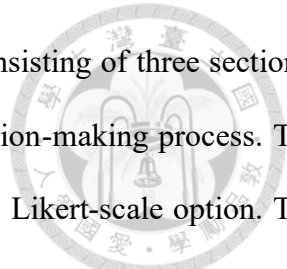
Data Analysis

We stored the recordings (in Vietnamese) and transcribed them into a Microsoft Word file. The next step is to code the transcripts to identify aspects of service quality reported by the patients. We breezed through the excerpts, identify the notable comments and patterns, categorized them into themes and labelled the themes systematically. The process was repetitive for each patient. The transcripts were later analyzed using content analysis (Stemler, 2000). Using such a coding scheme helped store and categorize the interviewed data. This aimed to make the interpretation systematic while ensuring transparency and minimizing bias. Starting with a set of codes, we found excerpts that fit the codes but also worked on data to inductively develop any new code (Vaughn & Turner, 2016). Finally, for each dimension analyzed, we can make inferences about messages within the texts and what the patients want to deliver.

4.2.2. Quantitative analysis

Research Instrument

A Google Form with a questionnaire was sent out to collect data. The author developed it based on a review of the relevant literature and the previous semi-structured interviews (Appendix 2). For collecting information from a large sample of individuals, a questionnaire has been an ideal tool with a high return rate (Hair et al., 2007).

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The final version of the questionnaire has 21 broad questions consisting of three sections: General information, Intention to overseas medical treatment, and decision-making process. The questions combine multiple choices, short-answer, and judgment on a 5 Likert-scale option. The answer options range from "Strongly disagree" to "Strongly agree," with the neutral option "Neither agree nor disagree". Most of the questions are closed questions, and respondents had to choose alternatives or judge a factor to the level of agreeableness. In addition, privacy and confidentiality regarding the respondent's personal information statement are included.

The sections equivalently addressed the demographic information, the questions related to each dimension of the SERVQUAL model, and the last one, optional information for attending the lucky draw. The purpose of the lucky draw is to engage more participants in the data collection. Section 1 focused on the respondents' general information, such as gender, age, marital status, occupation, etc. It is initiated with a qualifier question of whether the respondents have considered or planned to have overseas treatment. Then the survey should end here if the respondents showed no interest or plan to have overseas treatment now. The following sections try to identify reasons and resources affecting their decision towards going overseas for medical treatment, if there are any. Section 3 delved deeper into their perceptions towards factors of the measurement model, which can affect their level of satisfaction.

Data Analysis Method

To figure out what the impacting factors on the patient's overall satisfaction are, the study applied SPSS to process the descriptive statistical analysis and understand the profile of the respondents and the relation between variables. Categorical variables were compared using Chi-square or Fisher's exact tests to better understand how different categories of respondents view several

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criteria. Factors related to service quality aspects were questioned separately and sequentially to investigate the participants' preferences. The p-value of <0.05 was accepted as being statistically significant, and analyses were conducted within a 95% confidence interval. We developed the hypotheses as follows:

Hypotheses H1: **Tangibility** is associated with currently or ever consideration of seeking overseas medical treatment.

Hypotheses H2: **Reliability** is associated with currently or ever consideration of seeking overseas medical treatment.

Hypotheses H3: **Credibility** is associated with currently or ever consideration of seeking overseas medical treatment.

Hypotheses H4: **Responsiveness** is associated with currently or ever consideration of seeking overseas medical treatment.

Hypotheses H5: **Assurance** is associated with currently or ever consideration of seeking overseas medical treatment.

Hypotheses H6: **Empathy** is associated with currently or ever consideration of seeking overseas medical treatment.

Hypotheses H7: **Communications** is associated with currently or ever consideration of seeking overseas medical treatment.

4.3. Research Frameworks

Our research framework is visually summarized as follows, where we combined both quantitative and qualitative analysis to identify important factors to customers perceived service quality and the level of which Taipei VGH has been delivering to its patients.

Figure 2

Research Framework

Survey with prospective patients

Tangibility	H1
Reliability	H2
Credibility	H3
Responsiveness	H4
Assurance	H5
Empathy	H6
Communications	H7

Consideration of seeking overseas medical treatment

Interviews with patients

Tangibility
Reliability
Assurance
Responsiveness
Empathy
Credibility
Communications

Perceived service quality and customer satisfaction

Implications

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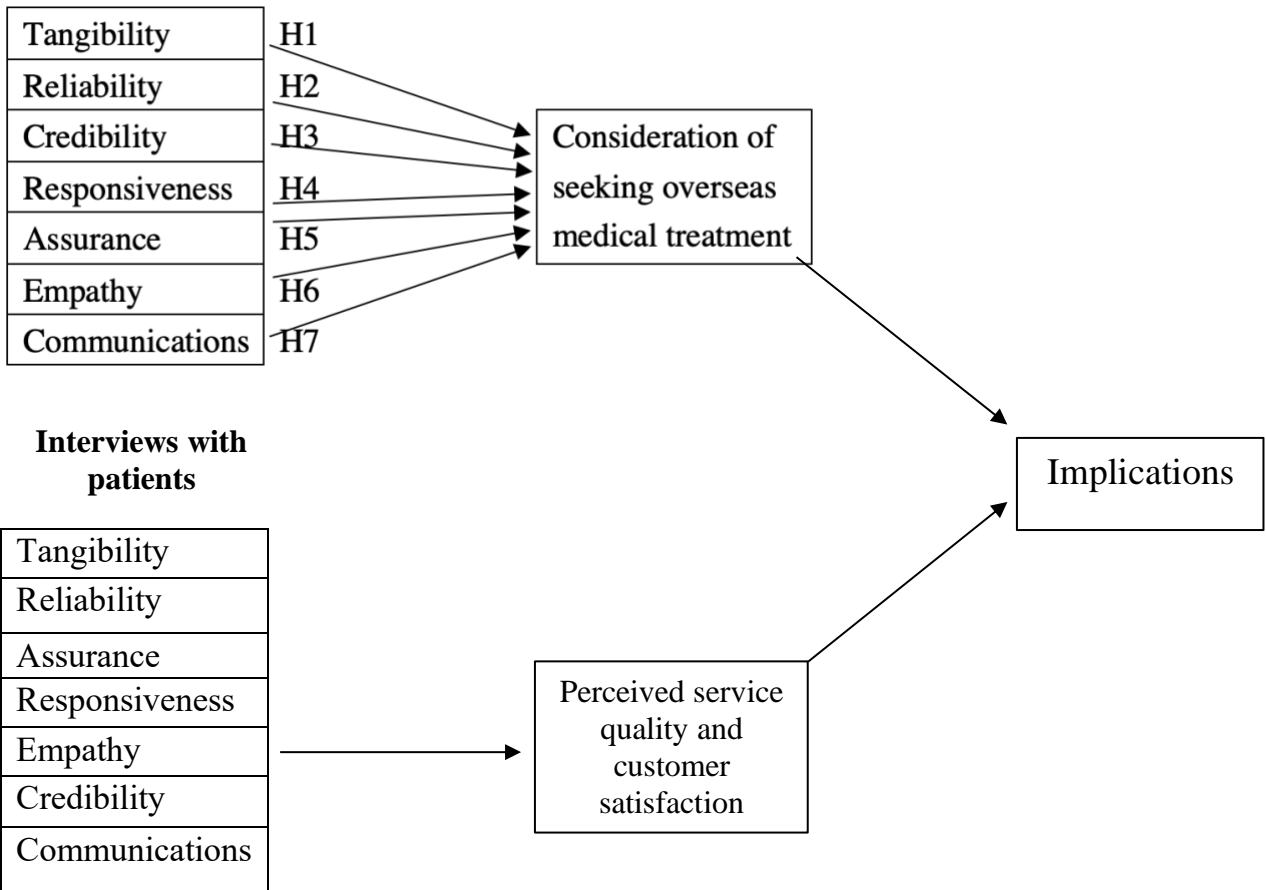
CHAPTER 5: RESEARCH FINDINGS

5.1. Qualitative analysis

5.1.1. Tangibility

Tangibility has been noted as one of the most important factors in the service industry when dealing with the quality of services (Panda, 2014). When asked about their perceptions towards the hospital's tangibles, two respondents aged 45-55 shared their thoughts on the hospital's buildings and facilities as follows:

> I have been to Taiwan many times. The building facades may look old, but the indoor establishments are state-of-the-art. Good streamlining with clear guidance from the staff makes us feel things are well-arranged. In Vietnam, public hospitals are always overloaded with underperforming machines and insufficient drugs.

> The facilities have been constantly upgraded. When we came here in 2021, we could not get single room for post-marrow transplants. The rooms looked quite old. Now the department has its own space, and the number of single rooms has been 15 from the previous 4.

