



Factors influencing hotel selection of tourists in Phuket during COVID-19

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ชื่อวิทยานิพนธ์ ปัจจัยที่มีอิทธิพลต่อการเลือกโรงแรมของนักท่องเที่ยวในจังหวัดภูเก็ตในช่วง
สถานการณ์โควิด-19

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บทคัดย่อ

การศึกษานี้ทำการศึกษปัจจัยที่มีอิทธิพลต่อการเลือกโรงแรมของนักท่องเที่ยวในช่วงสถานการณ์โควิด-19 ในจังหวัดภูเก็ตหลังจากมาตรการล็อกดาวน์ครั้งที่ 1 จากการระบาดระลอกแรกของโควิด-19 ในประเทศไทย การศึกษานี้ใช้ Pearson-chi-square, one-way ANOVA, factor analysis, และ Probit regression ในการวิเคราะห์ปัจจัยที่มีอิทธิพลต่อการเลือกรูปแบบโรงแรมของนักท่องเที่ยว

ผู้วิจัยพบว่านักท่องเที่ยวยินดีที่จะจ่ายค่าห้องในราคาที่สูงขึ้นระหว่างการท่องเที่ยวในช่วงสถานการณ์โควิด-19 สำหรับโรงแรมที่มีการรักษาความปลอดภัย, มาตรการรักษาความสะอาด และโรงแรมที่มีสิ่งอำนวยความสะดวกครบถ้วนและ รวมถึงโรงแรมที่สามารถดำเนินการมาตรการเว้นระยะห่างทางสังคม ผลการศึกษานี้สามารถแสดงให้เห็นว่านักท่องเที่ยวให้ความสำคัญต่อมาตรการฆ่าเชื้ออย่างสม่ำเสมอของโรงแรมที่เข้าพักและการใช้อุปกรณ์ต่างๆแบบใช้แล้วทิ้ง เช่น แก้วกระดาษ ภาชนะต่าง ๆ ที่ใช้ในการรับประทานอาหาร เป็นต้น การมีอุปกรณ์รักษาพยาบาลฉุกเฉิน เครื่องปรับอากาศส่วนตัว ระบบบริการสายตรงถึงแพทย์ บริเวณที่มีความหนาแน่นต่ำ กรณีมีการยกเลิกโดยไม่มีค่าใช้จ่าย มีหน้ากอนามัย แอลกอฮอล์และผลิตภัณฑ์เสริมสร้างภูมิคุ้มกันอื่นๆ เป็นปัจจัยที่นักท่องเที่ยวให้ความสำคัญมากขึ้นอย่างมีนัยยะสำคัญในช่วงระหว่างการเข้าพักในโรงแรมระหว่างช่วงสถานการณ์โควิด-19

คำสำคัญ: สถานการณ์โควิด-19, ปัจจัยด้านการโรงแรม, การเลือกโรงแรม, รูปแบบการท่องเที่ยว

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ABSTRACT

This study examines the factors that influence tourists' choice of hotels in Phuket during covid-19. Pearson-chi-square, one-way ANOVA, factor analysis, and Probit regression were used to examine the factors that influence tourists' choice of hotel type. It was found that tourists were willing to pay higher room rates during the covid-19 period for hotels that had the hotel factors of Security and Cleanliness, Facilities and Locations for social distance. The results showed that Regular disinfection, Cleanliness of room, Disposable items: Dixie cup, Tableware, Emergency service, Independent air conditioning, Doctor on call, Less density area, Free cancellation service, Convenient to hospital, Masks, alcohol and other immunization supplies hotel factors were more important to tourists during covid-19 than Pre COVID.

Keywords : During covid-19, hotel factors, hotel selection, travel patterns

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CHAPTER 1

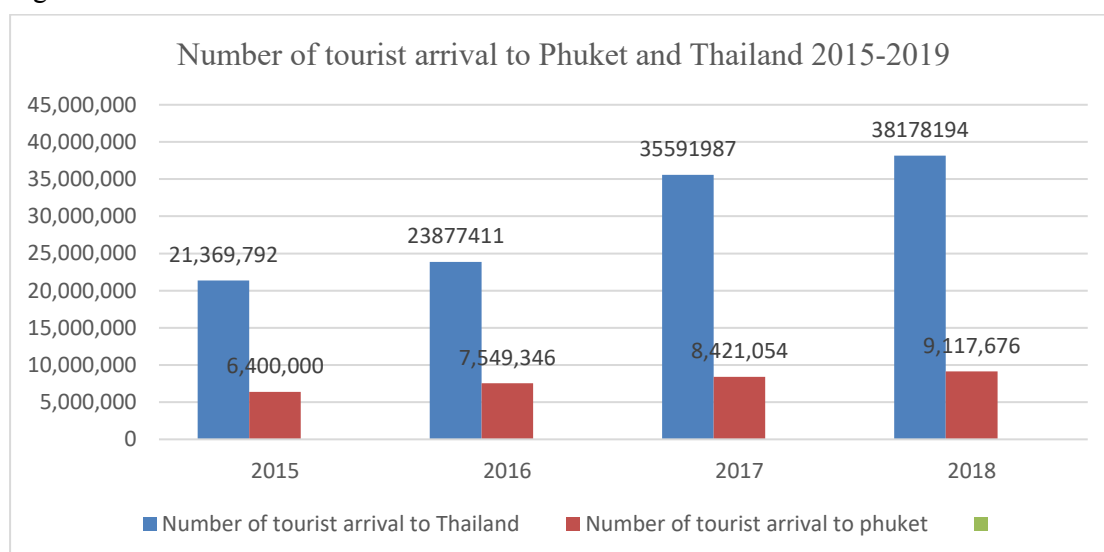
INTRODUCTION

In the introduction part, background and problem of statement, significant of this study was discussed further to give a clear understanding of the research area. The research questions, objectives and scope of this study are discussed.

1.1 Background and problem statement

Phuket is the most famous tourist destination in Thailand, with unique natural landscapes and profound cultural heritage, attracting many international and domestic tourists. (Phuket Island,2020) Figure 1.1 shows the number of people traveling to Phuket and Thailand from 2015 to 2019. In the past five years, the number of international tourists arriving in Phuket and Thailand has been increasing. From 2016 to 2017, the growth rate of tourists reached a staggering at 49%. In 2018-2019, the growth rate of tourists was slowed down due to the ship-turning incident on the Racha Island and the significant appreciation of the Thai baht. However, even under this situation, in 2019, the number of international tourists in Thailand has been reached nearly 40 million. (Ministry of Tourism & Sports, 2020)

Figure 1.1 Number of tourist arrival to Phuket and Thailand 2015-2019



Source : Ministry of Tourism & Sports, 2020.

The tourism industry in Thailand has been developed rapidly and becomes the main source of income of Thailand. Especially the hotel industry that fulfilling the accommodation needs for tourists. Not only has brought a lot of economic income to Thailand, but also provided a lot of employment opportunities for Thailand. Figure 1.2 shows Thailand's tourism revenue from 2015 to 2019. Tourism revenue increased from 1,457,150.28 million baht in 2015 to 1,922,368.23 million baht in 2019. 2019 is the year with the highest tourism revenue in Thailand. (Ministry of Tourism & Sports, 2020)

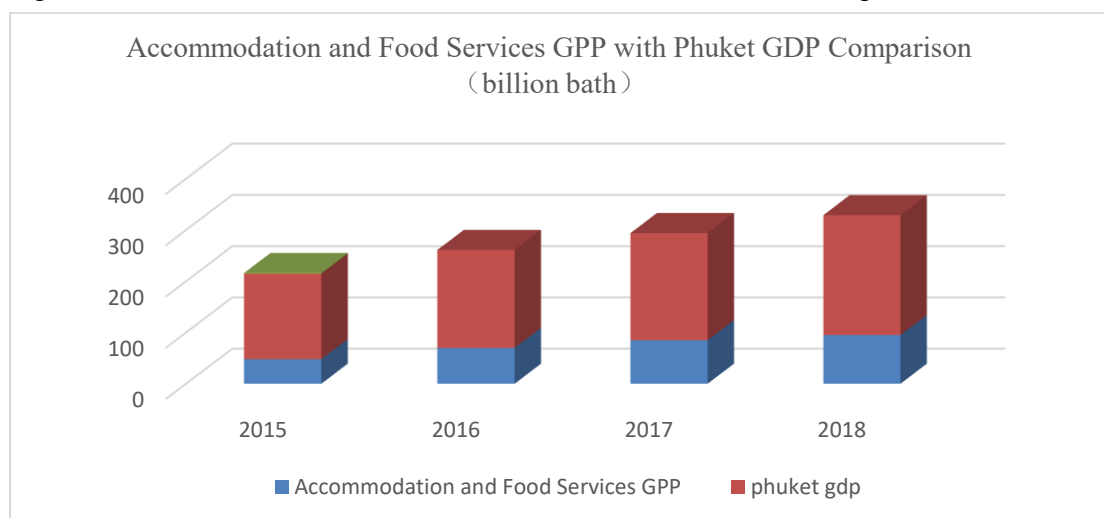
Figure 1.2 Revenue from Tourism of Thailand in 2015-2019



Source : Ministry of Tourism & Sports, 2020.

Phuket's GPP in the tourism sector remains highest among the provinces where the most popular beach destinations are located. Phuket's economy heavily relies on tourism. (C9hotelworks.com. 2020) According to the data of Figure 1.3 in 2019, the accommodation and food services sectors made up nearly 50% to its total GPP. (C9hotelworks.com. 2020)

Figure 1.3 Accommodation and Food Services GPP with Phuket GDP Comparison



COVID-19 is a new coronavirus. It was discovered in Wuhan, China at the end of 2019, in the first time, and then spread rapidly among more than 200 countries around the world. In February 2020, the World Health Organization defined it as a global pandemic. (World Tourism Organization, 2020)

Under the influence of the COVID-19, the global tourism industry has been profoundly affected. According to a report issued by the United Nations World Tourism Organization (UNWTO), the scale of global cross-border tourism dropped by 22% in the first quarter of 2020, and international tourists dropped by 67 million, causing a loss of 80 billion US dollars. The report predicts that in 2020, the number of global cross-border tourists will drop by 60% to 80%. (World Tourism Organization, 2020)

Affected by COVID-19, all accesses to Phuket are closed start from April 2020. (Phuket news,2020) The International visitors to Thailand plummet to zero and all hotels will be closed until 1st, June 2020. (Phuket news, 2020) In 2019, over 14 million travelers, including 10 million foreign tourists, visited Phuket. But because of Covid-19, the number of visitors dropped to only 25,596 from March to October with about 14,000 expats asking to enter the country. (Limited, B., 2020)

It will not be difficult to predict that what the hotel industry will face to when it is reopened. On the one hand, the hotel industry will be suffered from a market where it has sudden drop-down numbers of tourists. On the other hand, the hotel industry will also have to face the

increased number of rooms. In 2020, the hotel industry in Phuket will supply 5,009 new rooms from 21 hotels, an increase of 6% in the number of rooms. (C9hotelworks.com. 2020)

In addition, after COVID-19, the government and the market have also put forward higher epidemic prevention requirements for the daily operation of hotels. Anti-epidemic needs such as regular disinfection and social distancing and those are became the daily normal work.(Who.int. 2020. WHO Thailand) The main market of the Phuket hotel industry has been also changed from international tourists to domestic tourists and inbound tourists demanding isolated. High request of epidemic prevention, low passenger flow, and fierce market competition have become the new status quo of the Phuket hotel industry.

As a result, many hotels in Phuket have difficulty maintaining normal operations and have chosen to temporarily shut down or close permanently. (Nikkei Asia. 2020)Phuket's economy was highly dependent on tourism, Phuket is at the epicenter of the collapse of Thailand's tourist industry, which accounts for about 15% of the nation's gross domestic product, following the imposition of tight restrictions on incoming visitors in early April to fight COVID-19. (Nikkei Asia. 2020)

To cope with the current plight of Phuket's tourism industry, the Thai government is offering a variety of subsidies to promote domestic tourism in Thailand. (Limited, B., 2020) Local stores in Phuket said the state's current promotion of domestic tourism could help them maintain their business. (Limited, 2020) Referring to China's promotion of domestic tourism, businesses were able to maintain their current normal operations by responding positively to the government's epidemic prevention policy and developing new marketing strategies in response to the new demands of the consumer market during covid-19. (R., 2020)

Therefore, in order to adapt to this unprecedented new challenge, the Phuket hotel industry needs to quickly grasp the new needs caused by the epidemic. According to the changes in the market and the demand of target customers, hotels need to provide more professional services and products to form a competitive advantage.

1.2 Research Question

1.2.1 What are demographic and travel patterns of influencing tourists to choose hotels in Phuket during COVID-19?

1.2.2 What are the factors that influence tourists to choose hotel in Phuket during COVID-19?

1.2.3 Comparing Pre and during COVID-19, what are hotel-selection factors among tourists in Phuket?

1.3 Aim and Objective of the Study

1.3.1 Aim:

The main aim of this study is to examine demographic and travel patterns of influencing tourists to choose Phuket hotels during COVID-19 and to examine the factors that influence tourists to choose Phuket hotel during COVID-19.

1.3.2 Objectives:

- To examine demographic and travel patterns of influencing tourists to choose hotels in Phuket during COVID-19.

- To examine the factors that influence tourists to choose hotel in Phuket during COVID-19.

- To compare Pre and during COVID-19 hotel-selection factors among tourists in Phuket.

1.4 Hypothesis of the study

In order to better obtain the study Objectives, the hypotheses in the following table were proposed after combining the literature review.

Table 1.1 Objectives and Hypothesis of the study

Objectives	Hypothesis
<p>Objectives 1: To examine demographic and travel patterns of influencing tourists to choose hotel in Phuket during COVID-19 in Phuket.</p>	<p>Hypothesis 1.1: There is a significant different between tourists who travel with children and tourists who travel without children in hotel is selection.</p> <p>Hypothesis 1.2: There is a significant difference among tourist who used different Booking channel in hotel selection.</p> <p>Hypothesis 1.3: Tourist would plan their trip early prior to their arrival are significant different from tourist who shortly plan their trip prior to their arrival in hotel selection.</p> <p>Hypothesis 1.4: There is a significant different between tourist who used different transport mode in hotel room rate selection.</p>
<p>Objectives 2: To examine the factors that influence tourists to choose hotel in Phuket during COVID-19.</p>	<p>Hypothesis 2: There is a significant different between Hotel Factors and Hotel price toward hotel selection</p>
<p>Objectives 3: To compare Pre and during COVID-19 hotel-selection factors among tourists in Phuket.</p>	<p>Hypothesis 3.1 : Comparing to Pre COVID-19, tourists increasingly consider Hotel facilities factor in their hotel selection.</p> <p>Hypothesis 3.2 : Comparing to Pre COVID-19, tourists increasingly consider Hotel service in their hotel selection.</p> <p>Hypothesis 3.3 : Comparing to Pre COVID-19, tourists increasingly consider Hotel security and cleanliness in their hotel selection.</p> <p>Hypothesis 3.4 : Comparing to Pre COVID-19, tourists increasingly consider Hotel safety and cleanliness in their hotel selection.</p>

1.5 Significance of the Study

There are many researches done on hotel selection criteria, but the huge changes in the global tourism environment caused by COVID-19 have caused enormous changes in the factors that affect travelers' choices of hotel. Therefore, this study will help the hospitality industry to better understand the travel patterns of influence tourists when making a decision to choose a hotel during COVID-19. The hotel industry strives to develop, utilize and improve its own hotel attributes to meet the changes in the factors that have caused tourists to choose hotels due to COVID-19.

1.6 Scope of study

The 400 questionnaires were distributed by scanning QR code to tourists visiting Phuket Old Town and Cape Panwa. Before the questionnaires were distributed, it was confirmed that the respondents were tourists who were visiting Phuket and had a need for accommodation. The main locations for distributing the questionnaires were restaurants near the hotels in Phuket Town and Cape Panwa. The main customers of these restaurants are the residents of the surrounding hotels. Before to distributing the questionnaires, communication was made with the restaurant operators and consent was obtained from the restaurant operators. During the distribution process, the respondents filled in the questionnaire by scanning the QR code with their mobile phones, which met the requirements of epidemic prevention. Free masks were provided to the respondents after completing the questionnaire. The questionnaire was distributed for the period of October 2020 to November 2020.

1.7 Definition of key term of the study

For the purpose of this study, it is important to provide clear and specific definitions of term used in this study. The present study has used several terms which are here defined. Unless otherwise stated, the meanings of these terms are adopted by the dissertation.

Impact of the COVID-19 pandemic on tourism: The COVID-19 pandemic has had a huge impact on the tourism industry due to the resulting travel restrictions as well as slump in demand among travelers.

Consumer behavior: Consumer behavior is the study of individuals, groups, or organizations and all the activities associated with the purchase, use and disposal of goods and services, and how the consumer's emotions, attitudes and preferences affect buying behaviors.

Consumer selection process: The Consumer Decision Processes (also known as Buyer Decision Processes) refer to the decision-making stages that a consumer undergoes before, during, and after they purchase a product or service.

Hotel attributes : hotel facilities, hotel services, hotel location, hotel image, hotel safety and cleanliness, and hotel promotion.

CHAPTER 2

LITERATURE REVIEW

This chapter reviews the ideas, theories and related literature which concerning mainly about impact of the COVID-19 pandemic on tourism, the consumer behavior in travel and tourism, Consumer selection process and 7ps of marketing is organized as follows.

2.1 Impact of the COVID-19 pandemic on tourism

2.11 Definition of COVID-19

2.12 The impact of COVID-19 on Tourism

2.13 The impact of COVID-19 on Tourism behavior

2.2 Consumer behavior

2.2.1 Definition of consumer behavior

2.2.2 Factors influence consumer buying behavior

2.3 Consumer selection process

2.4 Hotel attributes

2.5 Types of hotels

2.1 Impact of the COVID-19 pandemic on tourism

2.11 Definition of COVID-19

COVID-19 is an epidemic disease, and the established routes of infection for COVID-19 include primarily human-to-human contact transmission (both direct contact and indirect contact through other objects), aerosol transmission (through inhalation of air), and fecal-oral transmission. Of all control measures, the most effective is to minimize close human-to-human contact. COVID-19 was first identified in Wuhan in December 2019 and subsequently spread rapidly to 212 countries worldwide. COVID-19 is characterized by fever, headache, body aches and pains, fatigue, dry cough, and sputum. (United Nations. News, 2020)

2.12 The impact of COVID-19 on Tourism

Tourism was an environmentally sensitive industry that was highly susceptible to crisis events that can lead to a severe economic downturn and create a tourism crisis. (Traveldaily.cn. 2020) Crisis events can be divided into five categories: international relations

events, domestic political events, terrorist attacks, financial crises, and natural and man-made disasters.

