

AN ELECTRONIC SERVICE QUALITY TRANSACTIONAL MODEL OF
ATTRACTION, TRUST AND LOYALTY FOR INTERACTIVE
HEALTHCARE PORTAL

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*Dedicated to my beloved mother Firoozeh, father Khosrow, brother Kamran, sister
Hanieh, aunt Sepideh and cousin Bitā.*

Thank you for your love, support and understanding

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ABSTRACT

Interactive Health Portals (IHPs) are portals of healthcare providers which offer e-services for patients to assist them in obtaining required health information, communicate easily and access all services offered. The quality of e-services provided by the IHP is a critical concern since it serves as a gateway to patients to interact with a respective healthcare provider. IHPs are well developed in US and Europe, but developing countries such as Malaysia are still lagging behind this trend. IHPs are very important for private hospitals whose aim include servicing patients from other countries. Previous studies have investigated how to attract patients, to increase their trust and to make them loyal to IHPs within developing countries, however they were studied in a segregate manner. The relationship among them have yet been explored in the context of healthcare and as a transaction model for patients' loyalty on IHP is not studied yet. The aim of this study is to identify the e-service quality (e-SQ) factors that may influence attraction, trust and loyalty on IHP and thus propose an e-SQ transactional model of attraction, trust and loyalty for IHP. A survey method was employed to examine the influence of the identified e-SQ factors on three components of attraction, trust and loyalty in the proposed model. Questionnaires were distributed targeting patients at three private hospitals who had experience in using e-services in which two hundred and three patients responded to the survey. Collected data were analysed using the Partial Least Squares Structural Equation Modelling (PLS-SEM) technique. The results showed that e-SQ factors of usability, information quality, virtual training, IHP services, and cost savings positively influenced patients' attraction. Trust of patients was positively influenced by security, privacy, reliability, and policy of IHPs. Finally, the e-SQ factors of compensation, responsiveness and hospitality affected patient loyalty in a positive manner. The Importance-Performance Matrix Analysis indicated that the top priority to be addressed to attract patients are IHP services and cost saving. Next, attraction, reliability and privacy are the most important factors to gain patients' trust, while hospitality and trust are most significant to make patients loyal. The e-SQ transactional model as an outcome of this study is hoped to assist Malaysian IHP providers to better understand patients' demands and allow them to design more patient-centric portals. This study is especially beneficial to private hospitals which receive no governmental financial aids and are in close competition with other private hospitals.

