THE READABILITY OF MALAYSIAN MEDICAL TOURISM HOSPITAL WEBSITES

BY

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ABSTRACT

Effective health communication is important for making healthcare decisions. The Internet facilitates patients to learn about their treatments and diseases. More than 70 000 websites disseminate health information and 50 million Internet users seek health information online. The interaction between online health information seekers and healthcare providers has helped the growth of medical tourism industry. For medical tourists, one of their sources of information is hospital websites. Since patients are from different backgrounds, hospital websites should be written for the general public. This study was conducted to analyze the readability levels of Malaysian medical tourism hospital websites. Out of 44 hospital websites, 32 fulfilled the criteria for this study. SMOG Grading and Fry Readability Graph were used in this research. Using Fry and SMOG indices, it was found that these websites were written at a college level (Grade 15 and 16) and graduate training level (Grade 17 and 18). This suggests that these hospital websites were difficult and very confusing for the general public to comprehend.

الملخص

التواصل الصحي الفعال مهم لاتخاذ قرارات الرعاية الصحية. الإنترنت يسهل على المرضى عملية التعرف على المزيد من العلاج والأمراض. أكثر من 70000 موقع إلكتروني ينشر معلومات صحية، كما يوجد 50 مليون مستخدم يسعى للحصول على المعلومات الصحية من شبكة الإنترنت. وقد ساعد التفاعل بين الباحثين عن المعلومات الصحية على الإنترنت، وبين مقدمي الرعاية الصحية على نمو صناعة السياحة الطبية. مواقع المستشفيات الإلكترونية تعد واحدة من مصادر المعلومات للسياح الطبيين. يجب أن تكتب المعلومات في مواقع المستشفيات الطبية بأسلوب يناسب الناس كافة؛ لأن المرضى ينتمون إلى خلفيات ثقافية مختلفة. وقد أجريت هذه الدراسة لتحليل مستوى مقروئية المواقع الإلكترونية للمستشفيات الماليزية للسياحة الطبية. من بين 44 من المواقع الإلكترونية للمستشفيات، 32 منها استوفت المعايير لهذه الدراسة. استخدمت الدراسة نظام درجات SMOG، ومؤشر صيغة Fry لقراءة النصوص. وبواسطة نظام درجات SMOG، وموشر صيغة Fry، تبين أن تلك المواقع كتبت لتوافق بالمستوى الجامعي (المستوى 15، و16)، ومستوى الخريجين المتدربين (المستوى 17، و18). وهذا يعني أن مستوى فهم المقروئية في المواقع الإلكترونية للمستشفيات يعد صعبا وغير واضح على عموم الناس.

APPROVAL PAGE

I certify that I have supervised and read this study and that in my opinion, it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a thesis for the degree of Master of Arts (Teaching English Language for Specific Purposes)

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DECLARATION

I hereby declare that this dissertation is the result of my own investigations, except where otherwise stated. I also declare that it has not been previously or concurrently submitted as a whole for any other degrees at IIUM or other institutions.

Ahmad Rauyani Bin Ab Hamid

Signature ....   Date ....

INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA

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READABILITY OF MALAYSIAN MEDICAL TOURISM HOSPITAL WEBSITES

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Firstly, it is my utmost pleasure to dedicate this work to my dearest parents, my understanding parents in law, my supportive adopted mother, my one and only wife, my cute son and my family, who granted me the gift of their unwavering belief in my ability to accomplish this goal: thank you for your support and patience.

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CHAPTER ONE

INTRODUCTION

1.1 INTRODUCTION

The easy access to technology makes it easy for users to seek information on the Internet. It allows them to get information at their fingertips. According to the Internet Live Stats (2014), the number of Internauts has skyrocketed tenfold from 1999 to 2013. In 2014, the International Telecommunication Union (ITU) also reported that the number of Internet users around the world had increased from 2.9 billions to 3.2 billions in the following year. This is an indicator that the Internet has indeed become a major source of information in today's world (Khare, Thapa, & Sahoo, 2007). This trend has also shaped the way users learn about health information. According to Cline and Haynes (2001), more than 70 000 websites disseminated health information and 50 million Internet users sought health information online.