Two respondents aged 35-45 also added that:

> We already sought medical treatment at more than 10 hospitals in Vietnam to observe the discrepancies between the two sides. The medical facilities at Taipei VGH are the topmost and even bio-friendly, as many were recycled and degradable. Bedding items make us feel safe.

> The toilet was attached to each room, so it was convenient. Upon my arrival, I spent quarantine in an isolated ward, and check-ups were all undertaken there. They even brought the machines into the rooms.

Further, they stated on the availability of drugs, which are essential to complicated diseases. A woman aged 45-55 stated that:

> My biggest concern when receiving treatment in Vietnam was drug scarcity.

Similarly, a woman aged 35-45 also cited:

> Equipment is available on our every request and drugs as well. Doctors are not scared of drug scarcity when they consider changing medications.

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> Billing, admins, and payment are fast. We just wait for minutes to pay the bill, either through cash, transfers, or international credit cards, whilst credit card is not very widely accepted in Taiwan.

The interviews also revealed that the patients had experienced an underperforming and overloaded public hospital system in Vietnam; therefore, they have had quite a high level of satisfaction with Taipei VGH's intangibility aspect, especially when it comes to medical facilities, equipment, and drug supplies. However, considering patients coming to Taiwan for complicated diseases and advanced treatments, most of them (according to Table 1) must reside in Taiwan for months or even up to two years, especially those with leukemia treatment. The patients also highlighted their need for accommodations, which remains their most significant challenge under medical treatment. Except for being admitted to the hospital, patients and their accompanied relatives must live outside, in a nearby rented apartment in the metropolis of Taipei.

> Short-term rentals around the hospital in Taiwan (under six months) are a real challenge for foreigners. We hope the hospital can provide stable leasing services, like a dormitory. Sometimes patients are on strict diets, and we cannot just rely on shopping for food.

Recognizing this, the hospital has been trying to keep a close contact with the Ronald McDonald House, a charitable temporary housing project for children undergoing cancer treatment worldwide, to provide accommodations for some of its patients in Taiwan. However, the McDonald House only serves pediatric patients with cancer, and this 10-kilometer distant shelter suspended hosting foreign patients due to COVID-19 since early 2020 until recently. A respondent, who came to Taiwan since December 2022 for leukemia, told us during our interview in May 2023:

> The hospital helped me contact the McDonald House to live there for free. I really need a stable place to live and cook for my daughter, because we both are not keen on local foods.

Another respondent whose husband suffered from leukemia shared with us her 6-month struggle with house rentals:

> At least the hospital should provide information about available rentals around the area, as foreigners all struggle with the short-term rents and language is a barrier as well. I heard that Japan provides paid dormitory service, while Singaporean hospitals also help with rentals.

Getting mentally and physically burdened with medical treatment and the feeling of being homeless may negatively affect customers' perceptions of the hospital's service quality, as they are all unfamiliar with living abroad for months. Housing, therefore, seems to be the biggest tangible issue international patients face when coming to Taipei VGH.

Under the case of Taipei VGH, customers' perceived tangibility includes building, environment and facilities, physical representation of the staff, medical equipment, drug supply, payment option, and housing supply. To summarize, patients all shared that for a hospital being established for over six decades, what tangibly matters to patients and their families is not the outlook of the building and facilities. They are satisfied with the well-managed indoor establishments and the constantly upgraded facilities. Specifically, drug supply and medical equipment availability are the most apparent competitive edge of the hospital. Nevertheless, housing is another problem that the hospital needs to factor in, as this is troublesome for not only Vietnamese but almost all foreign patients who plan to have treatment in Taiwan.

5.1.2. Reliability

This factor refers to "the ability to perform the service timely and accurately" (Parasuraman et al., 1988). Customer satisfaction will be high when service providers can show their commitment and efforts to deliver the service at a promised time and consistently satisfactory level. A respondent aged 45-55, who is a doctor from Vietnam, shared about his son's bone cancer treatment:

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I was impressed that they have a very systematic treatment protocol, time and costs. Though we are now 3 months behind the schedule, I totally understand that recovery varies among patients. At least we could see major progresses.
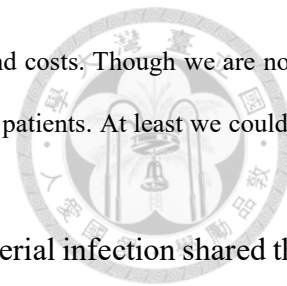
Meanwhile, a mother whose daughter having thyroid cancer and eye bacterial infection shared that:

We have searched for treatment protocol in different countries and felt secure about what VGH doctors informed; the attending doctor supervise every technique. Patients' records are kept online and accessible throughout the hospital, so the endocrinologist also knows that my daughter was having eye problems, and he actively communicated and collaborated with the ophthalmologist.

Another mother with her kid encountering leukemia also stated that:

My daughter looks and feels better than when she was in Vietnam. Her lab data are much improved.

A father having daughter with cardiovascular disease praised the hospital's reliability:
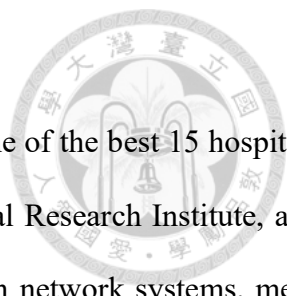
They are very punctual, always showing up on time for medications. We just got to the nursing station for whatever we need. They can understand English, but we did not need to call them much. They oversee all take-care stuffs.

Not all the patients got successful treatment. A woman who just lost her son last year due to leukemia shared that:

At the time of diagnosis, doctors in Vietnam refused to take over our case and predicted that my son could only live up to 2 years. He finally made it to 8 years before passing away due to multiple cancers. Taiwan's medicine was more advanced.

Generally, Taipei VGH's overall service quality reliability includes clear and consistent treatment protocol and cost estimates prior to the service and how they have committed to deliver those aspects at a desirable level. Medical records are kept accessible and transparent throughout the hospital while services are performed accurately and punctually as promised. Even for patients whose treatment outcome was not as desired, the patient's family still appreciated the hospital's efforts in realizing what they committed to do so.

5.1.3. Credibility

US media company The Gazette Review 2016 listed Taipei VGH as "one of the best 15 hospitals in the world". A National Medical Center named Taiwan's first Medical Research Institute, and the hospital has been equipped with medical and biological information network systems, med-tech buildings, and other facilities of international standards. The reputation of being a National Medical Center can be used to predict treatment outcomes effectively. It can be considered the most reliable indicator of its ability to satisfy customers. However, the unanimous among interviewed patients were clueless about the hospital's reputation and ranking before coming to Taiwan. 100% of the respondents decided to have treatment at Taipei VGH from Words-of-mouth and Doctor referrals, which made it initially uncertain. 90% of them said that when they consider overseas treatment, the first place that comes to their mind is Singapore.

> Vietnamese people always think of Singapore as the destination for medical treatment, but as a doctor, I rate Taiwan's medicine higher in efficacy and human touches. Singapore may gain better exposure by having a representative office in Vietnam and speaking English, which is easier for the Vietnamese to communicate. Due to political factors, Vietnamese people often mistake Taiwan with China, hence less prefer Taiwan.
>
> At first, we considered Singapore, whose service is much more expensive, but we still scheduled meetings with doctors in Taiwan. Ultimately, we switched to Taiwan because our Singaporean doctor was busy. I worked for a Taiwanese company for 16 years and my sister marries a Taiwanese, but I never thought of Taiwan. When I talked to some Vietnamese doctors about my decision, they said I got the right way.

After receiving treatment in Taiwan, the respondents shared that their perceptions about Taiwan's medicine differed from what they had previously speculated. Vietnamese people, in general, are skeptical or misunderstand Taiwan as an official part of mainland China. Vietnamese media has been reporting geopolitical tensions at a more intensified level following China's growing assertiveness. In contrast, mainstream media in Vietnam rarely mention Taiwan and its

achievements or with subtle changes to the names (Huynh & Tran, 2021). Discussions on Taiwan's socio-economy are very humble compared with those from other East Asian countries like China, Japan, and South Korea.

> Apart from doctor referrals and words-of-mouth, I would not believe a patient pick Taiwan. My relatives and friends all asked me why Taiwan. I once tried searching for Taiwan's medical industry online, the results were just poor.

> Many of our relatives advised us to stay in Vietnam for treatment. They all think that Taiwan is extremely politically unsafe. Our family even quarreled on this.

Taiwanese people, known for their introversion (Li et al., 2008), heighten "quality speaks itself" rather than promoting what they have been tirelessly doing. Therefore, people outside the medical networks and patients' reaches are unmindful of Taiwan's advanced healthcare and would potentially skip Taiwan in their considerations of outbound medical treatments. Under the scope of this research, credibility was found to include trustworthiness that the hospital gains in its customers, with contributing factors being its name and reputation as well as the contact channels. We found that patients have different perceptions of the hospital's credibility before and after treatment. From our interviews with these patients, what explains their confusion could be the political instances and effects of insufficient communications means about Taiwan.

