



INSTITUTO
UNIVERSITÁRIO
DE LISBOA

The impact of COVID-19 on medical tourists – a content analysis

Zeng Tian

Master in, Marketing

Supervisor:

PhD Helena Maria Correia Neves Cordeiro Rodrigues, Invited Assistant
Professor,

ISCTE Business School – University Institute of Lisbon

September, 2022

Acknowledgements

First of all, I would like to thank all the people who have helped me in my studies. I would like to express my deepest gratitude to my tutor, Professor Helena Rodrigues. She is always quick to reply to every email I send, patiently answering all my questions, and giving me suggestions. Under her guidance, I have gained the ability to think independently and have a better understanding of my academic papers.

Also, I would like to sincerely thank my parents and friends for their support to keep me going through this process. In particular, I would like to thank my parents for always respecting and supporting my choices without hesitation.

Resumo

A COVID-19 é considerada a maior pandemia de sempre que tem causado pânico em todo o mundo. Como resultado das medidas de prevenção e controlo da pandemia, a vida das pessoas e o desenvolvimento da indústria mudaram drasticamente. Durante a pandemia, a indústria do turismo médico foi grandemente afetada. Consequentemente, há uma escassez de investigação relacionada com o comportamento dos turistas médicos durante a pandemia. Este estudo tem como objetivo obter a perspetiva dos turistas desde o início do surto pandémico bem como analisar a perspetiva de diferentes faixas etárias. Este estudo inclui 70 turistas médicos que viajaram para tratamento desde março de 2020 até ao presente, e para assegurar a fiabilidade deste estudo foi escolhido unicamente o tratamento dentário. As análises dos turistas médicos foram recolhidas no sítio web Tratamento no estrangeiro e depois analisadas para os participantes e o conteúdo do texto utilizando o Leximancer.

Os resultados da investigação indicaram uma ligeira alteração na percentagem de turistas médicos por faixa etária, com um aumento na percentagem de indivíduos de meia-idade e mais velhos. Entretanto, devido ao período especial da COVID-19, os turistas médicos estão mais preocupados com os detalhes e a qualidade dos serviços. E, em comparação com os turistas mais jovens, as pessoas de meia-idade e mais velhas estão mais preocupadas com o nível da tecnologia médica.

Além disso, no período pós-COVID-19, os indivíduos que trabalham nesta indústria devem compreender as características e tendências dos potenciais consumidores e desenvolver estratégias apropriadas para lidar com uma nova realidade.

Palavras-chave: COVID-19, turismo médico, conteúdo gerado pelo utilizador, tratamentos dentários

Abstract

COVID-19 is considered to be the most influential pandemic, which has caused panic all over the world. As a result of epidemic prevention and control measures, the state of life and the development of the industry have changed dramatically. During the pandemic, the medical tourism industry was greatly affected. As a result, there is a lack of research related to the behavior of medical travelers during the pandemic. This study aims to gain insight into the consumers who still choose medical tourism from the beginning of the pandemic outbreak and to examine the differences by age. In this study, the participants are 70 medical tourists from March 2020 to the present, and to ensure the accuracy of the study, the direction of the study was focused on dental treatment. Medical tourists' reviews are collected on the Treatment abroad website and then analyzed for participants and text content using Leximancer.

The results of the research indicated a slight change in the percentage of medical tourists by age group, with an increase in the percentage of middle-aged and older individuals.

Meanwhile, due to the special period of COVID-19, medical tourists are more concerned about the details and quality of services. And compared to younger medical travelers, middle-aged and older people are more concerned about the level of medical technology.

Moreover, in the post-COVID-19 period, medical tourism industry personnel must understand the characteristics and trends of potential consumers and develop appropriate strategies to deal with the new situation.

Key Words: COVID-19, medical tourism, user generated content, dental treatments

Contents

Acknowledgements	iii
Resumo	v
Abstract	vii
CHAPTER 1. Introduction	1
1.1. Relevance of the research	1
1.2. Research question	2
1.3. Research Objectives	2
1.4. Research Framework	3
CHAPTER 2. Literature Review	5
2.1. Medical tourism	5
2.2. Medical tourists motivations	6
2.3. Medical tourism that seek dental treatment	7
2.4. Medical tourism needs by age	8
2.5. COVID-19 and its uncertain future	8
2.6. The impact of COVID-19 on the medical tourism industry	10
CHAPTER 3. Methodology	12
3.1. Research context	12
3.2. Data collection and analysis	13
CHAPTER 4. Results	15
4.1. Sample categories	15
4.2. Qualitative results	16
4.2.1. Concept map analysis	16
4.2.2. Content analysis	17
CHAPTER 5. Discussion	19
5.1. Differences in dental treatment by age during COVID-19	19
5.2. Medical tourists' characteristics and tendencies of dental treatment in the medical tourism industry during COVID-19	20
CHAPTER 6. Conclusions and limitations	23
6.1. Theoretical Contribution	23
6.2. Practical Contribution	24
6.3. Limitations	25

6.4. Future research.....	25
CHAPTER 7. Reference.....	27

Index of Tables and Figures

Figure 1.1 Flowchart of thesis framework.....	3
Table 4.1 Demographic attribute	15
Figure 4.1 Concept map for dental treatment by age.....	16
Table 4.2 Content analysis.....	17

Glossary of Acronyms

UNWTO	World Tourism Organization
WHO	World Health Organization
CDC	Centers for Disease Control and Prevention
ECDC	European Centre for Disease Prevention and Control
GISAID	Global Initiative of Sharing All Influenza Data
FDA	U.S. Food and Drug Administration
UKHSA	UK Health Security Agency
NHC	National Health Commission of the People's Republic of China
HON	Health On the Net Foundation

Introduction

1.1. Relevance of the research

With the increasing concern for people's physical health, consumers and society are paying more and more attention and requirements to the medical industry. As a result, consumers have begun to seek out new medical modalities, and medical tourism, to obtain treatment by traveling to another country (Horowitz et al., 2007). In 2019, the medical tourism market size reaches \$74-\$92 billion, based on statistics of about 21-26 million consumers worldwide, spending an average of \$3,550 per visit (Patients Beyond Borders, 2020). Aware of this, more and more countries are using policies and measures to attract medical tourists, such as medical technology, services, and prices, to gain access and a place in the world market (Sandberg, 2017).

However, with the emergence of COVID-19, which has caused panic across the world, affecting the lives of almost everyone, most industries have experienced stagnation and even financial deficit during this period. The data shows that international tourist arrivals fell by 87% in January compared to 2020 (UNWTO, 2021). In addition, at the end of 2021, the emergence of a new variant Omicron has brought the number of infections worldwide to a peak. Research as of November 26, 2021, shows that 98% of destinations have travel restrictions for tourists. According to the World Tourism Organization (UNWTO) reports, 46 destinations (21% of all global destinations) currently have their borders completely closed to tourists (UNWTO, 2021). The UNWTO's Global Tourism Crisis Committee has led the industry's recovery by developing an industry-wide response to the COVID-19 pandemic in the tourism industry (UNWTO, 2020).

On the one hand, according to the global COVID-19 database, the number of infections worldwide has risen sharply again due to the emergence of a new variant, Omicron (GISAIID, 2022). Medical journals have also recently suggested that COVID-19 may become a common epidemic coexisting with humans in the future (Murray, 2022). On the other hand, existing research focuses on the development of medical tourism and post-pandemic stagnation. Most of the medical literature and journals are discussing the impact of COVID-19, the current situation, and vaccines. However, from the perspective of the future development of medical tourism, these issues are not enough and should be discussed further in combination. Demographics have been a key factor considered in the study, so this research intends to

explore the differences in medical tourists through the different ages of the participants by dividing them into 3 age groups ([18:34], [35:54], and 55 and above). Therefore, to this day, analyzing consumer opinions and helping the recovery of the medical tourism industry currently is a well-worth topic of discussion.

