JOURNAL OF TOURISMOLOGY

Journal of Tourismology
Volume: 8 • Number: 1 • June 2022
e-ISSN: 2459-1939 • **DOI:** 10.26650/jot

INDEXING AND ABSTRACTING
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Journal of Tourismology
Volume: 8 • Number: 1 • June 2022
e-ISSN: 2459-1939 • **DOI:** 10.26650/jot

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https://iupress.istanbul.edu.tr/en/journal/jt/home

PUBLISHER
Istanbul University Press
Istanbul University Central Campus,
34452 Beyazit, Fatih, Istanbul, Turkiye
Phone: +90 (212) 440 00 00

Authors bear responsibility for the content of their published articles.

The publication language of the journal is English.

This is a scholarly, international, peer-reviewed and open-access journal published biannually in June and December.

Publication Type: Periodical

EDITORIAL MANAGEMENT BOARD

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Journal of Tourismology

RESEARCH ARTICLE

Journal of Tourismology, 8(1), 1-11

DOI: 10.26650/jot.2022.8.1.1038134
http://jt.istanbul.edu.en/

Submitted: 18.12.2021
Revision Requested: 18.01.2022
Last Revision Received: 20.01.2022
Accepted: 09.02.2022
Published Online: 08.03.2022

How To Be a Successful Revenue Manager: A Case from the Marriott Turkey Cluster

Tevfik Demirciftci[1]

Abstract

Revenue managers play a vital role in the hotel industry for maximizing revenues. The hotel industry also understands the importance of revenue managers. However, according to hotel revenue professionals, there is still a lack of qualified revenue managers. The purpose of this case study is to reveal the competencies of a successful hotel revenue manager. To achieve this purpose, an expert interview was done with a successful revenue manager in the Marriott Turkey cluster. It was found out that having good analytical and communication skills were essential to being a successful revenue manager. Understanding the local market and adopting brand standards were vital for effective revenue management.

Keywords

Revenue management, Hotels, Marriott, Turkey, Human resources

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To cite this article: Demirciftci, T. (2022). How to be a successful revenue manager: a case from the marriott Turkey cluster. *Journal of Tourismology, 8*(1), 1-11. https://doi.org/10.26650/jot.2022.8.1.1038134

Introduction

Revenue management (RM) was a strategy used by hotel companies to maximize revenue. It was a complex approach for managing supply and demand that needed to be driven by qualified revenue managers. RM was perceived as both art and science (Anderson & Xie, 2010). Advances in social media, digital marketing, safety and security concerns, and total hotel revenue management had a dramatic impact on the RM applications (McGuire, 2016). In addition to this, being a new field in the hospitality industry, RM did not have a stable set of rules applied to all situations. Thus, the RM application was perceived as a challenge by the hospitality industry.

Revenue managers had several challenges. These were personal challenges, internal challenges, organizational, industrial, and external challenges (Cetin et al., 2016). Personal challenges were related to work-life balance, being alert 7/24, and limited career growth opportunities (Demirciftci et al., 2017). Internal challenges might have been listed as information overload, lack of authority, and lack of qualified candidates (Demirciftci et al., 2017). Organizational challenges were classified as interdepartmental conflicts (particularly with sales), internal politics, and unbalanced responsibility and authority (Cetin et al., 2016). Industrial challenges were associated with the structure of the market, competitor actions, unstable demand, and seasonality (Cetin et al., 2016). Eventually, external challenges were interrelated to macroeconomic issues such as political, economic, and technological. To overcome these challenges, the hospitality industry regarded revenue manager competency as a critical skill for profit maximization.

The hotel industry understood the importance of revenue managers. Most international hotels had created several positions under the RM department, such as revenue analyst, revenue manager, and director of revenue (Demirciftci et al., 2017). Effective revenue managers allow hotels to increase their profits (Beck et al., 2011). A hotel revenue manager should have analytical skills such as forecasting, analyzing demand, and communication skills, e.g. listening and negotiation (Legohérel et al., 2013). Even though hospitality schools offered specific RM certifications or courses (Demirciftci et al., 2021), various hotel companies faced the challenge of finding qualified revenue managers (Wang et al., 2015; Legohérel et al., 2013; Koupriouchina et al., 2015). For example, Calvin Anderson, Hilton International's revenue executive, interviewed 20 hospitality students for the RM intern position. However, he said he could not find a qualified candidate (Koupriouchina et al., 2015). Hence, it is highly critical to find qualified RM professionals.