5.1.4. Responsiveness

The respondents observed a high level of responsiveness as they had not expected such prompt services delivered by the hospital, as opposed to the public hospital system in Vietnam, known for its constant overload. According to a staff from International Medical Service Center (IMSC), proceeding with a medical visa application usually takes 1 to 3 days. Under COVID-19, It took much longer as the hospital had to acquire a special entry permit released by Taiwan's Ministry of

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Health and Welfare, which is now waived. A respondent, who is a doctor and came in late 2022, stated that:

> I got visa 3 days after submission. I like the equitable treatment given to both foreign and local patients regardless of having insurance or not. I also referred another cancer patient to the hospital, and they responded within 3 days.

Another respondent, a father whose kid has cardiac problem, shared that:

> Our doctor in Vietnam was trained at Taipei VGH. Once he contacted the hospital for our case, we got the reply quickly and had a medical visa 2 weeks later.

Apart from a highly responsive system, the ability to provide prompt service and help customers from the personnel are what customers appreciated the most. Some respondents shared with positivity:

> Professor Liu (A liver transplant surgeon) immediately took over our case after knowing my son's urgency. The baby was in dark-yellow due to liver cirrhosis and may need a liver transplant as soon as possible.
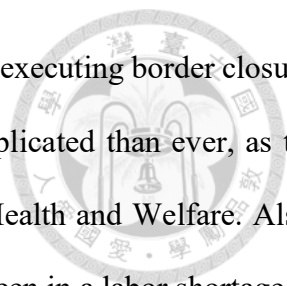
> The thyroid team was responsive and supportive to each of our requirement. They work restless through noon but always with a smile.

> Payment and administrative procedures are easy and accessible, and we only need guidance for the first time. When we were under quarantine due to COVID-19, IMSC staff came up to my ward and assisted with the procedures and bought the drugs we need.

However, there were still complaints about the hospital's resolution of administrative procedures. This was reflected by a respondent aged 45-55 in the following:

> We came in 2021 amid the toughest restrictions of foreign entries. VGH is a public hospital, so the administrative and medical visa procedures were quite slow. It is still better to know somebody there and be guided through this. Rather than that, everything was well-done, and they tried every effort to take us here.

The situation happened during the peak of COVID-19 when Taiwan was executing border closure. Therefore, application for medical treatment in Taiwan was more complicated than ever, as the hospital must apply for a particular entry permit from the Ministry of Health and Welfare. Also, according to a staff from IMSC, the hospital, especially the center, has been in a labor shortage.

> We set to reply to patients' inquiries within 3 days. We still need to forward patients' inquiries to specialized doctors who are also very busy, that's why this takes time. We just have a few staffs here and there were days that we received 20 emails from patients.

Another staff at VGH's International Medical Service Center added that:
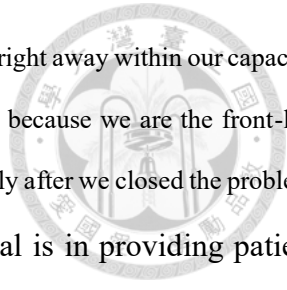
> Taking care of patients is my top priority. For example, if a patient already booked to visit doctor, I will prioritize escorting the patient to the appointment. While waiting for them, I can flexibly deal with emails and messages. Sometimes there are urgent cases that require overwork. I think our biggest problem is the lack of human resources, so everyone has to multitask.

When it comes to doctor access, two respondents shared that they had already asked for doctors' contacts (Line, Whatsapp) but got refused. They are afraid that sometimes patients will turn down or be sent to emergency, it would be panicking without having treating physician there. Two respondents aged 35-45 shared that:

> IMSC staff are accessible but treating doctors won't give their contacts. The only way to reach out to them is to send emails and we must wait for a while or push through IMSC.

> We are always assisted whenever we need. For example, when we are at home and I found something wrong with my daughter, I will email the doctor and she always replied. But we also don't know how to handle emergencies.

Regarding resolving any patients' complaints, IMSC staff are assigned certain power level to deal with the cases by themselves and they are stimulated to do so. The number of cases dealt by IMSC staff and upper management are of 80%-20% ratio respectively.

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> When the patients complain or get angry with us, we try to address the problem right away within our capacity. It is not advised to report to upper management and wait for their responses, because we are the front-line workers, and we know the situation better. We will let our supervisors know only after we closed the problem.

To sum up, responsiveness shows how prompt and engaging the hospital is in providing patient services. As we observed from the interviews, responsiveness could be seen in how fast the hospital proceeded with medical visa applications, how supportive the IMSC staff were, how quickly doctors replied to patients, and how they prioritized patients having problems. Most of the patients got satisfied with the speedy resolution of administrative procedures and visa applications from the hospital. As staff from IMSC suggested, "caring for patients should be everyone's work" other medical staff also show their engagement in caring for patients and addressing their concerns. However, overload remains in the system, and the lack of staff has resulted in slower progress.

5.1.5. Assurance

This factor refers to the employees' knowledge, attitudes, and ability to gain customer trust and confidence (Parasuraman et al., 2008). In a healthcare context, assurance refers to the level of professionalism and expertise of the doctors and nurses and their attitudes and involvement throughout treatment courses. Before each treatment, patients are informed about the risks and possibilities. A patient's mother aged 30-45, who donated partial liver to her son, shared that:

> I was amazed of how the hospital engage volunteers. They are so nice and kind as they put me in a wheelchair and did not let me walk.

Another patient's mother shared that:

> I feel 100% secure. I was always informed ahead of each procedure from both anesthesiologist and surgeons. It is a major operation but witnessing my child getting better every day, I was much appreciated their expertise. Nevertheless, the nurses were not so competent in drawing blood and insert IVs.

The most unsatisfied aspect is the residents who are still young. When they removed the catheter, the site of insertion was left bleeding. Nurses are also not good enough in putting intravenous line.

"Not competent in drawing blood," according to the patients, are because the nurses rely on equipment (catheter, ports, and hubs) rather than practicing the technique manually. Meanwhile, three respondents aged 35-55 shared doctors make the most part in their satisfaction.

The doctors are friendly, giving us a peace of mind. We entrust them as their expertise is great. I could see my kid not afraid of them at all, it is like she was visiting kindergarten.

Before the treatment, my daughter needed a whole-body imaging MRI and ultrasound. The doctor even accompanied us and supervised the ultrasound. They took shots of everything. In Vietnam, doctors do separately for ordering ultrasound and performing it.

When the doctors took a ward round and saw my son unable to sit up, he knelt on the bedside to talk to him.

To summarize, assurance is the medical staff's ability to gain patients' trust through their expertise and active involvement in the treatment. The medical staff in this context could be doctors, nurses, admin staff, or volunteers. It could be concluded that though the level of assurance of the doctors is over than expected, there remains limited versatility among nurses and resident doctors as they lack manual settlements. This may pose risks to patient satisfaction as nurses are the front-line workers and one of the most important contact points throughout the treatment.

5.1.6. Empathy

According to Parasuraman, Empathy refers to the level of caring and individual attention paid to the patients (Parasuraman et al., 2008). For medical services towards foreigners, perceived medical staff's empathy significantly influences patient satisfaction. Therefore, it has been strongly advised that medical staff learn to be compassionate and empathetic when caring for patients and

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understand their views (Meryn, 1998). Respondents shared that they feel touched by the care and whole-hearted support from the medical staff here:

My family has been knowing the treating doctor for years and regards her as our relative. She even thinks of how to save money for us and cut down on unnecessary exams. She also helped in donations for our treatment.

Each case is taken care by an IMSC staff, from visiting the hospital, booking appointments, extending visas and so on. We love Victor (IMSC staff), he is so great.

The doctor's enthusiasm is far better than we expected. All the medical staff, from doctors, nurses, IMSC staff to the volunteers are extremely dedicated and friendly.

Two respondents who worked for the International Medical Service Center shared that it was not income that matters but witnessing patients who suffer illnesses and the feeling of being surrounded by excellent people trying day and night saving lives inspired them the most.

I feel motivated at work when knowing that our teams are so capable, treating various types of diseases. I want to be part of that great team through helping people.

My empathy for patient come from my dad, who got stomach cancer and died quickly afterwards. I feel for them and understand how desperate and grieffully as they are. Sometimes their complaints are not very reasonable but I still try to put in their shoes and comfort them.