1.2. Research question

For some medical departments, the impact of COVID-19 has been more severe, such as the oral and dental medical industry. Because of the transmission characteristics of COVID-19, doctors in these industries have a greater possibility of being exposed to the virus during the treatment process (Meng et al., 2020). Therefore, our research is focused on the field of dental treatment. Due to the global changes brought by COVID-19, there is still a lot of work to be done in the medical tourism literature and much more to explore. Based on the enormous changes in the economic and social situation during the pandemic, the research question should be established:

According to the analysis of medical tourist reviews during COVID-19, what are the differences in dental treatment by age?

1.3. Research Objectives

This research selected the period from the beginning of March 2020, since the lockdown began, to the present. Although the medical tourism industry was significantly affected and consumers were severely reduced (Riestyaningrum, Ferdaos & Bayramov, 2020), some consumers continued to choose medical tourism for treatment during this period, and this study will analyze the comments of these consumers for content analysis.

Therefore, the objectives of this study are to examine, in the context of a medical tourism industry impacted by COVID-19:

First, to explore the differences in age from lockdown to present (post COVID-19) in dental treatment (three age groups [18:34], [35:54] and 55 and above).

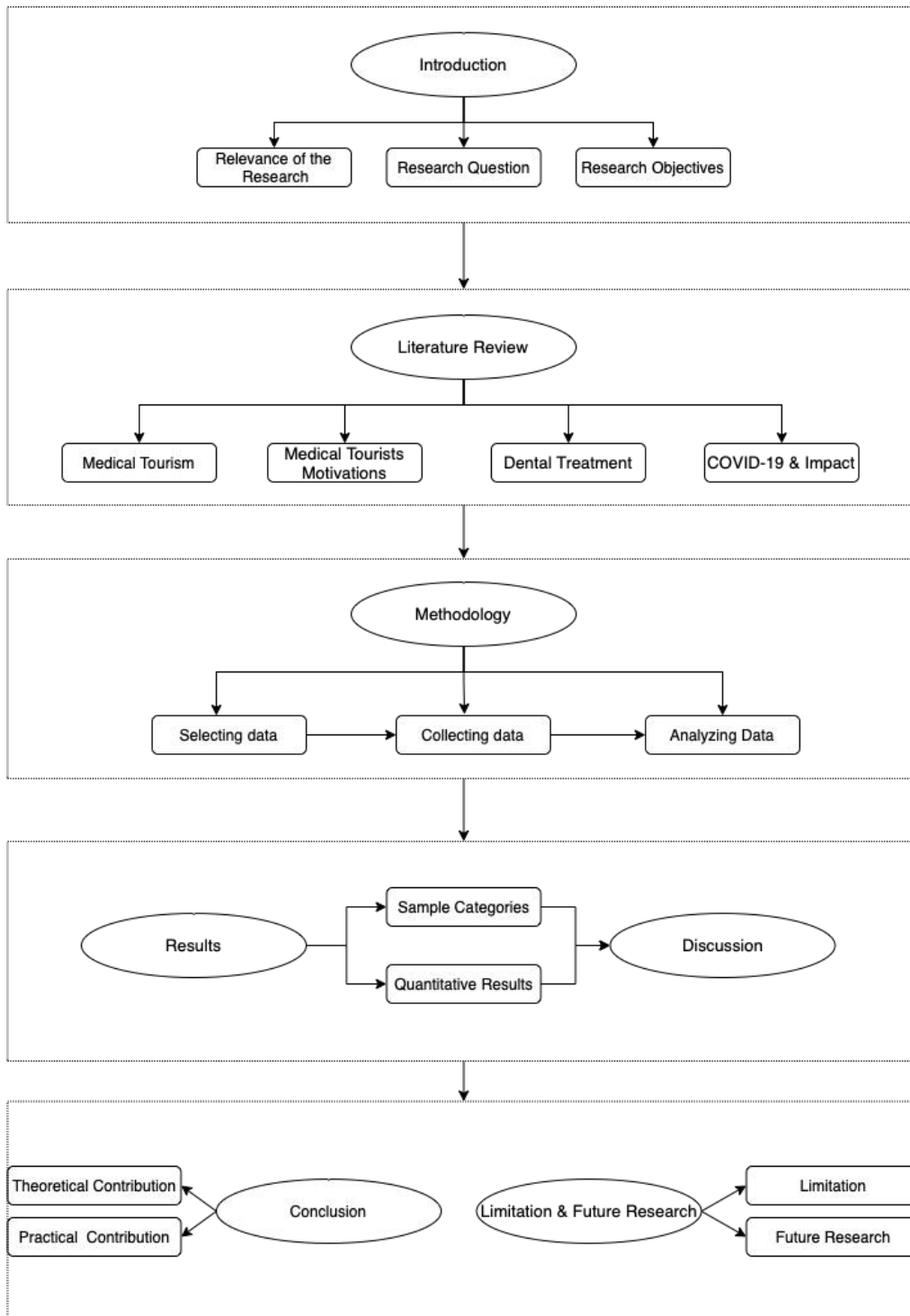
Second, to analyze medical tourists' characteristics and tendencies of dental treatment in the medical tourism industry during COVID-19.

Besides, through this study, it is possible to summarize today's environment based on the evaluation, which will help the countries to develop plans and strategies to recover their medical tourism industry in the future.

1.4. Research Framework

The overall framework of this paper is divided into five sections as shown in the flow chart in Figure 1.1 below. Research approaches such as literature studies, content analysis, and qualitative analysis were used throughout the paper.

Figure 1.1 Flowchart of thesis framework



CHAPTER 2

Literature Review

2.1. Medical tourism

Medical tourism refers to people going abroad for medical treatment, this usually refers to people who cannot be treated at home in major medical centers from underdeveloped to highly developed countries (Horowitz et al., 2007). In recent years, it may also mean that those from developed countries going to developing countries for cheaper or long-term medical treatment. (Centre for Disease Prevention and Control, 2021).

Medical tourism is an emerging global phenomenon in the 21st century. Since it came out, it has aroused the interest of academia and professionals (de la Hoz-Correa et al., 2018). In the past decades, medical tourism for patients overseas for surgery has grown rapidly. High domestic costs and long waiting time costs, high standards of skills and new technologies in destination countries, reduced transportation costs, and Internet marketing have all played a catalytic role, such as cosmetic surgery, dental treatment, etc. This industry is dominated by several Asian countries, but others are trying hard to enter the medical tourism market (Connell, 2006). In addition, there is a growing focus on developing professional standards designed to protect the quality and safety of patient care, as well as the types of business opportunities available in this new industry, to better capture business opportunities in this emerging industry (Sandberg, 2017). In today's situation, healthcare has become a global market, a multi-billion-dollar industry and it is still growing. Regarding the boom in the medical tourism industry today, it is an important part of the growing interest of healthcare providers in most countries of the world. Emerging, developing and developed countries are willing to implement measures to attract medical travelers (Cook, 2008). As a result, countries around the world have reached this level by attracting medical tourists by providing high-quality, low-cost, professional health care services and hospitality benefits (Sandberg, 2017). More and more institutions and regions are willing to attract and accommodate medical travelers to promote economic development. Medical tourism has developed in some countries such as India, Singapore, and Thailand. Many of these countries intend to link medical and tourism to enhance the attractiveness of nearby beaches to tourists. But medical tourism is also developing in other regions. For example, Hungary declared 2003 as the year of health tourism. At the same time, Eastern European countries have become key areas for dental care and plastic surgery. In addition, the main area of medical tourism is still in Asia.

As early as the 1970s, Thailand was well-known for its medical tourism industry because of its sex reassignment surgery, which further developed cosmetic surgery. To develop the medical tourism industry, some areas even set up counters at the airport for publicity and consultation (Connell, 2006).

2.2. Medical tourists motivations

The motivation of tourists plays a very important role in determining the destination, but investigations on factors related to destination choice are limited. Initially, a study has shown that medical conditions and economic factors are the main predictors of treatment destination selection. By gaining insight into patients' medical conditions and financial factors, you can better monitor treatment strategies overseas (Alnakhi et al., 2019).