This study aims to reveal the competencies of a successful revenue manager. An expert interview was done to achieve this purpose with EE, selected as an Excellence, Leadership, Inspiration, Teamwork, and Execution (ELITE) revenue manager leader in Marriott Europe and Marriott Global in 2017 (Marriott Sisli, 2018). He was asked several questions about the competencies of revenue managers and how to be successful in the Marriott Turkey cluster. Our findings, based on expert interviews, indicated that a revenue manager ought to think globally, act locally, communicate effectively, and think outside the box.

Literature Review

Knowledge Skills and Abilities (KSAs) OF REVENUE MANAGERS

A hotel can have an excellent RM system. However, this system could not have been beneficial if this system was not operated by a qualified revenue manager (Yeoman & Watson, 1997). Revenue managers were required to have several knowledge, skills, and abilities (KSA) to analyze guest behaviors, understand price sensitivity, and monitor competition (Hinterhuber & Liozu, 2012). If a revenue manager increases their knowledge, hotels might increase revenue (Skugge, 2004).

Three factors were significant for revenue managers' careers (Birdir & Pearson 2000). These are the education level, experience, and personality of revenue managers, which directly affect revenue managers' success. If a revenue manager lacks one of the competencies, another competency might lose its effectiveness. For instance, a revenue manager candidate could be successful in RM class at college. However, if the communication skills were not sufficient, his success in RM would be a low probability (Cetin et al., 2016).

Competition wars and commoditization were considered a big challenge for revenue managers (Carroll & Siguaw, 2003). It was known that most of the revenue managers did not have the competency to change room rates. Thus, marketing knowledge was essential for them (Demirciftci et al., 2017). In addition, economic theory, supply and demand, opportunity cost, price sensitivity, and knowledge about competition were also essential for the success of revenue managers (Chiang et al., 2006). Revenue managers had made many strategic decisions, so decision-making skills were vital. Knowledge of risk management and process management are assets for revenue managers (Lancaster, 2003). Knowing statistics was critical to forecasting. They should know several statistical forecasting techniques, such as regression, time series, etc. (Hallin & Marnburg, 2008). Therefore, a successful revenue manager needed to have analytical and communication skills, be a problem solver, and have leadership skills (Beck et al., 2011; Davies & Shafer, 2013; Koupriouchina et al., 2015). Legohérel et al. (2013) also summarized revenue management competencies (See Table 1 below).

Table 1
Revenue Management Competency Model

Competencies	Examples
Professional	Knowing revenue management theories Knowing revenue management applications Knowing marketing techniques Knowing sales techniques Knowing distribution channels
Management	Knowing budget Knowing contract negotiation Knowing pricing and market segmentation Knowing hotel technology system
Personal	Communication and negotiation skills Attention to detail Presentation skills

Revenue Management Applications in Marriot

The airline industry was the first industry to use revenue management. With the 1978 airline deregulation act, the airline industry started to use RM intensively (Tranter et al., 2009). After the airline industry had adopted RM, the hotel industry began to use RM applications. Marriot was the first hotel company to use RM intensively and benefited from RM (Hotel Tech Report, 2021). According to the Marriott 2020 annual report, the RM applications of Marriott provided a competitive advantage in pricing decisions, increasing efficiency, and generating extra revenue (Marriott, 2021). Bill Marriott , chairman of Marriott International company, supported that "RM has contributed millions to the bottom line, and it has educated our people to manage their business more effectively. When you focus on the bottom line, your company grows" (Hotel Tech Report, 2021).

Marriott has used automation for performing RM for individual bookings for more than 20 years (Hormby et al., 2010). Nowadays, 97% of Marriott's hotels use One Yield (Overby, 2005), an RM system designed for individual bookings. This system helps revenue managers forecast demand and allocate inventory related to price and length of stay (Hormby et al., 2010). Furthermore, Marriott created a fenced rate that would enable them to propose discounts for price-sensitive guests based on demand (Marriott & Cross, 2000). In addition to this, this system had a direct, seamless interface with Marriott Automated Reservation System (MARSHA), which processed more than 75 million transactions per year (Hormby et al., 2010). These RM systems helped Marriot generate $150 million and $200 million extra revenues (Marriott & Cross, 2000).