This is because health Internet "offers a wide range of benefits, to individual consumers and health professionals, as well as to national health systems and global public health" (World Health Organization, 2015). Realizing the potential of the Internet, some patients and caregivers use it as a medium to share their experiences dealing with chronic diseases in order to help other people (Fox, 2014). To ease the process, the Internet is also accessible through smart phones thanks to the modern technology. According to the Pew Research Centre (2014), about three-in-ten adults use their smart phones to search for health information online. However, some may go overboard in order to learn about their medical conditions online which leads to an obsession known as cyberchondria (Ardito, 2013; White & Horvitz, 2009).

Among the websites that provide health information on the Internet are hospitals. These hospitals use their websites to attract potential patients and their families (Scheinholtz, 2013). As for patients, they use hospital websites to get information about the treatment that they plan to obtain. With the existence of the Internet, it makes it possible to learn about services of other hospitals outside their countries. Some choose to seek medical attention abroad due to the high cost imposed by their local hospitals (Ozan, Johnson, Shah, & Kursun, 2014). Therefore, getting treatment abroad can be the only alternative for them (Thompson, 2011). This online interaction between health seekers and health providers has helped the growth of medical tourism industry (Ruka, 2015). Medical tourism is a term initially coined by travel agencies and the mass media to describe the rapidly-growing practice of travelling across international borders to obtain health care (Thomas, 2011; Keckley & Underwood, 2008).

1.2 BACKGROUND OF THE STUDY

One of the renowned countries in medical tourism is Malaysia. Malaysia's medical tourism was awarded 'Medical Travel Destination of the Year' at the International Medical Travel Journal (IMTJ) Medical Travel Awards for two consecutive years, 2015 and 2016 (IMTJ, 2015; IMTJ, 2016). To invigorate the industry, its Ministry of Health has established a council known as Malaysia Healthcare Tourism Council (MHTC). One of the objectives of this council is to facilitate public-private sector collaboration so that issues pertaining to this industry can be effectively addressed to ensure that visitors have an amazing experience with Malaysian healthcare services (The Malaysian Healthcare Tourism Council, 2017). This council has launched its

official website as a gateway of information for medical tourists who plan to obtain their medical attention in Malaysia.

1.3 STATEMENT OF THE PROBLEM

A certain proportion of the population has limited literacy skills. When users read health information either printed or online, they need certain health literacy skills. According to the National Partnership for Women and Families (2009), health literacy is the ability to read, understand and act on health information. It is known that users usually those from varying levels of educational background and websites are normally created for the general reader. Despite its accessibility to everybody, it is observed that some websites are more difficult to comprehend than others. Therefore, it is important that health-related information published on the Internet is easily understood to the majority of patients (Luers, Gostian, Roth, & Beutner, 2013) 'regardless of age, background or reading level' (U.S National Library of Museum, 2013). One of the significant factors to ensure comprehensibility of content on websites is readability.

In general, readability is "what makes some texts easier to read than others" (DuBay, 2004, p. 3). Many studies have been conducted on the readability levels of health-related information for specific groups of patients (Nair & Menezes, 2014, Byun, 2013; Polishchuk, Hashem, & Sabharwal, 2012; Gorczynski, Patel, & Ganguli, 2013; Downing, Omar, Sabri, & McCarthy, 2011), but, there is hardly any report on studies that look into the readability levels of hospital websites for the general public. Hence, this paper aimed to measure the readability levels of Malaysian medical tourism hospital websites.

1.4 OBJECTIVES OF THE STUDY

The objective of this study is to analyze the readability levels of Malaysian medical tourism hospital websites. The specific objectives are:

1. to investigate the readability levels of Malaysian medical tourism hospital websites based on their domains.

2. to examine the readability levels of Malaysian medical tourism hospital websites based on accreditation received.

3. to assess the readability levels of Malaysian medical tourism hospital websites across passages.

1.5 OPERATIONAL DEFINITIONS

Health Communication. As defined by the U.S. Centers for Disease Control and Prevention's, health communication concerns about the "study and use of communication strategies to inform and influence individual decisions that enhance health" (2011).

Health Literacy. Health literacy is linked to literacy and entails people's knowledge, motivation and competences to access, understand, appraise and apply health information in order to make judgments and take decisions in every-day life concerning health care, disease prevention and health promotion to maintain or improve quality of life during the life course (WHO, 2013).