Kurtz, 1972 found that patient-perceived empathy, not doctors' self-reported empathy, was highly associated with therapy outcomes. Patient-perceived staff empathy significantly influences patient satisfaction, including social care involvement, individualized attention to the patients, and efforts to keep them informed. Patients all shared that they could maintain positive relationships with the hospital after the treatment, which reveals their high level of satisfaction with the staff's empathy. This was attributable to their previous assumption and low expectation on the aspect as they have been through the overloaded public hospital system in Vietnam. However, while the hospital plans to incorporate non-medical services for treating patients, their current resources,

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especially manpower, are insufficient. As the case suggests, healthcare providers who wish to improve patient satisfaction should first identify where they could touch and improve their empathic communication and refine their skills while recruiting more frontline workers to better serve the patients, thereby bringing an overall better outcome.
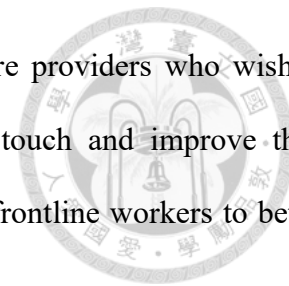
5.1.7. Communications

In addition to credibility, communication was another factor added to our research model based on the interview outcomes. Parasuraman (1988) states that communication means "keeping customers informed in a language they can understand and listening to them." A patient's father, who is also a doctor, talked about communications at Taipei VGH as follows:

> Unlike in Vietnam, a clear protocol was given to us, with the total estimated time and costs for the treatment. I would say the quality treatment is cost-effective.

However, he also commented on the translation and interpretation services which were repeatedly inaccurate as the hospital outsourced bilingual workers without medical backgrounds for the service. Also, according to this interviewee, not so many Vietnamese people can get through both Mandarin and medical terms.

> Professional language services are required to assist the patients. As a doctor, I have no problem understanding the doctors. However, from what I observe some translators did it wildly.

Some patients did not come across communications problem since they have relatives living in Taiwan or they possess advanced English. However, they also agreed that communication should be the biggest problem for Vietnamese patients.

> IMSC staff seems to be overloaded, so it is better to have a Vietnamese staff available there to support patients.
>
> Not every patient can speak either Chinese or English. I even had to help with translation for a referred case.

Meanwhile, two patients with limited English capabilities both agreed that:

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> I really struggle with communications as I could not neither understand doctor's words nor reflect to them my understanding. I tried to use translate apps but eventually had to rely on another patient's relative.
>
> We reflect on the decision for a long time with anxiety as we cannot communicate in English or Mandarin. Our friends all felt strange with our decision of going to Taiwan.
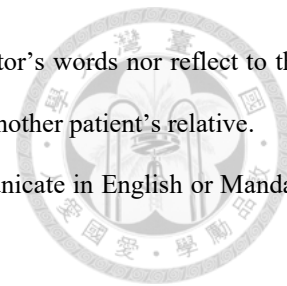
Talking about communications and language problems, a staff from IMSC commented that:

> Doctors are all proficient in English, but not the nurses. It is quite often among young nurses to speak English, but less in nurses over 40.

Though the Vietnamese community constitute Taiwan's second largest group of overseas people, many are wage laborers and brides. Therefore, it is challenging to outsource a professional interpretation service. Communication thus remains one of the biggest issues for patients coming from Vietnam.

5.2. Quantitative study

5.2.1. Demographic Analysis

As noted from the Table 1, the p-value for the two characters "Educational level" and "Residential Area" is less than 0.05, implying statistically that people living in different locations and having different education backgrounds will differ in thinking, thus making different decisions. For those who live in central- and local-level cities, their access to medical care and information may be better, which largely explains the phenomenon. What we considered significant findings from us were that though the number of female participants prevailed, there was no significant difference between the two gender groups in choosing outbound healthcare, in other words, both women and men have the same likelihood of going overseas if they encounter health problems. Similar patterns were observed in age and occupations categories where it was not clear which kinds of age or occupations are most likely to choose overseas treatment.

To get an insight into how the SERVQUAL dimensions (Tangibility, Reliability, Responsiveness, Assurance, Empathy, Credibility, Communication) impact customer's perceived service quality, we have asked participants to rate our statements on a 5-Likert scale with levels of importance ranging from 1=not at all important, 2= very less important, 3=no opinion, 4=important, 5=very important. Sum score of levels of importance was expressed as mean (standard deviation) and was compared using independent t test.

Table 3

Levels of importance of SERVQUAL dimensions: Tangibility (N=167)

	All	Seek overseas medical treatment		
Character		**Ever/yes (n=114)**	**Probably (n=53)**	**P-value**
Level of importance	**Overall score**	**Overall score**	**Overall score**	
Tangibility	**4.38 (0.63)**	**4.45 (0.48)**	**4.23 (0.86)**	**0.095**
Provide housing	4.34 (0.97)	4.41 (0.82)	4.19 (1.23)	0.231
Employees' appearance	3.93 (1.03)	4.02 (0.96)	3.74 (1.15)	0.124
Hospital's appearance	**4.67 (0.72)**	**4.76 (0.49)**	**4.47 (1.03)**	**0.05***
Informative website	4.22 (0.82)	4.25 (0.76)	4.13 (0.94)	0.373
Modern facilities and medical equipment	4.45 (0.87)	4.46 (0.82)	4.42 (0.97)	0.731
Convenient in-hospital design	**4.37 (0.79)**	**4.46 (0.65)**	**4.17 (0.99)**	**0.05***
Adequate drug supply	4.68 (0.69)	4.75 (0.53)	4.53 (0.93)	0.104

Note: *Statistical significance was determined by a two-sided p value < 0.05.

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The above table compares how the two groups observe Tangibility and its sub-sections. There are no differences between patients considering overseas treatment and those not. Overall, both groups graded Tangibility 4.38 out of 5, meaning that it is a very important criterion for them when considering overseas treatment (except for employee appearances). Two criteria, "Hospital appearance" and "Convenience in hospital design," logged p-values equal to 0.05 in both subsections, meaning evidently that people who look for overseas treatment are more demanding in the outlook of the healthcare facilities as well as the feeling of convenience in a foreign medical environment. Other sub-sections are similarly important for the two groups.

Table 4 Levels of importance of SERVQUAL dimensions: Reliability (N=167)

Character	All	Seek overseas medical treatment		
		Ever/yes (n=114)	Probably (n=53)	P-value
Level of importance	Overall score	Overall score	Overall score	
Reliability	**4.65 (0.59)**	**4.70 (0.40)**	**4.53 (0.86)**	**0.177**
On time	4.71 (0.65)	4.78 (0.46)	4.55 (0.93)	0.088
Sincerity	4.71 (0.63)	4.76 (0.45)	4.60 (0.91)	0.229
Right first-time service	4.74 (0.64)	4.80 (0.46)	4.60 (0.91)	0.145
Schedule	4.68 (0.66)	4.73 (0.50)	4.57 (0.91)	0.229
Record and billing accuracy	4.62 (0.67)	4.67 (0.53)	4.51 (0.91)	0.247
Record accessibility and transparency	4.55 (0.78)	4.56 (0.72)	4.53 (0.91)	0.8
Treatment time estimation	4.46 (0.76)	4.51 (0.63)	4.34 (0.98)	0.253
Pre-treatment communication	4.71 (0.66)	4.79 (0.47)	4.55 0.93	0.078

Note: *Statistical significance was determined by a two-sided p value < 0.05.

When looking at overall scores rated by the prospective patients, one may note that patients all place a stronger emphasis on Reliability, with an overall score of 4.65 out of 5, higher in the "Yes" group and a little lower in the "Probably/not yet" group. There were no differences in their expectation on the aspects, as the comparison produced all P-values more significant than 0.05.

Table 5

Levels of importance of SERVQUAL dimensions: Credibility (N=167)

Character	All	Seek overseas medical treatment		
		Ever/yes (n=114)	Probably (n=53)	p value
Level of importance	Overall score	Overall score	Overall score	
Credibility	**4.39 (0.66)**	**4.49 (0.45)**	**4.18 (0.93)**	**0.025***
Rank in the country	4.38 (0.80)	4.46 (0.69)	4.21 (0.97)	0.052
Reputation in the country	**4.43 (0.77)**	**4.55 (0.60)**	**4.17 (1.01)**	**0.013***
Renowned doctors	4.35 (0.79)	4.44 (0.65)	4.17 (1.01)	0.081
Referred by doctor in Vietnam	**4.34 (0.83)**	**4.45 (0.67)**	**4.11 (1.07)**	**0.04***
Known successful cases via word of mouth	4.37 (0.89)	4.46 (0.75)	4.17 (1.11)	0.091
Staff-guided service	**4.49 (0.78)**	**4.59 (0.56)**	**4.26 (1.10)**	**0.046***

Note: *Statistical significance was determined by a two-sided p value < 0.05.