Compared to other crisis events, the impact of the epidemic on tourism has been the most severe. In just a few months, COVID-19 has affected 212 countries around the world, causing a series of problems such as city closures, flight suspensions, school suspensions and border closures. It has seriously affected normal social activities and dealt a huge blow to all sectors of society. (Traveldaily.cn. 2020)

According to data released by the National Economic and Social Development Committee of Thailand, due to the global spread of COVID-19, the number of international tourists has dropped sharply, and Thailand's pillar industry tourism has suffered heavy losses. This has caused Thailand's economy to shrink by 12.2% in the second quarter of this year. May exceed the period of the Asian financial crisis at the end of the last century. (Nesdc.go.th. 2020)

In 2019, 39.8 million international tourists will arrive in Thailand, accounting for 11.4% of the country's GDP. The Thai government predicted last year that 40 million international tourists would arrive in Thailand by 2020. However, under the influence of COVID-19, this number has become an impossible task. Previously, the Tourism Authority of Thailand estimated that only 14 million foreign tourists would come to Thailand this year, the lowest level in the past 14 years. The Bank of Thailand's forecast is even more pessimistic, predicting that the number of international tourists arriving in Thailand could be as little as 8 million. (Nesdc.go.th 2020)

With the continuous spread of the epidemic, the global tourism industry faces serious uncertainty. The Thailand Epidemic Management Center announced that it intends to open restricted travel to some countries in order to promote the recovery of the Thai tourism industry. However, tourists will need to be quarantined in hotels for 14 days. After confirming that they are not infected with COVID-19, tourists can travel freely in Thailand.(Travel Off Path. 2020.)

But these measures are not enough to attract enough international tourists. At present, the Thai government is making efforts to promote the development of domestic tourism. The domestic tourism market accounts for about 30% of Thailand's tourism market, which has become an important driving force to promote the recovery of Thailand's tourism industry. The government stimulates domestic tourism by issuing coupons for hotels, restaurants and air tickets. (T A T highlights the tourism promotion activities of Thai foreigners in 2020)

2.13 The impact of COVID-19 on Tourism behavior

COVID-19 has brought about significant changes in consumers' travel patterns. These changes are mainly due to the needs of epidemic prevention and changes in tourism environment. These changes also put forward higher requirements for the hotel industry, prompting hotel operators to take measures to deal with the challenges brought by the epidemic. Travel patterns is directly affected by travel (Mao et al., 2010). Therefore, hotel operators must actively respond to COVID-19, meet the needs of consumers caused by the epidemic, and restore the confidence of tourists.

Compared with January 2020, the number of "flight cancellation" queries increased by 15 times in March 2020. Travel instability caused by COVID-19 has become the new normal in the during epidemic era. Changes in policy of origin and destination may lead travelers to cancel or rearrange itineraries. Therefore, whether the hotel can provide corresponding policies is the main factor to attract customers. In order to ensure a stable occupancy rate, hotels usually make policies that cannot be cancelled. During COVID-19, the policy of **free cancellation and free rescheduling** meets the actual needs of tourists. (The impact of the coronavirus on travel-Google think, 2020)

According to McKinsey's survey, due to the epidemic situation, various countries have also closed their borders, the number of international tourists has greatly decreased, and domestic tourism is slowly recovering from the stimulation of policies. (Mckinsey. 2020.)

Affected by the spread of the epidemic, During COVID-19, tourists mainly travel by car. Self-guided self-driving has become the mainstream way of travel. (Mckinsey. 2020.) Compared with airplanes, tourists don't need to stay in a narrow space with strangers. Driving by yourself with familiar family members or friends increases the safety factor relatively. Therefore, guests will have demand for **hotel parking areas** and **car rental services**.

According to the survey of during COVID-19 Chinese tourists' tourism demand, tourists prefer to enjoy outdoor natural scenery. Try to minimize contact with dense crowds. **Beach** not only meet the needs of people's leisure and entertainment, but also maintain social distance and meet the needs of epidemic prevention. In China, Sanya City has become a favorite tourist city for Chinese tourists in the during COVID-19. (Will Engel. 2020)

COVID-19 is highly contagious from human to human (Chan et al., 2020), and people are urged to reduce interpersonal contact and increase social distance (WHO, 2020A). Therefore, it can be expected that the outbreak of COVID-19 will accelerate the entry of contactless services into the hotel industry. Specifically, more Hotel "unmanned" devices and robots can be used to provide completely contactless services. **Contactless services** mainly include cashless service, online check-in and check-out, robot delivery, code scanning to reduce the use of paper menus, infrared temperature sensor to measure body temperature, intelligent artificial intelligence cleaning, etc. (Jiang Wen, 2020)

Affected by the epidemic situation, the importance of hotel sanitation has become particularly prominent. Because COVID-19 can be transmitted by contact with virus contaminated surfaces (WHO, 2020b). The public area of the hotel contacts more people, and indirect contact with the public area has become a potential source of virus transmission. (Park et al., 2019).

In addition, aerosol transmission through central air conditioning may be another route of COVID-19 transmission (Zhang et al., 2020). In China, hotels used for quarantine are required to turn off central air conditioning to prevent cross-contamination of COVID-19 through air circulation. Central air conditioning usually makes hotels more modern. However, due to the spread of covid-19, **Independent air conditioning** is more compatible with vaccination requirements. (Will Engel. 2020)

Due to the outbreak of COVID-19, travelers tend to choose hotels that can provide more professional epidemic prevention services and a **highly hygienic and clean environment**. Therefore, higher requirements are put forward for **hotel staff's knowledge of epidemic prevention** and health of hardware facilities.

In terms of hardware facilities, **public gyms and nursing rooms** are common health facilities in hotels. According to a survey report conducted by Nielsen on business travel scenarios, business travel users will pay more attention to hotel sports facilities. These customers have higher fitness needs and can continue to exercise during business trips. However, public gyms can easily increase the infection rate of the virus because they are not cleaned in time and cannot maintain social distance. Therefore, in the context of the epidemic, **fitness facilities in guest room** have become a new demand in terms of convenience and safety. (Will you go to the hotel gym? 2020)

In order to make fitness more convenient for people on the journey, Hilton Hotel moved the **gym into the guest room**. At the end of May 2017, two Hilton hotels in the United States added 11 types of fitness equipment of different sizes in the guest rooms, a variety of small equipment with functional training racks, indoor bicycles, and a touch screen containing 200 video courses. But most hotels do not have enough indoor space to place this large sports equipment. In the Chinese market, Westin chose to cooperate with the sports technology company Keep. Keep has specially developed a set of sports teaching courses for the guest room space. For this reason, Westin opened an exclusive TV channel to allow business travelers to exercise in the guest room. (Ratten, 2020)

Hotel is a comprehensive service enterprise. When providing the service required by guests, the hotel has the obligation and responsibility to protect the personal and property of customers from infringement. Most hotels have a basic infirmary to deal with unexpected accidents during guests' stay in the hotel. During COVID-19, people pay more attention to their health. Especially during the isolation period, people are prone to physical and psychological problems. **24-hour online doctor services** can largely resolve consumer anxiety. (Baum, Mooney, Robinson and Solnet, 2020)

In addition, the hotel's health and epidemic prevention training for employees can also improve customers' trust in hotel safety to a certain extent. Sanitation and anti-epidemic training include two aspects: one is the employee's own sanitation and anti-epidemic requirements. Wear necessary personal protective equipment, take regular temperature measurement and keep the work area clean and hygienic. Another aspect is the sanitation service for guests. This includes providing guests with complete protective equipment during check-in, measuring their body temperature, providing guests with professional epidemic prevention information, and maintaining a safe social distance for guests. (Jones and Comfort, 2020)

2.2 Consumer behavior

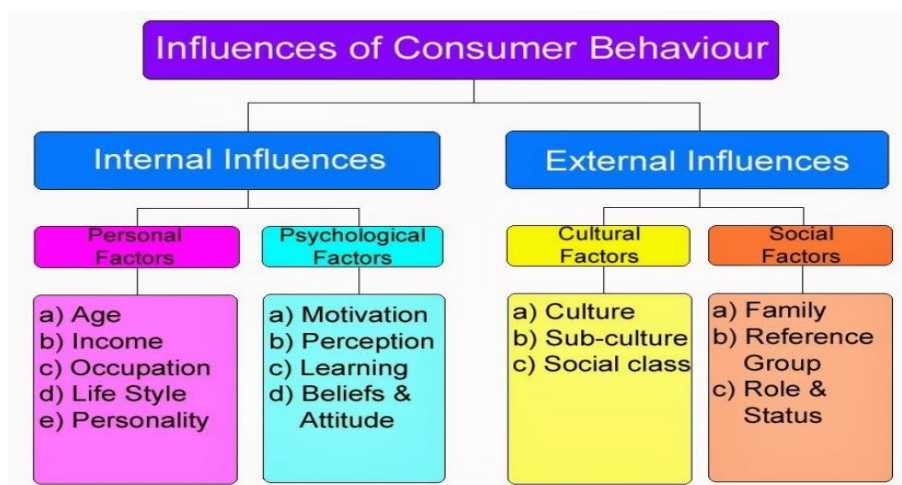
2.2.1 Definition of consumer behavior

Consumer behavior is the study of individuals, groups, or organizations and all the activities associated with the purchase, use and disposal of goods and services, and how the consumer's emotions, attitudes and preferences affect buying behaviors. Consumer behavior is a whole and a process, and acquisition or purchase is only one stage of this process. (Noel, 2018)

2.2.2 Factors influence consumer buying behavior

Consumer purchasing behavior is a process in which people seek, choose, purchase, use, evaluate and dispose products or services to meet their needs and desires. According to the consumer behavior research of n Ramya and Dr. SA Mohamed Ali, the factors influencing consumer behavior can be divided into the following four aspects. (N Ramya and Dr. SA Mohamed Ali 2016)

Figure2.1 Factors influence consumer buying behavior



Source : N Ramya and Dr. SA Mohamed Ali, 2016.

1) Culture factors

Culture is the precipitation of historical phenomena formed in people's social practice. Culture is inherently intangible; Culture usually consists of three parts.

First, culture is the collective term for human knowledge, beliefs, art, morals, law, aesthetics, customs, language, writing and other abilities and habits acquired by human

beings as members of society. (Tushar, 2015) Culture is formed by people in social practice and is the precipitation of a historical phenomenon. Culture is dynamic and in constant flux.

Second, subcultures with different values and customs. Values refer to people's attitudes and opinions on various things in social life. (Kolb, 2014) Different cultural backgrounds have very different values. For example, Asians prefer to share food together, and Europeans prefer a split meal system. Under the influence of the epidemic, the meal sharing system is more in line with the needs of epidemic prevention.

Third, the social class is relatively stable. People of different social classes have different economic conditions, values, hobbies, lifestyles, consumption characteristics, leisure activities and acceptance of mass media. These will have a direct impact on their products, brands, stores, buying habits and purchasing methods. (N Ramya and Dr. SA Mohamed Ali 2016) Therefore, understanding the habits and preferences of different groups can better segment the market and find the target group.

2) Social factors

Consumer behavior is also influenced by social factors. Social factors include the consumer's family, reference groups and social class. (Durmaz, Y. and Durmaz, B. 2013.)

The family is the most basic group to which the individual consumer belongs. A person learns many of his or her daily consumer behaviors from his or her parents. Even after growing up and leaving home, the influence of parental instruction is still evident. Consumer behavior is heavily influenced by the family life cycle, with each life cycle stage having a different purchase or behavior pattern. (McGowan, M., Shiu, E. and Hassan, L., 2016)

A person's consumer behavior is influenced by many reference groups. The groups that are directly influenced are called membership groups and include primary groups such as family, friends, neighbors, and co-workers and secondary groups such as religious organizations, professional organizations, and peer unions. Some products and brands are heavily influenced by reference groups, and the opinions of reference groups can influence consumers' purchasing behavior. (G Chaudhary, 2018)

Social class refers to the division of members of society into several social classes according to certain social criteria, such as income, education, occupation, social status and

prestige. People in the same social class tend to share common values, lifestyles, ways of thinking and life goals, and influence their purchasing behavior. (Durmaz, Y. and Durmaz, B.2013)

3) Personal factors

The important personal factors influencing consumers' purchase behavior include: **Economic Situation, Occupation, Age, life-cycle, Gender and Education** level.

The **economic** base determines the superstructure. High income is often accompanied by high consumption. (Linh, 2020) On the one hand, consumers' income affects their level of purchases. On the other hand, the economic environment affects the consumer's desire to spend. Under the influence of COVID-19, the economic outlook is uncertain, leading consumers to reduce unnecessary spending.

A person's **occupation** has a significant influence on his or her purchasing behavior. (Linh, 2020) Different occupations attach different importance to hotel facilities and hygiene. For example, medical workers tend to pay more attention to hotel cleanliness during COVID-19.

The influence of **gender** on consumption is reflected in the different attitudes of males and females towards consumption: male purchasing behavior is relatively purposeful and rational. The formation of purchase motivation is characterized by rapidity and passivity. Males are relatively independent in their purchasing process, but lack patience. Females' buying behavior is focused on the specific benefits and practical value of the goods. Females tend to be emotional in the buying process. Female consumption tendency is characterized by diversity and individuality. (Durmaz, Y. and Durmaz, B.2013.)

Education affects consumer behavior. However, most of the effects of education on consumer behavior are indirect. Education can affect the consumer's ability to afford it. There is a positive relationship between a person's level of education and his or her personal income. When income rises, consumers have a wider range of choices and the characteristics of consumption change. The process of education changes the consumer's taste in life. Education changes the lifestyle of the consumer. It includes the ability to gather information and the depth and circumspection of the consumer's thinking. (G Chaudhary, 2018)

Age and life-cycle have potential impact on the consumer buying behavior. The consumers change the purchase of goods and services with the passage of time. According to

research on the psychology of age: consumers of different ages have different consumer psychology. (Stet, M. and Rosu, A., 2012)

In early adulthood (18-26 years of age), university students and newlyweds are the main consumer groups. Consumers in this age group are fashion-conscious and consume ahead of their time. They stand at the forefront of the times, they are pursuers of new products and new ways of consumption, and they like to have unique style of products. Consumers in this age group are also prone to impulsive and irrational spending. Most of the consumers in this stage are poor financial management ability, lack of planning of expenditure, making themselves "follow the feeling" in consumption. They lose their judgment in consumption, resulting in a lot of irrational and blind consumption. (Mallalieu, L., 2006.)

In the middle of adulthood (26-50 years old), parents are the main consumers of this stage. Consumers in this stage are rational and have few emotional impulses. Consumers have a lot of experience in life, and they buy products according to their actual needs. The emotional response is generally calm, and they rarely get emotionally involved. They insist on their own opinions and are not influenced by the outside world. They are also more likely to think about their children in the consumption process. (Mallalieu, L., 2006.)

In late adulthood (from age 50 until death), the elderly is the main consumer group. Most elderly consumers have their own opinions and trust their own experience and wisdom when it comes to consumption. (Mallalieu, L., 2006.)

As consumers' **family roles** change, they tend to have different requirements for goods and services. (Hoyer, Pieters and MacInnis, 2013) Consumers who travel with their children tend to have more demanding requirements when choosing a hotel.

4) Psychological factors

The main psychological factors that affect consumers' buying behavior are motivation, cognition, learning and attitude. The **motivation** is to generate consumer demand for purchase. Any purchasing activity is always governed by certain motives, and this motivation from within the consumer responds to the physical, psychological and emotional needs of the consumer. (Stet, M. and Rosu, A., 2012)

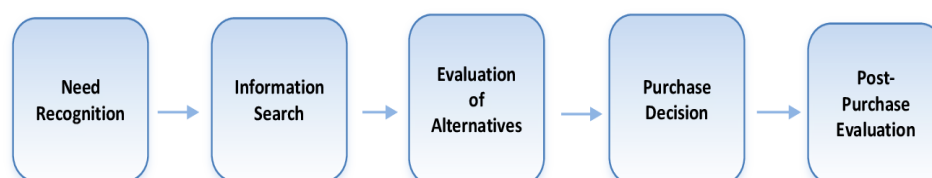
Consumer **attitudes** are the emotional tendencies that consumers have towards goods or services in the process of buying or using goods. If consumers hold a positive

attitude, they will promote their purchase behavior; if they hold a negative attitude, they will hinder or even interrupt their purchase behavior. (Chaudhary, G., 2018) Consumers form beliefs and attitudes when purchasing and using goods. Attitudes towards goods in turn influence consumers' future purchasing behavior. Businesses would be better off changing their products to fit the existing attitudes of consumers rather than trying to change their attitudes. (Stet, M. and Rosu, A., 2012)

Perception refers to people's understanding of individual attributes or the whole of commodities through senses and memories. (Amaral, N., 2020) **Learning** was a psychological process of lasting change in individual behavior caused by experience. Learning was the process by which consumers gradually acquire and accumulate experience through practices such as use, practice or observation, and adjust their purchasing behavior in response to that experience. (Durmaz, 2014)

2.3 Consumer selection process

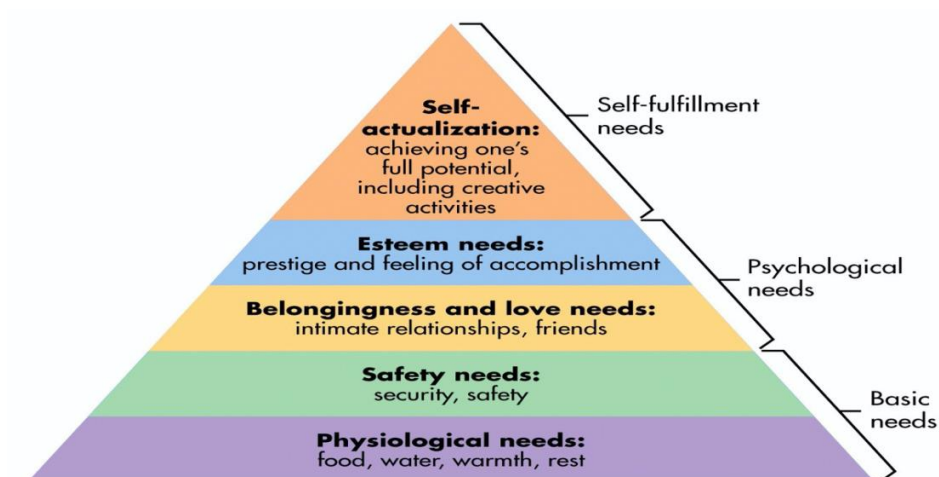
Figure 2.2 The purchase decision-making process by a consumer



1) *Needs awareness*

Needs awareness was the first stage of the consumer decision-making process. At this stage, consumers can identify what their needs are. Then, what product or a certain product will be able to meet the demand. Needs awareness was considered the first and most critical step in the purchase process. Because if consumers are not aware of the problem or need, they usually do not consider buying the product.

Figure 2.3 Maslow's hierarchy of needs



Source : Brown, 2005.

Maslow's hierarchy of needs into five categories: physiological needs, safety needs, social needs, compliance needs, and self-actualization needs. From the perspective of corporate consumer satisfaction (CS) strategy, each Consumers at the demand level have different requirements for products. different products meet different demand levels. (Brown, 2005) The marketing method was based on the needs of consumers, and different needs also produce different marketing methods.