In another study, it was found that cultural similarity is the least important motivation factor for medical travel by tourists. More than one-third of tourists believe that special requirements for food and religious facilities are not important or maintain a neutral attitude, cultural similarity may be more suitable for inbound foreign tourists with other needs (Jaapar et al., 2017). On the contrary, the cultural similarity is important for some foreigners and immigrants returning to their country of origin for treatment (Lee et al., 2010). Moreover, people from different countries have different intentions and motivations for travel because of different cultural backgrounds. Greeks, for example, hate traditionally organized travel (Kourgiantakis et al., 2020), and despite similar geographic and cultural backgrounds, many Bulgarians prefer to leave travel to others to plan and assign. Besides, surveys show that the main travel motive for the Middle East and US markets is business, but Indonesians seek more nature-based vacations (Wachyuni & Kusumaningrum, 2020).

On the other hand, there was research indicating that in medical conditions, satisfaction significantly affects motivation (Jaapar et al., 2017). Many consumers studies link travel motivation and satisfaction (Lee et al., 2004). According to the data that Jaaper collected, it shows that support services are the third motivational factor affecting tourist satisfaction. For example, in Malaysia, dental tourists can learn more about transportation, accommodation, and travel from the Internet (Jaapar et al., 2017). The survey shows that consumers are more willing to choose destinations supported by a better service system for medical tourism. At the same time, cost savings is another important motivational dimension for medical tourists to affect overall satisfaction. Cost-saving is an important factor in destination selection, especially for middle-aged people. Relatively speaking, the needs of young or old people are lower. In addition, most people choose a car as their preferred transportation for their next trip

(55.5%), and despite the large number of flight cancellations caused by the blockade, most people are still willing to choose the plane as a means of transportation (Elliott, 2020), second only to the car. Additionally, those with lower incomes may continue to rely on organized tours or low-cost airlines (Ivanova et al., 2020).

Moreover, as the demand for medical tourism continues to expand in the future, the demand for overseas services will also continue to expand. And with the apparent success of treatment outcomes, the need is likely to increase further (Connell, 2006). Obviously, the provision of services is another important factor in generating travel intention and motivation, it also helps satisfaction as well, and many people recognize that convenient services can ensure that the entire medical travel experience is satisfying and enjoyable (Vequist & Stackpole, 2012), which includes travel convenience, accommodation, transportation arrangements and low cost (Glinos & Baeten, 2006). The marketers should consider convenience aspects to ensure a positive travel experience for tourists (Vequist & Stackpole, 2012). Therefore, the development of support services and complete tourism services will increase the competitive advantage of countries in the international market for medical tourism (Eman, 2011).

2.3. Medical tourism that seek dental treatment

Dental treatment usually includes diseases of the oral cavity and related structures, and the prevention, diagnosis, and treatment of pathologies (Gambhir, 2015). Although avoidable, oral diseases still cause serious health and economic burdens for many families and countries as well as affect people for their life, causing pain and even death (WHO Oral health, 2022). According to the World Health Organization, oral diseases are a major public health problem because of their high global prevalence and the financial pressure patients usually have to endure due to the high cost of treatment for dental procedures (Petersen, 2003). Based on 2022 WHO (World Health Organization) data indicate that oral diseases affect nearly 3.5 billion people in the world (WHO Oral health, 2022).

The mouth has long been considered separate from the rest of the body, but today more and more studies are showing its important connection to the body (Gambhir, 2015). With an aging population and the impact of chronic diseases, more and more people seek and need dental services (Sherman et al., 2009). At the same time, with the large number of studies showing the severity of oral problems and the insight into the status of related diseases, more attention has been paid to the prevention and treatment of oral diseases than before (Journal of Dental Education, 2008).

2.4. Medical tourism needs by age

Age is a key factor in personal characteristics and this demographic factor is the most frequently used personal characteristic factor because of its influence on purchasing behavior (Han et al., 2021). Homburg and Giering (2001) state that while available information provides the basis for young people's purchase decisions and behaviors, older consumers prefer to base their purchase decisions on existing experiences with products and services. Older and younger customers will have different purchasing behaviors due to different experiences with the selection process (Han et al., 2021).

Baby boomers (born approximately 1946-1964) dominate the population, thus leading to an increasing research interest in older adults as a consumer segment (Norman, Daniels, & Norman, 2001). The significance of this segment in the travel market is that the baby boomers are becoming more conscious of travel expenditures while they are in a better financial position compared to younger generations (Patterson & Pegg, 2009), while middle-aged people are more concerned with the cost-saving element of travel.

2.5. COVID-19 and its uncertain future

In 2020, the COVID-19 pandemic broke out in a city called Wuhan in China, with symptoms such as fever, cough, and difficulty breathing (Wu et al., 2020). In early January, 41 patients diagnosed with COVID-19 were hospitalized (Huang et al., 2020). Although Wuhan was locked down until mid-February to contain the virus and reduce the circulation of people and the virus, the number of cases in China stabilized at around 80,000 (European Centre for Disease Prevention and Control, 2020). However, at that time, global air transport had brought the virus to every continent, and by mid-March it had spread to 146 countries, leading to a dramatic increase in the number of confirmed infections worldwide (Gössling et al., 2020). COVID-19 is a pandemic that we have never experienced before, it damaged our economic system, supply chain, etc. (Nicola et al., 2020). Most areas of the world suffered from isolation, blockades, entry bans, and border closures. Therefore, the public's lifestyle has also undergone enormous changes during this difficult time (Wen et al., 2020). While most countries are already working to achieve universal access to COVID-19 vaccination for their citizens, many countries are still facing lockdown policies. However, it has also created a social phenomenon in which the public pays more attention to the medical industry and hygiene products, the demand has undergone a fundamental change (Riestyaningrum et al., 2020).

As of January 29, 2022, the data indicate that 60.9% of the world's population today has received at least one dose of the COVID-19 vaccine. 10.04 billion doses have been administered globally, and 24.96 million doses are now administered daily (Our World In data, 2022). Overall, China and India have administered the highest number of doses, with about three billion and 1.6 billion respectively. The US is third, with more than 530 million (BBC, 2022).

However, Corrao, et al. (2022) published the results of a study that examined infection rates among more than 5,000,000 vaccinated people and followed them up for 9 months (Corrao et al., 2022). The research showed that within a few months of full vaccination, vaccine protection decreased more for infection risk (from 78% to 10%) than protection against severe disease (from 86% to 49%). Therefore, vaccine protection will not disappear, and protection will remain for those vaccinated 9 months after the vaccination, especially against severe forms of COVID-19 (Corrao et al., 2022).

On November 9, 2021, South Africa detected a new coronavirus variant for the first time from a sample of cases. Then on November 26, the World Health Organization named it the Omicron variant (WHO, 2021). And nowadays, the whole world is experiencing a huge wave of infection with the omicron variant. According to the global COVID-19 database, GISAIID (Global Initiative of Sharing All Influenza Data), on January 29, 2022, 131 countries have submitted and shared 763,026 Omicron virus genome sequences (GISAIID, 2022). Meanwhile, the data showed that the Omicron Variant has enhanced transmission ability compared to the original SARS-CoV-2 virus and other variants (Centre for Disease Prevention and Control, 2022). Since patients with the Omicron variant have a much higher rate of asymptomatic carriers than other variants, this condition may be a major factor in the variant's widespread and rapid global spread, leading to high infection rates (Garrett et al., 2021). A World Health Organization briefing on Omicron on 23 December 2021 showed a household recurrence rate of 15.8%, higher than Delta's 10.3% (WHO, 2021). According to data from the UK Health Security Agency (UKHSA), between 19 and 20 December 2021, 90% of new coronary pneumonia cases in London and 76% in England were Omicron variant infections (UKHSA, 2021). During the week from December 26, 2021, to January 1, 2022, 95.4% of local COVID-19 cases in the United States were Omicron variants (Centre for Disease Prevention and Control, 2022). NHC (National Health Commission of the People's Republic of China) states that existing vaccines have no effect on preventing severe disease and mortality of the Omicron variant, but the prevention of infection of the new variant has been reduced (NHC, 2022). The emergence of COVID-19 omicron variants has made us realize that despite the

great achievements of the COVID-19 response over the past two years, there is still a lot of work to be done in the future (Rae, 2021).