Marriott Turkey Cluster

Turkey was ranked 11th globally in absolute terms, visited by 52 million people (World Data Info, 2021). Turkey's tourism revenue was 42.35 bn $ in 2019, corresponding to 5.6 % of its gross domestic product (GDP). 3 cities in Turkey were among the 100 most popular destinations globally. These destinations were Istanbul, Antalya, and Mugla (World Data Info, 2021). See Table 2 below.

Table 2
Most Popular Destinations in Turkey

City	Tourists	9 Rank
Istanbul	14,715,900	9
Antalya	13,332,100	12
Mugla	2,920,800	81

Note. The data are from *Tourism in Turkey* by *Worlddata.info* (https://www.worlddata.info/asia/turkey/tourism.php)

The major tourist destinations of Turkey were Istanbul and Antalya, which have historical places and coastal regions (GoTurkeyTourism, 2021). Istanbul had many historic sites, such as Topkapi Palace, Maiden's Tower, Sultanahmet Square, Rumeli Fortress, and Dolmabahce Palace (GoTurkey Tourism, 2021). Furthermore, Antalya is famous for crystal clear beaches with the bluest flag awards (certificate based on water cleanliness) (GoTurkeyTourism, 2021). Since Turkey is a tourism country, many international chain hotels have invested in Turkey. One of these global brands is Marriott.

Marriott has several hotels all around Turkey with different hotels operating in various cities such as Istanbul (20), Izmir (4), Ankara (3), Bodrum-Mugla, Bursa (2), and Samsun (1). Only in Istanbul, 20 Marriott hotels have operated in every hotel segment. In the luxury segment, these brands were JW Marriott, St Regis, and W. In classic premium segments, these brands were Renaissance Hotels, Marriott, Sheraton, and Delta Hotels. (Marriott, 2021). Since Marriott has many investments in Turkey, managing RM applications for their hotels is vital. Hence, they created a Marriot RM cluster under Mr. E-Market Director of Revenue Strategy at Marriott International, an RM expert who worked for several brands such as Accor, Hyatt, and Mandarin Oriental. His performance was so successful that he was chosen as an RM leader in Marriott Europe and Marriott global in 2017 (Marriott Sisli 2018). This paper has provided an overview of the Marriott Turkey RM cluster and Mr. E's success in the RM cluster in Marriott.

Methodology

Case studies have been used by hospitality researchers intensively. Cakar & Aykol (2021) reported that 871 case studies had been published in leading hospitality and tourism journals, such as Annals of Tourism Research, Current Issues in Tourism, etc. Creswell (2012) defined a case study as an "in-depth exploration of a bounded system (e.g., activity, event, process, or individuals) based on extensive data collection (465)." The main advantage of the case study was that an entire organization or individual could be analyzed in-depth (Zikmund et al., 2013). Thus, a case study was utilized to understand the competencies of a successful revenue manager in the Marriott group.

An expert interview was used for collecting data in this study. Expert interview is a qualitative empirical research method used to explore expert knowledge (Meuser & Nagel, 2009). There are several benefits of expert interviews. First, it shortens the data gathering process (Meuser & Nagel 2009). Second, this data collection method is proper since the expert has intensive knowledge about his concentration (Meuser & Nagel 2009), which provides undiscovered issues related to his topic. Therefore, an expert interview was used in this study.

After analyzing current literature in-depth, a zoom interview was conducted with Mr. E in December 2020. Four questions below were asked to him. The duration of the interview was 70 minutes. This interview was electronically recorded. At the end of the interview, 10 pages of transcription were created.

• What was your background?

• How did you define being a good revenue manager?

• What made you successful in Marriott Turkey Cluster Group?

• What did you recommend for future revenue managers?