According to five levels of need, five consumer markets can be divided:

- **Physiological needs** → Meet the market with the lowest demand level, consumers only need products with general functions. Consumers at this level often only need hotels to provide the most basic accommodation services. (Pichère, Cadiat and Probert, 2017)
- **Safety needs** → Meet the market that requires "safety". This demand was manifested in the hotel industry as the hotel needs to provide complete security facilities and safe hygiene standards. Consumers pay attention to the impact of products on the body. (Hotel Tech Report. 2013.)
- **Social needs** → Meet the market that requires "social contact", consumers pay attention to whether the product can help improve their social image. Consumers at this level have higher requirements

for hotel hardware facilities and services. (Hotel Tech Report. 2013.)

Hotels need to offer a wider range of recreational facilities and additional services.

- **Satisfying needs** → Meeting markets with unique requirements for products, consumers pay attention to the symbolic meaning of products. Consumers at this level pay more attention to the hotel's star rating and image. (Hotel Tech Report. 2013.)
- **Self-realization** → Realize personal ideals and ambitions, maximize personal abilities, and accomplish all things commensurate with their abilities. (Pichère, Cadiat and Probert, 2017)

2) *Information Search*

Information Search was a stage in the Consumer Decision Process during which a consumer searches for internal or external information. (Oktadiana and Kurnia, 2011) As consumers are in a state of uncertainty about the quality and service of the hotel prior to booking, they seek information from a variety of sources and need to use a large amount of information to inform their decision-making process. (Hamza Salim Khraim, 2020)

Internal search refers to a consumer's memory or recollection of a product, oftentimes triggered or guided by personal experience. This is when a person tries to search their memory to see whether they recall past experiences with a product, brand, or service. If the product is a frequently purchased product, internal information search may be enough to trigger a purchase. (Studymode.com. 2011) During the process of booking a hotel, consumers first search their minds for hotels they have stayed in before and compare the impressions these hotels give them. Hotels or related brands that have had great experiences are often chosen again by consumers.

External search was conducted when a person has no prior knowledge about a product, which then leads them to seek information from personal sources (e.g., friends and family recommendations) or public sources (e.g. social media recommendations, newspaper and guide book) or marketer dominated sources (e.g. online travel websites, travel agent and loyalty program websites) especially when a person's previous experience was limited. (Oktadiana and Kurnia, 2011) Consumers collect information about hotels primarily on hotel prices, location, facilities, image, promotions, and service quality of the hotel. For hotel prices, hotel facilities and hotel

location, tourists tend to look for them from online travel agents, travel agencies and hotel websites. (AAQ, R., 2016)The image of the hotel and the quality of the hotel's services relate to the hotel's reputation. (Jeziarski, A., 2020) Travelers collect hotel's reputation from two main sources: On the one hand, there was the traditional word of mouth, i.e. getting reviews about the hotel from friends or family members. On the other hand, was the tourists who get information about the hotel from social media and online reviews. (Jeziarski, A., 2020) With the development of information technology, online travel agencies and meta-search portals have become essential sources of information (Buhalis & Law, 2008, Mauri, 2014). Hotel guests can effortlessly compare competitive products on online booking channels such as Booking, Ctrip. They can also read reviews and recommendations from past customers on review sites such as Tripadvisor.com or social media sites (Verma, 2010). With the development of information technology, the website of tourism agencies has become an important channel for disseminating tourism information resources, and was the main reference source for most potential tourists to search for information before traveling. With the characteristics of low search cost and fast dissemination, online travel information has become an important information carrier and a factor influencing travelers' decision.

3) Evaluation of Alternatives

Evaluation of alternatives was the third stage in the Consumer Buying Decision process. During this stage, consumers evaluate all of their product and brand options on a scale of attributes which have the ability to deliver the benefit that the consumer is seeking. Customers rarely focus their evaluations and build their expectations on a single hotel property. (Aurelio G. Mauri 2018)After searching for information, the consumer will get the attributes of different hotels. At the stage of evaluating alternatives, consumers compare the various attributes and choose the hotel that meets their expectations. According to Aurelio G. Mauri study, Competitors' actions, Psychological factors, Marketing communications, Hotel product and service and Price influence the customer's expectations. (Aurelio G. Mauri 2018)

4) Purchase decision

The purchase decision is the fourth stage in the consumer's decision-making process. In this stage, the consumer will decide whether or not to purchase the product. If the consumer makes a purchase, from what source will the consumer purchase the product? In the

hospitality industry, the main buying channels for consumers include walk-in bookings, hotel websites, travel agents and online travel agencies. (Hotel Channel Management & Online Distribution Solutions, 2020) According to past studies, online travel agencies are the most preferred booking method for tourists. Online travel agencies have strong bargaining power and are able to attract consumers with the lowest prices after they have gone through price comparisons from various sources. Websites of large chain brands are more popular with consumers than lesser-known brands. With their loyalty programs, large chain brands attract more consumers to book hotels through their websites. Travel agents tend to be more popular with large tour groups. Relying on a stable and large number of customers, they reach lower agreed prices with hotels, creating a price advantage for travel agents. (Invattur. 2014.)

After comparing and evaluating product information, the consumer has formed an intention to buy, but two additional factors influence the transition from intention to decision to buy (Emerald.com. 2016):

1. The attitude of the other person, the stronger the opposition, or the closer the opponent is to the consumer, the greater the likelihood that the consumer will modify his or her purchase intentions.
2. Unforeseen circumstances-unemployment, unexpected urgent needs, price increases, etc.-are likely to change a consumer's purchase intentions.

5) Post-Purchase Behavior

Post-purchase behavior is when the consumer assesses whether he is satisfied or dissatisfied with a purchase.

Post-purchase behavior is the final stage in the consumer decision process. How the consumer feels about a purchase will significantly influence whether he will purchase the product again or consider other products within the brand repertoire. A consumer will also be able to influence the purchase decision of others because he will likely feel compelled to share his feelings about the purchase. (Pre-Purchase & Post-Purchase Behavior - Tutorialspoint, 2013)

Satisfaction or dissatisfaction is the dominant feeling of the consumer after purchasing a good. On the other hand, it depends on what other people say about the product. The consumer is more satisfied if the people around him have more positive opinions about the product, and more dissatisfied if he has more negative opinions, even if he originally thought that the product

was a good. Those who are satisfied may also turn out to be dissatisfied. (Taylor & Francis, 2015) Consumers who are satisfied are more likely to behave in a way that promotes and recommends them to others.

If the level of consumer dissatisfaction is low or the value of the goods is low, consumers are likely not to complain. However, if the level of dissatisfaction is high or the value of the merchandise is high, the consumer will typically take means to express their dissatisfaction. If the hotel fails to properly handle the customer's complaint, the consumer may tell a family member or friend about the dissatisfaction and never purchase this hotel or this brand-related hotel again. A possible course of action for consumers in extreme cases of dissatisfaction is to take their dissatisfaction to the public, such as complaining to a consumer association, disclosing it to the news media, or even going to court. Such an action would be more costly to the business. Hotels should avoid such a situation as much as possible. In fact, even if a situation arises where a consumer is not satisfied, the hotel can make the consumer change his or her satisfaction if it handles the situation properly. For example, the hotel changes the room for the consumer in a timely manner, the hotel listens to the consumer patiently and apologizes sincerely, takes positive steps to improve the situation, and, if necessary, takes the initiative to compensate the consumer, and so on. (Taylor & Francis, 2015)

2.4 Hotel attributes

According to SunghaJang's research, hotel attributes for consumers to evaluate quality include price, hotel environment, cleanliness, service, attractiveness, relaxation opportunities, loyalty program, guest experience, promotions, amenities, conventions, green program, hotel image, and hotel reputation. (Kim, K. and Chang, Y., 2017)

There are many attributes of hotels, and with the change in tourist behavior during the COVID-19 period, the attributes that influence tourists' choice of hotels can be categorized into 6 major factors: hotel facilities, hotel services, hotel location, hotel image, hotel safety and cleanliness, and hotel promotion.

Hotel Facilities

The basic facilities of the hotel include front desk facilities (reception hall, cashier desk, business center, valuables storage, reception, etc.), room facilities (dressing table,

wardrobe, bed, chair, sofa, bedside control cabinet and other matching furniture, hot and cold water facilities, split air conditioning or central air conditioning, television and audio equipment, sanitary toiletries, etc.) dining facilities (various restaurants and tableware, etc.), entertainment facilities (fitness room and various fitness equipment, swimming pool, SPA, etc.) and hotel business security facilities (parking area).

Depending on the level of the hotel, there are different hotel facilities available. During the COVID-19 period, along with the need for epidemic preparedness and changes in tourists' travel patterns, tourists have become more interested in some hotel facilities.

According to the China Tourism Report, driving became the main mode of travel during the COVID-19 period. Therefore, parking areas have become an important demand for hotel facilities for tourists.

As a result of COVID-19, people have become more conscious of their health. Fitness room have also been popular among business people. However, due to the need for epidemic prevention, many hotels choose to close the fitting room or limit the number of people entering the fitting room to maintain a social distance. Thus, there is a new demand for in-room fitting facilities. In-room fitting facilities can meet the fitness needs of customers while reducing the risk of covid-19 infection.

Most hotels in Phuket offer buffet breakfast. The breakfast buffet in hotels is usually an open display and generally self-collected by the consumer. According to the China Health Bureau, if staff and consumers are talking or coughing or sneezing while consumers are grabbing food, the virus is transmitted by droplets, increasing the risk of COVID-19 infection. So, in order to reduce the risk, separate order breakfasts reduce human contact and are more hygienic and safer.

Cashless payments have been popular for a long time, and credit card payments and mobile phone payments have reduced the use of cash and the indirect contact between guests and staff.

Recreational facilities in room: Recreational facilities include swimming pools, water parks, and indoor recreational facilities. recreational facilities have also been popular for tourists. However, due to the need for epidemic prevention, many hotels choose to close the recreational facilities or limit the number of people entering the public recreational facilities to

maintain a social distance. Thus, there is a new demand for in-room recreational facilities. In-room recreational facilities can meet the recreational needs of customers while reducing the risk of covid-19 infection.

Disposables will reduce indirect contact between people and the health hazards caused by incomplete cleaning. Individual air conditioning ensures that air from different rooms does not circulate to each other through the air conditioning ducts.

Masks, alcohol and other: Masks, alcohol, and other epidemic prevention supplies are new hotel facilities because of COVID-19. COVID-19 is primarily transmitted from human to human through respiratory droplets. A mask is a simple barrier that reduces droplet spray when the mask covers the nose and mouth. Wearing a mask is especially important when it is not possible to maintain a social distance of at least 6 feet. For the safety of hotel guests, a portable mini bottle of disinfectant alcohol is provided at check-in. Hand sanitizer is available in public spaces. Disinfectant alcohol and spray are available on each floor in public areas such as the hotel lobby and breakfast room.

Hotel Services

Hotel service refers to the content, manner, attitude, and speed of the services provided by the hotel. The type and level of services provided by the hotel is one of the main factors that guests use when choosing a hotel. Good service is an important means to establish the image of the hotel and increase the visibility of the hotel.

Hotel services include many categories, this study focuses on services related to COVID-19. Because COVID-19 is primarily transmitted through direct or indirect close contact with infected people via mouth or nose secretions, social distancing and frequent sanitation are highly recommended. (World Tourism Organization, 2020) It is not surprising to see consumers demand services with minimum human contact, which in turn promotes contactless services.

Contactless services include :

- Contactless check-in and check-out process.
- Enhanced cleaning standards and procedures, with or without the aids of technology.

- Contactless experiences with a hotel's mobile app, through which travelers can access in-room TV, room service, concierge, and guest service.
- Digital menus in food outlets, some including retrieving a digital menu on a traveler's mobile device. (Net, H., 2020.)

According to the European Commission's regulations issued during COVID-19, in the event of cancellation or rescheduling due to force majeure such as COVID-19, merchants are required to provide free cancellation or rescheduling services. In Thailand, the government has not issued a decree on COVID-19, so free cancellation and free rescheduling of services are mainly based on hotel regulations. (European Commission, 2020)

The modern hotels have room services, even the bed and breakfast hotels offer services of room service. (Jacobs, G., 2020) 24 hours-Room service is organized as a subdivision within the food and beverage department of high-end hotel and resort properties. It is uncommon for room service to be offered in hotels that are not high-end, or in motels. (Razalli, M., 2020)

Airport transfer services can reduce the amount of time tourists spend waiting in line for taxis at the airport. However, not all hotels offer free airport transfers. Free airport transfer services are usually found in high-end luxury hotels. But even paid airport transfers reduce the anxiety of first-time visitors to Phuket by eliminating the need for them to think about how they will get to their hotel. (Moro, Lopes, Esmerado and Botelho, 2020)

The health of the guests is an important element of room management. The hotel is obliged to ensure the personal safety of the guests during their stay. On the one hand, the online doctor consultation service provides guidance to hotel staff on how to deal with sudden illnesses of guests. On the other hand, it also reduces the need for guests to travel to and from the hospital for minor accidents. (Bashkir State University, 2020)

According to the survey, people's fear of COVID-19 pair mainly stems from incomplete knowledge of the epidemic. The overall control of the epidemic in Phuket is relatively perfect, and the provision of timely information about the epidemic can increase the safety and confidence of tourists. (Lima, C., 2020)

Hotel Location

A Hotel's Location is undoubtedly one of the most important factors for choosing a hotel. Nearly all activities of the travelers are linked to the hotel's location, and almost their entire journey planning is made based on the location and accessibility of the Hotel. (Morantis and Morantis, 2016)

Because COVID-19 is primarily transmitted through direct or indirect close contact with infected people via mouth or nose secretions, social distancing and frequent sanitation are highly recommended. (World Tourism Organization, 2020) Therefore, hotels that are away from the crowds, able to maintain a social distance, with a private beach, are more in line with the needs of tourists during COVID-19.

Phuket is an international tourist island and the beaches are an important attraction for tourists arriving in Phuket. (Taecharungroj and Mathayomchan, 2019) The means of transportation for tourists to arrive in Phuket is also mainly by air.

Compared to Pre COVID, people are more concerned about their health. Therefore, the distance between the hotel and the hospital is also a factor for tourists to choose a hotel.

Hotel Image

Hotel image refers to the public's impression and evaluation of the hotel. If a hotel wants to show its difference, the most effective breakthrough point is to establish a good and unique image. (Journal of Tourism Research & Hospitality, 2013) A hotel brand is a distinctive mark used by a hotel to distinguish its products and services from those of other hotels and to enable consumers to identify them. Professional branding is more likely to give visitors a sense of security. (Foroudi, P., 2019) It's common knowledge that hotels are divided into 5 star categories. The higher the star rating of the hotel means the larger the scale of the hotel, the more luxurious equipment and the better service. The classification of stars is generally based on the hotel's architecture, decoration, facilities, management and service levels. (Shapiro, 2017)

Hotel security and cleanliness

COVID-19 has posed challenges never seen before by the hotel industry. The industry faced the challenge of not only creating a safe lodging environment but also creating the impression of security to give guests the confidence to travel again. (Christian Cross. 2020) Hotels encounter different types of emergencies in the course of their daily operations. These

unforeseen emergencies can occur at any time without any notice and hotel staff should be well trained to recognize such emergencies and be able to act quickly. (Staff, T. and HR, S., 2020)

24 Hour Surveillance Cameras are essential hotel equipment. With the rise in crime in hotels, CCTV surveillance cameras are becoming more and more important in hotels. A 24-hour security camera system protects the personal and property safety of hotel guests and increases guest safety. (Mansour Ghazi, K., 2014)

Cleanliness is a key factor in the overall travel experience. When people choose a hotel, they are often influenced by what rating sites or friends and family say about the hotel. If someone is unhappy with the cleanliness of their stay, the hotel can lose that customer, and the bad reviews they leave can be even more costly. (Park et al., 2019)

The public area of the hotel contacts more people, and indirect contact with the public area has become a potential source of virus transmission. (Park et al., 2019) The public areas of a hotel make the first impression of the hotel and influence the overall evaluation of the hotel by the customer. The public area of the hotel contacts more people, and indirect contact with the public area has become a potential source of virus transmission. (Park et al., 2019)

Hotel rooms are the areas that guests use the longest during their stay in the hotel. The overall cleanliness of the hotel room, the completeness of the room amenities, the cleanliness of the linens, and the smell of the room all affect the guest's experience and satisfaction. The cleanliness of a hotel room is an important factor in a guest's choice of hotel.

Regular disinfection: According to the Minnesota Department of Health's operating requirements for the hotel industry, in order to reduce the risk of COVID-19 infection in public areas, hotels should frequently clean and disinfect surfaces that are in frequent contact with customers. Cleaning and disinfection of public areas (e.g., restrooms, lobbies, reception areas, hallways, and elevators) should be performed as a general precaution. Special attention should be paid to objects that are frequently touched, such as handles, elevator buttons, handrails, switches, door handles, and remote controls. Cleaning staff should follow professional instructions. (Health.state.mn.us. 2020)

Hotel Promotion

Promotional campaigns can simply and effectively capture the attention of travelers searching online, flexibly position a hotel's services and products, and increase booking

traffic, thereby increasing hotel occupancy and revenue. (Mansur, R., 2019)The impact of COVID-19 has greatly affected the tourism industry, and hotels have been able to attract more customers with COVID-19-related promotions.

Table 2.1 Hotel attributes

Factor	Hotel Attributes
Hotel facilities	Parking area, Fitness room, Separate breakfast (not buffet), Cashless payment, Recreational facilities, Disposable items: Dixie cup, Tableware, Independent air conditioning, Masks, alcohol and other immunization supplies
Hotel service	Contactless service, Car rental services, Express service (Check in, check out), Free rescheduling service, Free cancellation service, Airport transfer, 24hours room service, Doctor on call, Provide real-time epidemic information
Hotel location	Less density area, Private beach, Convenient to the airport, Convenient to the beach, Convenient to hospital
Hotel image	Brand image, Star rating
Hotel security and cleanliness	Emergency service, 24-hour video security, Cleanliness of room, Cleanliness of public area, Regular disinfection
Hotel price	Special discount of FB for COVID-19, Special room rate for COVID-19, Special discount of SPA for COVID-19

2.5 Hotel types

According to Hotel Tech Report, hotels can be classified into 80 hotel types. Hotels can be classified according to star rating, function, target market, etc. (Hotel Tech Report. 2020.) According to star rating, hotels can be classified into 5 stars :

One-star hotel. Simple equipment, with food and lodging two most basic functions, can meet the guests most basic travel needs, to provide basic services, the price is cheaper. (Catalonia Hotels & Resorts Blog. 2020.)

Two-star hotel. Equipment in general, in addition to having rooms, restaurants and other basic equipment, can meet the needs of travelers in the lower and middle classes. The rooms have air-conditioning equipment, carpets, telephones, simpler furniture, low charges and economical. (Catalonia Hotels & Resorts Blog. 2020.)