ABSTRAK

Portal Kesihatan Interaktif (IHP) merupakan portal bagi badan kesihatan yang menawarkan e-perkhidmatan untuk pesakit bagi membantu mereka mendapatkan maklumat kesihatan yang diperlukan, berkomunikasi dengan mudah, dan mengakses kesemua perkhidmatan yang ditawarkan. Kualiti e-perkhidmatan yang disediakan oleh IHP merupakan satu perkara yang kritikal memandangkan ia adalah penghubung antara pesakit dan badan kesihatan yang telah diaturkan. IHP dibangunkan dengan amat baik di Amerika Syarikat dan Eropah, tetapi masih ketinggalan di negara-negara membangun seperti Malaysia. IHP sangat penting untuk hospital swasta di mana sasaran mereka termasuk memberi perkhidmatan kepada pesakit di luar negara. Kajian terdahulu telah menyiasat kaedah untuk menarik pesakit, meningkatkan kepercayaan mereka dan memastikan mereka setia dengan IHP di dalam konteks negara yang membangun, walau bagaimanapun kajian telah dijalankan secara berasingan. Perhubungan antara mereka di dalam konteks kesihatan masih belum diterokai dan model transaksi untuk kesetiaan pesakit juga masih belum dikaji. Matlamat kajian ini adalah mengenal pasti faktor kualiti e-perkhidmatan (e-SQ) yang mungkin mempengaruhi tarikan, kepercayaan dan kesetiaan terhadap IHP dan kemudian mencadangkan model transaksi tarikan, kepercayaan dan kesetiaan pelanggan untuk IHP. Kaedah kaji selidik telah dijalankan untuk mengkaji pengaruh faktor e-SQ yang telah dikenal pasti komponennya iaitu tarikan, kepercayaan dan kesetiaan di dalam model yang dicadangkan. Soalan kaji selidik telah diedarkan dengan menyasarkan kepada pesakit di tiga hospital swasta yang berpengalaman menggunakan e-perkhidmatan. Dua ratus tiga orang pesakit telah menjawab soalan kaji selidik dalam kajian ini. Data yang dikumpulkan telah dianalisa dengan menggunakan teknik Model Persamaan Struktur Kuasa Dua Separa (PLS-SEM). Keputusan menunjukkan faktor e-SQ iaitu penggunaan, kualiti maklumat, latihan seara maya, khidmat IHP, dan kos penyimpanan mempengaruhi tarikan pesakit secara positif. Kepercayaan pesakit pula dipengaruhi oleh keselamatan, privasi, serta kebolehpercayaan dan polisi IHP. Akhir sekali, faktor e-SQ iaitu pampasan, sambutan dan hospitaliti juga mempengaruhi kesetiaan pesakit secara positif. Analisis Matrik Kepentingan-Prestasi menunjukkan keutamaan yang perlu diketengahkan untuk menarik pesakit adalah khidmat IHP dan penjimatan kos. Seterusnya tarikan, kebolehpercayaan dan privasi adalah faktor terpenting untuk memperolehi kepercayaan pesakit, manakala kemesraan dan kebolehpercayaan pula adalah yang terpenting bagi menjadikan pesakit setia. Model transaksi e-SQ yang merupakan sumbangan kepada kajian ini diharap dapat membantu penyedia IHP Malaysia untuk lebih memahami kehendak pesakit dan membantu mereka membangunkan lebih banyak portal yang berpusat kepada pesakit. Kajian ini juga bermanfaat kepada hospital swasta yang tidak mendapat peruntukan kewangan kerajaan dan bersaing rapat dengan hospital swasta yang lain.

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LIST OF ABBREVIATIONS

| | | |
|----------------|---|--|
| AMOS | - | Analysis of Moment Structure |
| AVE | - | Average Variance Extracted |
| CB | - | Covariance Based |
| CIO | - | Chief Information Officer |
| CR | - | Composite Reliability |
| EC | - | Electronic Commerce |
| ECT | - | Expectation Confirmation Theory |
| E-SQ | - | Electronic Service Quality |
| HO | - | Healthcare Organisation |
| ICT | - | Information and Communication Technologies |
| IHP | - | Interactive Healthcare Portal |
| IPMA | - | Importance-Performance Matrix Analysis |
| IS | - | Information Systems |
| KPJ | - | Kumpulan Perubatan Johor |
| IT | - | Information Technology |
| MHTC | - | Malaysian Healthcare Travel Council |
| OHO | - | Online Healthcare Organisation |
| OL | - | Outer Loading |
| OTS | - | Online Transaction Stage |
| PEMANDU | - | Performance Management and Delivery Unit |
| PLS | - | Partial Least Squares |
| R ² | - | Coefficient for Determination |
| SEM | - | Structural Equation Modeling |
| TAM | - | Technology Acceptance Model |
| TRA | - | Theory of Research Action |
| MPL | - | Model of Patients' Loyalty |
| VIF | - | Variance Inflation Factor |

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CHAPTER 1

INTRODUCTION

1.1 Overview

The last decade of the twentieth century witnessed profound technological changes including the advent of e-commerce (EC), or the exchange of products and payments via the Internet (Qin *et al.*, 2016; Yang and Lin, 2015; Lee, 2009). Today, the buying and selling of products/services all over the Web is a part of everyday life for millions of people. The monetary value of products/services exchanged using EC reached US \$7 trillion by 2004 (Qin *et al.*, 2016; Yang and Lin, 2015; Lee, 2009). According to Rahayu and Day (2016) and Turban (2009), EC is the “process of buying, selling, transferring, or exchanging products, services, and/or information via computer networks.” Erdem (2011) defines EC as, “the use of networks to conduct business-to-consumer or business-to-business transactions involving the exchange of information, currency, and both digital and non-digital goods and services.” Online shopping, retailers, and Online Health Organisations (OHOs) are a few examples of EC (Gummerus, 2011; Hadwich *et al.*, 2010).