Findings

Background Information

After completing his tourism and vocational high school in hospitality management in Istanbul in 2002, he moved to Ankara to do his bachelor's degree in tourism at Gazi University. He graduated from Gazi University in 2006. Mr. E first started to work in the Accor group as a front office agent in Istanbul in 2007. Then, he was promoted to the front office team leader in the Accor group. Since he had excellent Excel skills, he was offered a position as a multi-hotel revenue coordinator responsible for Novotel and Ibis Istanbul Zeytinburnu. During his tenure in Accor, he finished his master's degree focusing on e-marketing in Novotel hotels at Istanbul University. In addition to this, he completed the Accor's RM dimension program - a mandatory program needed to be completed by the revenue managers - (Accor, 2015) while working for the Accor hotel group. He stated that the RM dimension program in Accor and his thesis about e-marketing sharpened his RM skills.

After working in the Accor group for five years, he worked for Renaissance Polat Istanbul and Renaissance Istanbul Bosphorus as a cluster revenue manager between 2012 and 2014. During his tenure there, he helped implement a high-performance pricing system and created the current RM strategy dashboard for the hotels. During his tenure there, the hotel maximized its RevPAR dramatically by 20%. After working there for two years, he started working for Hyatt Regency Atakoy , a pre-opening hotel in Istanbul, and worked there for 2 years, He implemented the Maxim RM system there, which improved his RM software experience.

After Hyatt, he started to work for Marriott as a market director of strategy. He is responsible for managing RM applications of 11 hotels in total. Five of these hotels are in Istanbul (Istanbul Marriott Hotel Sisli, JW Marriott Istanbul Bosphorus, Sheraton Istanbul City Center, Courtyard by Marriott Istanbul, and Le Meriden Istanbul). Two of these hotels are in Ankara (JW Marriott Hotel Ankara and Sheraton Ankara Hotel & Convention Center). One hotel is located in Izmir (Renaissance Izmir Hotel), and one hotel is in Bodrum Muğla (the Bodrum Edition). Two of them are outside Turkey (Sheraton Batumi Hotel in Georgia and Skopje Marriott Hotel in Macedonia). Under his supervision, there is one senior revenue manager, two revenue managers, and one revenue analyst.

Being A Successful Revenue Manager in Marriott

Mr. E stated that establishing global standards was important for revenue managers. He added that Marriott had more than 7000 hotels globally, and it had long RM history offering many tools and standards. In addition, the company had a sophisticated RM system. He stated that we needed to adapt brand standards and RM tools as much as possible. Automation and adapting brand standards would be great for our company and our associates. Hence, selling correct rates and upselling were critical for RM success.

The second most important thing was that understanding the local market was a key for RM success. He argued that Turkish hospitality was fragile. Several dynamics have impacted it: security, terrorist activities, economy, and pandemic. He also mentioned the lack of qualified RM candidates in Turkey, and the talented revenue managers went to Middle East countries such as Qatar, United Arab Emirates, or the US. These issues had created challenges for Turkish hospitality executives. Thus, he stated that "*you have to think globally, act locally as a revenue manager.*"

He stressed the importance of communication. He mentioned that communication skills were as crucial as analytic skills. He noted that 50% of reservations came from digital channels. 50% of demand had come from sales, reservations, and the front office. Thus, according to him, managing offline demand was critical. In addition to this, he noted that RM in Turkey was still new. Employees in Turkish hotels did not have a strong background in RM. Teaching RM to them was vital for effective RM. He added that the RM team also learned many things from the operation departments, which helped set rates. Other stakeholders such as the director of sales and marketing, general managers, and owners were also important for RM strategies.

Mr. E also reported that technology significantly affected RM, and big data was getting more prominent and more significant in the hotel industry. He said that he was fortunate that Marriott had its RM tools. He noted that he had improved these tools by customizing Excel. These tools have created bridges between global standards and the local market. These tools were automatic group displacement analysis, three months pace statistics, STR positioning, and competition check. He mentioned that time management was critical for revenue managers, and these tools helped him be an effective revenue manager by automating reports. Hence, his hotel performances had experienced single-digit and double-digit growth depending on the market. Marriott saw his success and was chosen as an ELITE Award winner in 2017 among 7000 hotels and 100 clusters. Elite stands for several qualities; Excellence (E), Leadership (L), Inspiration (I), Teamwork (T), and Execution (E).