Like Tangibility and Reliability, the Credibility of the health facility is accentuated by the prospective patients, as the overall score by the respondents was 4.39. However, discrepancy was noted between the two groups. People searching for foreign overseas treatment are placing more

emphasis on the Credibility of the facility, especially in reputation, doctoral reference, and staff-guided services, as p-values for these groups are less than 0.05.
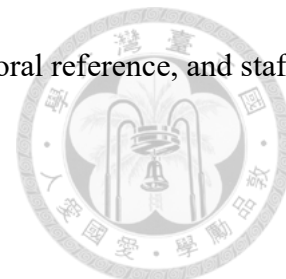
Table 6

Levels of importance of SERVQUAL dimensions: Responsiveness & Assurance (N=167)

	All	Seek overseas medical treatment		
Character		**Ever/yes (n=114)**	**Probably (n=53)**	**P-value**
Level of importance	**Overall score**	**Overall score**	**Overall score**	
Responsiveness	**4.38 (0.67)**	**4.46 (0.52)**	**4.21 (0.89)**	**0.066**
Prompt services	4.41 (0.81)	4.50 (0.58)	4.21 (1.13)	0.081
Instill confidence and trustworthiness	4.48 (0.74)	4.55 (0.60)	4.32 (0.96)	0.109
Never too busy to respond the request	4.26 (0.77)	4.32 (0.69)	4.11 (0.91)	0.098
Assurance	**4.56 (0.65)**	**4.64 (0.47)**	**4.40 (0.91)**	**0.069**
Courtesy	4.54 (0.67)	4.61 (0.53)	4.42 (0.91)	0.161
Expertise	4.58 (0.79)	4.68 (0.60)	4.38 (1.08)	0.064

Note: *Statistical significance was determined by a two-sided p value < 0.05.

Again, the two groups agreed that Responsiveness and Assurance are very important to the respondents, with the overall scores recorded in the two groups being 4.38 and 4.56, respectively. This time, no discrepancies were noted for the groups when judging the importance of these two aspects on the perceived service quality.
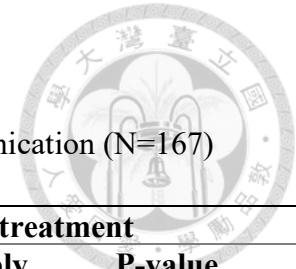
Table 7

Levels of importance of SERVQUAL dimensions: Empathy & Communication (N=167)

	All	Seek overseas medical treatment		
		Ever/yes (n=114)	Probably (n=53)	P-value
Character				
Level of importance	Overall score	Overall score	Overall score	
Empathy	**4.27 (0.67)**	**4.33 (0.62)**	**4.15 (0.76)**	**0.111**
Care about patient's social needs	4.21 (0.82)	4.27 (0.76)	4.08 (0.94)	0.15
Listens to patient's every concern	4.36 (0.76)	4.39 (0.70)	4.28 (0.89)	0.421
Keep patient informed	4.57 (0.65)	4.62 (0.57)	4.45 (0.80)	0.167
Pay more attention to foreign patients	3.95 (1.09)	4.03 (1.00)	3.79 (1.25)	0.234
Communication	**4.00 (0.73)**	**4.07 (0.69)**	**3.87 (0.79)**	**0.103**
Professional translator	4.63 (0.67)	4.68 (0.57)	4.53 (0.85)	0.254
English-speaking countries are better	3.95 (1.20)	4.02 (1.23)	3.81 (1.13)	0.301
Doctors, nurses can speak English	**4.02 (1.08)**	**4.15 (1.03)**	**3.75 (1.14)**	**0.028***
Daily life communication with the staff	3.41 (1.14)	3.42 (1.16)	3.38 (1.10)	0.818

Note: *Statistical significance was determined by a two-sided p value < 0.05.

When asked about Empathy, both groups of respondents agreed that this is an essential aspect of service quality. Assuming themselves a foreign patients, having an empathetic staff sharing their hardness and burden would relieve their stress and depression while being overseas for medical cure. Meanwhile, Communication is a less critical criterion amongst the seven discussed, with an overall score of 4 - somehow important. For those who will consider overseas treatment, the

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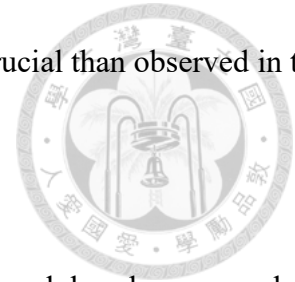
communication problem with foreign nurses and doctors will be more crucial than observed in the other group, as the p-value for the comparison was 0.028.

Expansion to Vietnamese community

From what our qualitative analysis indicated, Taiwanese medical brand has been somehow restricted in the Vietnamese media, making Taiwanese medicine less visible in Vietnamese people's perceptions and awareness. Under this setting, we want to explore which channel of references is most important to their decisions towards outbound healthcare and how Taipei VGH has conquered these sources.

In this segment, we asked people to define their level of agreement on a 5-Likert scale, with "Yes" referring to the level of agreement from 4 to 5; "No" was defined as a level of agreement from 1 to 3. Categorical variables were compared using Pearson Chi-square tests or Fisher's exact tests. Statistical significance was determined by a two-sided p-value < 0.05. *p-value < 0.05; **p-value < 0.005. For the most generally common source of information, including social media, Google search, and mainstream media, no statistically significant difference was found for marital status, age, gender, and income in each channel's impact on decision-making.

Table 8

Characteristics associated with channel's impact on decision-making of the participants ever sought or planning to seek overseas treatment (N=114)

	FACEBOOK/ SOCIAL MEDIA			GOOGLE SEARCH ARTICLES			NEWSPAPER/ MAINSTREAM MEDIA		
Channel Impact	Yes	No	P-value	Yes	No	P-value	Yes	No	P-value
Character-istic									
Age group									

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<30 years	3 (25.0)	9 (75.0)	0.904	5 (41.7)	7 (58.3)	0.261	10 (83.3)	2 (16.7)	0.374
30-40 years	14 (25.3)	46 (76.7)		17 (28.3)	43 (71.7)		40 (66.7)	20 (33.3)	
>40 years	12 (28.6)	30 (71.4)		8 (19.0)	34 (81.0)		26 (61.9)	16 (38.1)	
Gender									
Male	9 (24.3)	28 (75.7)	1.0	6 (16.2)	31 (83.8)	0.113	21 (56.8)	16 (43.2)	0.14
Female	20 (26.0)	57 (74.0)		24 (31.2)	53 (68.8)		55 (71.4)	22 (28.6)	
Occupation									
Public officer	8 (17.8)	37 (82.2)	0.01*	9 (20.0)	36 (80.0)	0.516	30 (66.7)	15 (33.3)	0.11
Corporate employee	8 (20.5)	31 (79.5)		11 (28.2)	28 (71.8)		27 (69.2)	12 (30.8)	
Self-employed	7 (38.9)	11 (61.1)		5 (27.8)	13 (72.2)		8 (44.4)	10 (55.6)	
Unemployed	1 (16.7)	5 (83.3)		2 (33.3)	4 (66.7)		5 (83.3)	1 (16.7)	
Retired/others/student	5 (83.3)	1 (16.7)		3 (50.0)	3 (50.0)		6 (100)	0	
Residential area									
North Vietnam	15 (27.3)	40 (72.7)	0.83	11 (20.0)	44 (80.0)	0.129	35 (63.6)	20 (36.4)	0.014*
Central Vietnam	7 (21.2)	26 (78.8)		11 (33.3)	22 (66.7)		18 (54.5)	15 (45.5)	
South Vietnam	2 (20.0)	8 (80.0)		1 (10.0)	9 (90.0)		7 (70.0)	3 (30.0)	
Overseas	5 (31.3)	11 (68.8)		7 (43.8)	9 (56.3)		16 (100)	0	
Edu. level									
College & under/ other	6 (85.7)	1 (14.3)	0.001**	4 (57.1)	3 (42.9)	0.176	7 (100)	0	0.147
University graduate	14 (21.5)	51 (78.5)		16 (24.6)	49 (75.4)		43 (66.2)	22 (33.8)	
Master/Phd and above	9 (21.4)	33 (78.6)		10 (23.8)	32 (76.2)		26 (61.9)	16 (38.1)	
Family income (per year)									

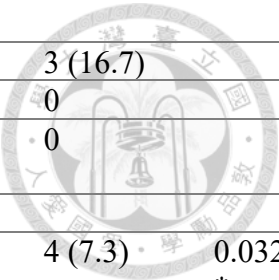|								
Under US$10,000	10 (20.0)	40 (80.0)	0.07	16 (32.0)	34 (68.0)	0.148	36 (72.0)	14 (28.0)	0.27
US$10,000- US$35,000	16 (37.2)	27 (62.8)		12 (27.9)	31 (72.1)		29 (67.4)	14 (32.6)	
Above US$35,000	3 (14.3)	18 (85.7)		2 (9.5)	19 (90.5)		11 (52.4)	10 (47.6)	

Note: *Statistical significance was determined by a two-sided p value < 0.05.