Recently, one of the world's most prestigious medical journals, the Lancet, published research declaring that COVID-19 will coexist with humanity as a recurrent common disease that the world's health systems and societies must face together. After the Omicron wave, COVID-19 may return, but the pandemic will not (Murray, 2022). Murray et al. also indicated that by March 2022, a significant portion of the world will be infected with the omicron variant. At the same time, the number of people vaccinated continues to increase and many countries are popularizing the booster of the COVID-19 vaccine. Therefore, most people gain immunity to COVID-19 by getting vaccinated or infected with a range of variants (Sidik, 2022). Hence, for some time to come, the global level of SARS-CoV-2 immunity will be at the highest level in history, and the level of COVID-19 transmission in the world will also be very low (Murray, 2022).

2.6. The impact of COVID-19 on the medical tourism industry

After the pandemic spread globally, the government imposed many restrictions on the free movement of the public to reduce the spread of the virus by maintaining social distancing. The pandemic caused public panic and significantly affected the dramatic decline in tourism demand (Bakar & Rosbi, 2020). The tourism industry has faced huge economic problems as a result, resulting in reduced income, stagnation, and even recession (Riestyaningrum et al., 2020). Statistics show that the loss limit caused by lock-in, and travel is still increasing every day, especially for some countries and regions where tourism is the main economic body. UNWTO (World Tourism Organization) declared that the global tourism industry experienced its worst year on record in 2020, with the number of international tourists falling by 74%. According to the report, the Asia-Pacific region was the hardest-hit region, with 33 million tourists lost (UNWTO, 2021). To this day, the world has not gotten rid of this virus and its effects. Therefore, governments have begun to formulate strategies to restore travel and economic growth, as well as policies to promote consumption (Fakhruddin et al., 2020). At the same time, some countries have begun to try to open to inbound tourists and local tourists to restore their economies.

According to Abbaspour et al. (2020), in a study in Iran, they interviewed medical tourists from Iranian medical institutions as participants. The results showed that almost all participants expressed confidence in Iran's ability to continue to provide high-quality medical tourism experiences in the post-COVID-19 period. In addition, many participants expect a

slight increase in medical prices. However, the possibility of price increases does not seem to have reduced the demand for medical tourism in Iran. When the participants were asked if a price discount strategy was necessary, all of them expressed that this was not an important factor because medical tourism prices in Iran are already low compared to other similar countries such as Jordan, Saudi Arabia, and Turkey (Jabbari et al., 2012). At the same time, all participants expressed their intention to continue to choose Iran as a medical tourism destination after COVID-19. Most participants expect to continue medical tourism once the pandemic is under control. This intention indicates that medical tourists see the increased risk of COVID-19 as temporary and they trust Iran will use best practices to deal with the post-crisis period (Abbaspour et al., 2020).

CHAPTER 3

Methodology

To address the research questions and objectives, we intended to collect comments from medical tourists during COVID-19 for content analysis. Reviews were first collected by online date restriction and participants were divided into three age groups ([18:34], [35:54] and 55 and above), based on the information provided by the website. Then, this research used Leximancer to content analyze these comments in order to explore the age differences and characteristics.

3.1. Research context

Initially, we collected the samples from comments submitted on the Treatment Abroad portal (www.treatmentabroad.com). Due to the specificity of the period of this study, we selected reviews from the beginning of March 2020 to April 2022. All the 70 medical tourists in the sample were treated for dental, from 18 countries or regions, and 4 destination countries for treatment. Since age is a significant factor in demographics and research has shown that age makes a difference in consumer behavior and travel. To answer the research question and explore the differences in medical travelers by age, we divided all participants into three age groups [18:34], [35:54] and 55 and above for the analysis.

Treatment Abroad Portal was established in 2004 to provide those considering medical travel with the information they need to help them more easily choose a more suitable hospital, clinic, or doctor abroad. HON provides a straightforward way to evaluate health information for patients and healthcare providers, and websites need to meet the eight principles of HONcode to successfully have the HON label. Moreover, according to the research of Lunt and Carrera (2011) for 50 sites with HON labels, we finally chose the page www.TreatmentAbroad.com as the research background.

Regarding the analysis of the data, this study decided to use a method based on the Leximancer tool with and qualitative analysis. The Leximancer software has been used for more than two decades for research in tourism (Scott & Smith, 2005), and it identifies the hits from the text data by generating a lexicon and grouping them by theme (Leximancer, 2021).

Thus, Leximancer can be clustered by the relationship between different concepts, while clustering algorithms are used in this lexical software to show the relationship between major

themes and concepts (Smith & Humphreys, 2006). Hence, it is possible to obtain the key information and associations from a large number of texts that they respond to by using the Leximancer tool. In the qualitative content analysis section, a concept map about three different age groups in dental treatment was obtained, describing separately the popular themes and concepts presented in the results. By categorizing the medical tourists into age groups, it was possible to obtain the themes and concepts more preferred by each age group. Based on the research question and objectives of this study, the differences and characteristics of the content preferred by each age group were found and new trends were summarized.

3.2. Data collection and analysis

Based on 70 reviews of medical tourism consumers collected by Treatment Abroad (see <http://www.treatmentabroad.com>), we could obtain 81,450 characters. Leximancer has been widely used in tourism research for many years and is computer software that undertakes quantitative content analysis, which allows for the topical and content analysis of survey data to obtain the main concepts in the text and the relationships between them. Also, Leximancer (Leximancer, 2021) can calculate the number of occurrences of words, (Ward et al., 2014). In order to meet the above-mentioned research context and to achieve the research objectives, the research methodology was divided into several stages. In order to meet the first research objective, to explore the differences in age from lockdown to present in dental treatment.

Therefore, with the assurance that the information was available and reasonable, we screened only the reviews from March 2020 to the present and collected only the content related to dental treatment for analysis. Also, to address the second research objective, demographic analysis was performed on the sample. Based on the HON label certification and other studies, we found the best website where we eventually collected the data to make sure the results are accurate. In addition, the samples were categorized by age, type of treatment procedure, country of origin, and country of treatment. Finally, text data analysis and cross-analysis were performed by the Leximancer tool to produce a high-frequency word map. The Leximancer software generated a graph of the results and differentiated dental treatments by age group, while the results of the frequency analysis of the content contained the most common terms used in dental treatment reviews, as well as valid terms including staff, airport, and service in medical tourism, thus enabling a targeted analysis. By using excel software, the personal information of the participants was categorized to generate a table that facilitates a more visual analysis together with the results of Leximancer.

CHAPTER 4

Results

After screening the reviews based on the date of submission, we selected 70 reviews through the Treatment Abroad website, which were both in English. All samples are displayed on the portal with specific reviews, clinic of treatment, country of treatment, name of the operation, country or region of origin, time of review, age group, and gender.

4.1. Sample categories

The sample consists of 70 consumers who traveled abroad for dental treatment is shown in Table 4.1. The table shows that the most significant proportion of the sample reviewers was in the group aged 55 years and older, followed by those between 45-54 years. Of this sample, 57.1% consisted of medical tourists aged 35-54 years and 35.7% were aged 55 and older, making a total of 92.8% of the total sample size.

The medical tourists in the study were from 18 countries. There was a clear majority of visitors from the United States (35.7%). The second highest percentage was of medical tourists from the United Kingdom (24.3%), followed by those from Australia (18.6%). In contrast, visitors from 15 other countries around the world represented only 21.4% of the sample size, and the number of consumers from each region was small.

Meanwhile, the bottom half of Table 4.1 lists all destination countries where medical tourists receive treatment. By the end of data collection, India was the country with the most reviewers traveling to receive the treatment, with 82.9% of the total visitors.