Final Recommendations for Future Revenue Managers

Mr. E recommended that future revenue managers should focus on the big picture, not details. He added that technology was improving a lot. However, the critical fundamentals of RM were the same according to him. He stressed the importance of automation to track key performance indicators such as pace reports and displacement analysis in less time but more efficiently. He said that innovation was vital for students. He advised students to think about how to improve themselves and RM tools every day to be innovative. In addition to this, he suggested that future revenue managers should embrace brand standards if they have a chance to work for international chain hotels. This would help them to improve themselves. Moreover, he advised students to be tech-savvy with information about artificial intelligence and machine learning. He added that they needed to be comfortable with new software tools. Finally, he mentioned the importance of communication and added that communication was as important as analytical skills.

Conclusion

This current study investigated the Marriott Turkey RM cluster and Mr. E's success in Marriott. In this study, the KSAs of revenue managers were discussed. Brief information was given about Marriott RM applications and the Marriott Turkey cluster. This study showed that communication and analytic skills were vital for revenue managers. This case study has confirmed the findings of Kimes (2011), Cetin et al. (2016), and Demirciftci et al. (2017) regarding communication and analytical skills. Moreover, adopting brand standards allowed revenue managers to apply RM applications more effectively. Educating the operational employees was critical to creating RM culture in the hotel industry since 50% of sales were generated from non-online channels. Cetin et al. (2016) supported that cooperation among departments for adopting organizational RM strategy was vital. In addition to this, automation was essential for revenue managers, which helped them save more time. Finally, he recommended students to improve their knowledge every day and be creative. He mentioned that big data and artificial intelligence would be vital in the future. However, he noted that human judgment was still crucial for effective RM decisions. Egan and Haynes (2018) verified that even though big-data automated RM systems have the technical ability to make pricing and inventory decisions, revenue managers still use human judgment for data collection and price changes.

This study showed the importance of automation and recommended other revenue managers automate RM tools, which helped them save time. It has revealed that understanding the local market is critical for revenue managers. The study findings will help other revenue managers determine better RM strategies by adopting brand standards.

This paper has several limitations. First, the sample size is limited for this kind of study. In the future, more interviews could be conducted with revenue managers working for other international brands or independent hotels. Other members of the revenue manager, the Marriott Turkey cluster, might be interviewed in the future. Furthermore, this study can be conducted in other parts of the globe.

Peer-review: Externally peer-reviewed.
Conflict of Interest: The authors have no conflict of interest to declare.
Grant Support: The authors declared that this study has received no financial support.

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Journal of Tourismology

RESEARCH ARTICLE

Journal of Tourismology, 8(1), 13-25

DOI: 10.26650/jot.2022.8.1.1057609
http://jt.istanbul.edu.en/

Submitted: 14.01.2022
Revision Requested: 05.03.2022
Last Revision Received: 07.03.2022
Accepted: 08.03.2022
Published Online: 23.03.2022

Distance Education in Tourism and Hospitality amid Covid-19: Perspectives of Students and Academics

Derya Demirdelen Alrawadieh[1]

Abstract

The current pandemic has reshaped all aspects of life, and higher education is no exception. Despite the growing interest in how universities are coping with distance education during crises, there is limited knowledge on how such a delivery model is perceived by both students and academics. Drawing on the experiences of tourism and hospitality students and academics, the present study delves into the distance education experience amid Covid-19 identifying its advantages and challenges. In-depth interviews with tourism and hospitality students and academics in Turkey (12 students and 12 academics) were conducted, and the data were analysed using content analysis. The findings suggest that distance education amid Covid-19 has brought some opportunities, but also posited significant challenges. On the benefit side, distance education seems to have provided students with easier access to information/learning materials and more flexibility while enabling tourism academics to dedicate more time to research activities. On the negative side, however, students seem to be unhappy for being deprived of their social life at class and on campus whereas tourism academics raised concerns related to their lecture content being monitored and accessible, thus limiting their freedom of "lecturing their way". The current study contributes to the growing body on knowledge on distance education in the time of crisis and provides recommendations to different stakeholders in higher education.

Keywords

Covid-19 and tourism, Distance education, Tourism education, Tourism students and academics

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To cite this article: Demirdelen Alrawadieh, D. (2022). Distance education in tourism and hospitality amid Covid-19: perspectives from students and academics. *Journal of Tourismology, 8*(1), 13-25. https://doi.org/10.26650/jot.2022.8.1.1057609

Introduction

The current crisis caused by Covid-19 has resulted in sudden and radical changes in the traditional education model (Chandra et al., 2022). Distance education has therefore emerged as a solution in response to closure and restrictions on the movements of individuals. With the restrictions and stay-home orders in many countries over the globe, distance education had been introduced initially as a temporary solution, but soon the uncertainty around the pandemic forced greater reliance on distance education for longer periods than initially expected. In this sense, although the distance education model is seen as a temporary solution, given the uncertainty around the ongoing pandemic, it is necessary to examine the distance education experience from the perspective of both students and academics.