Three-star hotel. It is well-equipped, providing not only accommodation and food, but also comprehensive service facilities such as meeting rooms, amusement halls, bar rooms and cafes. Each room has an area of about 20 square meters, is fully furnished and has refrigerators, TV sets, etc. The service quality is better and the charges are higher. It can meet the needs of middle-class or above tourists. At present, this kind of hotel which belongs to the middle level is the most popular and more numerous in the international arena.(Catalonia Hotels & Resorts Blog. 2020.)

Four-star hotel. Luxurious equipment, comprehensive service facilities, many service items, excellent service quality, pay attention to the art of indoor environment and provide high quality service. Guests can get not only high-level material enjoyment, but also excellent spiritual enjoyment. Charges are generally very high.(Catalonia Hotels & Resorts Blog. 2020.)

Five-star hotel. This is the highest level of tourist hotels. The equipment is very luxurious, the facilities are more perfect, in addition to the room facilities are luxurious, the service facilities are complete. Various kinds of restaurants, larger banquet halls, conference halls, comprehensive services are more complete. The environment is beautiful and the service quality is demanding. The charges are very high. (Catalonia Hotels & Resorts Blog. 2020.)

According to the price division, Because of COVID-19, the overall hotel prices in Phuket were significantly reduced. (C9hotelworks.com. 2020) According to the price check on booking.com, the price difference between 1-3-star hotels was extremely limited, mainly below 50 US\$. Four-star hotels are mostly priced at 51-100 US\$. Five-star hotels are mostly in the range of 100-150 US\$, with only a few excellent five-star hotels exceeding 150 US\$. (Booking.com)

CHAPTER 3

METHODS

This chapter present a brief description of the research methodology used for this study. This includes population of the research, sample size, sampling method, research design, followed by research instruments, data collection, data analysis and importance level.

3.1 Population of the research

This research aims to study travel patterns of influence tourists to choose Phuket hotels during COVID-19 and to identify factors influence tourists to choose Phuket hotel during COVID-19. The study population for the present study is identified as tourists travelling in Phuket during COVID-19.

According to statistical data provided by ministry of tourism and sports (2019) the number of visitors to Phuket in 2019 was 9.89 million. (C9hotelworks.com. 2020) However, due to COVID-19, the number of tourists has decreased significantly in 2020.

3.2 Sample size

This research used this formula for measure the sample size by Dr. Kanlaya Vanitbancha, cited from Amornkaew (2010) at 95% confidence level.

$$N = \frac{z^2 pq}{e^2}$$

Where

n=sample size

z=confidence level at 95% (standard value of 9.89)

p=expected value

q=1-p

e=allowable error (5%)

In case not know p and q therefore p=0.5 and q=0.5

$$\begin{aligned} \text{In the formula : } N &= \frac{(9.89)^2(0.5)(0.5)}{(0.5)^2} \\ N &= \frac{9.604}{0.0025} \\ &= 384.16 \\ &= 385 \end{aligned}$$

Based on this formula, the sample size would be sets at 385. However, the research is concerned that the questionnaires would not completely fill by respondents therefore the research prepared more 15 questionnaires and 400 questionnaires were distributed to tourists travelling in Phuket during COVID-19.

3.3 Sampling Method

In this research, Convenience sampling method was used to select tourists arriving in Phuket during COVID-19. At Cape Panwa and Phuket old town, randomly selected tourists who would stay in Phuket for more than one night, and conducted a questionnaire survey.

3.4 Type of Research

This research used quantitative research methods, by collecting the data from tourists travel in Phuket during COVID-19.

3.5 Data Collection

The questionnaire

In terms of data collection, this study specific in quantitative research that conducted by questionnaire related to the travel band the factors that influence hotel selection of visitors to Phuket during COVID-19. The research distribute questionnaire to targets at Phuket central and Cape Panwa. Time for collected the data on November 2020.

3.6 Research Instruments

The questionnaire was used to collect during COVID-19 tourists' responses to travel patterns and factors affecting hotel choice from the perspective of tourists. This study uses a questionnaire based on literature reviews as a tool for collecting sample data. Questionnaires for

tourists consisted of three parts made up by check list, open and close-end questions and five-point Likert scales. The surveys included following topics:

Part 1: Demographic Characteristic

The first part composed of information on Demographic Characteristic and some personal information include age, gender, annual income, nationality, occupation and family role.

Part 2: Tourist behaviors

The second part is a series of questions about travel patterns, including primary purpose of choose hotel, transportation to Phuket, transportation to the hotel, channels for booking hotels, room rate, source of hotel information, length of stay in Phuket and time used for plan the trip.

Part 3. Factors influence hotel selection of tourists in Phuket

The third part ask about factors influence hotel selection of tourists in Phuket during COVID-19. This part was based on five-point Likert scale ranging from: Not important at all, Not important, Neutral, Important and Very Important. All hotel attributes used in this research are showed in table3.1.

Table 3.1 All hotel attributes used in the questionnaire

Factor	Hotel Attributes
Hotel facilities	Parking area, Fitness room, Separate breakfast (not buffet), Cashless payment, Recreational facilities, Disposable items: Dixie cup, Tableware, Independent air conditioning, Masks, alcohol and other immunization supplies
Hotel service	Contactless service, Car rental services, Express service (Check in, check out), Free rescheduling service, Free cancellation service, Airport transfer, 24hours room service, Doctor on call, Provide real-time epidemic information
Hotel location	Less density area, Private beach, Convenient to the airport, Convenient to the beach, Convenient to hospital

Table 3.1 Continued

Factor	Hotel Attributes
Hotel image	Brand image, Star rating
Hotel security and cleanliness	Emergency service, 24-hour video security, Cleanliness of room, Cleanliness of public area, Regular disinfection
Hotel promotion	Special discount of FB for COVID-19, Special room rate for COVID-19, Special discount of SPA for COVID-19

3.7 Data Analysis

The data analysis of each step is as follows: First, use Cronbach's alpha coefficient for data screening to test the reliability of the entire questionnaire data. After that, the researcher decided to use descriptive statistics (such as frequency, percentage, mean, and standard deviation), multiple regression, Pearson Chi- square and one-way ANOVA (Analysis of variance).

Part 1 and Part 2: Personal Characteristics and Tourist behaviors

Descriptive statistics such as standard deviation, means and percentages were used to collect the personal data of the interviewee, such as characteristic (age, gender, annual income, nationality, occupation and family role) and travel patterns (primary purpose of choose hotel, transportation to Phuket, transportation to the hotel, channels for booking hotels , room rate, source of hotel information, length of stay in Phuket and time used for plan the trip). Moreover, the researcher used Pearson Chi- square testing the correlated between demographic (such as nationality, age, gender) and travel patterns (channels for booking hotels, room rate, source of hotel information).

Part 3. Factors influence hotel selection of tourists in Phuket

The researchers used descriptive statistics to analyze the factors affecting Phuket tourists' choice of hotels during COVID-19. used paired-samples t-tests to test hypotheses designed to test for significant differences between hotel factors that influence tourists' choice of hotels Pre and during COVID-19 period. In addition, one-way analysis of variance (ANOVA) was used to test for significant differences between hotel attributes and hotel choice. To further understand the factors influencing tourists' choice of hotels, factor analysis was used to extract and

classify hotel attributes, and then multivariate probability analysis was used to analyze the extracted hotel factors and hotel types.

Suppose a response variable Y is binary, that is it can have only two possible outcomes which we will denote as 1 and 0. According to the price division, hotels can be divided into two categories. Hotels with room rates below 50US\$ can be classified as Economy Hotels; Hotels with room rates above 50US\$ can be classified as High Value Hotels.

According to the formula of multivariate probability analysis :

$$Y_i = \begin{cases} 0 & \text{(Hotels with room rates below 50US\$) = Economy Hotels} \\ 1 & \text{(Hotels with room rates above 50US\$) = High Value Hotels} \end{cases}$$

$$Y_i = \beta_1 X_{1i} + \beta_2 X_{2i} + \beta_3 X_{3i} + \beta_4 X_{4i} + \beta_5 X_{5i} + \beta_6 X_{6i},$$

The factors influencing tourists' choice of hotels can be further analyzed.

3.8 The level of importance to be measured

Table 3.2 The meaning of each assessment level was ranged for an interval width of 0.80

Mean	Level of important
1.00-1.80points	Very low important factor level
1.81-2.60points	Low important factor level
2.61-3.40points	Fairly important factor level
3.41-4.20poiots	High important factor level
4.21-5.00points	Very high important factor level

CHAPTER 4

RESULTS

As mentioned previously that this study was conducted by a quantitative method, therefore, the questionnaires were used to collect data as well as to analyze by using descriptive analysis (such as frequency, percentage, mean, and standard deviation), an independent sample t-test, Pearson Chi- square and one-way ANOVA. The purpose of this study is to examine travel patterns and to identify factors influence hotel selection of tourists travelling in Phuket in during COVID-19.

4.1 Personal Characteristic

4.2 Travel patterns of influence tourists choose Phuket hotel during COVID-19.

4.3 Factors of influence tourists to choose Phuket hotels Pre and during COVID-19

4.1 Personal Characteristic

This study used 400 questionnaires had been distributed at Phuket Airport and Phuket old town for analysis. According to the results of table1, among the interviewed groups, 48% were females and 52% were males. Moreover, In the division of age groups, 46% of the respondents are 31-40 years old and 27% are over 50 years old. According to nationality, the respondents are mainly from Asia, Europe and Australia, which are 47%, 22% and 11% respectively. In addition, according to the results of this table, the three industries in which the respondents are most engaged are Employee, Self-Employed and Retired, accounting for 33%,21.5% and 19.3%, respectively. The main income groups of the respondents are in , 10001-30000US\$, 5001-10000US\$ and 30001-50000US\$, accounting for35.8%, 26.5% and 18.0% respectively. The main educational experience of the respondents was Bachelor Degree, followed by High School or Lower, accounting for 58.3%and 19.3%, respectively. 180 of the respondents traveled with their children, representing 45% of the total group.

Table 4.1 Personal Characteristic

Variables	Description	N=400	
		Frequency	Percentage
Gender	Female	198	49.5
	Male	202	50.5
Age	Under 20 Years	23	5.8
	21-30years	149	37.3
	31-40years	79	19.8
	41-50years	73	18.3
	51-60years	33	8.3
	Over 60years	43	10.8
	Nationality	Asian	221
African		4	1.0
American		14	3.5
European		80	20.0
Middle East		10	2.5
Australian		37	9.3
Other		34	8.5
Education	High School or Lower	77	19.3
	Bachelor Degree	233	58.3
	Master Degree	74	18.5
	Ph.D.	16	4.0
Occupation	Self-Employed	86	21.5
	Manager	26	6.5
	Employee	132	33.0
	Retired	77	19.3
	Government Officer	13	3.3
	Professionals	14	3.5
	Student	49	12.3
	Others	3	.8

Table 4.1 continued

Variables	Description	N=400	
		Frequency	Percentage
Annual income	Under 5000US\$	35	8.8
	5001-10000US\$	106	26.5
	10001-30000US\$	143	35.8
	30001-50000US\$	72	18.0
	50001-100000US\$	33	8.3
	Over 100,000 US\$	11	2.8
With children	Yes	180	45.0
	No	220	55.0

4.2 Travel patterns of influence tourists choose Phuket hotel during COVID-19.

Table 4.2 below showed the results of the travel patterns from a survey of 400 respondents. According to the results, among the respondents who travel in Phuket, 40.3% of tourists travel in Phuket for more than 3-4days. Followed by travel 1-2 days, accounting for 17%.

In the choice of room rate, the room price of 51-100 US\$ is the most popular among tourists, and 51.7% of tourists choose the room price of 51-100 US\$. The second most popular is the room price of 101-150 US\$, and 30.3% of tourists choose the room price of 101-150 US\$. More than 150 US\$ is the least selected room price.

When booking hotels, online travel agencies are the most selected channel by tourists, and 49.0% of tourists choose to book hotels from online travel agencies. Followed by booking hotels from hotel websites, accounting for 35.5%. Among tourists' travel purposes, vacation is the main purpose of most tourists coming to Phuket, accounting for 82.5%, followed by Visit friends or relatives, accounting for 9.8%.

In planning the trip in advance, most tourists planned the trip 1 week before departure date, accounting for 45.0%. The second is to plan this trip one month before departure, accounting for 29.8%.

Among the means of transportation to Phuket, airplanes are the main means of transportation for tourists to reach Phuket, accounting for 76.8%. Secondly, the most popular mode of transportation for tourists is driving, accounting for 22.0%.

Among the transportation methods to reach the hotel, by taxi is the most common transportation method, and 69.8% of tourists choose by taxi arrive to the hotel. The second is driving, and 26.3% of tourists choose to driving to the hotel.

Table 4.2 Tourist behavior

Travel patterns	Description	N=400	
		Frequency	Percentage
How many days travel in Phuket?	1-2days	68	17.0
	3-4days	161	40.3
	4-6days	64	16.0
	7-15days	65	16.3
	More than15days	42	10.5
Which room rate do you stay average per night	Under 50US\$	179	44.8
	50-100 US\$	129	32.3
	100-150 US\$	89	22.3
	Over 150US\$	3	.8
How did you reserve the hotel before arrive to Phuket	Walk in booking room	18	4.5
	Hotel websites	142	35.5
	Travel agent	33	8.3
	Online travel agent	196	49.0
	Direct booking with hotel	8	2.0
	Others	3	.8

Table 4.2 Tourist behavior

Travel patterns	Description	N=400	
		Frequency	Percentage
What is the primary purpose of the trip?	Vacation	330	82.5
	Visit friends/relatives	39	9.8
	Retirement	7	1.8
	Business	14	3.5
	Meeting /conference	1	.3
	Health check	1	.3
	Others	8	2.0
How long do you plan	Less than 1 week before departure	82	20.5
	1 week before departure	180	45.0
	1 month before departure	119	29.8
	1-2 month before departure	2	.5
	More than 2 months	2	.5
	Pre COVID	15	3.8
How did you arrive to	Airplane	307	76.8
	Bus	1	.3
	Driving	88	22.0
	Cross province taxi	4	1.0
How did you arrive to	By hotel shuttle/van/taxi	10	2.5
	By car	105	26.3
	By taxi	279	69.8
	By public transportation	3	.8
	Other	3	.8

According to table 4.3, online travel agent was the most popular source of information for tourists searching for hotel information, accounting for 43.5% of the total. This was followed by social media, travel agents, and hotel websites. accounting for 29.5%, 24.3%, and 22.8% of the total. Newspaper /Magazines and Called the hotel directly were the least used sources of information by tourists, at 4.3% and 0.8% respectively.

Table 4.3 Source of Information when tourist choosing Phuket hotel.

Source of Information	N	Frequency	Percentage (%)	Rank
<i>Online travel agent</i>	400	174	43.5	1
<i>Social media recommendation</i>	400	118	29.5	2
<i>Travel agent</i>	400	97	24.3	3
<i>Hotel websites</i>	400	91	22.8	4
<i>Friends and family</i>	400	68	17.0	5
<i>Previous trips experience</i>	400	52	13.0	6
<i>Loyalty program websites</i>	400	51	12.8	7
<i>Newspaper /Magazines</i>	400	17	4.3	8
<i>Called the hotel directly</i>	400	3	0.8	9
<i>Others</i>	400	3	0.8	10

Demographic and Room Rate

Pearson chi-square was conducted in order to check the correlated between demographic and tourism behavior. Demographic is mainly gender, nationalities, age, annual income, travel with children and booking channel. The main travel patterns are room rate, primary purpose of the trip and channel to reserve hotel. The findings were as follows:

Table 4.4 shows the correlation result between **Gender** and room rate of staying check by Pearson's chi-square test. The results show that there is a correlation between the **Gender** of the respondents and the **room rate**. According to table data, it was found $\chi^2=8.093$ $p < 0.05$. therefore, it can be said that the respondents' base of **Gender** are correlated to room rate.

Table 4.4 Pearson Chi- square of Gender and room rate of staying.

Room rate preference	Gender		Total
	Female	Male	
Under 50US\$	45.8%	54.2%	44.8%
51-100 US\$	46.5%	53.5%	32.3%
101-150 US\$	59.6%	40.4%	22.3%
Over 150 US\$	100.0%	0.0%	0.8%
Total	49.5%	50.5%	100%
	Value	Df	Asymp.sig
Pearson chi-square	8.093	3	.044

Table 4.5 shows the correlation result between nationalities and room rate of staying check by Pearson's chi-square test. The results show that there is a correlation between the **nationality** of the respondents and the **room rate**. According to table data, it was found $\chi^2=45.471$, $p < 0.05$. therefore, it can be said that the respondents' base of nationalities are correlated to room rate.

Table 4.5 Pearson Chi- square of the respondents' base of nationalities and room rate of staying.

Room rate preference	Nationalities							Total
	Asian	African	American	European	Middle east	Australian	other	
Under 50US\$	65.2%	1.1%	2.2%	14.6%	2.2%	6.7%	7.9%	44.8%
51-100 US\$	5.0%	0.0%	3.1%	23.3%	4.7%	9.3%	4.7%	32.3%
101-150 US\$	65.2%	1.1%	2.2%	14.6%	2.2%	6.7%	7.9%	22.3%
Over 150 US\$	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.8%
Total	55.3%	1.0%	3.5%	20.0%	2.5%	9.3%	8.5%	100%
			Value			Df		Asymp.sig
Pearson chi-square			45.471			18		.015

Table 4.6 shows the correlation result between **Annual income** and room rate of staying check by Pearson's chi-square test. The results show that there is a correlation between the education of the respondents and the room rate. According to table data, it was found $\chi^2=35.273$, $p < 0.05$. therefore, it can be said that the respondents' base of **Annual income** are correlated to room rate.

Table 4.6 Pearson Chi- square of the respondents' base of Annual income and room rate of staying.

Room rate preference	Annual income						Total
	Under5,000 US\$	5,001 -10,000US\$	10,001 -30,000US\$	30,001-50,000 US\$	50,001-100,000 US\$	Over 100,000 US\$	
Under 50US\$	9.5%	20.1%	39.7%	20.1%	8.4%	2.2%	44.8%
51-100 US\$	5.4%	31.0%	38.8%	16.3%	7.8%	0.8%	32.3%
101-150 US\$	12.4%	33.7%	24.7%	13.5%	9.0%	6.7%	22.3%
Over 150 US\$	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
Total	8.8%	26.5%	35.8%	18.0%	8.3%	2.8%	100.0%
			Value		Df	Asymp.sig	
Pearson chi-square			35.273		15	.002	

Table 4.7 shows the correlation result between age and room rate of staying check by Pearson's chi-square test. The results show that there is a correlation between the **age** of the respondents and the **room rate**. According to table data, it was found $\chi^2=61.018$, $p < 0.05$. therefore, it can be said that the respondents' base of age are correlate to room rate.