Table 4.1 Demographic attribute

Demographic	Dimensions	Dental Treatment	Percentage
Age	18-34	5	7.2%
	35-54	40	57.1%
	≥55	25	35.7%
Clinic/destination country	Greece	2	2.9%
	Hungary	5	7.1%
	India	58	82.9%
	Turkey	5	7.1%
	Total	70	100%

4.2. Qualitative results

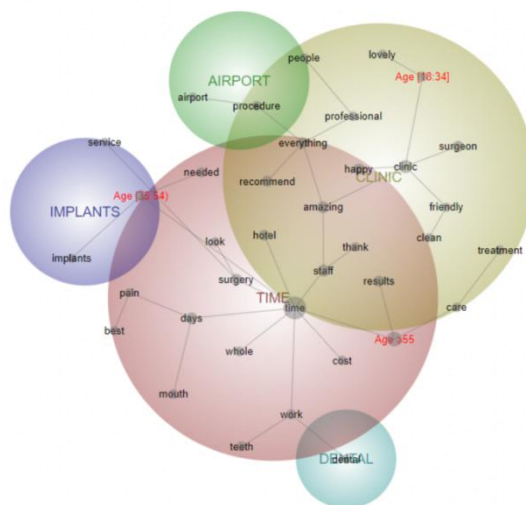
The results of the qualitative analysis were derived from the content analysis of the sample by the Leximancer tool, which helped the study identify the main content and themes to be discussed.

4.2.1. Concept map analysis

Regarding the concept map generated by the Leximancer software, it is clear that the results of the sample show five themes (see Figure 4.1), namely "time" (50 hits), "clinic" (23 hits), "dental" (3 hits), "airport" (3 hits), and "implants" (2 hits), which can represent the experience and quality of the participants this time. Meanwhile, the concept map contains concepts and themes, represented by small gray dots and large colored circles respectively, and the concepts are contained within the themes (Wu et al., 2014). Furthermore, Leximancer calculated the frequency of their occurrence, but also the connectivity of the themes, which are time (100%), clinic (22%), dental (6%), airport (4%), and implants (2%). According to the Leximancer manual, the size of a concept point visually reflects its connectivity in the concept map, and the connectivity represents the importance of the topic, which means that the higher the connectivity rate, the more important it is (Leximancer, 2021).

In Figure 4.1, the evidence showed that consumers aged 18-34 focus on the theme of "clinic", those aged 35-54 favor "implant" and "time", and those aged 55 and above are more associated with "time", "clinic".

Figure 4.1 Concept map for dental treatment by age



4.2.2. Content analysis

In this study, qualitative content analysis was achieved by analyzing medical tourists' comments about this treatment. The participants' comments were achieved by conceptualizing their medical tourism experience and their evaluation of the clinic, services, and staff (Rodrigues et al., 2017). By using the six themes given in the Leximancer results (see Figure 4.1), the sample was labeled according to three age groups, sorted by hits, as shown in Table 4.2, to observe how medical tourism consumers of different ages described their medical experience during the treatment.

Table 4.2 Content analysis

Theme: concept words	Age	Comments
time (50 hits): staff, days, surgery, hotel, recommend, results, teeth, work, needed, whole, cost, mouth, best, look, pain	18-34	I was having tooth problem for such a long time, the biggest problem I faced was I had a phobia of dentist.
	34-54	... booked my hotel, booked my appointment times and transfer times for driver from hotel pick up and drop off.
	≥55	The price I spent here in India is incomparable to the price in the USA and the quality here is 3 to 4 times better in comparison.
Clinic (23 hits): amazing, happy, surgeon, everything, procedure, care, treatment, professional, thank, clean, friendly, lovely	18-34	The staff and the clinic was very nice especially the co-ordinator Tasneem.
	35-54	I am so grateful for the quality, best dental implant clinic smoothness and professionalism of service provided.
	≥55	I did my research, contacted the clinic, and put myself in the capable hands of the International Co-ordinator who arranged everything, all I had to do was get a visa, and organize myself from London to Hyderabad airport, where I would be met and taken to the prearranged hotel of my choice.
Airport (3 hits): people	18-34	we were picked up at the airport [and] taken to the hotel and the next morning, we met (Doctor) and his delightful team.

	35-54	I must also commend the good service and coordination done by the International coordinator from airport pickup & hotel booking.
	≥55	All the communication beforehand, the help in arranging accommodation, transfers to/from the airport & the transport throughout my treatment were excellent.
Dental (3 hits)	18-34	First time I came across (Doctor)'s is while researching online for good dental doctors in Hyderabad, I have approached them as they have very good ratings.
	35-54	(Doctor) is a brilliant dental surgeon, I work in the operating theatres and watched closely at all the standards of care and interventions used here, and in my eyes, it met all the professional standards that are used to pass the code of practice 100%.
	≥55	My experience with (Doctor) and associates at The Dental Specialist, Hyderabad, has been absolutely first class from start to finish.
Implants (2 hits): services	18-34	After searching for a year for doing implants, I came across (Doctor)'s website.
	35-54	After the initial implants, (Doctor) took his time over several visits to make sure my Nexx Zr Zirconia bridges looked absolutely perfect and they do.
	≥55	When I read on (Doctor)'s website that it was possible to have Implants even for hopeless cases without the need for bone grafts, I was truly amazed.

CHAPTER 5

Discussion

Demographics have been the focus of consumer research, including gender, age, economic status, educational background, etc. In this research, Leximancer software was used, which is an efficient tool that allows the analysis of medical travelers' comments to understand their psychology and tendencies. Cross-tabulations of content and participant characteristics were performed to ensure accurate and valid results. Therefore, studies using the Leximancer tool need to obtain as much personal information as possible about the reviewers (such as gender, age, country of origin, country of treatment, etc.) to classify them demographically more easily. This study is particularly interested in analyzing age differences in the evaluation of dental treatments.

This section begins with a discussion of the significance of consumer's description of dental treatment and the key attributes represented by the themes in the concept map . The second part of this section analyzes the sample's different age demographic factors and narratives through demographic attributes (see Table 4.1). Meanwhile, in combination with the concept map in Figure 4.1 above, the question and objectives of the research were addressed by determining the extent to which the five main themes explain the influence of medical tourists on their overall description of dental treatment procedures.

5.1. Differences in dental treatment by age during COVID-19

To meet the research question and the first research objective, the reviews collected for this study were all from early March 2020 to April 2022, and the following descriptions will be divided into three sections according to age groups.

The result showed that only 7.2% of medical tourists were between the ages of 18-34, 57.1% were between the ages of 35-54, and 35.7% were 55 years old and older (see Table 4.1). According to Lunt et al. (2014), most medical tourists to the UK were 25% between the ages of 18-34, 40% between the ages of 35-54, and 35% were above 55 years. It is evident that there is a significant downward trend in medical tourists aged 18-34 during COVID-19, while there is a sharp increase in those aged 35-54 and no noticeable change in those aged 55 years and above.

Regarding the 18-34 age group, it is evident that the number of medical tourists within this age group showed a significant decline during COVID-19. A comparison of the resulting

conceptual maps (see Figure 4.1) shows that medical travelers aged 18-34 years place more importance on "clinic", "airport" and "time". In the concept map produced by Leximancer, no different themes were found for medical travelers in the 18-34 age group than for other groups, but "clinic" was the strongest theme. Compared to the other groups, the participants in the 18-34 age group were more interested in the environment of the clinic, such as the concepts of "lovely", "friendly" and "happy" (see Figure 4.1). Therefore, it can be established that for medical travelers in the 18-34 age group, the attitude of the staff and their satisfaction are the most important factors for them.

As can be seen in Table 4.1, middle-aged and older medical tourists continue to be a large percentage and have increased from previous years. In the 35-54 age group, these consumers are closely associated with the themes "implants", "time" and "airport". And among these themes, a new theme "implants" was found to be different from the other age groups. Therefore, it is clear to find that medical tourists aged 35-54 years care more about medical technology compared to other age groups.