Distance education has received considerable attention in various disciplines (Liguori & Winkler, 2020; Bao, 2020) including tourism and hospitality (Qiu et al., 2021; Akyol, 2020a; Akyol, 2020b; Buluk & Esitti, 2020; Göksu et al., 2021; Ye & Law, 2021; Joshi & Gupta, 2021; Hsu, 2021; Tiwari et al., 2021). While valuable, except for one study (Lei & So, 2021), these studies do not draw on the perspectives of both students and academics. To fill this gap and draw a comprehensive portrait of distance education in the field of tourism amid Covid-19, the present study examines the perceptions and experiences of both students and academics within the field of tourism and hospitality. This is particularly important given that tourism and hospitality programs tend to include both theoretical and practical courses. While contributing to a growing stream of research addressing distance education in the time of crisis, the study contributes to the development of effective and knowledge-based strategies to enhance the quality of distance education and mitigate the difficulties associated with remotely delivered educational content.

Literature review

Impact of Covid-19 on Higher Education

The pandemic has had significant impacts on all aspects of life (Demirdelen-Alrawadieh, 2021a), and higher education is no exception. Following closure and lockdown orders in many parts of the world, educational activities have moved to cyber space, leading to an unprecedented reliance on distance education instead of traditional methods (Aristovnik et al., 2020). Initially, distance education was perceived as a temporary situation during the pandemic; however, due to the uncertainty around the pandemic, distance education has continued for longer periods. The shift to distance education has encouraged significant academic interest on this topic. Existing research has evaluated the well-being of students and academic staff during the pandemic (Wang & Zhao, 2020), students' acceptance of distance education (Rizun & Strzelecki, 2020), and the effects of the pandemic on the policies and functioning of higher educational institutions (Pham & Ho, 2020).

Research shows that both students and academics are faced with various difficulties due to the uncertainty, fear, and anxiety created by the pandemic (Demirdelen-Alrawadieh, 2021b; Gupta et al., 2021). For instance, Wang and Zhao (2020) noted that university students have a much higher level of anxiety compared to other segments of society. Students' adaptation to this sudden change has also been discussed in a number of studies. For instance, it is argued that the enjoyment of distance education and the ease of the techniques used can positively affect students' attitudes towards distance education (Rizun & Strzelecki, 2020). Although there have been some studies on the benefits and challenges of distance education (Liguori & Winkler, 2020; Bao, 2020; Aristovnik et al., 2020), there is limited research drawing on the perspectives of both students and academics. Even before the pandemic, universities used to offer online education in addition to traditional methods (Palvia et al., 2018). Therefore, the use of distance education is not a new practice (Liu, 2012).

Advantages and disadvantages of distance education

A considerable amount of research discusses the advantages and disadvantages of distance education. Liu (2012) stated that distance education eliminates time and place constraints as students will not have to physically enter the classroom environment. Yağcı et al. (2019) noted that distance education has both positive and negative impacts with advantages including time-saving and cost-saving and disadvantages including difficulties and disruptions in communication during the education-teaching process. Distance education is also argued to limit face-to-face communication and reduce social interaction (Göksu et al., 2021). Hsu (2021) argues that learning outcomes in courses delivered remotely can differ from those delivered face-to-face. This confirms that distance education creates some disadvantages compared to face-to-face education during Covid-19 (Liguori & Winkler 2020; Saltürk & Güngör, 2020; Yılmaz-Altuntaş et al., 2020; Aristovnik et al., 2020; Göksu et al., 2021). For instance, according to Liguori and Winkler (2020), the pandemic has created some difficulties in delivering distance education courses. Göksu et al. (2021) stated that the rapid transition from face-to-face education to distance education during the pandemic brought about some negative outcomes with stress, anxiety and depression largely reducing motivation to engage in distance education. Other similar findings are also reported in recent research (Saltürk & Güngör, 2020; Yilmaz-Altuntas et al., 2020; Aristovnik et al., 2020).