However, it can be noted that p-values are less than 0.05 in the Facebook/social media with occupation and education backgrounds. This is statistically significant because people having different occupations and educational levels will have different levels of trust and reliance on information on Facebook and social media. For mainstream media, it is statistically evident that people living in different regions will have distant beliefs toward mainstream media. This could be noted obviously as a phenomenon in Vietnam that Southern and OV people are less likely to trust official media than the Northern and Central people (Hallin, 1984).

Table 9

Characteristics associated with channel's impact on decision-making (N=114)

Channel Impact	WORDS OF MOUTH			DOCTOR REFERRALS/ HOSPITAL NETWORK		
	Yes	**No**	**P-value**	**Yes**	**No**	**p value**
Characteristic						
Age group						
<30 years	11 (91.7)	1 (8.3)	0.192	12 (100)	0	0.015 *
30-40 years	48 (80.0)	12 (20.0)		56 (93.3)	4 (6.7)	
>40 years	29 (69.0)	13 (31.0)		32 (76.2)	10 (23.8)	
Gender						
Male	27 (73.0)	10 (27.0)	0.481	31 (83.8)	6 (16.2)	0.543
Female	61 (79.2)	16 (20.8)		69 (89.6)	8 (10.4)	
Occupation						
Public officer	32 (71.1)	13 (28.9)	0.87	37 (82.2)	8 (17.8)	0.538
Corporate employee	31 (79.5)	8 (20.5)		36 (92.3)	3 (7.7)	

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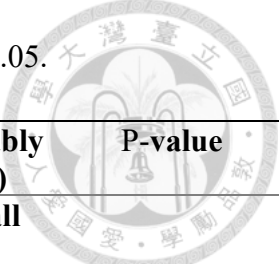
Self-employed	15 (83.3)	3 (16.7)		15 (83.3)	3 (16.7)	
Unemployed	5 (83.3)	1 (16.7)		6 (100)	0	
Retired/others/student	5 (83.3)	1 (16.7)		6 (100)	0	
Residential area						
Northern Vietnam	46 (83.6)	9 (16.4)	0.325	51 (92.7)	4 (7.3)	0.032 *
Central Vietnam	22 (66.7)	11 (33.3)		24 (72.7)	9 (27.3)	
Southern Vietnam	8 (80.0)	2 (20.0)		10 (100)	0	
Overseas	12 (75.0)	4 (25.0)		15 (93.8)	1 (6.3)	
Educational level						
College and under/ other	5 (71.4)	2 (28.6)	0.538	7 (100)	0	0.57
University graduate	48 (73.8)	17 (26.2)		55 (84.6)	10 (15.4)	
Master/ PhD and above	35 (83.3)	7 (16.7)		38 (90.5)	4 (9.5)	
Family income (per year)						
Under US$10,000	39 (78.0)	11 (22.0)	0.491	42 (84.0)	8 (16.0)	0.424
US$10,000- US$35,000	31 (72.1)	12 (27.9)		38 (88.4)	5 (11.6)	
Above US$35,000	18 (85.7)	3 (14.3)		20 (95.2)	1 (4.8)	

Note: *Statistical significance was determined by a two-sided p value < 0.05.

For this continual table, no statistically significant difference was found for groups of people judging the importance of "Words-of-mouth." However, as below Table 9 indicates for "Doctor Referral," its significance is once again noted in Age and Residence, meaning that people living in different regions with different ages have different levels of confidence in "Doctor referral." This is also the most trustworthy channel of references agreed by the prospective patients with a score of 4.25 out of 5, followed by "Words-of-mouth".

Table 10 Scoring of level of agreement of communications channels (N=167)

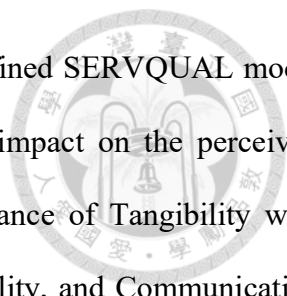| Character	All (n=167)	Ever/yes (n=114)	Probably (n=53)	P-value
Channels' impact on decision-making	**Overall score**	**Overall score**	**Overall score**	
Facebook/ social media	2.96 (1.09)	3.05 (1.06)	2.75 (1.16)	0.102
Google search articles	3.01 (1.01)	3.06 (0.99)	2.91 (1.04)	0.353
Newspaper/ mainstream media	3.72 (1.04)	3.79 (0.99)	3.58 (1.13)	0.238
Words of mouth	3.95 (0.99)	4.03 (0.93)	3.79 (1.10)	0.182
Doctor referrals/ hospital network	4.25 (0.96)	4.33 (0.88)	4.06 (1.10)	0.083

CHAPTER 6: DISCUSSION
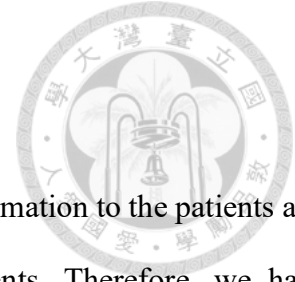
6.1. Theoretical Implications

For a high-involvement service like healthcare, providing available information to the patients and understanding their needs are crucial in building trust among patients. Therefore, we have incorporated qualitative and quantitative approaches to thoroughly investigate patients' perceptions and satisfaction. It was evident that mixed methods are appropriate and inclusive for the healthcare sector as they can target large samples and thoroughly investigate consumer perspectives simultaneously (Sohn & Choi, 2017).

However, previous studies have limited focus on international medical service quality using mixed methods. For example, a study by Nguyen et al. (2022) explored service quality dimensions on inpatients' satisfaction and optimized mixed methods in a developing country. However, no similar investigation has been conducted for a developed country setting, as models from developed countries are unsuitable for developing countries, and thus, quality demands contextualized and patient-perspective research. Another study by Horrocks (2018) leveraged mixed method approaches in measuring quality in community nursing quality in the UK, but not any similar studies customized for Taiwan have been in place. Therefore, this study adds to existing literature regarding international medical services using mixed methods and is dedicated to Taiwan, focusing on its Vietnamese market.

Regarding elements of the SERVQUAL model, our empirical findings suggest that Reliability and Assurance are the most impacting factors for prospective patients, followed by Tangibility, Credibility, and Responsiveness. All of them achieved an overall score of 4.00 (important) and above, which conforms to the extant works of literature.

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For example, Rad et al. (2010) stated that four factors of the refined SERVQUAL model (Reliability, Assurance, Responsiveness, and Empathy) have a large impact on the perceived service quality in healthcare while Panda (2014) affirmed the importance of Tangibility with service quality in the hospital sector. Two additional elements, Credibility, and Communication were also found to be key variables in the medical field in research by Amjeriya (2012).

About Taipei's VGH perceived service quality using the SERVQUAL model, our interviews with 11 patients, relatives, and IMSC staff in the qualitative analysis revealed that most of the respondents exposed a relatively high level of satisfaction towards Taipei VGH's Reliability, Responsiveness, Assurance, and Empathy. The study also noted that there is still much room for improvement regarding Tangibility (Housing) and Credibility (Name, reputation in Vietnam, and guided services). With Tangibility, the hospital cannot offer housing services for foreign patients while patients and their relatives struggle to find shelter. For Credibility, it is regarded as the hospital's online exposure and how it appears credible among Vietnamese people. Yang (2011) believed that for such a high-involvement service and that patients are becoming increasingly proactive, the main source of information must be from personal settings, such as Word-of-mouth or individual referrals. Our findings found that Doctors' referrals and Words-of-mouth are the most reliable sources of reference that could affect the hospital's Credibility and garner bigger flows of overseas patients from Vietnam.

Our research also provided new findings out of the mentioned aspects. Previous literature did not mention cost as an influential factor in their decisions on overseas medical treatment. However, our interviews with the patients suggest that this is one of the foremost considerations and a frequently asked question from the patients. As such, further studies on cost considerations

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are suggested for a more profound understanding of its affection towards patients' choices and perceptions compared to hospital-delivered services.