Table 4.7 Pearson Chi- square of the respondents' base of Ages and Room rate preference

Room rate preference	Ages						Total
	Under 20	21-30years	31-40years	41-50years	51-60years	Over 60years	
Under 50US\$	6.7%	28.5%	27.4%	14.0%	10.6%	12.8%	44.8%
51-100 US\$	3.9%	46.5%	12.4%	24.0%	4.7%	8.5%	32.3%
101-150 US\$	6.7%	42.7%	15.7%	19.1%	5.6%	10.1%	22.3%
Over 150 US\$	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.8%
Total	5.8%	37.3%	19.8%	18.3%	8.3%	10.8%	100.0%
			Value		Df	Asymp.sig	
Pearson chi-square			61.018		15	.038	

Table 4.8 shows the correlation result between Travel with children and room rate of staying check by Pearson's chi-square test. The results show that there is a no correlation between the Travel with children of the respondents and the room rate. According to table data, it was found $\chi^2=3.193$, $p > 0.05$. therefore, it can be said that the respondents' base of **Travel with children** are unrelated to **room rate**.

Table 4.8 Pearson Chi- square of the respondents' base of Travel with children and room rate

Room rate preference	Travel with children		Total
	Yes	No	
Under 50US\$	47.5%	52.5%	44.8%
51-100 US\$	42.6%	57.4%	32.3%
101-150 US\$	44.9%	55.1%	22.3%
Over 150 US\$	0.0%	100.0%	0.8%
Total	45.0%	55.0%	100%
	Value	Df	Asymp.sig
Pearson chi-square	3.193	3	.363

Table 4.9 shows the correlation result between **Booking channel** and room rate of staying check by Pearson's chi-square test. The results show that there is a no correlation between the **Booking channel** of the respondents and the **room rate**. According to table data, it was found $\chi^2=47.825$, $p > 0.05$. therefore, it can be said that the respondents' base of **Booking channel** are unrelated to room rate.

Table 4.9 Pearson Chi- square of the respondents' base of Booking channel and room rate

Room rate preference	Booking channel					Total	
	Walk in booking room	Hotel websites	Travel agent	Online travel agent	Direct booking with hotel		Others
Under 50US\$	7.3%	31.8%	5.6%	54.2%	0.6%	0.6%	44.8%
51-100 US\$	2.3%	47.3%	3.9%	41.9%	3.1%	1.6%	32.3%
101-150 US\$	2.2%	23.6%	20.2%	50.6%	3.4%	0.0%	22.3%
Over 150 US\$	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.8%
Total	4.5%	35.5%	8.3%	49.0%	2.0%	0.8%	100.0%
			Value		Df	Asymp.sig	
Pearson chi-square			47.825		15	.076	

Table 4.10 shows the correlation result between **time of plan the trip** and room rate of staying check by Pearson's chi-square test. The results show that there is a no correlation between the **time of plan the trip** of the respondents and the **room rate**. According to table data, it was found $\chi^2=128.307$, $p < 0.05$. therefore, it can be said that the respondents' base of Time of plan the trip are correlated to room rate.

Table4.10 Pearson Chi- square of the respondents' base of time of plan the trip and room rate

Room rate preference	Time of plan the trip					Pre COVID	Total
	Less than 1 week	1 week before	1 month before	1-2 month before	More than 2 months		
Under 50US\$	25.7%	34.1	32.4%	0.6%	1.1%	6.1%	44.8%
51-100 US\$	16.3%	59.7	23.3%	0.0%	0.0%	0.8%	32.3%
101-150 US\$	16.9%	47.2	34.8%	0.0%	0.0%	1.1%	22.3%
Over 150 US\$	0.0%	0.0%	0.0%	33.3	0.0%	66.7	0.8%
Total	20.5%	45.0	29.8%	0.5%	0.5%	3.8%	100.0%
			Value		Df	Asymp.sig	
Pearson chi-square			128.307		15	.000	

Table 4.11 shows the correlation result between **Transport to Phuket** and room rate of staying check by Pearson's chi-square test. The results show that there is a no correlation between the **Transport to Phuket** of the respondents and the **room rate**. According to table data, it was found $\chi^2=16.533$, $p > 0.05$. therefore, it can be said that the respondents' base of **Transport to Phuket** are unrelated to room rate.

Table4.11 Pearson Chi- square of the respondents' base of Transport to Phuket and room rate

Room rate preference	Transport to Phuket				Total	
	Airplane	Bus	Driving	Cross province taxi		
Under 50US\$	73.2%	0.0%	25.7%	1.1%	44.8%	
51-100 US\$	71.3%	0.8%	26.4%	1.6%	32.3%	
101-150 US\$	91.0%	0.0%	9.0%	0.0%	22.3%	
Over 150 US\$	100.0%	0.0%	0.0%	0.0%	0.8%	
Total	76.8%	0.3%	22.0%	1.0%	100.0%	
			Value		Df	Asymp.sig
Pearson chi-square			16.533		9	.057

Hypothesis 1.1: There is a significant difference between tourists who travel with children and tourists who travel without children in hotel selection.

Hypothesis 1.2: There is a significant difference among tourist who used different Booking channel in hotel selection.

Hypothesis 1.3: Tourist would plan their trip early prior to their arrival are significant different from tourist who shortly plan their trip prior to their arrival in hotel selection.

Hypothesis 1.4: There is a significant difference between tourist who used different transport mode in hotel room rate selection.

Table 4.12 shows the correlation result between Demographic and travel patterns with room rate of staying check by Pearson's chi-square test. The results show that there is a correlation between the Gender, Nationalities, Annual income, Ages and Time of plan the trip of the respondents and the room rate. According to table, the Hypothesis 1.1, Hypothesis 1.2, Hypothesis 1.4 shall be rejected and Hypothesis 1.3 shall be accepted. The result suggest that this is a significant different between Time of plan the trip and Room Rate toward hotel selection.

Table 4.12 Summary of the result of Pearson Chi- square test

	Room rate	Room rate
Personal and Behavior		
Gender		Significant
Nationalities		Significant
Annual income		Significant
Ages		Significant
H1.1 Travel with children		No Significant
H1.2 Booking channel		No Significant
H1.3 Time of plan the trip		Significant
H1.4 Transport to Phuket		No Significant

Objectives 1: To examine demographic and travel patterns of influencing tourists to choose hotel in Phuket during COVID-19 in Phuket.

According to the results of the Pearson Chi- square test on travel patterns of influence tourists and room rate, Time of plan the trip was found to influence tourists' choice of

hotels. Travel with children, booking channel and transport to Phuket were no significant impact on tourists' choice of hotels during covid-19.

According to the results of the above analysis, 1 week before departure planning trip is the choice of most tourists, followed by 1 month before departure. According to the results of table 4.2.9, tourists who booked hotels close to the departure date chose hotels with relatively low prices. Because of the impact of covid-19, many tourists were worried that their trip would be cancelled and booked closer to their departure date to reduce their risk. (BBC News. 2020.) Tourists booked their trips Pre COVID choose hotels at relatively higher prices. On one hand, because the overall hotel prices in Phuket Pre COVID are higher than during covid-19 (Booking.com. 2020), and on the other hand, because hotels with higher prices offer free cancellation or free rescheduling during covid-19. (The Points Guy. 2020.) Therefore, there is a significant difference between the Time of plan the trip and room rates.

Among the booking channels, Online travel agent is the most preferred channel for tourists to book hotels, followed by hotel websites. This is also similar to the results of Invattur's study that online travel agencies are the most preferred booking method for tourists. Online travel agencies have strong bargaining power and are able to attract consumers with the lowest prices after they have gone through price comparisons from various sources. (Invattur. 2014.) Online travel agencies accept all levels of hotels to join (Booking.com. 2020), and hotels of different stars and prices have their own hotel websites. So, there is no significant difference between the Booking channel and room rates.

Airplane has always been the main mode of transportation for tourists arriving in Phuket. (Osac.gov. 2020) Although the number of tourists self-driving increased during covid-19 (McKinsey. 2020.), airplane was still the main mode of transportation for tourists arriving in Phuket. In this study, 76.8% of tourists arrived in Phuket by airplane, Therefore, there is no significant difference between Transport to Phuket and room rates.

4.3 Factors of influence tourists to choose Phuket hotels during COVID-19

Hypothesis 2: There is a significant different between Hotel Factors and Hotel price toward hotel selection

Regarding to room rate were divided into 4 groups according the price (Group1: Under 50US\$ Group 2:51-100 US\$ Group 3:101-200 US\$ Group 4: Over 200 US\$). Regarding to hotel factors were divided into 6 groups according the literature review (Hotel Facility, Hotel Servers, Hotel Location, Hotel Image, Hotel security and cleanliness, Hotel promotion)

From the table 4.13 below the result of one-way ANOVA test in all hotel factors and room rate to hotel selection that there was all P-Value<0.05. Therefore, **Hypothesis 2** shall be accepted. These results suggest that there is a significant different between all hotel factors and Room Rate toward hotel selection.

Table 4.13 One-way ANOVA test in hotel factors and room rate

Hotel factors	Mean During COVID-19				P-VALUE
	Under 50US\$	51-100 US\$	101-150 US\$	Over 150US	
Hotel Facility	4.84	4.17	3.94	3.33	.000*
Hotel Servers	4.67	4.29	4.39	3.33	.000*
Hotel Location	4.62	4.36	4.19	3.33	.000*
Hotel Image	4.65	4.05	4.04	4.00	.000*
Hotel security and cleanliness	4.89	4.50	4.791	4.66	.000*
Hotel promotion	4.38	4.14	4.34	4.33	.015*

From the table 4.14 below the result of one-way ANOVA test in all Hotel Attributes and room rate to hotel selection. Except for Convenient to Airport, Special discount of FB for COVID-19, Special discount of SPA, the other Hotel Attributes P-Value<0.05. These results suggest that there is a significant different between except for convenient to airport, special discount of FB, special discount of SPA, the other hotel attributes and Room Rate toward hotel selection.

Table 4.14 One-way ANOVA test in Hotel Attributes and room rate

Hotel Attributes	Mean During COVID-19				P-VALUE
	<50	51-100	101-150	>150	
Parking area	4.59	3.43	2.83	3.33	.000*
Fitness facility in room	4.52	3.88	2.78	3.33	.000*
Separate breakfast (not buffet)	4.82	4.17	3.61	3.33	.000*
Cashless payment	4.83	4.39	4.31	4.66	.000*
Recreational facilities	4.82	4.45	4.10	4.66	.000*
Disposable items: Dixie cup,	4.70	4.40	3.80	4.33	.000*
Independent air conditioning	4.87	4.60	4.51	4.66	.000*
Masks, alcohol and other	4.87	4.69	4.75	4.33	.000*
Contactless service	4.65	4.36	4.07	5.00	.000*
Car rental services	4.32	4.00	3.77	5.00	.000*
Express service (Check in, out)	4.74	4.32	4.26	4.66	.000*
Free rescheduling service	4.81	4.28	4.52	4.66	.000*
Free cancellation service	4.84	4.40	4.67	5.00	.000*
Airport transfer	4.50	4.47	4.38	3.66	.000*
24hours room service	4.65	4.25	4.55	4.00	.000*
Doctor on call	4.68	4.46	4.49	4.67	.000*
Less density area	4.58	4.07	3.66	3.66	.000*
Private beach	4.71	4.12	4.12	3.66	.000*
Convenient to Airport	4.32	3.76	4.04	4.00	.169
Convenient to Beach	4.69	4.27	4.06	4.66	.000
Convenient to Hospital	4.54	4.08	4.38	3.66	.000
Brand image	4.62	3.96	4.15	5.00	.000*
Star rating	4.62	4.03	3.88	5.00	.000*
Emergency service	4.87	4.35	4.55	4.66	.000*
24-hour video security	4.81	4.27	4.55	4.66	.000*
Cleanliness of room	4.91	4.49	4.83	4.66	.000*
Cleanliness of public area	4.87	4.44	4.70	4.33	.000*
Regular disinfection	4.89	4.49	4.78	4.66	.000*
Special discount of FB	4.70	4.16	4.39	5.00	.335
Special room rate for COVID-19	4.46	4.16	4.40	5.00	.000*
Special discount of SPA	4.35	4.12	4.29	5.00	.056

Table 4.15 Factor's analysis on hotel factors

Factors	Loading	Eigen value	Variance	Cumulative	Mean	S.D.
Factor 1- Security and Cleanliness		4.68	14.63	14.63	4.69	0.51
Regular disinfection	0.96				4.74	0.48
Cleanliness of room	0.96				4.76	0.47
Cleanliness of public area	0.81				4.70	0.52
Emergency service	0.79				4.64	0.52
24-hour video security	0.7				4.59	0.58
Factor 2- Facilities and Locations for social distance		3.99	12.49	27.12	4.04	1.03
Fitness facility in room	0.8				3.91	1.14
Less density area	0.72				4.22	0.82
Convenient to the beach	0.68				4.22	0.82
Parking area	0.61				3.81	1.35
Factor3-Facilities for COVID-19		3.89	12.17	39.30	4.62	0.66
Cashless payment	0.79				4.54	0.70
Recreational facilities in room	0.73				4.51	0.69
Independent air conditioning	0.72				4.67	0.68
Masks, alcohol and other	0.63				4.77	0.55
Factor 4- Service for COVID-19		3.46	10.83	50.14	4.55	0.57
Free rescheduling service	0.75				4.58	0.49
Free cancellation service	0.66				4.66	0.47
Doctor on call	0.63				4.58	0.52
Convenient to hospital	0.62				4.37	0.78

Table 4.15 Continued

Factors	Loading	Eigen value	Variance	Cumulative	Mean	S.D.
Factor 5- Hotel Promotion		3.22	10.06	60.20	4.31	0.78
Special room rate for COVID-19	0.93				4.36	0.76
Discount of SPA for COVID-19	0.90				4.26	0.80

The 31 items of hotel attributes were factor analyzed to explore the underlying dimensions. In this study, factor analysis was performed using the SPSS as follows:

- SPSS selects the analyze-data reduction-factor.
- Put all hotel factors data into variable.
- Select KMO and Bartlett test in the Description.
- Selecting the maximum likelihood method in the Extraction
- Selecting Factor Rotation and Maximum Variance in Rotation
- Select to sorted by size and suppress absolute values. The suppress absolute value of the minimum value is 0.6 in Option

According to the above method, the table 4.16. KMO=0.705, which is in the good range. Sig=0.004<0.05, which means that the correlation matrix is not a unit matrix and the correlation coefficients of the variables are significant.

Table 4.16 KMO and Bartlett test

KMO		0.705
	Approx.	18.993
Bartlett test	Df	6
	Sig	.004

Based on the rotation results, there were a total of 5 common factors with eigenvalues larger than 1 Therefore, Factor Analysis extracted a total of 5 common factors.

Factor 1- Security and Cleanliness

The first common factor includes Regular Disinfection, Cleanliness of Room, Cleanliness of Public area, Emergency Service and 24-Hour Video Security.

Regular disinfection : Regular disinfection reduces the risk of COVID-19 transmission and enhances the safety of employees and customers.(Who.int. 2020) According to the Minnesota Department of Health's operating requirements for the hotel industry , in order to reduce the risk of COVID-19 infection in public areas, hotels should frequently clean and disinfect surfaces that are in frequent contact with customers. Cleaning and disinfection of public areas (e.g., restrooms, lobbies, reception areas, hallways, and elevators) should be performed as a general precaution. Special attention should be paid to objects that are frequently touched, such as handles, elevator buttons, handrails, switches, door handles, and remote controls. Cleaning staff should follow professional instructions. (Health.state.mn.us. 2020)

Emergency Service : The COVID-19 was a public health emergency that had a significant impact on the entire hotel industry. A comprehensive emergency service can increase the sense of security for customers. (Ahmad R. Albattat. 2013.) According to the guidelines of China's Ministry of Health for the hotel industry, during COVID-19, hotels should educate all employees to develop good personal hygiene habits and strengthen their knowledge of hygiene. The hotel should conduct regular medical checkups for employees and take comprehensive preventive measures for COVID-19 to provide a safe environment for guests as much as possible. (China's Ministry of Health,2020)

In addition to emergency services regarding COVID-19, the hotel should also strengthen its emergency response to other natural disasters (e.g., fire, earthquake, tsunami, etc.) and make the best efforts to protect the lives and property of guests. Hotel facilities should also be well maintained and managed, such as elevator breakdowns and pool safety patrols. (Ahmad R. Albattat. 2013.)

24-Hour Video Security :24 Hour Surveillance Cameras are essential hotel equipment. With the rise in crime in hotels, CCTV surveillance cameras are becoming more and more important in hotels. A 24-hour security camera system protects the personal and property safety of hotel guests and increases guest safety. (Mansour Ghazi, K., 2014)

Cleanliness of Public area: The public area of the hotel contacts more people, and indirect contact with the public area has become a potential source of virus transmission. (Park et al., 2019) The public areas of a hotel make the first impression of the hotel and influence the overall evaluation of the hotel by the customer. The public area of the hotel contacts more people, and indirect contact with the public area has become a potential source of virus transmission. (Park et al., 2019)

Cleanliness of Room: Hotel rooms are the areas that guests use the longest during their stay in the hotel. (Natalie B.Compton, 2020.)The overall cleanliness of the hotel room, the completeness of the room amenities, the cleanliness of the linens, and the smell of the room all affect the guest's experience and satisfaction. The cleanliness of a hotel room is an important factor in a guest's choice of hotel. (Natalie B.Compton, 2020.) Cleaning and disinfecting the room after guests have checked out is also part of the COVID-19 defense.

Based on the literature review of regular disinfection, cleanliness of room, cleanliness of public area, emergency service and 24-hour video security, the first common factor can be summarized as security and cleanliness

Factor 2- Facilities and Locations for social distance

The second common factor includes fitness facility in room, less density area, convenient to the beach and parking area.

Fitness facility in room: As a result of COVID-19, people have become more conscious of their health. (WHO, 2020) Fitness room have also been popular among business people. (Will you go to the hotel gym? 2020) However, due to the need for epidemic prevention, many hotels choose to close the fitting room or limit the number of people entering the fitting room to maintain a social distance. Thus, there is a new demand for in-room fitting facilities. In-room fitness facilities can meet the fitness needs of customers while reducing the risk of covid-19 infection. (Will you go to the hotel gym? 2020)

Parking area: Affected by the spread of the epidemic, tourists mainly travel by car during COVID-19. (Mckinsey. 2020.) Self-guided self-driving has become the mainstream way of travel. (Mckinsey. 2020.) Compared with airplanes, tourists don't need to stay in a narrow space with strangers. Driving by yourself with familiar family members or friends increases the safety factor relatively. Therefore, guests will have demand for hotel parking areas

Convenient to the beach: The beach was an attractive destination for tourists in Phuket. During COVID-19, beach not only meet the needs of people's leisure and entertainment, but also maintain social distance and meet the needs of epidemic prevention. Hotels with convenient reach to the beach were very popular.