Medical Tourism. It refers to the rapidly-growing practice of travelling across international borders to obtain health care (Thomas, 2011; Keckley & Underwood, 2008).

Medical Tourism Hospital Websites. They refer to hospitals that have websites to provide information about their services and served to promote medical tourism.

Readability. Dale and Chall (1949) defined readability as "legibility, interest, or ease of reading, or some combination of these" (p.1). It can be gauged by employing readability formulas.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

This chapter will review the literature related to the readability levels of hospital websites and health information seekers who use the Internet to get information on health-related issues and services provided by medical tourism hospitals.

2.2 HEALTH COMMUNICATION: DEFINITION

Communication is an integral part of human beings. It is a process of generating meanings (information, ideas, feelings, and perceptions) by people through the use of symbols within and across various contexts, cultures, channels, and media (Hybel, 2008). Rimal and Lapinski (2009) added that communication not only about exchanging information through the communication process (source, receiver and message), but it also signifies how people interact and act according to their habitual behaviors. Thus, they defined communication as "the symbolic exchange of shared meaning, and all communicative acts have both a transmission and a ritualistic component" (p. 247).

Simply put, when a message is sent, a receiver will construe the message according to his prior experience, efficacy beliefs and knowledge. Thus, it is important to ensure the intended message is imparted effectively so that the receiver can successfully respond to the message. This is because good communication allows people who share a mutual interest yet with different perspectives "to understand systems or issues and make decisions for effective change or enhancement" (Conway, 1999, p.1). By having good or effective communication, they feel at ease to get their

messages across, express their concerns or ask for help (Australian Early Childhood Mental Health Initiative, n.d.). In addition, the U.K. National Archives (2013) explains that

> effective communication happens when a complete message is sent and fully received and understood by an audience. Good communication is about getting the right message to the right person in the right medium at the right time. Depending on the nature of the message and audience, the audience may then have the opportunity to engage in a productive discussion of the message (p. 10).

Effective communication is also a great concern in the health industry. According to the U.S. National Partnership for Women and Families (2009b) and a report by the World Health Organization (2013), the health of patients with limited health literacy skills may decline because they are not able to read, understand and act on health information. Thus, health communication was introduced to help patients receive the right information to make the right decision. This is in harmony with the U.S. Centers for Disease Control and Prevention's definition of health communication - 'the study and use of communication strategies to inform and influence individual decisions that enhance health' (2011).

Shciavo (2007) summarized health communication definitions into six key words: to inform and influence (individual and community) decisions, to motivate individuals, to change behaviors, to increase knowledge and understanding of health-related issues, to empower people and to exchange or interchange information. He also highlighted the word influence because health outcomes can be improved by sharing health-related information. According to Rimal and Lapinski (2009), health communication is gaining more attention due to its ability to amalgamate theory and practice in understanding communication processes and changing human behavior. This approach is pertinent because "many of the threats to global public health

(through diseases and environmental calamities) are rooted in human behavior" (Rimal & Lapinski, 2009, p. 247).

A plethora of initiatives have been promoted to improve public health. The U.S. federal government included health communication in its official public health agenda, the Healthy People 2010. There are 11 attributes of effective health communication stated in Healthy People 2010 (U.S. Department of Health and Human Services, 2000, p. 4):

1. **Accuracy:** The content is valid and without errors of fact, interpretation, or judgment.

2. **Availability:** Content (whether a targeted message or other information) that is delivered or placed where the audience can access it. Placement varies according to audience, message complexity, and purpose - from interpersonal and social networks to billboards, mass transit signs, prime-time TV, and radio and from public kiosks (print or electronic) to the Internet.

3. **Balance:** Where appropriate, content that fairly and accurately presents the benefits and risks of potential actions or recognizes different and valid perspectives on an issue.

4. **Consistency:** Content that remains internally consistent over time and also is consistent with information from other sources.

5. **Cultural competence:** The design, implementation, and evaluation process that accounts for special issues of select population groups (ethnic and racial, linguistic) as well as differing educational levels and disabilities.

6. **Evidence base:** Relevant scientific evidence that has undergone comprehensive review and rigorous analysis to formulate practice guidelines, performance measures, review criteria, and technology assessments for telehealth applications.