Online Health Organisations (OHOs) provide virtual healthcare and medical services across distances (Poropatich *et al.*, 2013). OHOs extend healthcare services to a more geographically dispersed population than is possible with traditional care (Arief *et al.*, 2013). OHOs can be defined as the use of existing and emerging e-technologies to provide and support healthcare delivery that transcends physical, temporal, social, political, cultural, and geographical boundaries (Iluyemi, 2012; Tan, 2005). According to Gavrilov *et al.* (2016) and Manganello *et al.* (2015), OHOs are defined as health organisations that use Information and Communication Technology

(ICT), particularly the Internet, to offer healthcare services. Riteaid.com and Walgreens.com are two examples of OHOs that provide online services to patients.

Interactive health portals (IHPs) are portals that help OHOs offer online services to their patients. Online services refer to Internet-based services that connect patients in the healthcare marketplace (Zhang *et al.*, 2015; Meyers *et al.*, 2002). Chang *et al.* (2009) stated that IHP involves the “delivery of information and health services via the internet or related technologies”. IHPs provide vast opportunities for both health organisations and patients. Using IHPs, health organisations are able to provide their conventional services continuously via the Internet (Jaganath *et al.*, 2012). IHPs enable health care organisations to transfer some of their services to the Internet thus improving the quality of these services and reducing overall costs (Büyükozkan and Çifçi, 2012; Bilsel *et al.*, 2006). Private health organisations receive no governmental financial aid and are in a close competition with each other. Enhanced online services can help these organisations provide effective and more appropriate services for their patients, which will allow them to remain sustainable in a competitive marketplace (Chang and Wang, 2011a; Butler *et al.*, 2010). Since IHPs allow patients to consult with their physicians online, patients can easily use online health services without any additional costs to themselves (Huang *et al.*, 2012). In addition, it helps patients to obtain required health information and enables easy communication with health experts, and access to all services being offered. Furthermore, IHP offers many other advantages such as empowerment and cost efficiency (Chang and Wang, 2011b). For example, if patients cannot be physically present at a physicians’ office, IHPs can offer an online consultation. Therefore, the quality of online health services typifies important attitudinal change for patients and accordingly, an organisation’s commitment to network global thinking to improve healthcare locally and globally by making use of current ICT (Zhang *et al.*, 2015; Mukherjee and McGinnis, 2007).

Based on the previous studies conducted on the development of e-services in healthcare sector (e.g., Büyükozkan and Çifçi, 2012; Cristobal *et al.*, 2007), providing services online to patients has changed the nature of healthcare from traditional approach to the modern one. Hence, with an increasing rate of utilizing online services by organizations and businesses, assessment of website quality, or in other words,

Electronic Service Quality (e-SQ), has been a dominant topic among both practitioners and academics (Collier and Bienstock, 2015; Büyüközkan and Çifçi, 2012; Zeithaml *et al.*, 2002).

According to Zeithaml *et al.*(2001), e-SQ can be defined as the extent to which a website facilitates efficient and effective shopping, purchasing, and delivery of product/services. Zeithaml *et al.*(2001) believe that e-SQ is, “the consumer’s evaluation of process and outcome quality of the interaction with a service provider’s electronic channels.” E-SQ provides an instrument for organisations to distinguish the quality of their services and offers competitive advantages (Herington and Weaven, 2009). In addition, e-SQ is a key factor for the success of any online portal (De Oliveira, 2007). In fact, efficient e-SQ attracts online users who trust the web portal and are more loyal to the online portals (Cotirlea, 2011). This is due to the fact that e-SQ has a strong impact on users’ pleasure (Cotirlea, 2011; Herington and Weaven, 2009). For example, Li and Suomi (2007) believe that factors of e-SQ such as efficiency, usability, and aesthetics create user attraction. Ladhari (2010) believe that factors of e-SQ such as reliability, fulfilment, and security lead to user trust. Hadwich *et al.* (2010) believe that factors of e-SQ such as empathy and ability to respond enhanced user loyalty.