Less density area: Because COVID-19 is primarily transmitted through direct or indirect close contact with infected people via mouth or nose secretions, social distancing and frequent sanitation are highly recommended. (World Tourism Organization, 2020) Therefore, hotels that are away from the crowds, able to maintain a social distance, were more in line with the needs of tourists during COVID-19.

Based on the literature review of fitness facility in room, less density area, convenient to the beach and parking area, the second common factor can be summarized as facilities and locations for social distance.

Factor 3- Facilities for COVID-19

The third common factor includes cashless payment, recreational facilities, independent air conditioning, masks, alcohol and other

Cashless payment: Cashless payments have been popular for a long time, and credit card payments and mobile phone payments have reduced the use of cash and the indirect contact between guests and staff. Cashless payment reduces the chance of COVID-19 infection. (The Conversation. 2020)

Recreational facilities in room: Recreational facilities include swimming pools, water parks, and indoor recreational facilities. Recreational facilities have also been popular for tourists. However, due to the need for epidemic prevention, many hotels choose to close the recreational facilities or limit the number of people entering the public recreational facilities to maintain a social distance. (Bccdc.ca. 2020) Thus, there is a new demand for in-room recreational facilities. In-room recreational facilities can meet the recreational needs of customers while reducing the risk of covid-19 infection.

Independent air conditioning: Aerosol transmission through central air conditioning may be another route of COVID-19 transmission (Zhang et al., 2020). In China, hotels used for quarantine are required to turn off central air conditioning to prevent cross-contamination of COVID-19 through air circulation. Central air conditioning usually makes hotels

more modern. However, due to the spread of covid-19, Independent air conditioning better suited to epidemic prevention needs. (Will Engel. 2020)

Masks, alcohol and other: Masks, alcohol, and other epidemic prevention supplies are new hotel facilities because of COVID-19. (Who.int. 2020) COVID-19 is primarily transmitted from human to human through respiratory droplets. (WHO,2020) A mask is a simple barrier that reduces droplet spray when the mask covers the nose and mouth. Wearing a mask is especially important when it is not possible to maintain a social distance of at least 6 feet. (Who.int. 2020) For the safety of hotel guests, a portable mini bottle of disinfectant alcohol is provided at check-in. Hand sanitizer is available in public spaces. Disinfectant alcohol and spray are available on each floor in public areas such as the hotel lobby and breakfast room. (Who.int. 2020)

Based on the literature review of cashless payment, recreational facilities, independent air conditioning, masks, alcohol and other, the third common factor can be summarized as Facilities for COVID-19.

Factor 4- Service for COVID-19

The fourth common factor includes free rescheduling service, free cancellation service, doctor on call and convenient to hospital.

Free cancellation service and Free rescheduling service :

Compared with January 2020, the number of "flight cancellation" queries increased by 15 times in March 2020. Travel instability caused by COVID-19 has become the new normal in the during epidemic era. (European Commission. 2020) Changes in policy of origin and destination may lead travelers to cancel or rearrange itineraries. According to the European Commission's regulations issued during COVID-19, in the event of cancellation or rescheduling due to force majeure such as COVID-19, merchants are required to provide free cancellation or rescheduling services. (European Commission. 2020) In Thailand, the government has not issued a decree on COVID-19, so free cancellation and free rescheduling of services are mainly based on hotel regulations.

Doctor on call: Hotel is a comprehensive service enterprise. When providing the service required by guests, the hotel has the obligation and responsibility to protect the personal and property of customers from infringement. Most hotels have a basic infirmary to deal with unexpected accidents during guests' stay in the hotel. During COVID-19, people pay

more attention to their health. Especially during the isolation period, people are prone to physical and psychological problems. 24-hour online doctor services can largely resolve consumer anxiety. (Baum, Mooney, Robinson and Solnet, 2020)

Convenient to hospital: Compared to Pre COVID, people are more concerned about their health. (Who.int. 2020) Therefore, the distance between the hotel and the hospital is also a factor for tourists to choose a hotel.

Based on the literature review of free rescheduling service, free cancellation service, doctor on call and convenient to hospital, the fourth common factor can be summarized as Service for COVID-19.

Factor 5- Hotel Promotion

The fifth common factor includes special room rate for COVID-19 and special discount of spa for COVID-19. So, the fifth common factor can be summarized as Service for COVID-19.

Promotional campaigns can simply and effectively capture the attention of travelers searching online, flexibly position a hotel's services and products, and increase booking traffic, thereby increasing hotel occupancy and revenue. (Mansur, R., 2019) The impact of COVID-19 has greatly affected the tourism industry, and hotels have been able to attract more customers with COVID-19-related promotions.

In this factor analysis, there were 11 hotel attributes that were not categorized, including: Brand image, Star rating, Special discount of FB, Special room rate for COVID-19, Special discount of SPA, Private beach, Convenient to Airport, Parking area, Fitness facility in room, Separate breakfast (not buffet), Cashless payment.

Because the eigenvalues of these hotel attributes are less than 1, the common factors have not been extracted. But this doesn't mean that these factors aren't important to consumers when choosing a hotel during COVID-19.

Table 4.17 Compare Pre COVID and During COVID-19 Factor analysis

Pre COVID	During COVID-19
Less density area	Regular disinfection
Masks, alcohol and other immunization	Cleanliness of room
Independent air conditioning	Cleanliness of public area
Convenient to hospital	Emergency service
Free cancellation service	24-hour video security
Doctor on call	Fitness room
Disposable items	Less density area
Recreational facilities	Convenient to the beach
Separate breakfast (not buffet)	Parking area
Parking area	Cashless payment
Contactless service	Recreational facilities
Cashless payment	Independent air conditioning
Car rental services	Masks, alcohol and other immunization supplies
24hours room service	Free rescheduling service
Free rescheduling service	Free cancellation service
Cleanliness of public area	Doctor on call
Star rating	Convenient to hospital
Brand image	Special room rate for COVID-19
Private beach	Special discount of SPA for COVID-19

Using the same approach for the Pre COVID hotel factors in the factor analysis, the Pre COVID hotel factors are divided into five common factors as shown in table 4.17 The fifth common factor was not summarized because only one hotel attribute was private beach. Based on the literature review, the factor analysis for before covid-19 is summarized below.

The first common factor included: less density area, Masks, alcohol and other immunization, independent air conditioning, Convenient to hospital, Free cancellation service, Doctor on call, and Disposable items. These factors have a common feature that was not generally emphasized Pre COVID. Because COVID-19 required social distance, it appeared that tourists preferred hotels in less density area. During COVID-19, consumers are more concerned about their

health, so they are more concerned about Convenient to Hospital and Doctor on call. Masks, alcohol and other immunization, independent air conditioning, and disposable items are the new needs of consumers during COVID-19 due to the requirement for COVID-19 prevention. COVID-19 leads to increased uncertainty for consumers, and free cancellation services give tourists more assurance that they are booking hotels in advance. So, the first common factor is named Factor 1-New hotel attribute for COVID-19.

The second common factor included: Recreational facilities, Separate breakfast (not buffet), Parking area, Contactless service, Cashless payment and Car rental services. These hotel attribute existed Pre COVID, but some changes have been made because of COVID-19. Recreational facilities were popular with tourists both Pre and during COVID-19. However, during COVID-19, tourists preferred to have some in-room recreational facilities in order to reduce contact with the outside world and the risk of contracting COVID-19. Parking areas and car rental services are also in high demand due to the increase in the number of self-guided trips during COVID-19. Phuket is an island and tourist transportation to Phuket was primarily by flight Pre COVID. Breakfast, cashless service, and contactless service already existed Pre COVID, but because of the way COVID-19 was spread, these hotel attributes were more valued and used by consumers. So, the second common factor is named Factor 2-Impotent hotel attribute for COVID-19.

The third common factor included: 24hours room service, Free rescheduling service, Cleanliness of public area. These hotel properties were available and were valued by consumers both Pre and during COVID-19. So, the third common factor is named Factor 3-Normal hotel attribute for COVID-19.

The fourth common factor included: Star rating and Brand image. Because both the Star rating and the Brand image are part of the hotel's image, they are classified as a common factor. So, the fourth common factor is named Factor 4- Hotel image.

According to the factor analysis Pre and during COVID-19, the common factor extraction Pre COVID was based on the association of hotel attributes with COVID-19. The common factor extraction after COVID-19 is mainly based on hotel factors.

Table 4.18 Multivariate Probability for hotel factors and hotel categories

Factors	95% Wald confidence interval				Hypothesis test		
	B	Std. error	Lower	Upper	Wald chi-square	Df	Sig
Factor 1- Security and Cleanliness	1.270	.3772	.531	2.009	11.342	1	.001*
Factor 2- Facilities and Locations for social distance	1.776	.2337	1.318	2.234	57.722	1	.000*
Factor 3- Facilities for COVID-19	.376	.3523	-.314	1.067	1.141	1	.285
Factor 4- Service for COVID-19	.538	.3671	-.181	1.258	2.150	1	.143
Factor 5- Hotel Promotion	-.401	.2245	-.841	.039	3.194	1	.074
	Value		Df		Asymp.sig		
Wald chi-square	128.307		6		.004		

$$Y_i = \beta_1 X_{1i} + \beta_2 X_{2i} + \beta_3 X_{3i} + \beta_4 X_{4i} + \beta_5 X_{5i} + \beta_6 X_{6i}$$

$$Y_i = \begin{cases} 0 & \text{(Hotels with room rates below 50US\$) = Economy Hotels} \\ 1 & \text{(Hotels with room rates above 50US\$) = High Value Hotels} \end{cases}$$

$$X_i = \begin{cases} X_1 = \text{Factor 1- Security and Cleanliness} \\ X_2 = \text{Factor 2- Facilities and Locations for social distance} \\ X_3 = \text{Factor 3- Facilities for COVID-19} \\ X_4 = \text{Factor 4- Service for COVID-19} \\ X_5 = \text{Factor 5- Hotel Promotion} \end{cases}$$

Hotels were classified into two categories according to their room rate, hotels with room rates below 50us\$ were classified as economy hotels and hotels with room rates above 50us\$ were classified as high value hotels. The five common factors and these two categories of hotels were analyzed by Multivariate Probability. According to table 4.18, it was found $X^2=128.307$,

Asymp.Sig <0.05. It shows that the entire equation has a high co- significance for all factors, indicating that the model is a valid model. The Factor 1- Security and Cleanliness and Factor 2- Facilities and Locations for social distance sig<0.05, which means that there have significant different between Factor 1 - Security and Cleanliness and hotel categories toward hotel selection. And there have significant different between Factor 2- Facilities and Locations for social distance and hotel categories toward hotel selection.

Table 4.19 Multivariate Probability for hotel attributes and hotel categories

Attributes	95%wald confidence interval				Hypothesis test		
	B	Std. error	Lower	Upper	Wald chi-square	Df	Sig
Regular disinfection	.099	.0898	-.077	.275	1.213	1	.271
Cleanliness of room	-.236	.0787	-.390	-.081	8.971	1	.003
Cleanliness of public	-.890	.2311	-1.343	-.437	14.837	1	.000
Emergency service	.148	.1056	-.059	.355	1.965	1	.161
24-hour video security	.631	.2261	.188	1.075	7.795	1	.005
Fitness facility in room	-.048	.0350	-.117	.020	1.909	1	.167
Less density area	-.082	.0506	-.181	.017	2.614	1	.106
Convenient to the beach	-.119	.0237	-.165	-.072	25.084	1	.000
Parking area	-.075	.0304	-.135	-.016	6.108	1	.013
	Value		Df		Asymp.sig		
Wald chi-square	18.993		6		.004		

$$Y_i = \beta_1 X_{1,1} + \beta_2 X_{1,2} + \beta_3 X_{1,3} + \beta_4 X_{1,4} + \beta_5 X_{1,5} + \beta_6 X_{2,1} + \beta_7 X_{2,2} + \beta_8 X_{2,3} + \beta_9 X_{2,4}$$

$$Y_i = \begin{cases} 0 & \text{(Hotels with room rates below 50US\$) = Economy Hotels} \\ 1 & \text{(Hotels with room rates above 50US\$) = High Value Hotels} \end{cases}$$

$$\begin{cases} X_{1,1} = \text{Regular disinfection} \\ X_{1,2} = \text{Cleanliness of room} \\ X_{1,3} = \text{Cleanliness of public} \\ X_{1,4} = \text{Emergency service} \\ X_{1,5} = \text{24-hour video security} \\ X_{2,1} = \text{Fitness facility in room} \\ X_{2,2} = \text{Less density area} \\ X_{2,3} = \text{Convenient to the beach} \\ X_{2,4} = \text{Parking area} \end{cases}$$

Objectives 2: To examine the factors that influence tourists to choose hotel in Phuket during COVID-19.

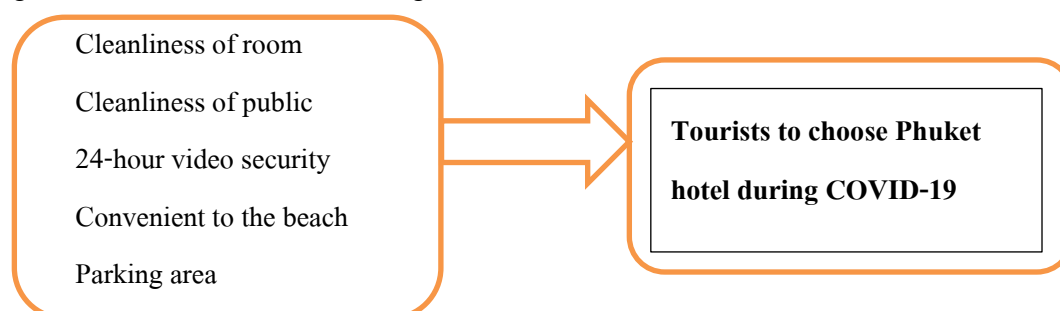
According to the results of the analysis in table 4.18, there have significant different between Factor 1- Security and Cleanliness and Factor 2- Facilities and Locations for social distance and room rate toward hotel selection. Factor 1 includes Regular Disinfection, Cleanliness of Room, Cleanliness of Public area, Emergency Service and 24-Hour Video Security. Factor 2 includes fitness facility in room, less density area, convenient to the beach and parking area. The nine hotel attributes and these two categories of hotels were analyzed by Multivariate Probability.

According to table 4.19, it was found $X^2=18.993$, Asymp.Sig <0.05. It shows that the entire equation has a high co- significance for all factors, indicating that the model is a valid model. Cleanliness of room, Cleanliness of public, 24-hour video security, Convenient to the beach and Parking area Sig<0.05, which means that there have significant different between Cleanliness of room and hotel categories toward hotel selection. There have significant different between Cleanliness of public and hotel categories toward hotel selection. There have significant different between 24-hour video security and hotel categories toward hotel selection. There have

significant different between Convenient to the beach and hotel categories toward hotel selection. There have significant different between Parking area and hotel categories toward hotel selection.

According to the results of the analysis in table 4.19, consumers pay attention to hotel factors such as Cleanliness of room, Cleanliness of public, 24-hour video security, Convenient to the beach and Parking area when choosing hotels tend to choose high-value hotels.

Figure 4.1 Choose Phuket hotel during covid-19



4.4 Comparing Pre and during COVID-19, the changes in factors of influence tourists to choose hotels

Table 4.20 T-test Factors of influence tourists to choose Phuket hotels Pre and during COVID-19

Factors	Before mean	During mean	Mean difference	F-value	P-value
Hotel Facility	3.60	4.37	0.77	.271	.000*
Hotel Services	3.77	4.46	0.69	.385	.000*
Hotel Location	3.63	4.29	0.66	.287	.000*
Hotel Image	4.06	4.28	0.22	.654	.000*
Hotel security and cleanliness	4.31	4.68	0.37	.527	.000*
Hotel promotion	N/A	4.36	N/A	4.33	N/A

The table shows the results of the descriptive statistic of the importance and T-test of hotel factors Pre and during COVID-19, which consisted of 6 factors as hotel facilities, Hotel service, Hotel location, Hotel image and Hotel promotion respectively in order to analyzed what was concerned by tourists to choose Phuket hotels Pre and during COVID-19.

According to the T-test, all hotel factors had a P-Value <0.05 . This means that all hotel factors are significantly different Pre and during COVID-19.

Hypothesis 3.1 : Comparing to Pre COVID-19, tourists increasingly consider Hotel facilities factor in their hotel selection.

Hypothesis 3.2 : Comparing to Pre COVID-19, tourists increasingly consider Hotel service in their hotel selection.

Hypothesis 3.3 : Comparing to Pre COVID-19, tourists increasingly consider Hotel security and cleanliness in their hotel selection.

Hypothesis 3.4 : Comparing to Pre COVID-19, tourists increasingly consider Hotel safety and cleanliness in their hotel selection.

In terms of important factors, the results show that both Pre and during COVID-19, hotel security and cleanliness is the most important factor for tourists when choosing a hotel in Phuket. Therefore, Hypothesis 3.4 was accepted. During COVID-19, Hotel safety and cleanliness were the most important factors for tourists.

Pre COVID, hotel security and cleanliness (mean = 4.31), during COVID-19, hotel security and cleanliness (mean = 4.68). Therefore, Hypothesis 3.3 was accepted. During COVID-19 tourists consider Hotel security and cleanliness to be more important than before the COVID-19. In addition, respondents considered other hotel factors to be more important during COVID-19 than Pre COVID. The hotel factor that changed the most was hotel facilities (Mean difference=0.77) Therefore, Hypothesis 3.1 was accepted. During COVID-19 tourists consider Hotel facilities to be more important than before the COVID-19. Followed by hotel services (Mean difference=0.69). Therefore, Hypothesis 3.2 was accepted. During COVID-19 tourists consider Hotel service to be more important than before the COVID-19. Hotel promotion is for COVID-19, so it's only available during COVID-19. Hotel promotion (mean = 4.36).

Table 4.21 T-test Factors of influence tourists to choose Phuket hotels Pre and during COVID-19.