In contrast, medical tourists over 55 years old focus more on "time", "teeth" and "clinic", and the theme "dental" is a new theme different from other age groups. Also, the concept map shows that they have a very direct association with "results" and "care". Thus, similar to participants in the 34-54 age group, medical tourists over the age of 55 were also more concerned about the quality of medical treatment.

The results of this study highlight the association between the age difference and medical tourists' attitudes toward dental treatment. Based on the above analysis, it is significant to understand that medical care was the most important factor for all age groups of medical tourists during COVID-19. Medical tourists of all ages were more satisfied with their treatment in this period. Meanwhile, There was a significant decrease in medical tourists aged 18-34 years, which was much less relative to other age groups. Middle-aged (aged 35-54) and older (aged 55 and above) tourists made up the major part and preferred quality in terms of treatment services. The difference, however, is that medical tourists aged 18-34 are more interested in the quality of services provided by the clinic and its staff, while those aged 35-54 and above 55 are more interested in the quality and results of medical treatment.

5.2. Medical tourists' characteristics and tendencies of dental treatment in the medical tourism industry during COVID-19

In order to reach the second research objective, it is important to understand the characteristics of medical tourists and trends in dental treatment during COVID-19 and help

medical institutions to establish their strategies by describing and analyzing the mentioned high-frequency themes.

Based on the results given by Leximancer (see Figure 4.1), "time" is the strongest theme in the comments of medical tourists who had undergone dental treatment and a theme of interest to all age groups of medical tourists. It covers the time spent by medical tourists searching for information prior to receiving treatment, with a large percentage of consumers commenting that they had collected information on the Internet to choose a destination for treatment (see Table 4.2). Meanwhile, the theme of "time" is even more important due to the specific time period of the pandemic. In addition, time is very important for medical tourism activities because it includes waiting time, treatment time, and recovery time, etc. A proportion of consumers choose medical travel because of the high cost of waiting time in the country of origin (Connell, 2006). This also means that medical travelers will stay in the destination country and providing better travel services will make the host country more competitive (Eman, 2011).

The second most popular theme in the results of this study is "clinic", which included concepts related to treatment, services, and staff. And it is the most important factor of interest to medical travelers aged 18-34 in this research. Medical tourism is a fast-growing industry in the 21st century, and more and more countries are taking it seriously (Sandberg, 2017). In order to gain the advantages of the market in the medical tourism industry, a large number of countries have started to propose policies and strategies to improve the level of services to attract medical tourists (Jaapar et al., 2017). Clearly, service is an important factor in generating intention, and motivation in consumers and can increase consumer satisfaction (Vequist & Stackpole, 2012). In addition, in the case of medical tourism, the recommendation is very important to attract potential consumers and is one of the most influential aspects of consumer decision-making behavior (Rodrigues et al., 2017).

Furthermore, it is interesting to observe that "airports" was also a popular theme in this research, with several consumers expressing their satisfaction with staff pick-up and drop-off services at airports, as well as travel arrangements. Elliott (2020) stated that despite the massive flight cancellations due to the global lockdown brought about by COVID-19, most people still prefer airplanes. Organizations provide quality medical care and comprehensive services to their medical travelers, including accommodation, transportation arrangements and prices during the trip (Glinos & Baeten, 2006). Thus, the importance of medical tourists' needs and concerns about transportation during a pandemic is significant.

The last two themes that emerged from this study are "dental" and "implants". Based on the analysis mentioned above, it is known that during COVID-19, medical travelers aged 34-54 as well as 55 years and older were very concerned about the quality of this area. And in the current study, these two age groups accounted for 92.8% of all participants in the medical tourists. They include the concepts of treatment, price, and service, as well as the positive comments that link them together (see Figure 4.1). "Implant" is a very common treatment in dentistry, where implants are surgically placed in the jaw to restore chewing ability or appearance (U.S. Food and Drug Administration, 2022). The cost of this treatment is usually high, for example, dental implants range from \$800 in Costa Rica to \$2700 in Singapore (see www.medicaltourism.com).

In summary, it is clear that the concept of service is heavily referenced in all five themes derived from this study, which may be relevant to the particular point in time of COVID-19. Vequist and Stackpole (2012) indicated that the provision of service is an important factor in generating travel intentions and motivation, and it also contributes to consumer satisfaction, with convenient service ensuring that the medical travel experience is enjoyable for the trip. Therefore, it is obvious to see that during COVID-19 it is necessary for medical institutions to establish a complete service strategy, including the whole range of services from online promotion, airports, treatment processes, and staff. In particular, the quality of medical treatment, since the vast majority of consumers (35-54 and 55+) prefer this service. In addition, research has shown that age is an important factor in financial capability, with older consumers exhibiting higher levels of overall financial capability compared to younger consumers (Xiao et al., 2015). Also, the employees can influence their impression of the clinic or treatment, the study indicated that high standards of service quality will increase consumer trust and effectively contribute to the long-term profitability of the organization (Rodrigues et al., 2017). Marković et al. (2014) indicated that patients who are subjected to high levels of service quality also have higher satisfaction and loyalty to the service and the healthcare institution, and satisfaction also significantly affects motivation, which increases the likelihood of return visits.

Through these, it is possible to increase the loyalty and satisfaction of medical tourists and secure long-term competitiveness, income, and customer base.

Conclusions and limitations

6.1. Theoretical Contribution

Regarding the research question and the research objectives: the age differences of medical tourists who underwent dental treatment during COVID-19 and their characteristics, the corresponding conclusions can be reached based on the above analysis. The above conclusions show that during COVID-19 there was a significant decrease in medical tourists aged 18-34 years (only 7.2%), while the proportion of middle-aged and older medical tourists increased, with 35-54 years accounting for 57.1% of the overall number. Thus, the first theoretical contribution: COVID-19 allowed a considerable change in the age proportion of medical tourists, with a significant increase in middle-aged and older medical tourists.

Furthermore, the results of Leximancer show that participants in all age groups have significant concerns about medical care overall. Among the participants, medical tourists aged 18-34 were more tend to be impressed with the clinic's services and staff performance, while, on the contrary, medical tourists aged 35 and older were more partial to the quality and outcome of medical treatment. Meanwhile, "airports" appeared as an unexpected theme in the findings of the study. This means that flights and the special entry policies during the COVID-19 period did become an important influencing factor for the medical tourism industry. Moreover, Leximancer's analysis of the entire content resulted in several factors regarding service, including "staff," "friendly", "treatment", "service" , "treatment", "professional" , and "airport". It can be seen that during this particular period of the pandemic, medical tourists pay more attention to the improvement and quality of services. Satisfaction plays an important role in the return visit of medical tourists, which is closely related to the services provided by the clinic. Consequently, the second theoretical contribution: COVID-19 makes medical tourists more concerned about comprehensive services and it is necessary for medical tourism providers to focus on and improve their services.

In addition, regarding the second research objective of trends in dental treatment in medical tourism, the above findings suggest that the proportion of middle-aged and older medical tourists (aged 35-54, 55 and more) increased during COVID-19 and these consumers in this age group generally have a higher financial capacity. Medical tourism providers can target this age group as the main potential consumers to develop more specific marketing strategies. Hence, the third theoretical contribution: middle-aged and older medical travelers

became the major consumer group in the medical tourism market during COVID-19, both in terms of the increasing numbers and their financial capacity.

6.2. Practical Contribution

The third research objective of this research is answered through practical implications that summarize today's environment and suggest strategies to help the medical tourism industry recover. This study analyzed medical tourists' reviews of dental treatment from the time of the epidemic lockdown (March 2020) to the present, assessing the changes in medical tourism and the concerns of audience segments during this period. The results can help healthcare providers and marketers as a base reference for more detailed analysis and strategy development.