1.2 Background of the Problem

The role of the Internet has undergone a transition from being a simple data repository to providing access to a variety of sophisticated services, such as e-mail, online shopping, social networking, and entertainment. Various EC services such as online banking, shopping, and healthcare provide a significant portion of the services offered on the Internet (Totok and Karamcheti, 2010). In IHPs, compared to traditional health organisations (HO), patients are able to make appointments with physicians through online portals and use online services such as online consultations and prescription services. IHPs in developed countries such as the United States (US) and the United Kingdom (UK) have been developed for decades. As an example, the American Medical Association provided citizens an electronic service named as

“Online Consultation”, in which it allows patients to e-consult with their physicians regarding their symptoms, medications, appointments and refilling their prescription orders (Tan, 2005). This is a clear example of a US IHP (Tegegne *et al.*, 2010; Tan, 2008). However, in developing countries, such as Malaysia, IHPs are in the very early stage (Fanta *et al.*, 2015; Organisation, 2012; PEMANDU, 2009; Ouma and Herselman, 2008). For instance, in Malaysia, very few IHPs use the Internet to conduct basic two-way interactions between IHPs and patients (KPJ Healthcare Berhad, 2016). In other words, patients can only engage in simple interaction such as sending email, requesting an appointment and checking their appointment with their physicians. Kumpulan Perubatan Johor (KPJ) Healthcare Berhad is one example of a Malaysian IHP that allows these simple interactions in their portals.

According to Järvinen and Lehtinen (2015) and Fox (2008), IHPs are more convenient and provide better access to healthcare information compared to traditional healthcare organisations. They provide easy access to a variety of information and save time. A study conducted by Wood (2010) found that patients prefer the privacy of the Internet compared to answering personal questions asked by physicians face-to-face. The Performance Management & Delivery Unit of Malaysia (PEMANDU), as an economic transformation programme and the government transformation programme council, stated that Malaysian healthcare organisations must gain a strong position in new technologies and move towards implementing IHPs by 2020. Therefore, there is a strong need for Malaysian healthcare organisations to move towards using IHPs and gain better opportunities from their usage.

Wolf (2012) believed that both patients and IHPs must increase their awareness of new technologies and define their requirements as this will help them to realize the benefits of IHPs. Currently, IHPs have failed to meet their patients’ needs to interact with hospital portals (KPJ Healthcare Berhad, 2016; Nuq and Aubert, 2013). Thus, IHPs must meet the demand to build patient-centric web portals where user demands are a key factor when designing the web portal (e.g., Huang, 2015; Nguyen *et al.*, 2015; Huang and Chang, 2014; Wilson *et al.*, 2014). For instance, according to Huang *et al.* (2012), interactivity is as individual and organizations directly communicate with each other regardless of distance or time. This feature is one of the core healthcare services

that motivate patients towards utilizing online healthcare service. However, current Malaysian private healthcare portals are not equipped with these interactive services (KPJ Healthcare Berhad, 2016; Fanta *et al.*, 2015).