Factors	Pre COVID		During COVID-19		Mean difference	F-value	P-value
	Frequency (400)		Frequency (400)				
	Mean	SD	Mean	SD			
Hotel facilities							
Parking area	3.45	1.42	3.81	1.35	0.36	0.772	.000*
Fitness room	3.70	0.97	3.91	1.14	0.21	0.567	.000*
Separate breakfast	3.77	1.06	4.34	0.80	0.57	0.234	.000*
Cashless payment	4.03	0.79	4.54	0.70	0.51	0.504	.000*
Recreational	3.94	0.78	4.51	0.69	0.57	0.436	.000*
Disposable items:	3.26	0.87	4.44	0.76	1.18	-0.018	.000*
Independent air	3.35	1.09	4.67	0.68	1.32	0.326	.000*
Masks, alcohol and	3.27	1.07	4.77	0.55	1.50	0.055	.000*
Hotel service							
Contactless service	3.77	1.42	4.41	0.65	0.64	0.379	.000*
Car rental services	3.60	0.97	4.08	0.81	0.48	0.55	0.741
Express service	3.93	1.06	4.45	0.65	0.52	0.436	.000*
Free rescheduling	3.97	0.79	4.58	0.49	0.61	0.255	.000*
Free cancellation	3.41	0.78	4.66	0.47	1.25	-0.017	.000*
Airport transfer	3.81	0.87	4.40	0.61	0.59	0.517	.000*
24hours room service	4.23	1.09	4.54	0.54	0.31	0.306	.000*
Doctor on call	3.44	1.07	4.58	0.52	1.14	0.365	.000*
Provide real-time	N/A		4.50	0.59		N/A	
Hotel location							
Less density area	3.30	1.00	4.22	0.82	0.92	0.103	0.039
Private beach	3.95	0.65	4.39	0.64	0.44	0.429	.000*
Convenient to the	3.50	1.03	4.07	2.70	0.57	0.233	.000*
Convenient to the	4.10	0.67	4.43	0.63	0.33	0.395	.000*
Convenient to	3.30	1.07	4.37	0.78	1.07	0.55	.000*
Hotel image							
Brand image	3.95	0.94	4.31	0.71	0.36	0.618	.000*
Star rating	4.17	0.87	4.25	0.84	0.08	0.736	.000*

Table 4.21 Continue

Factors	Pre COVID		During COVID-19		Mean difference	F-value	P-value
	Frequency (400)		Frequency (400)				
	Mean	SD	Mean	SD			
Hotel security and cleanliness							
Emergency	4.17	2.15	4.64	0.52	0.47	0.606	.000*
24-hour video	4.29	0.55	4.59	0.58	0.30	0.223	.000*
Cleanliness of	4.62	0.56	4.76	0.47	0.14	0.676	.000*
Cleanliness of	4.46	0.80	4.70	0.52	0.24	0.579	.000*
Regular	4.02	1.35	4.74	0.48	0.72	0.199	.000*
Hotel promotion							
Special discount of FB for COVID-	N/A		4.47	2.65		N/A	
Special room rate for COVID-19	N/A		4.36	0.76		N/A	
Special discount of SPA for	N/A		4.26	0.80		N/A	

Objectives 3: To compare Pre and during COVID-19 hotel-selection factors among tourists in Phuket.

According to table 4.20, only car rental service P-Value>0.05, the other factors P-Value<0.05. This means that except for car rental service, the other factors are significantly different Pre and during COVID-19.

Factor 1“Hotel Facilities”, Pre COVID, the most popular hotel facilities was “Cashless payment” (mean=4.03). During COVID-19, The most popular hotel facilities was “Masks, alcohol and other immunization” (mean=4.77). Pre and during COVID-19, the factor that changed the most was "Masks, alcohol and other immunization” (Mean difference=1.5). Follow by “Independent air conditioning” (Mean difference=1.32) “Disposable items: Dixie cup” (Mean

difference=1.18). Preventative facilities, which are directly related to COVID-19, have changed relatively significantly.

Pre COVID, masks were generally considered necessary only for the sick. Alcoholic hand sanitizers were available only on a small scale. Medical studies have shown that masks were more important than social distance and home quarantine policies in preventing COVID-19 transmission and infection. In Thailand, the government has also made it mandatory for people to wear masks and measure body temperature when entering public areas. Therefore, tourists perceive Masks, alcohol and other immunization to be more important than Pre COVID.

Pre COVID, central air conditioning often meant that hotels were more modern. Tourists cared more about the noise of the hotel's air conditioning when choosing a hotel. Aerosol transmission through central air conditioning may be another route of COVID-19 transmission (Zhang et al., 2020). Therefore, tourists prefer hotels with independent air conditioning when choosing a hotel during COVID-19.

Pre COVID, hotels around the world had been reducing disposable products offered to customers. On one hand, this was due to the need to protect the environment, and on the other hand, to reduce the cost of the operation of hotels. During COVID-19, tourists thought that a safe environment was more important than environmental awareness. Tourists are more concerned about their own safety and perceive disposables as more important than Pre COVID.

Factor 2 "Hotel service", Pre COVID, the most popular hotel service was "24hours room service" (mean=4.23). During COVID-19, The most popular hotel service was "Free cancellation service" (mean=4.66). Pre and during COVID-19, the factor that changed the most was "Free cancellation service" (Mean difference =1.25). Follow by "Doctor on call" (Mean difference=1.14) "Contactless service" (Mean difference=0.64). "Provide real-time epidemic" was a hotel service that emerged during COVID-19 and is highly valued by tourists. (mean=4.50).

Compared with January 2020, the number of "flight cancellation" queries increased by 15 times in March 2020. Travel instability caused by COVID-19 has become the new normal in the during epidemic era. Changes in policy of origin and destination may lead travelers to cancel or rearrange itineraries. Therefore, the demand for "free cancellation services" has increased compared to the time Pre COVID.

Pre COVID, the majority of the population with a need for doctor on call service was older and had recurrent illnesses. During COVID-19, people pay more attention to their health. Especially during the isolation period, people are prone to physical and psychological problems. 24-hour online doctor services can largely resolve consumer anxiety. (Baum, Mooney, Robinson and Solnet, 2020)

The hotel industry is a service industry. Service quality is the core competence of a hotel. Pre COVID, customers preferred to have complete human service, even if non-contact service was available only as an adjunct to human service. Because COVID-19 is primarily transmitted through direct or indirect close contact with infected people via mouth or nose secretions, social distancing and frequent sanitation are highly recommended. (World Tourism Organization, 2020) Therefore, during the COVID-19 period, contactless service was more popular among customers.

Factor 3“Hotel location”, Pre and during COVID-19, The most popular hotel location factor was “Convenient to the beach” (mean=4.13)-(mean=4.43). Pre and during COVID-19, the location factor that changed the most was " Convenient to hospital” (Mean difference=1.07). Follow by “Less density area” (Mean difference=0.92). Pre and during COVID-19, the location factor that made the biggest difference in visitors' opinions was the “Convenient to the airport”. Pre COVID (Sd=1.03), During COVID-19 (Sd=2.70)

Phuket as an international resort island, beaches have always been a popular area for tourists. During the COVID-19 period, the beach is an outdoor tourist attraction. On the one hand, it can satisfy the leisure needs of tourists, and on the other hand, it can maintain social distance and meet the needs of prevention of disease. Therefore, convenience of access to the beach is the most important hotel factor for tourists both Pre and during COVID-19.

Compared to Pre COVID, people are more concerned about their health. Therefore, the distance between the hotel and the hospital is also a factor for tourists to choose a hotel.

Pre COVID, tourists preferred the bustling Patong area. Because COVID-19 is primarily transmitted through direct or indirect close contact with infected people via mouth or nose secretions, social distancing and frequent sanitation are highly recommended. (World Tourism Organization, 2020) Therefore, hotels that are away from the crowds, able to maintain a social distance, were more in line with the needs of tourists during COVID-19.

Factor 4“Hotel image”, Pre and during COVID-19, Hotel image changes are relatively minor. Brand image is more valued by tourists during COVID-19 (mean=3.95) - (mean=4.31). Star rating is also more valued by tourists during COVID-19(mean=4.17) - (mean=4.25).

In a survey of hotel information, it was found that because of COVID-19, the occupancy rate of hotels decreased. The prices of hotels in general have dropped dramatically. Brand image became the new attraction for consumers when prices were no longer competitive.

Factor 5“Hotel security and cleanliness”, Pre and during COVID-19, The most popular Hotel security and cleanliness factor was “Cleanliness of room” (mean=4.62). Compare Pre and during COVID-19, the factor that changed the most was “Regular disinfection” (Mean difference=0.72). Follow by “Emergency service” (Mean difference=0.47) and “24-hour video security” (Mean difference=0.30). Preventative hotel security and cleanliness factors, which are directly related to COVID-19, have changed relatively significantly.

Pre COVID, consumers focused more on the overall cleanliness of the hotel environment than on the smallest viruses. However, due to the virus's ability to be transmitted through contact with surfaces, consumers were more concerned with regular disinfection and cleaning practices to reduce the risk of contracting COVID-19.

Accidents are inevitable, and improved emergency services are more effective in protecting the lives and property of consumers. Consumer awareness of disaster prevention increased with the outbreak of COVID-19.

24-hour video security is important for protecting consumer lives and property both before and after covid-19. However, Pre COVID, tourists did not pay much attention to this intangible protection. Because of the epidemic, consumers are paying more attention to hotel security systems.

Factor 6“Hotel promotion”, Hotel promotion is for COVID-19, so it's only available during COVID-19. Of all the promotions, special discounts on food and beverages were the most popular promotion factor among tourists(mean=4.47). According to Table 4.3.2One-way ANOVA test in Hotel Attributes and room rate, in hotel promotion, only the special room rate for COVID-19 affects the tourist's choice of hotel.

Because of COVID-19, hotels are offering different promotions. Based on the results of this analysis, it is recommended that hotels focus their promotions on hotel rates and food and beverage discounts, which are two areas that tourists pay more attention when selecting a hotel.

CHAPTER 5

CONCLUSION AND RECOMMENDATIONS

This chapter contains the conclusions and discussion about the research findings based on the research objectives. The discussion explicitly explains the concluded results and key findings. Likewise, some implications and suggestions for government and tourism providers, limitations, and future research recommendations are reincluded in this section.

5.1 Conclusion

5.1.1 Profile of Respondents

5.1.2 Travel patternss

5.2 Discussion

5.2.1 Travel patterns influencing tourists to choose Phuket hotel during COVID-19

5.2.2 Personal Characteristics while tourists choosing Phuket hotel during COVID-19

5.2.3 Compare Pre and during COVID-19, the changes in factors influencing tourists to choose hotels

5.3 Recommendations

5.4 Limitations

Phuket's tourism industry has been greatly impacted by COVID-19, and both the tourism and hospitality industries are facing tremendous difficulties. It is urgent that the hotel industry adapt to the changes and needs of the market brought about by COVID-19. In consideration of the gap existing in tourism research about During-COVID-19, factors influence hotel selection of tourists in Phuket. This study attempted to achieve three objectives:

- To examine demographic and travel patterns of influencing tourists to choose hotel in Phuket during COVID-19 in Phuket.
- To examine the factors that influence tourists to choose hotel in Phuket during COVID-19.

- To compare Pre and during COVID-19 hotel-selection factors among tourists in Phuket.

5.1 Conclusion

A self-administrated questionnaire was developed based on the literature review. The population of this study was mainly the tourists in Phuket during COVID-19. The primary data were collecting during the period of October to November 2020 at Phuket town and Cape Panwa.

5.1.1 Profile of Respondents

According to the demographic results, it can be concluded the majority of tourists arriving in Phuket were between 21-30 years old. 50.5% of respondents were male tourists, and 49.5% were female. In terms of occupation, the majority of respondents were company employees (33%), followed by self-employed (21.5%). The majority of respondents had an annual income of 10001-30000USD (41.1%). Asia (55.3%) was the region with the most tourists arriving in Phuket. The majority of tourists to Phuket are traveling without children(55%). The educated level of majority is bachelor's degree (58.3%).

5.1.2 Travel patterns

According to the results, 40.3% of tourists travel to Phuket for more than 3-4days. While choosing the room rate, the room price of under 50USD was the most popular among tourists. When booking hotels, online travel agencies (49%) was the most selected channel by tourists. Among tourists' travel purposes, vacation was the main purpose of most tourists coming to Phuket, accounting for 82.5%. In planning the trip in advance, most tourists planned the trip one week before the departure date, accounting for 45.0%. Among the means of transportation to Phuket, airplanes are the primary means of transportation for tourists to reach Phuket, accounting for 76.8%. Among the transportation methods to reach the hotel, 69.8% of tourists choose by taxi to arrive at the hotel. The online travel agent is the most popular source of information for tourists searching for hotel information, accounting for 43.5% of the total.

5.2 Discussion

This study used descriptive analyses (e.g., frequencies, percentages, means, and standard deviations), one-way ANOVA, and Pearson Chi-square to analyze the factors that influenced tourists' choice of hotels in Phuket during COVID-19.

5.2.1 Travel patterns influencing tourists to choose Phuket hotel during COVID-19

Based on the analysis with Pearson chi-square of travel patterns that influence tourists' choice of hotel. Among the travel patterns, only the time of the planned trip and the traveler's hotel choice has a significant relationship. Tourists were most likely to plan their trip one week before departure. The most popular hotels among tourists who plan their trip one week before departure is in the 51-100USD range. According to Pakpum Kowisuth's study, Pre COVID, most tourists arriving in Phuket were planning their trip 1-2 months before departure (Pakpum Kowisuth 2015).

There are many reasons for this change, which can be divided into the following four points: First, Pre COVID, the Phuket tourism market was dominated by international tourists. (C9hotelworks.com. 2020) During the COVID-19 period, Phuket's tourist market was dominated by domestic tourists, mostly Thais from other provinces and foreigners with a long-term residency in Thailand. Compared to international long-distance travel, travel plans for domestic travel were closer to the departure date.

Second, the overall supply of rooms in Phuket's hospitality industry was higher than the market demand during COVID-19. Pre COVID, it was often difficult to get a space in Phuket during significant festivals. However, during the COVID-19 period, the supply of rooms in Phuket was relatively abundant, reducing tourists' worries about failing to book a room.

Third, during COVID-19, Thailand's principal tourism market was domestic tourism. (C9hotelworks.com. 2020) While promoting domestic tourism, the government was also faced with pressure to prevent epidemics. City lockdowns due to COVID-19 might occur at any time.

Fourth, hotels are launching more and more promotions to increase occupancy, since supply exceeds demand. When supply is less than demand, as the move-in date approaches, room rates increase as occupancy increases; When the supply is higher than the demand, hotels will offer more favorable promotions to attract consumers in order to increase occupancy.

Based on descriptive statistics and Pearson chi-square, analyze the relationship between the booking channel and tourist's choice of hotel. The booking channel and tourist's choice of the hotel were not significantly related. Among the booking channel's options, the most used booking channel was online travel agent, followed by hotel website. The bargaining power of online travel agents guarantees their competitiveness. According to a comparison with Pakpum Kowisuth's study, there was no significant change in tourist booking channels Pre and during COVID-19.

Based on descriptive statistics and Pearson chi-square, analyze the relationship between transport to Phuket and tourist's choice of hotel. Transportation to Phuket and tourist's choice of the hotel were not significantly related. Among the transportation to Phuket choices, the most used transport to Phuket was by airplane, followed by driving. Because Phuket is an island, it is still the main way for tourists to arrive in Phuket by airplane. The percentage of tourists arriving in Phuket by car has increased contrasted to Pre COVID. This is similar to the results of the Chinese tourism study, as covid-19, the proportion of self-drive travel increased in order to reduce contact with strangers.

Based on descriptive statistics and Pearson chi-square, analyze the relationship between travel with children and tourist's choice of hotel. Travel with children and tourist's choice of the hotel were not significantly related. In a statistical survey of travel with children, most tourists were traveling without children. This fact is significantly different from Pakpum Kowisuth's study, which was done Pre COVID, in which there was no significant relationship between travel with children and tourists' choice of hotels. Because of covid-19, parents minimized travel with their children. This led to the fact that very few tourists traveling with children were found in our survey.

5.2.2 Factors influencing tourists to choose Phuket hotels during COVID-19

This study used descriptive analyses (e.g., frequencies, percentages, means, and standard deviations), one-way ANOVA, factor analysis, and Multivariate Probability to analyze the factors that influenced tourists' choice of hotels in Phuket during COVID-19.

According to the one-way ANOVA analysis of hotel factors and room rates, there are significant differences between hotel facilities and hotel choices. Hotel facilities include Parking area, Fitness facility in room, Separate breakfast (not buffet), Cashless payment, Recreational facilities, and Disposable items such as Dixie cup, Tableware, Independent air conditioning, Masks, alcohol, and other immunization supplies. The result of the one-way ANOVA analysis of these

hotel facility factors and room rate was that there is a significant difference between the hotel facility factors and hotel choices. Among these hotel facility factors, the most important to consumers were Masks, alcohol and other immunization supplies. Follow by Disposable items: Dixie cup, Tableware and Independent air conditioning. These hotel facilities were not conventional and were associated with COVID-19.

According to the one-way ANOVA analysis of hotel factors and room rates, there are significant differences between hotel services and hotel choices. Hotel services include: Contactless service, Car rental services, Express service (Check in, out), Free rescheduling service, Free cancellation service, Airport transfer, 24-hour room service, Doctor on call. The result of the one-way ANOVA analysis of these hotel service factors and the room rate was that there is a significant difference between the hotel service factors and hotel choices. Among these hotel service factors, the most important to consumers was the Free cancellation service. In comparing the trip Pre and during COVID-19, the time of plan the trip changed from one month before departure to one week before departure, which also shows the tourists' concern about the hotel cancellation due to COVID-19. According to the European Commission's regulations issued during COVID-19, in the event of cancellation or rescheduling due to force majeure such as COVID-19, merchants are required to provide free cancellation or rescheduling services (European Commission. 2020). According to the study, free cancellation of services is also essential in Thailand. However, the government has not issued a precise regulation.

According to the one-way ANOVA analysis of hotel factors and room rates, there are significant differences between hotel location and hotel choices. Hotel location include: Less density area, Private beach, Convenient to Airport, Convenient to Beach, Convenient to Hospital. The result of the one-way ANOVA analysis of these hotel location factors and room rate, less density area, Private beach, Convenient to Beach, Convenient to Hospital, then hotel choices will have a significant difference. Convenient to Airport and hotel choices have a no significant difference. Travel by air is the primary transportation for tourists arriving in Phuket, but there was no significant difference between Convenient to airport and hotel selection during the COVID-19 period. On the one hand, this is due to the increase in tourists traveling by car during the COVID-19 period. On the other hand, it is ascribed to an increase in tourists' demand for hotel epidemic

prevention and a decrease in the importance of the hotel's location for Convenient to Airport. This situation is similar to the China Tourism Report results (Traveldaily.cn. 2020).

According to the one-way ANOVA analysis of hotel factors and room rates, there are significant differences between hotel image and hotel choices. Hotel image factors include: Brand image and Star rating. The result of the one-way ANOVA analysis of these hotel image factors and room rate was that there is a significant difference between the hotel image factors and hotel choices. The image of the hotel, the star rating and the price of the hotel are directly proportional. This is similar to the results of many hotel studies. The higher the star rating demanded by customers, the better the image of the hotel required, accompanying the higher the price of the hotel (Pakpum Kowisuth. 2015).