Second, due to the complicated political relationship between Vietnam – Taiwan – China, many Vietnamese living in Vietnam do not have sufficient access to information about Taiwan's socio-economy and its medical advantages. As our qualitative interview suggests, many Vietnamese people are still confused about Taiwan's political status and mistake Taiwan for China; therefore, will consider a more obviously independent and closer state such as Singapore or South Korea.
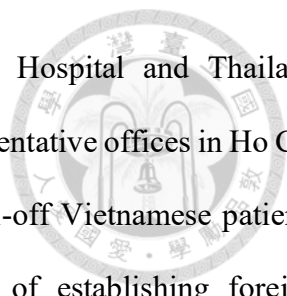
6.2. Practical implications

In the setting of insufficient proper knowledge propagated to the Vietnamese public and the rising competition from other countries in the Asian/ASEAN region, hospitals in Taiwan, especially Taipei Veterans General Hospital, needs to adapt to renewal strategies while maintaining its most efficient service aspects. This segment draws up some managerial implications for the hospital management towards its international medical services, with accentuation made on factors that need more significant improvements.

6.2.1. Tangibility

The study found critical sub-dimensions of tangibility that the hospital management must focus on. Physical presence, including transitional post-discharge housing provision and a representative office in Vietnam, maintaining, and redesigning the hospital website, are the most necessary now.

The interview data suggests that most Vietnamese people will consider Singapore or Thailand as their first and foremost options for outbound treatment. Together with Vietnam, these countries are members of the Association of Southeast Asian Nations, where infra-regional
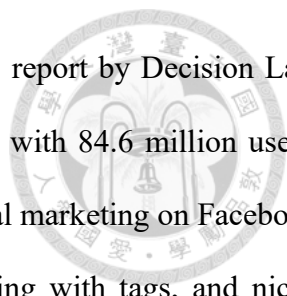
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travelers have waived visas for up to 30 days. Thailand Bangkok Hospital and Thailand Bumrungrad International Hospital are two hospitals that have had representative offices in Ho Chi Minh City, Vietnam, for years. According to them, the number of well-off Vietnamese patients receiving medical care at these hospitals tripled within two years of establishing foreign representative offices. Bumrungrad International Hospital runs two hotels in Thailand for overseas outpatients and their relatives, a large proportion of Vietnamese. Medical visa applications and housing are key concerns among Vietnamese patients considering Taiwan a medical service destination. Therefore, the hospital needs to be addressed the concerns of the patients. This can be done either by out-sourcing, i.e., tie-ups with housing agents/hotels, or by in-sourcing and renovating hospital unused buildings and facilities.

While Singaporean and Thai hospitals have established their representative offices in Vietnam since the 2000s, Taiwanese hospitals seem to be lagging by offering remote service and teleconferences with patients only. Having a legal entity run by Vietnamese people who understand Vietnamese representing Taipei VGH in the host country could be a worth-mentioning option as they are the front-line and contact points where prospective patients could entrust and access the hospital service most quickly; as from Thai hospitals experience sharing, up to 80 percent of those had sought information at their office went overseas for treatment, representing a very high conversion rate.

6.2.2. Credibility

Online presence

Taiwan has been politically quiet on Vietnam's mainstream media; therefore, it is necessary to gain brand equity by redirecting towards more impacting but unofficial channels, such as social media
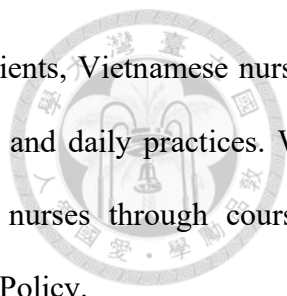
and Words-of-mouth. According to The Connected Consumer Q1/2023 report by Decision Lab, Facebook remains the most popular social media platform in Vietnam, with 84.6 million users, spreading across all generations, followed by the homegrown Zalo. Social marketing on Facebook through KOL (Key Opinion Leaders), Ad Targeting, creative contenting with tags, and niche discussion groups with constant posts could help educate people and gain brand equity. Moreover, designing a user-friendly interface and website may help impressing patients on their first virtual visits. Short video excerpt series of old patients' medical journeys and sharing could be made viral on multiple channels to maximize effectiveness.

Strengthening hospital networks

Taipei VGH is considered more competitive than other hospitals in Taiwan because of its New Southbound Policy Vietnam engaging hospital status. As of May 2023, the hospital has signed Memorandums of Understanding (MOUs) with 25 Vietnamese hospitals. Leveraging hospital-to-hospital networks could be an option for getting patients referred from partner hospitals for advanced treatments. Also, from 2018 to 2022, the hospital has provided intensive training for 79 doctors, nurses, and technicians from hospitals in Vietnam. Having experienced the advanced medical techniques and service quality from Taipei VGH, these medical practitioners could act as a channel for Word-of-mouth communications to patients they are serving back in Vietnam.

6.2.3. Assurance

Assurance is very important to the respondents, with the overall score recorded at 4.56. While patients reached a consensus in rating high for expertise and professional attitude from doctors, most of them show dissatisfaction with nurses' manual skills, for example inserting IVs or drawing blood, since they are too reliant on equipment (catheter, ports, and hubs) and do not have the chance

to practice these techniques manually. Meanwhile, according to the patients, Vietnamese nurses are more competent in this aspect due to the large number of patients and daily practices. We recommend further mutual training for Taiwanese and Vietnamese nurses through courses organized by Taipei VGH under the framework of the New Southbound Policy.

6.2.4. Communication

The hospital also needs to pay more attention to Communication as this has posed challenges to patients. Many of them shared how difficult it was to understand doctors and nurses.

Outsourcing translation services with Vietnamese students doing fellowships at medical colleges in Taiwan could be a solution or providing short-term courses on medical interpretation to engage Vietnamese.

6.2.5. Reliability, Responsiveness and Empathy

Interviews showed that the patients appraised Taipei VGH's Reliability and Empathy, as the hospital has been keeping consistent and clear communications about cost, treatment protocol, and time and having a team of IMSC staff full of empathetic and patient-centric mindset. We recommend the hospital upkeep the current standards for Reliability.

For Empathy and Responsiveness, the hospital has been striving to reduce waiting time for visa applications and time intervals between emails. To further the excellence, we strongly recommend investing more in human resources and giving more incentives to IMSC staff under extra payouts, rewards, and promotions. The current seniority-based income gives little or no motivation for the employees to excel at work, especially when tasked with an increasing number of patients.
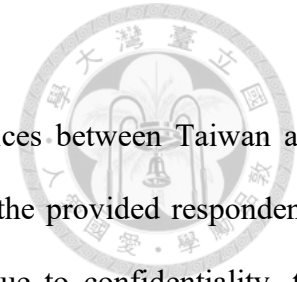
6.3. Limitations

Though striving for an emerging topic on international medical services between Taiwan and Vietnam, this research is not without its limitations. Firstly, some of the provided respondents' demographics may not fully reflect the respondents' backgrounds. Due to confidentiality, the questionnaire cannot further delve deeper into other financial-related indices that better reflect the prospective patients' economic status, such as tax spending or total assets. We have been relying on the family's yearly income, which varies in age, education, family size, and occupation. Family yearly income, therefore, is not a reliable assessment tool of a respondent's overall economic background. Second, though having strived to diversify interviewees' backgrounds in the qualitative part, we did not have access to all the representing patients of those who obtained high dissatisfaction with the hospital service.

Moreover, when we tried to run logistic regressions with binary variables to find out the contribution of individual service quality dimensions on consideration of seeking overseas medical treatment in Vietnam, the data limitations have prevented us from running the regression, as the number of respondents in the "Yes" and "No" groups (114 and 53 respectively) are not similar. Therefore, we suggest that regression could be done in future studies to gain a better understanding of how prospective patients consider service quality aspects when deciding overseas medical treatment.

Nonetheless, the data gathered in this research represent much-needed new knowledge on patients' intentions toward overseas medical treatment. The findings, therefore, can serve as a foundation for further studies of Taiwanese medicines for foreign patients, not only from Vietnam but also from other countries.
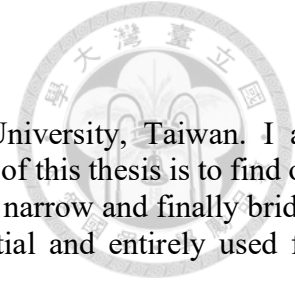
Hello, I am ELAINE LE, a Master's student at National Taiwan University, Taiwan. I am developing a semi-structured interview for the above topic. The purpose of this thesis is to find out any gaps between service delivery and customer satisfaction and how to narrow and finally bridge the gaps. The information you provide will be kept strictly confidential and entirely used for academic purposes. Thank you!

1. Please describe your situation before coming to Taiwan for treatment, and how you are feeling now (or your relatives if you are his/her helper)

2. TANGIBILITY: Regarding medical equipment in Vietnam, how was your treatment facility doing? And how about what you have seen at Taipei VGH and Taiwan in general? In what ways that facilities contribute to your treatment?

3. RELIABILITY: How was the service in comparison with the similar in Vietnam? Were you informed and aware of what to do/what the medical staff did to you?

4. RESPONSIVENESS: Please think back of your impression of first contact with the medical staff at Taipei VGH. How did the hospital help you in aiding your stay in Taipei? To what extent that are basic needs for medical stay in Taipei met?