In light of this, to increase the number of customers and to keep them as the permanent ones who utilize online services, organisations should make effort to attract customers, increase their trust and make them loyal (Lu, 2015; Antikainen, 2007; Li and Suomi, 2007). According to Li and Suomi (2007), attraction, trust, and loyalty all play significant roles in the success of any online portal. Additionally, these prominent factors can be affected positively by improving e-SQ which would further help organizations gain an advantage over their competitors (Chuang *et al.*, 2016; Agrawal *et al.*, 2015). In fact, better e-SQ is a crucial element for the success of any business organization, particularly the ones who provide electronic services (Agrawal *et al.*, 2015). Health industry is not an exception regarding the capabilities that are provided by e-SQ. Some studies have been conducted in IHP research paradigm emphasizing the impact of quality of e-services on patients' attraction (e.g., Huang *et al.*, 2012; Catallo, 2008; Song and Zinkhan, 2008), trust and loyalty (e.g. Martínez-Caro *et al.*, 2013; Martínez-Caro *et al.*, 2012; Hadwich *et al.*, 2010; Harrison *et al.*, 2007; Gummerus *et al.*, 2004). Huang *et al.* (2012) and Buckley (2009) reported that there is a positive correlation between the quality of online communication service and the extent use of IHPs by patients. Moreover, Harrison *et al.* (2007) and Gummerus *et al.* (2004) believe that IHPs' security and privacy (considered as e-SQ factors) positively influence patients' trust.

However, from the literature review conducted in Chapter 2, it can be concluded that in the context of IHP research paradigm, there is a scarcity of research on investigating what and how e-SQ factors influence patients' attraction, trust and loyalty comprehensively. Hence, it can be concluded that attraction, trust and loyalty are the most important factors to move IHPs towards being patient-centric while e-SQ can significantly affect these factors positively.

Attraction is a fundamental precondition for customer interaction; it can motivate potential customers and improve their opinion of a service (Huang *et al.*,

2012). Private hospitals are a big business in Malaysia (Oxford Business Group, 2012) but they are still behind in offering e-services. According to Huang *et al.* (2012), the role of e-services is to attract more patients to healthcare organisations. For example, KPJ as the leading Malaysian private healthcare provider is unable to provide any medical or professional services through its website (KPJ Healthcare Berhad, 2016). Its website is static while providing information to its visitors in the form of electronic brochures. Hence, there is a necessity for Malaysian private hospital providers to shift their e-services more towards dynamic than the existing static ones.

PEMANDU (2009) stated that Malaysian private healthcare organisations must attract more patients from other countries by 2020. Without attractive web portals, online portals lag behind in the competitive marketplace and must strive to sustain their business. Consequently, customers will stop using the IHP and will go towards other alternative portals. Thus, IHP providers must recognize the e-SQ factors that can influence user attraction to the e-services provided.

In the 1980s, private healthcare in Malaysia encountered a downturn due to the Asian financial crisis (Chee, 2007). It was in response to this crisis that private hospitals in Malaysia turned to foreign countries to attract patients. However, the number of medical tourists to Malaysia was lower than expected (PEMANDU, 2012). One of the ways that they can attract patients is to develop attractive IHPs. IHPs can be used as an alternative approach for Malaysian healthcare organisation to attract potential patients both locally and globally.

As with any online service, there are some risks for users such as risk of information leakage to unauthorized people, and online e-health services are no exception (Thiranant *et al.*, 2014). According to Yang *et al.* (2015) risk is the most significant factor in creating initial trust during early stage of online service. Without risk it may cause user loss (Yang *et al.*, 2015). Hence, a vital role in a customer's acceptance of risk is trust, be it is trust in a person, an organisation, or trust in the technology used to keep information safe and secure (Duquenoy *et al.*, 2013; Hoffman *et al.*, 1999). Trust arises in situations where factors such as risk, uncertainty, and interdependence exist. This is particularly true for online business where customer and

online services are separated physically; the relationship between them is encapsulated and cyber laws are not well legislated (Sheng and Liu, 2010). Virtual environments, such as IHPs, intensify trust and as a result, patients have conservative interactions via online portals. Trust is crucial if patients are to feel safe and complete an interaction (Ha and Lee, 2011; Luo and Najdawi, 2004). If the online portal is not able to gain patients trust, the patient will not guarantee that they complete their deal, even though they are attracted (Saedi and Iahad, 2012). Moreover, if patients do not interact with IHP, all investments that have been made to attract them are wasted. According to Midha (2012), the source of revenue is trust in the cyberspace. That is why, without trust, dealings between patients and IHP would be challenging. Furthermore, Raman and Annamalai (2011) found that Malaysian people are very conservative especially while working in online workplaces.