First, since a large number of potential consumers gather information via the Internet and social media before making a decision, some of them are willing to share their experiences and treatment process via the Internet. Medical tourists browse through these contents to reduce their anxiety about the unfamiliar environment and boost their decision-making. A good marketing strategy is very important in the medical tourism industry, so analyzing the current situation and consumer tendencies is an effective option. In this study, part of the medical tourists mentioned in their comments that they had visited the relevant pages of the treatment clinic and the information about the doctor. Therefore, healthcare providers may consider offering quality websites, social media, or advertising to promote the advantages of their service.

In addition, based on what was mentioned above, middle-aged and older medical tourists are more focused on the quality of the treatment experience. Superior medical skills and conditions promote their satisfaction and increase the probability of recommending them to others. Thus, at the practice level, these results provide theoretical support for healthcare providers to train their staff to improve service attributes whereby customer experience and satisfaction can be maximized to ensure a long-term promotional approach. In particular, the complete and detailed services provided by healthcare organizations during COVID-19 will better increase customer loyalty. That means that due to the special features of COVID-19, medical tourism providers need to pay closer attention to the country's exit and entry policies (both in their own country and in the tourists' country of origin), as well as local policies, to constantly adapt their service approach to ensure the medical tourists' experience.

Finally, medical tourism providers need to conduct demographic analysis regularly, which means segmenting consumers into different groups. Feedback from different groups to

understand current market trends and directions is also an important aspect of the medical tourism industry. As different generations focus on different priorities, it means that marketers facing different age groups need different strategies to increase their appeal. Thus, medical tourism providers can analyze their market strengths to help develop strategies and allocate resources to different factors, focusing on populations with greater market possibilities to attract potential consumers and enhance their medical experience. A good healthcare experience means that customers are more likely to share their experiences on social media, and positive reviews can give providers a huge competitive advantage to expand their market and attract potential consumers.

6.3. Limitations

However, despite the relevance of the above discussion, it is undeniable that this study still has limitations and shortcomings. First, the sample size of this study was only 70 which is relatively small compared to normal studies and there were almost no negative evaluations, so it may affect the accuracy of the results. In addition, the specificity of treatment in many areas (e.g. infertility, cosmetic surgery, etc.) leads to feedback lags and treatment time errors due to limitations in the particular period, so the current study focuses only on dental treatment. Moreover, the lack of sample size resulted in a large range for each age group and a large difference in numbers. The 18-34 age group only accounted for 7.2% of the overall sample size, which may affect the reliability of the study results.

6.4. Future research

Future studies can expand the sample size as much as possible by finding more sites and valid information. A larger sample size allows for the more detailed grouping of study participants while ensuring small disparities in numbers across groups. Furthermore, since this research was conducted by collecting spontaneous medical visitor reviews on the Treatment Abroad portal, a follow-up study could be conducted by selecting participants for interviews or questionnaires to make the findings more specific. Moreover, more accurate treatment dates can be obtained, for example, by filling in the treatment date when the medical traveler comments. This would not only allow for more accurate results but also expand the number of samples obtained. By categorizing medical travelers in different areas, such as cosmetic and infertility treatments as mentioned above, a more comprehensive study of these areas and results can be collected.

CHAPTER 7

Reference

Abbaspour, F., Soltani, S., & Tham, A. (2020). Medical tourism for COVID-19 post-crisis recovery?. *Anatolia*, 32(1), 140-143. doi: 10.1080/13032917.2020.1815067

Alnakhi, W., Segal, J., Frick, K., Ahmed, S., & Morlock, L. (2019). Motivational factors for choosing treatment destinations among the patients treated overseas from the United Arab Emirates: results from the knowledge, attitudes, and perceptions survey 2012. *Tropical Diseases, Travel Medicine And Vaccines*, 5(1). doi: 10.1186/s40794-019-0093-9

Taufik, N., & Sulistiadi, W. (2018). The Impact of Medical Tourism Industry for the Hospital Services and Marketing Activities: A Systematic Review. doi: 10.7454/arsi.v5i1.2873

Bakar, N., & Rosbi, S. (2020). Effect of Coronavirus disease (COVID-19) to tourism industry. *International Journal Of Advanced Engineering Research And Science*, 7(4), 189-193. doi: 10.22161/ijaers.74.23

Centre for Disease Prevention and Control (CDC). (2022). Medical Tourism: Travel to Another Country for Medical Care. Retrieved 19 April, 2021, from <https://www.cdc.gov/travel/page/medical-tourism>

Connell, J. (2006). Medical tourism: Sea, sun, sand and ... surgery. *Tourism Management*, 27(6), 1093-1100. doi: 10.1016/j.tourman.2005.11.005

Cook, Peta S. (2008) What is health and medical tourism? In: The annual conference of the Australian Sociological Association, 2 to 5 December 2008, The University of Melbourne, Victoria.

Corrao, G., Franchi, M., Cereda, D., Bortolan, F., Zoli, A., & Leoni, O. et al. (2022). Persistence of protection against SARS-CoV-2 clinical outcomes up to 9 months since vaccine completion: a retrospective observational analysis in Lombardy, Italy. *The Lancet Infectious Diseases*. doi: 10.1016/s1473-3099(21)00813-6

De la Hoz-Correa, A., Muñoz-Leiva, F., & Bakucz, M. (2018). Past themes and future trends in medical tourism research: A co-word analysis. *Tourism Management*, *65*, 200-211. doi: 10.1016/j.tourman.2017.10.001

European Centre for Disease Prevention and Control (ECDC). (2020). COVID-19 Situation update worldwide. Retrieved April 4, 2020, from <https://www.ecdc.europa.eu/en/geographical-distribution-2019-ncov-cases>

Fakhrudin, B., Blanchard, K., & Ragupathy, D. (2020). Are we there yet? The transition from response to recovery for the COVID-19 pandemic. *Progress In Disaster Science*, *7*, 100102. doi: 10.1016/j.pdisas.2020.100102

Gössling, S., Scott, D., & Hall, C. (2020). Pandemics, tourism and global change: a rapid assessment of COVID-19. *Journal Of Sustainable Tourism*, *29*(1), 1-20. doi: 10.1080/09669582.2020.1758708

Gambhir, R. (2015). Primary care in dentistry - An untapped potential. *Journal Of Family Medicine And Primary Care*, *4*(1), 13. doi: 10.4103/2249-4863.152239

Garrett, N., Tapley, A., Andriesen, J., Seocharan, I., Fisher, L., & Bunts, L. et al. (2021). High Rate of Asymptomatic Carriage Associated with Variant Strain Omicron. doi: 10.1101/2021.12.20.21268130

GISAID. (2022). hCoV-19 data sharing via GISAID. Retrieved 29 January 2022, from <https://gisaid.org/>

Han, H. (2013). The healthcare hotel: Distinctive attributes for international medical travelers. *Tourism Management*, *36*, 257-268. doi: 10.1016/j.tourman.2012.11.016

Han, H., Lee, S., Ariza-Montes, A., Al-Ansi, A., Tariq, B., Vega-Muñoz, A., & Park, S. H. (2021, January 18). Muslim Travelers' Inconvenient Tourism Experience and Self-Rated Mental Health at a Non-Islamic Country: Exploring Gender and Age Differences. *International Journal of Environmental Research and Public Health*, *18*(2), 758.

<https://doi.org/10.3390/ijerph18020758>

Heung, V., Kucukusta, D., & Song, H. (2011). Medical tourism development in Hong Kong: An assessment of the barriers. *Tourism Management*, 32(5), 995-1005. doi: 10.1016/j.tourman.2010.08.012

Homburg, C. and Giering, A. (2001), Personal characteristics as moderators of the relationship between customer satisfaction and loyalty—an empirical analysis. *Psychology & Marketing*, 18: 43-66. [https://doi.org/10.1002/1520-6793\(200101\)18:1<43::AID-MAR3>3.0.CO;2-I](https://doi.org/10.1002/1520-6793(200101)18:1<43::AID-MAR3>3.0.CO;2-I)

Horowitz, M. D., & Rosensweig, J. A. (2007). Medical tourism--health care in the global economy. *Physician executive*, 33(6), 24–30.