7. **Reach:** Information that gets to or is available to the largest possible number of people in the target population.

8. **Reliability:** Content that is credible in terms of its source and is kept up to date.

9. **Repetition:** Delivery of and access to content continued or repeated over time, both to reinforce the impact with a given audience and to reach new generations.

10. **Timeliness:** Content that is provided or available when the audience is most receptive to, or in need of, the specific information.

11. **Understandability:** Reading or language level and format (including multimedia) appropriate for a specific audience.

On the other hand, the federal government of Malaysia introduced four strategies in the 10th Malaysian Plan (10MP) to ensure provision of and increase accessibility to quality health care and public recreational and sports facilities to support active healthy lifestyle:

1. Establish a comprehensive healthcare system and recreational infrastructure.

2. Encourage health awareness & healthy lifestyle activities.

3. Empower the community to plan or implement individual wellness programme (responsible for own health).

4. Transform the health sector to increase the efficiency and effectiveness of the delivery system to ensure universal access (Ministry of Health Malaysia, 2010, p. 36).

These initiatives are intended to improve public health so that they can live a healthier lifestyle and be responsible for their own health. In the previous Country Health Plan, the 9th Malaysia Plan, the Ministry of Health Malaysia adapted Communication for Behavioral Impact (COMBI) to curb dengue outbreaks in dengue prone areas through mobilization of people and their resources in planning and implementing activities (Ministry of Health Malaysia, 2010).

One of the channels of health communication interventions is the Internet. The Internet "facilitates access to an increasing array of health information and health-related support services and extends the reach of health communication efforts" (ODPHP, 2011, p. 7). The increasing number of patients who seek health information on the Internet also signals the need for more vigorous health communication efforts.

2.3 ONLINE HEALTH INFORMATION SEEKERS

According to a 2016 report by the International Telecommunication Union (ITU), the number of Internet users around the world has increased from 3.2 billions to 3.5 billions in the following year. This shows that the Internet has the potential to be a major source of reference in today's world (Khare et al., 2007). Due to that, it also shapes the way people learn about their health conditions. Cline and Haynes (2001) revealed that the engagement of customers in seeking health information via the Internet increased in which more than 70 000 websites disseminated health information and 50 million Internet users sought health information online.

Bates, Romina, and Ahmed (2007) asserted that 4.5% of all Internet searches worldwide are dedicated to searching for information on health or health-related issues. Adding to that, Diaz et al., (2002) found that those using the Internet for medical information were more educated and had higher incomes. According to Boer, Versteegen and Wijhe (2007), patients who used the Internet to learn about pain-related medical information were convinced that the information provided was accurate and reliable. The preference for seeking information on the Internet may lead to an obsession known as cyberchondria (Ardito, 2013; White & Horvitz, 2009).

2.4 HOSPITAL WEBSITES

Among the websites that provide health information on the Internet are hospitals. Patients use hospital websites to get information about the treatment that they plan to obtain. A report by Consumer Report (2011) stating that 31 percent of the patients that they interviewed wished that they had more information before choosing a doctor. This is also supported by a 2012 study conducted by Google partnered with Compete, Inc. who found that those who used the Internet to search for products and services were three times more likely to visit hospital sites as a result of their search. They further claimed that "44% of patients who research hospitals on a mobile device scheduled an appointment".

Realizing this potential, many hospitals and health systems spend a large amount of money to provide consumers with 'an easy-to-navigate, personalized, content-rich experience on their websites' (Brubaker, 2016). Since the chance of getting customers through the Internet is higher, many studies have been done to evaluate the quality of hospital websites. Zingmond and colleagues (2001) found that out of 390 hospitals in California, 62% (242) had websites. They revealed that the

non-profit hospitals provided more information in their websites compared to the for-profit hospitals. In the same year, Norum (2001) studied the biggest Norwegian cancer hospitals' websites and found that 5 hospitals out of 7 had a website. Using the scheme based on Norwegian recommendations for websites developed by the Norwegian Central Information Service, he concluded that these websites were not impressive since they only scored 6 to 15 points out of 27.