According to the one-way ANOVA analysis of hotel factors and room rates, there are significant differences between hotel security and cleanliness and hotel choices. Hotel security and cleanliness include: Emergency service, 24-hour video security, Cleanliness of room, Cleanliness of public area, and Regular disinfection. The result of the one-way ANOVA analysis of these hotel security and cleanliness factors and the room rate was that the hotel image factors and hotel choices have a significant difference. Hotel security and cleanliness were the most important factor for tourists when choosing a hotel in Phuket during COVID-19. This situation has similar results as the study by Pakpum Kowisuth (Pakpum Kowisuth 2015). Among these hotel security and cleanliness factors, the most important factors for consumers were Cleanliness of the room and Regular disinfection. In the study about hotel attributes from B.B. Stringam also shows that tourists highly value the cleanliness of room (Stringam, B.B 2008). In the WHO guidelines for hotel operations also show the importance of regular disinfection of hotels (WHO,2020c).

According to the one-way ANOVA analysis of hotel factors and room rates, there are significant differences between hotel promotion and hotel choices. Hotel promotion factors include: Special discount of FB for COVID-19, Special room rate for COVID-19 and Special discount of SPA for COVID-19. The result of the one-way ANOVA analysis of these hotel promotion factors and room rate, Special discount of FB for COVID-19, Special discount of SPA for COVID-19 and hotel choices have a no significant difference. Special room rate for COVID-19 and hotel choices have a significant difference. This result suggests that hotels offer room rate-related promotions that are more effective in attracting consumers during COVID-19.

To further understand the influence of hotel attributes on tourists' choice of hotels, the 31 items of hotel attributes were factor analyzed to explore the underlying dimensions. The Principal maximum likelihood method with a Varimax rotation was performed to the destination attributes of the overall data, the same approach as that used by Kozak (2001). To determine the number of factors, only factors that meet the minimum eigenvalue of 1.0 or higher were retained for further analysis (Pallant, 2013). A cut-off point of factor loadings was identified at 0.6, the same level identified in previous studies such as that of Lee and Lee (2009).

The factor analysis extracted five factors, which were labeled separately as Factor 1- Security and Cleanliness, Factor 2- Facilities and Locations for social distance, Factor 3- Facilities for COVID-19, Factor 4- Service for COVID-19, Factor 5- Hotel Promotion.

Based on a multivariate probability analysis of the five common factors and the two categories of hotels, there is a significant difference between Factor 1- Security and Cleanliness, Factor 2- Facilities and Locations for social distance and the categories of hotels tourists choosing during COVID-19. Tourists more concerned with Factor 1 - Security and Cleanliness and Factor 2 - Facilities and Locations for social distance are more suited to high value hotels during COVID-19.

Security and cleanliness had been the most important factors for tourists in choosing a hotel, and the results are similar to the findings of Pakpum Kowisuth (Pakpum Kowisuth 2015) and Stringam, B.B (Stringam, B.B 2008). In order to seek the hotel environment with Security and Cleanliness, tourists were more willing to pay a higher price. Facilities and Locations for social distance are new demands due to COVID-19. Facilities and Locations for social distance ensure a safer stay and reduce the risk of COVID-19 infection during the hotel stay. In order to reduce the risk of COVID-19, tourists were also willing to pay a higher price.

Factor 1- Security and Cleanliness includes Regular Disinfection, Cleanliness of Room, Cleanliness of Public area, Emergency Service and 24-Hour Video Surveillance. Factor 2- Facilities and Locations for social distance fitness facility in room, less density area, convenient to the beach and parking area.

Based on a multivariate probability analysis of the nine hotel attributes and the two categories of hotels, there is a significant difference between Cleanliness of room, Cleanliness

of public, 24-hour video surveillance, Convenient to the beach, convenient to Parking area, and the categories of hotels tourists choosing during COVID-19.

The guest room was the central part of the hotel and occupied an important position in the hotel. As well, the guest room was the place where guests stayed the longest in the hotel (J., A. and A, S., 2019). The cleanliness of the room is always an important factor for the consumer when choosing a hotel. Because of COVID-19, consumers not only focus on the surface cleaning of the room, but also focus on the deep disinfection and cleaning of the room. Consumers were willing to pay higher room rates for hotels with higher cleanliness levels.

The results of this study show that consumers also place a high value on the cleanliness of public areas. On the one hand, this result might come from the fact that public areas distribute the first impressions of tourists and show the overall level of cleanliness of a hotel. On the other hand, the risk of spreading COVID-19 was highest in public areas, which are the areas that have the most contact with guests. For the prevention of COVID-19, tourists were willing to pay higher room rates for hotels with cleanliness in public.

24 Hour Surveillance Cameras are essential hotel equipment. With the rising crime rate in hotels, surveillance cameras are becoming more and more important in hotels. A 24-hour security camera system protects the personal and property safety of hotel guests and provide better guest safety (Mansour Ghazi, K., 2014). Consumers were willing to pay higher room rates for hotels with 24-Hour Video Surveillance.

The beach was an attractive destination for tourists in Phuket. During COVID-19, the beach not only need to meets the needs of people's leisure and entertainment, but also maintain social distance and fulfill the needs of epidemic prevention. Hotels with convenient reach to the beach were very popular. Consumers were willing to pay higher room rates for hotels which are convenient to the beach.

Parking areas are a standard amenity at hotels, but are more in demand by tourists during COVID-19. This also indicates that self-guided driving has become the dominant mode of travel during COVID-19. Tourists will choose hotels with more ample parking areas when choosing a hotel.

5.2.3 Compare Pre and during COVID-19, the changes in factors of influencing tourists to choose hotels

In terms of important factors, Pre COVID, hotel security and cleanliness used to be the most important factor for tourists to choose a hotel in Phuket, then followed by hotel image, hotel location, hotel service and hotel facilities. During COVID-19, hotel security and cleanliness were also the most important factor for tourists to choose a hotel in Phuket, then followed by hotel service, hotel facilities, hotel promotion, hotel location and hotel image. Both Pre and during COVID-19, hotel security and cleanliness were the most important factor for tourists to choose a hotel in Phuket. Pre COVID, tourists attached more importance to the scenery and image of the hotel while during COVID-19, tourists placed more importance on hotel factors related to the epidemic prevention.

Hotel security and cleanliness were the most important factors for tourists during the COVID-19 period. Regular disinfection was the most variable factor Pre and during COVID-19. Cleanliness of room and cleanliness of public area were both highly significant Pre and during COVID-19. The importance of cleanliness of public area has increased significantly due to the impact of COVID-19. Efficient cleaning measures will provide a sense of security for guests. Hotels need to provide a safe and hygienic hotel environment in order to create satisfying experience. Maintaining a social distance and increasing the frequency of cleaning in public areas was the new requirements for hotels during COVID-19.

Hotel facilities were important factors for tourists during the COVID-19 period. During COVID-19, masks, ethanol and other immunization, independent air conditioning as well as cashless payment were the three factors that tourists valued the most. Compared to the pre-COVID-19 period, the importance of these three factors has increased significantly among tourists. This indicates that during the COVID-19 period, tourists attach great importance to availability of immunization-related hotel facilities in their hotels. Comparing Pre and during COVID-19, there was no difference of tourists' demand for hotel facilities such as parking area and fitness room.

In recent years, efforts to reduce the consumption of disposable plastic utensils, such as cups and straws, have become increasingly popular in the hospitality industry. However, during the COVID-19 pandemic, hotel consumption of disposable plastic utensils has recently

resurfaced on the rise. Consumers were confident that disposables have not been used before and that it is much safer and hygiene for usage.

Hotel service was the most variable factor Pre and during COVID-19. The hotel services in this study were those related to COVID-19 rather than regular hotel services. During COVID-19, hotel service that tourists valued the most was free cancellation service. Compared to Pre COVID, tourists preferred hotels to offer free rescheduling services. Because of the increased uncertainty caused by COVID-19, the cancellation rate of travelers' trips increased. Thus, contactless service is an increasingly important factor for tourists. The hotel industry is a service industry, and it is important for hotels to focus on how to provide satisfying contactless service. For example, Pre COVID, only the elder travelers needed doctor on call while it became one highly valued factor during COVID-19. Hotels with hospitals and doctors in cooperation can be an important factor in attracting guests during COVID-19.

Hotel location was a very important factor Pre COVID. Pre COVID, tourists preferred busy and bustling areas when choosing a hotel location. But during COVID-19, less density area was more popular among tourists. Hotels with convenient access to the beach were popular with tourists both Pre and during COVID-19. For hotel locations with convenient access to hospitals, there was a significant increase in popularity during COVID-19. When advertising, hotels located quietly but out of town can highlight their strengths to attract guests.

Hotel image, Pre and during COVID-19, Hotel image changes are relatively minor. Brand image is more valued by tourists during COVID-19. Star rating was also more valued by tourists during COVID-19.

Hotel promotion was for COVID-19, so it's only available during COVID-19. Of all the promotions, special discounts on food and beverages were the most popular promotion factor among tourists.

5.3 Recommendations

Hotel cleanliness is the most important hotel factor for consumers during COVID-19. Therefore, hotels should increase their cleaning intensity and prepare additional or upgraded hotel facilities associated with COVID-19.

In order to reduce the risk of COVID-19 infection in public areas, hotels should frequently clean and disinfect surfaces that are in frequent contact with consumers. Cleaning and disinfection of public areas (e.g., restrooms, lobbies, reception areas, hallways, and elevators) should be performed as a general precaution. Special attention should be paid to objects that are frequently touched, such as handles, elevator buttons, handrails, switches, door handles, and remote controls. Cleaning staff should follow professional instructions.

In accordance with WHO recommendations for cleaning and disinfection of environmental surfaces in non-medical facilities in the context of COVID-19, hotels should carefully select the type and concentration of disinfectants to avoid surface damage and to minimize toxic effects.

In hotel cleaning facilities, vehicles used to pick up and drop off guests at the airport should also be a prioritized cleaning area. Vehicles must be sprayed with a disinfectant spray: door handles, leather seats, seat belts, steering wheels and windows, and the disinfectant must be left on for 10 minutes before being wiped off with a clean cloth.

For the safety of hotel guests, a portable mini bottle of disinfectant alcohol should be provided at check-in, hand sanitizer should be available in public spaces and disinfectant alcohol and spray should be available on each floor in public areas such as the hotel lobby and breakfast room.

Moreover, hotels should increase recreational and fitting facilities in the room, then clean and disinfect these facilities carefully. the health of employees should be monitored and controlled in real time, and ensure that no others re-enter the room after it has been cleaned and disinfected.

Free cancellation and free rescheduling services should be provided to reduce consumer anxiety in case they are unable to travel. Individual breakfasts and online ordering should be offered to reduce contact on public goods.

The hotel has increased connections with hospitals, provided doctors online service, upgraded nursing rooms, increased staff training in relevant epidemic prevention information, and provided professional epidemic prevention services and real-time epidemic information to consumer.

In terms of hotel advertisement, establish the image of the hotel as a professional epidemic prevention to increase the trust of consumers. On the other hand, promote special rates during the COVID-19 period. Hotels strengthen their cooperation with the government and positively participate in the government's activities for boosting tourism.

5.4 Limitations

The results of this study have limitations. In order to better understand the factors that influence tourists' choice of hotels in different regions, tourists from different countries were surveyed in this study. In fact, because of COVID-19, Thailand has severely restricted international tourists to enter the country, and now most of the tourist market in Phuket is domestic residents.

There were no cases of COVID-19 in Phuket and no native cases of COVID-19 in Thailand during the time period of this data collection. This may also affect the choice of some tourists.

Because of COVID-19, overall hotel prices in Phuket have dropped significantly. Hotel prices are not fully representative of the style and level of the hotel. This survey has limitations due to the temporary closure of many hotels during COVID-19.

In order to better find the target population, the survey locations for this study were mainly around hotels. Although there was a selection of as many different hotel surroundings as possible, but the results of the study were not without human bias.

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APPE DIX A
RESEARCH QUESTIONNAIRE



During covid-19, factors influence hotel selection of tourists in Phuket

Dear respondent

This questionnaire is part of a research project entitled *During covid-19, factors influence hotel selection of tourists in Phuket*. The project is fully granted by Faculty of hospitality and tourism to assess the current tourists' expectations about Phuket hotel industry. Your responses are important in enabling us to obtain fuller understanding of the topical issues.

This questionnaire consists of 3 parts:

- Part 1: Personal Characteristics
- Part 2. Tourist behaviors when choose hotel
- Part 3. Factors influence hotel selection of tourists in Phuket

Please indicate your opinion by circling an appropriate number or filling in the blanks for each question. Also, please be assured that the information collected will be treated confidential and used for academic purposes only.

Thank you very much for your kind assistance. For further information about the study, please do not hesitate to contact me at ziyuwang000@gmail.com

Ziyu Wang

Project co-ordinator

Faculty of Hospitality and Tourism, Prince of Songkla University, Phuket Campus

Part 1: Personal Characteristics

1. Gender :

- Female Male

2. Age :

- Under 20 41-50years 21-30years
 51-60years 31-40years Over 60years

3. Education :

- High school or lower Master degree
 Bachelor degree Ph.D.

4. Annual income :

- Under 5,000 US\$ 30,001-50,000 US\$ 5,001 -10,000US\$
 50,001-100,000 US\$ 10,001 -30,000US\$ Over 100,000 US\$

5. Occupation :

- Self-employed Government officer
 Manager Professionals (E.g. teacher lawyers)
 Employee Student
 Retired Others

6. Do you have children traveling with you?

- Yes. No

7. Nationality

- Asian African American
 European Middle east Australian
 Other _____

Part 2. Tourist behaviors

1. How many days do you travel in Phuket for this trip?

- 1-2 days 4-6days 7-15days
 3-4days More than 15days

2. Which room rate do you stay average per night?

- Under 50US\$ 51-100 US\$
 101-150 US\$ Over 150 US\$

3. Which information source did you use to plan for booking the hotel? (Multiple choice)

- | | |
|--|--|
| <input type="checkbox"/> Hotel websites | <input type="checkbox"/> Social media recommendation (YOUTUBE) |
| <input type="checkbox"/> Travel agent | <input type="checkbox"/> Friends and family recommendations |
| <input type="checkbox"/> Online travel agent (Booking.com) | <input type="checkbox"/> Loyalty program websites |
| <input type="checkbox"/> Newspaper /Magazines | <input type="checkbox"/> Called the hotel directly |
| <input type="checkbox"/> Previous trips experience | <input type="checkbox"/> Others..... |

4. How did you reserve the hotel when you travel in Phuket?

- | | |
|--|--|
| <input type="checkbox"/> Walk in booking room | <input type="checkbox"/> Travel agent |
| <input type="checkbox"/> Hotel websites | <input type="checkbox"/> Online travel agent (Ctrip, Booking.) |
| <input type="checkbox"/> Direct booking with hotel | <input type="checkbox"/> Others..... |

5. What is the primary purpose of the trip?

- | | |
|--|--|
| <input type="checkbox"/> Vacation | <input type="checkbox"/> Visit friends/relatives |
| <input type="checkbox"/> Retirement | <input type="checkbox"/> Business |
| <input type="checkbox"/> Meeting /conference | <input type="checkbox"/> Health check |
| <input type="checkbox"/> Other | |

6. How long do you plan this trip in advance?

- | | |
|---|--|
| <input type="checkbox"/> Less than 1 week before departure date | <input type="checkbox"/> 1 week before departure date |
| <input type="checkbox"/> 1 month before departure date | <input type="checkbox"/> 1-2 month before departure date |
| <input type="checkbox"/> More than 2 months | <input type="checkbox"/> Before COVID-19 |

7. How did you arrive to Phuket?

- | | |
|-----------------------------------|--|
| <input type="checkbox"/> Airplane | <input type="checkbox"/> Bus |
| <input type="checkbox"/> Driving | <input type="checkbox"/> Cross province taxi |

8. How did you arrive to the hotel?

- | | |
|--|---|
| <input type="checkbox"/> By hotel shuttle/van/taxi | <input type="checkbox"/> By car |
| <input type="checkbox"/> By taxi | <input type="checkbox"/> By public transportation |
| <input type="checkbox"/> Other | |

Part 3. Factors influence hotel selection of tourists in Phuket

Below are the hotel attributes. Before and during covid-19, when you choose a Phuket hotel, how **important** do you think the following attributes?

Factors	Before covid-19					During covid-19				
	Not important at all	Not important	Neutral	Important	Very Important	Not important at all	Not important	Neutral	Important	Very important
Hotel facilities										
Parking area	1	2	3	4	5	1	2	3	4	5
Fitness room	1	2	3	4	5	1	2	3	4	5
Separate breakfast (not buffet)	1	2	3	4	5	1	2	3	4	5
Cashless payment	1	2	3	4	5	1	2	3	4	5
Recreational facilities	1	2	3	4	5	1	2	3	4	5
Disposable items: Dixie cup, Tableware	1	2	3	4	5	1	2	3	4	5
Independent air conditioning	1	2	3	4	5	1	2	3	4	5
Masks, alcohol and other immunization supplies	1	2	3	4	5	1	2	3	4	5
Hotel service										
Contactless service (AI delivery)	1	2	3	4	5	1	2	3	4	5

Car rental services	1	2	3	4	5	1	2	3	4	5
Express service (Check in, check out)	1	2	3	4	5	1	2	3	4	5
Free rescheduling service	1	2	3	4	5	1	2	3	4	5
Free cancellation service	1	2	3	4	5	1	2	3	4	5
Airport transfer	1	2	3	4	5	1	2	3	4	5
24hours room service	1	2	3	4	5	1	2	3	4	5
Doctor on call	1	2	3	4	5	1	2	3	4	5
Provide real-time epidemic information	N/A					1	2	3	4	5
Hotel location										
Less density area	1	2	3	4	5	1	2	3	4	5
Private beach	1	2	3	4	5	1	2	3	4	5
Convenient to the airport	1	2	3	4	5	1	2	3	4	5
Convenient to the beach	1	2	3	4	5	1	2	3	4	5
Convenient to hospital	1	2	3	4	5	1	2	3	4	5
Hotel image										
Brand image	1	2	3	4	5	1	2	3	4	5
Star rating	1	2	3	4	5	1	2	3	4	5

Factors	Before covid-19					After covid-19				
	Not important	Not important	Neutral	Important	Very	Not important	Not important	Neutral	Important	Very
Hotel security and cleanliness										
Emergency service	1	2	3	4	5	1	2	3	4	5
24-hour video security	1	2	3	4	5	1	2	3	4	5
Cleanliness of room	1	2	3	4	5	1	2	3	4	5
Cleanliness of public area	1	2	3	4	5	1	2	3	4	5
Regular disinfection	1	2	3	4	5	1	2	3	4	5
Hotel promotion										
Special discount of FB for covid-19	N/A					1	2	3	4	5
Special room rate for covid-19	N/A					1	2	3	4	5
Special discount of SPA for covid-19	N/A					1	2	3	4	5

Do you want travel to Phuket again?

Yes

No

What else do you think needs more attention from Phuket hotels during covid-19?

.....

APPE DIX B**Certification**

VITAE

Name Miss ZiYu Wang

Student ID 6130121010

Educational Attainment

Degree	Name of Institution	Year of Graduation
BBA. (Tourism Management)	Prince of Songkla University, Hatyai Campus	2017

Work-Position and Address (If Possible)

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