Horowitz, M. D., Rosensweig, J. A., & Jones, C. A. (2007). Medical tourism: globalization of the healthcare marketplace. *MedGenMed : Medscape general medicine*, 9(4), 33.

Huang, C., Wang, Y., Li, X., Ren, L., Zhao, J., & Hu, Y. et al. (2020). Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. *The Lancet*, 395(10223), 497-506. doi: 10.1016/s0140-6736(20)30183-5

Ivanova, M., Ivanov, I., & Ivanov, S. (2020). Travel behaviour after the pandemic: the case of Bulgaria. *Anatolia*, 32(1), 1-11. doi: 10.1080/13032917.2020.1818267

Jaapar, M., Musa, G., Moghavvemi, S., & Saub, R. (2017). Dental tourism: Examining tourist profiles, motivation and satisfaction. *Tourism Management*, 61, 538-552. doi: 10.1016/j.tourman.2017.02.023

Jabbari, A., Mardani, R., Tabibi, S., & Delgoshaei, B. (2012). Medical tourism in Iran: Issues and challenges. *Journal Of Education And Health Promotion*, 1(1), 39. doi: 10.4103/2277-9531.104809

Lee, C., Lee, Y., & Wicks, B. (2004). Segmentation of festival motivation by nationality and satisfaction. *Tourism Management*, 25(1), 61-70. doi: 10.1016/s0261-5177(03)00060-8

Lee, J., Kearns, R., & Friesen, W. (2010). Seeking affective health care: Korean immigrants' use of homeland medical services. *Health & Place*, 16(1), 108-115. doi: 10.1016/j.healthplace.2009.09.003

Leximancer. (2021). Retrieved 10 March 2021, from <https://www.leximancer.com/resources>

Lunt, N. and Carrera, P. (2011), "Systematic review of web sites for prospective medical tourists", *Tourism Review*, Vol. 66 No. 1/2, pp. 57-67. doi: 10.1108/16605371111127224

Lunt, N., Smith, R., Mannion, R., Green, S., Exworthy, M., & Hanefeld, J. et al. (2014). Implications for the NHS of inward and outward medical tourism: a policy and economic analysis using literature review and mixed-methods approaches. *Health Services And Delivery Research*, 2(2), 1-234. doi: 10.3310/hsdr02020

Marković, S., Lončarić, D., & Lončarić, D. (2014). Service quality and customer satisfaction in the health care industry. *Tourism and Hospitality Management*, 20(2), 155–170.

Meng, L., Hua, F., & Bian, Z. (2020). Coronavirus Disease 2019 (COVID-19): Emerging and Future Challenges for Dental and Oral Medicine. *Journal Of Dental Research*, 99(5), 481-487. doi: 10.1177/0022034520914246

Murray, C. (2022). COVID-19 will continue but the end of the pandemic is near. *The Lancet*, 399(10323), 417-419. doi: 10.1016/s0140-6736(22)00100-3

New Opportunities for Dentistry in Diagnosis and Primary Health Care. (2008). *Journal Of Dental Education*, 72, 66-72. doi: 10.1002/j.0022-0337.2008.72.2_suppl.tb04483.x

Nicola, M., Alsafi, Z., Sohrabi, C., Kerwan, A., Al-Jabir, A., & Iosifidis, C. et al. (2020). The socio-economic implications of the coronavirus pandemic (COVID-19): A review. *International Journal Of Surgery*, 78, 185-193. doi: 10.1016/j.ijsu.2020.04.018

Patients Beyond Borders. (2020). Retrieved 13 April 2022, from <https://www.patientsbeyondborders.com/media>

Sherman, P., Moscou, S., & Dang-Vu, C. (2009). The primary care crisis and health care reform. *Journal of health care for the poor and underserved*, 20(4), 944–950.

<https://doi.org/10.1353/hpu.0.0207>

Patterson, I., & Pegg, S. (2009). Marketing the Leisure Experience to Baby Boomers and Older Tourists. *Journal of Hospitality Marketing & Management*, 18(2–3), 254–272.

<https://doi.org/10.1080/19368620802594136>

Petersen, P. (2003). The World Oral Health Report 2003: continuous improvement of oral health in the 21st century - the approach of the WHO Global Oral Health Programme. *Community Dentistry And Oral Epidemiology*, 31, 3-24. doi:

10.1046/j..2003.com122.x

Qin, A., & Chang Chien, A. (2022). Omicron reaches Beijing, three weeks before the Olympics begin. Retrieved 31 January 2022, from

<https://www.nytimes.com/2022/01/16/world/asia/omicron-reaches-beijing-three-weeks-before-the-olympics-begin.html>

Rae, M. (2021). Omicron: a failure to act with a global focus will continue the proliferation of new variants of covid-19. *BMJ*, n3095. doi: 10.1136/bmj.n3095

Riestyaningrum, F., Ferdaos, E., & Bayramov, B. (2020). Customer behavior impact on international tourist's travel intention due to Covid-19. *Journal Of Sustainable Tourism And Entrepreneurship*, 1(3), 231-243. doi: 10.35912/joste.v1i3.367

Rodrigues, H., Brochado, A., Troilo, M., & Mohsin, A. (2017). Mirror, mirror on the wall, who's the fairest of them all? A critical content analysis on medical tourism. *Tourism Management Perspectives*, 24, 16-25. doi:

10.1016/j.tmp.2017.07.004

Sandberg, D. (2017). Medical tourism: An emerging global healthcare industry. *International Journal Of Healthcare Management*, 10(4), 281-288. doi: 10.1080/20479700.2017.1296213

Sidik, S. (2022). Immunity against Omicron from breakthrough infection could be a matter of timing. *Nature*. doi: 10.1038/d41586-022-00004-x

Scott, N., & Smith, A. E. (2005). Use of automated content analysis techniques for event image assessment. *Tourism Recreation Research*, 30, 87–91. <http://dx.doi.org/10.1080/02508281.2005.11081477>.

Taufik, N. A., & Sulistiadi, W. (2018). The impact of medical tourism industry for the hospital services and Marketing Activities: A systematic review. *Jurnal Administrasi Rumah Sakit Indonesia*, 5(1). doi: 10.7454/arsi.v5i1.2873

The World Tourism Organization (UNWTO). (2021). 2020: Worst Year in Tourism History with 1 Billion Fewer International Arrivals. Retrieved 28 October 2021, from <https://www.unwto.org/news/2020-worst-year-in-tourism-history-with-1-billion-fewer-international-arrivals>

U.S. Food and Drug Administration (FDA). (2022). Dental Implants: What You Should Know. Retrieved 31 July 2022, from <https://www.fda.gov/medical-devices/dental-devices/dental-implants-what-you-should-know>

Ward, V., West, R., Smith, S., McDermott, S., Keen, J., Pawson, R., & House, A. (2014). The role of informal networks in creating knowledge among health-care managers: a prospective case study. *Health Services And Delivery Research*, 2(12), 1-132. doi: 10.3310/hsdr02120

Wen, J., Kozak, M., Yang, S., & Liu, F. (2020). COVID-19: potential effects on Chinese citizens' lifestyle and travel. *Tourism Review*, 76(1), 74-87. doi: 10.1108/tr-03-2020-0110

WHO Oral health. (2022). Retrieved 25 June 2022, from <https://www.who.int/news-room/fact-sheets/detail/oral-health>

Wu, M., Wall, G., & Pearce, P. (2014). Shopping experiences: International tourists in Beijing's Silk Market. *Tourism Management*, 41, 96-106. doi: 10.1016/j.tourman.2013.09.010

Wu, Y., Chen, C., & Chan, Y. (2020). The outbreak of COVID-19: An overview. *Journal Of The Chinese Medical Association*, 83(3), 217-220. doi: 10.1097/jcma.0000000000000270

Xiao, J., Chen, C., & Sun, L. (2015). Age differences in consumer financial capability. *International Journal Of Consumer Studies*, 39(4), 387-395. doi: 10.1111/ijcs.12205