In addition, he also found that only 13% of surveyed patients used the Internet to search for medical information and thus did not recommend allocating resources to the development of websites. However, he did mention that this would change since more people access the Internet. With the aid of Internet, patients can easily learn about services of other hospitals outside their countries. Some choose to seek medical attention abroad due to the high cost imposed by their local hospitals (Ozan-rafferty, Johnson, Shah, & Kursun, 2014). Therefore, getting treatment abroad can be the only alternative for them (Thompson, 2011). This online interaction between health seekers and health providers has helped the growth of medical tourism industry (Ruka, 2015).

2.5 MEDICAL TOURISM: OVERVIEW

Interaction between health information seekers and healthcare providers has helped the growth of medical tourism industry (Ruka, 2015). Medical tourism is a term initially coined by travel agencies and the mass media to describe the rapidly-growing practice of travelling across international borders to obtain health care (Thomas, 2011; Keckley & Underwood, 2008). In other words, it is the process of "leaving home" (Keckley & Underwood, 2008; Munro, 2012) or from "the home country" to "the destination country" (Cohen, 2011, p. 2) in order to seek medical treatment.

According to Crooks, Kingsbury, Snyder and Johnston (2010) and Helble (2011), the rise of medical tourism resulted from two major factors; push and pull and they influence the patient decision-making. The former refers to what pushes the patient to seek "affordable care" (Helble, 2011, p. 69) abroad usually due to "high cost of out-of-pocket payments for procedures in patients' home countries" (Crooks et al., 2010,p. 5). Meanwhile, the latter refers to the quality of health services provided by destination countries thus pulls "affluent patients" (Helble, 2011, p. 69) to seek medical treatment abroad. These patients are known as the importer of the service, who gain it from the destination country that functions as the exporter of the service (Pasadilla, 2014).

Despite its proliferation, Pasadilla (2014), Ruka (2015) and Helble (2011) asserted that there is no standardized definition for medical tourism which results in data implication. Based on their analyses, there are two types of definition of medical tourism; narrow and broad. The former results in a fewer number of medical tourists in terms of data implications because it excludes dental treatments and cosmetic surgeries and the latter may result in a higher number of medical tourists since it includes expatriates, and those who travel "for spa and wellness and cosmetic procedures" (Pasadilla, 2014, p. 2). Henceforth, the actual magnitude of medical tourism is unpredictable due to the asymmetry of its common definitions. To fully understand this concept, Ruka (2015) and Munro (2012) made a distinction between medical tourism and health tourism and claimed both terms are often confused and used interchangeably. Both agreed that health tourism is a more comprehensive term and medical tourism is a subset of it.

On the other hand, Munro (2012) claimed that the phrase, medical tourism, is meaningful to consumers but "not very useful and practical for health care

practitioners and service providers" (p. 11). Instead, the term 'medical travel' is more preferable among health care providers and medical professionals because the term 'travel' connotes more purposeful meetings compared to tourism (Munro, 2012). Nevertheless, he agreed to use the terms 'medical tourism' and 'medical tourists' due to their wide usage on the Internet. In order to find an equipoise between these two terms, Pollard (as cited in Ruka, 2015) introduced the term 'health and medical travel' and concluded that medical tourism and wellness tourism are two of the five segments (medical tourism, dental tourism, cosmetic surgery tourism, spa tourism and wellness tourism) of this term.

Keckley and Underwood (2008) from the Deloitte Center for Health Solutions, on the other hand, categorize medical tourism into three types; outbound, inbound and intrabound (domestic) where outbound refers to locals who seek treatment outside their own countries and inbound is the opposite. The last type, intrabound, refers to patients who travel within their own countries but outside their geographic area for the sake of obtaining medical care. However, Munro (2012) opposed the last idea because it is a requirement to cross international border to be considered as part of medical tourism activities. Owing to this vague usage of the terms, medical tourism "is indeed an industry with significant gaps of evidence-based, transparent knowledge on the topic" (Ruka, 2015. p. 8).

2.6 MEDICAL TOURISTS AND THE INTERNET

One of the key factors that accelerates the growth of medical tourism is the Internet (Ruka, 2015; Pasadilla, 2014; Lunt et al., 2011). Internet provides a platform for medical tourists to learn about the medical treatment that they plan to obtain abroad (Keckley & Underwood, 2008). Furthermore, Ilian Assenov and Rerkrujipimol (2011)