Online businesses such as IHPs compete with their rivals to ensure patient loyalty. According to Cyr *et al.* (2007), customer loyalty is defined as, “an enduring psychological attachment by a customer to a particular online vendor or service provider.”. In the current competitive marketplace, the online business that acquires the knowledge to ensure customer loyalty has an advantage over their competitors. The key purpose of online businesses, including IHP, is to create customer loyalty, especially in an increasingly competitive market place where it is necessary for IHPs to build strong relationships with their patients (Carter *et al.*, 2012; Martínez-Caro *et al.*, 2012). The cost of attracting new customers is greater than the cost of keeping loyal customers. Loyal patients are a valuable asset for any IHP as they can recommend an IHP to others. Businesses that lose this asset will fall behind in this competitive market place (Yen and Lu, 2008). Compared to traditional marketing, competitors are able to disseminate their information quickly with the assistance of technology, and as a result, grab other customers very easily (Deng *et al.*, 2010). Therefore, it is crucial for IHPs to identify factors that will enable them to keep current patients and make them more loyal. Currently, there is a lack of studies that focus on the attraction, trust and loyalty to IHPs. Moreover, there is no model that illustrates the elaborate online attraction, trust and loyalty stages for IHPs.

Previous definitions of e-loyalty emphasized behavioural definitions such as repeatedly using a service. However, opponents of this definition believe that it is not accurate to define loyalty as “to be” or “not to be.” Clients returning to the online organisations and using its services does not prove their loyalty and further analysis is needed. Recognizing real loyalty requires phases that gradually lead clients to be loyal to the organisation (Oliver, 1999). The aim of this study is to make patients loyal to an IHP. Therefore, this study is focused on models that look at loyalty as well as examined the aspects of e-SQ related to each IHP attraction, trust and loyalty stages.

1.3 Statement of the Problem

The result of poor quality of electronic services provided by healthcare organizations is the result of the slow adoption rate of e-services for medical purposes among the patients (Biesdorf and Niedermann, 2014). According to Zaidan (2011) and Hadwich (2010), concerns such as lack of understanding of the factors that result in patient attraction, trust, and loyalty are the major obstacles faced by both patients and IHPs. Subsequently, there is a need to explain and design a framework to address these issues. Ladhari (2010) believed building a successful online portal relied on understanding the factors that increase patient satisfaction and attract the online users in order to gain their trust and loyalty. For example, Horng and Tsai (2010) indicated that usability results in user attraction. Focusing on the usability of IHPs will increase patient satisfaction by improving their attraction, trust and loyalty.

Furthermore, as stated by (Elsharnouby and Mahrous, 2015; Parasuraman, 2005), e-SQ encompasses “all phases of a customer’s interactions with a Web site”. e-SQ provides a mechanism for organisations to differentiate the quality of their services when compared with those offered by other organisations, thereby offering a competitive advantage (Gupta and Sahu, 2015; Herington and Weaven, 2009). The most important factor in developing IHP should therefore be understanding of what e-SQ facilities should be offered to the patients in order to streamline the relationship between patients and healthcare providers, to increase patient’s trust, and finally, loyal to the IHP (Saeed and Ullah, 2009). Therefore, online healthcare providers should

develop strategies for discovering facets of e-SQ in order to boost users' demand for the services from the first stage of initially attracting customers, to the last stage of holding onto those patients and earning their loyalty. Most of the time, e-SQ is used for evaluation but there is a case that factors of e-SQ are used for eliciting the requirements (e.g. Hadwich, 2010; Kassim et. al, 2010). In this research, the second approach, which is considering the e-SQ as the elicitation requirement, is considered. The main research question for this study is:

“How can patients be attracted, trust and remain loyal to an IHP?”