5. ASSURANCE: How do you assess the level of professionalism of the service? How different from those you received in Vietnam? For example, did they pay 100% attention to you as a patient? Have you ever been suspicious about doctors' explanation, treatment and so on?

6. EMPATHY: In what situation that you interact with the hospital staff the most? How do you describe your relationship with the nurses/doctors? Is it hard reaching out to them? How do you perceive the interaction that you have just shared? Have you ever felt being left neglected?

7. If you could make a recommendation to the hospital service, what would it be?

8. What comments or questions do you have? What would you like to tell me that you've thought about during this interview?

For the medical staff

1. Please tell us more about the procedures receiving a patient referred from overseas. Is that time-consuming to handle all the processes needed?

2. Do you think that the facilities at Taipei VGH are enough for treatment? Do customers often complain/ suggest any changes in terms of hospital assets?

3. How do you assess the proactiveness of IMSC staff and hospital to support Vietnamese patients? Do you label receiving patient a prioritized task or a usual work done in a given deadline? When compared with local patients, are there any preferences/favored treatment to overseas patients?

4. How does IMSC cover the taking care of patients? Only with treatment or even with daily life? How do you cope with patients' complaint? Will you deal with it yourself or forward it up to high-level managers?

5. How often do you have to interact with patients and attending doctors? What do you mostly do? Are there any communications problem (If yes: How to deal; If no: How to prevent)

6. How are you evaluated when doing this cross-border IMS? What are the motivations for you to keep up with the work?

7. (For doctor from Vietnam) Do you have to follow up on/interfere with any issues that arises when patients are in Taipei?

Hello, my name is ELAINE LE, a Master student at National Taiwan University, Taiwan. I have developed this survey to understand and improve service for Vietnamese consumers seeking medical service in Taiwan. The purpose of this thesis is to find out Vietnamese people's perceptions towards having overseas medical treatment and what factors stimulate them towards the decisions. The information you provide will be kept strictly confidential and entirely used for academic purposes. Thank you!

Section 1: General Information

1. Have you ever sought or planning to seek overseas medical treatment? (Qualifier question)

   Yes   No   Maybe after this survey

   If it is no, then the survey should end here

2. Gender: Male   Female   Prefer not to say

3. Year of birth:

4. Marriage status:
   - Single
   - Married
   - Divorced
   - Others

5. Occupation:
   - Government staff
   - Corporate employees
   - Self-employed
   - Unemployed
   - Retired
   - Others

6. Which city do you live in Vietnam? Is this a dropdown list or text entry?

7. Education:
   - College and under
   - University graduate
   - Master
   - PhD and above
   - Others

8. Family total yearly income
   - Under US$10,000
   - US$10,000 - US$35,000
   - US$35,000 - US$70,000
   - Above US$70,000

Section 2: Intention to overseas medical services. Please select appropriate responses

9. Please indicate your level of agreement for the following statements related to your consideration for overseas medical treatment.
   1. When I myself encounter major issues and the treatment is not available in Vietnam
   2. When I consider aesthetic/new technique treatment(s)

3. When my kids have problems and treatment is not available in Vietnam
4. When my parents have problems, and the treatment is not available in Vietnam.
5. When I want to have comprehensive/advanced health screenings/check-ups

10. For any other reasons, please detail the reasons: (Put this as a separate question)
11. What kinds of diseases would you consider or have considered for overseas treatment? (Can pick more than one)
    1. Cancer
    2. Aesthetics/Cosmetics
    3. Complicated surgeries (robotics, transplants), please specify:
    4. Internal treatment, please specify:
    5. Others, please specify: (text)

12. Please update your level of agreement to the following statements. Which of the following channels have impacted or are likely to impact your decision?
    (Put a 5 point Likert scale – Strongly disagree-1 to Strongly agree)
    1. Facebook/ social media discussions about the problem
    2. Google search articles
    3. Newspaper or mainstream media
    4. Words of mouth
    5. Doctor referrals/hospital network
    6. Others, please specify

13. Do you have any connection to Taiwan? (Can pick more than one)
    1. No connection at all
    2. Travel
    3. My friend or relative live/work in Taiwan
    4. My colleagues/ boss/ friends are Taiwanese living in VN
    5. I used to study/work in Taiwan now return to VN
    6. Others, please specify

Section 3: Decision Making

All items are measured on a five-point Likert scale ranging from Very important to not at all important

1	2	3	4	5
Very important	Important	No opinion	Very less important	Not at all important
Hoàn toàn không đồng ý	Không đồng ý lắm	Bình thường	Cũng có đồng ý một chút	Hoàn toàn đồng ý

14. **TANGIBILITY:** Please update your level of importance to the following statements that have impacted or will impact your choice of destination for overseas medical service (Source: AlOmari et al., (2021) for statements 1-4; Statements 5-8 are developed based on qualitative research)
1. The hospital provides housing for foreign patients.
2. Hospital employees are neat in appearance with clean uniform
3. Hospital's building and facilities are attractive, modern and good-looking.
4. Hospital website is informative

5. Hospital has up-to-date facilities and modern medical equipment
6. Hospital beds, rooms, functional design are convenient.
7. Hospital has adequate drug supply

15. **RELIABILITY:** Please update your level of importance to the following statements that have impacted or will impact your choice of destination for overseas medical service (Source: AlOmari et al., (2021) for statements 1-5; Statements 6-8 are developed based on qualitative research)
1. Employees provide services at the time they promise to do
2. Employees show a sincere interest in solving patient's problem
3. Employees carry out services right the first time
4. Employees inform patients exactly when services would be performed
5. Employees keeps accurate record and billing
6. Medical records are made easy-to-access and transparent throughout the hospital for all its medical staff
7. Actual treatment time is similar to estimates provided
8. Treatment protocol, time and cost are communicated prior to treatment

16. **CREDIBILITY:** Please update your level of importance to the following statements that have impacted or will impact your choice of destination for overseas medical service (Source: AlOmari et al., (2021) for statements 1-5; Statements 6-8 are developed based on qualitative research)
1. The hospital is highly ranked in the country,
2. The hospital is reputed in the country
3. The hospital has renowned doctors.
4. The hospital is referred by my doctor in Vietnam.
5. I know of a successful case treated by that hospital through word of mouth of the treated patient
6. The hospital sends a contacting staff to guide through all the processes and take care of basic needs

17. **RESPONSIVENESS:** Please update your level of importance to the following statements that have impacted or will impact your choice of destination for overseas medical service (Source: AlOmari et al. (2021) for statements 1-4; Statements 5-8 are developed based on qualitative research)
1. Employees give prompt services to patients
2. Employees instill confidence and trustworthiness in patients
3. Employees are never too busy to respond to patients' request

18. ASSURANCE
1. Employees are always courteous to patients
2. Their expertise must be the top priority over others (courtesy, attitude, facilities…)
AlOmari et al. (2021)

19. EMPATHY
AlOmari et al. (2021)
1. The medical staff also cares about the patient's social needs
2. The medical staff listens to every concern
3. The medical staff keeps the patients informed.
4. The medical staff pays more attention to foreigner patients.

20. COMMUNICATIONS
1. Someone professional can translate the medical issues.
2. English-speaking countries are better than Chinese-speaking countries
3. Doctors and nurses can speak English and take good care of you, even other people from daily communications cannot.
4. You care a lot about daily life communication in addition to working with doctors.

PRICE: What do you think is the reasonable cost in comparison with that in Vietnam for higher prognosis and generally better-quality service?
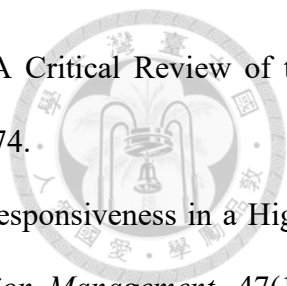- I think over 10 times than that of public service in Vietnam is reasonable
- I think over 5 times than that of public service in Vietnam is reasonable
- I often go to private hospitals, so I think 5 times higher than that of private service in Vietnam is reasonable
- I often go to private hospitals, so I think 2-3 times higher than that of private service in Vietnam is reasonable
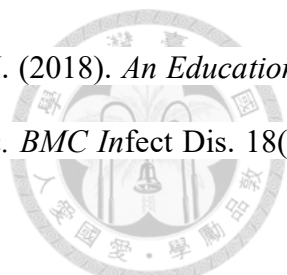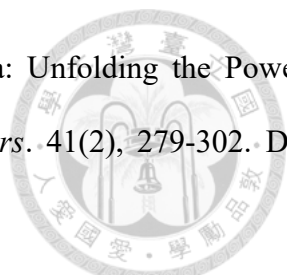- I think the cost being equivalent to private hospital in Vietnam is reasonable

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