1.4 Research Questions

1. What are the factors of e-SQ that influence patients' attraction, trust and loyalty?
2. To what extent do these factors influence patients' attraction, trust and loyalty?
3. What is the predictor model of patients' loyalty towards IHPs?

1.5 Research Objectives

1. To identify the e-SQ factors that influence patients' attraction, trust and loyalty to an IHP.
2. To investigate the influence of these factors on patients' attraction, trust and loyalty.
3. To develop the predictor model of patients' loyalty towards IHPs.

1.6 Significance of the Study

Currently, hospital web sites are considered a suitable media for exchanging information between patients and hospital staff. Consequently, healthcare centres are transferring some of their services to the Internet to improve the quality of patient care

and control expenses. Hospital web sites are vital to convey information regarding healthcare services to patients who live in metropolitan areas where their healthcare needs might not be met. Therefore, this study is significant for hospitals run by the private sector that receives no financial aid from the government and that compete with other hospitals because it can provide them with more effective and better services for their patients. In fact, while utilizing IHP has many advantages for patients, the competitive benefit that putting the system into place can have for healthcare organisations should not be overlooked.

Attraction, trust, and loyalty play a significant role in every online portal including the online portals for IHPs. Hence, the quality of online portals has a significant role in attracting customers to an IHPs, making them feel safe, and creating a long-time relationship with IHPs. In Malaysia, IHPs are in their early stage and therefore, focusing on the quality of e-service will help IHPs attract more patients, provide high levels of trust, and make patients more loyal to Malaysian IHPs. This study attempted to assist Malaysian IHP providers to understand the patient demands and design portals that are more suitable. Additionally, this study will help Malaysian IHPs compete in the marketplace.

The importance of this study is its contribution to the current body of knowledge about better ways or strategies of implementing technologies in healthcare industry. Theoretically, this study contributes to the area of user loyalty of e-SQ for health. In fact, an online Malaysian private healthcare portal was evaluated and the several aspects of e-SQ were categorized based on attraction, trust, and loyalty. Indeed, this study was a comprehensive study to test and verify the loyalty by specifying concepts of attraction, trust and loyalty all together in an online healthcare context. Additionally, this study investigated particular factors of e-SQ based on each stage (i.e. attraction, trust and loyalty) in terms of an IHP.

The model found in this study can be used as a guide for online private healthcare providers to attract new patients and engage in a long-term relationship. In light of this, providers can develop online health portals and focus on e-SQ factors to attract patients. Certain factors of e-SQ can also be evaluated to establish an

environment of trust. Finally, to create a permanent relationship with patients, online private healthcare providers can use e-SQ aspects to meet patient requirements and create a successful and sustainable business.

1.7 Scope of the Study

This study focused on private hospitals in Johor Bahru (three specialist hospitals in Johor Bahru) from the perspective of patients those who had experienced in using online services (e.g. health services). The data was collection from patients at the hospitals. This was followed using a quantitative data approach in the form of a paper base questionnaire. Structural Equation Modelling (SEM) using Partial Least Squares (PLS) Version 2.0.M3 was used to analyse the quantitative data.

1.8 Organisation of the Thesis

The thesis is organised into six interrelated chapters. Chapter 1, 2, and 3 introduce the issue discussed in the study and explain related prior studies and the plan to steer and navigate the study. Chapter 4 and 5 provide an overall analysis of the study and present a discussion. Chapter 6 describes conclusion of the study.

Chapter 1 provides a brief introduction of the study area. The chapter proceeds with the research problem. Then it highlighted the study questions and the objective of the study. The advantages of the study based on its contributions to practice, theory and methodology were described. Moreover, the scope of the study was clarified. Finally, the chapter presented an overview of the thesis organisation.

Chapter 2 reviews previous studies on online health services, the current situation of online services offered by Malaysian private hospitals, prior studies on successful model of attraction, trust and loyalty in both marketing and electronic marketing are reviewed. Moreover, the literature regarding the factors of e-SQ in terms of attraction, trust, and loyalty are investigated. Furthermore, the most dominant e-SQ

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