Despite the disadvantages, there are some advantages of distance education during Covid-19 pandemic (Park & Jones, 2021; Yılmaz-Altuntaş et al., 2020; Aristovnik et al., 2020; Bao, 2020; Akyol, 2020b; Buluk ve Esitti, 2020; Seo & Kim, 2021). For instance, alternative learning and teaching opportunities, new methods for virtual internships, and online discussion groups have been developing, thus enhancing student participation and engagement (Seo & Kim, 2021; Park & Jones, 2021). Indeed, distance education has enhanced the technical skills of students (Yilmaz-Altuntas et al., 2020). Akyol (2020b) notes that tourism students were generally satisfied with the quality of online education, and their individual performance increased over time by getting used to the new environment. Buluk and Esitti (2020) suggested that there were some factors affecting course satisfaction such as learning conditions, personal suitability, and support given to the students.

Methodology

Drawing on the perceptions of tourism students and academics, the study delves into the distance education experience amid Covid-19 identifying its advantages and challenges. For this purpose, in-depth interviews were conducted. During the Covid-19 pandemic, an interview protocol was developed for both tourism students and academics to determine their distance education experiences. Interview protocols for both samples were developed based on a detailed literature review on distance education (e.g., Edelheim, 2020; Akyol, 2020a-b).

The interview protocol consisted of two sections. The first section aimed to collect demographic data such as age, gender, academic title (for academics), and year of school (for students) whereas the second section included open-ended questions to understand students and academics' distance education experiences. For instance, academics were asked questions related to the experience of distance education during the pandemic, the preparation process, the techniques used in distance education and how they differ from those in face-to-face education, and the main advantages and disadvantages of distance education. Likewise, students were asked about the distance education experience and whether that experience was beneficial, the quality of distance education, and the benefits and drawbacks of distance education. The data from the students was collected from one of the schools hosting the oldest tourism program in Istanbul, Turkey. The data from tourism academics, however, was collected from various schools across Turkey that provide tourism education.

A total of 24 interviews (12 tourism students and 12 tourism academics) were conducted remotely due to Covid-19, and the data obtained were analysed using content analysis. The data collection was ceased when the saturation level had been reached (Glaser ve Strauss, 1967). Using the convenience sampling method, the data collection process was completed between February 6, 2021 and February 15, 2021. For this present study, ethical approval was obtained from Istanbul University Ethical Committee (2020/108). The general profile of informants in both samples is presented in Table 1.

Table 1
Demographic profile of tourism students and academics

No	Age	Gender	Year of School
TS1	21	Male	Third year
TS2	21	Female	Third year
TS3	22	Male	Fourth year
TS4	23	Male	Second year
TS5	22	Female	Second year
TS6	22	Female	Second year
TS7	19	Female	Second year
TS8	18	Female	First year
TS9	22	Male	Second year
TS10	20	Female	Second year
TS11	22	Male	Fourth year
TS12	21	Male	Fourth year
No	**Age**	**Gender**	**Academic title**
TA1	29	Male	Asst. Prof.
TA2	29	Female	Lecturer
TA3	33	Female	Lecturer
TA4	34	Female	Assoc. Prof.
TA5	35	Female	Asst. Prof.
TA6	35	Male	Assoc. Prof.
TA7	32	Male	Asst. Prof.
TA8	29	Female	Lecturer
TA9	43	Male	Lecturer
TA10	33	Female	Res. Ass. 'Dr.'
TA11	33	Female	Asst. Prof.
TA12	35	Female	Asst. Prof.

Note: TS= Tourism students; TA= Tourism academics.

Findings

Advantages of distance education amid Covid-19

The qualitative data shows that both tourism academics and tourism students perceive some advantages from distance education amid the pandemic. For tourism students, distance education seems to bring some advantages including the ease of using technology and the physical benefits of distance education (see Fig. 1).

Tourism students appear to be satisfied with the introduction of technology into their education life. In this context, among the most frequently mentioned benefits are related to conveniences such as providing fast and easy access to information, the abundance of resources on the internet, and the opportunity to watch the course recordings again. Another issue is related to the fact that students have the advantage of keeping their courses recorded and accessing these courses easily whenever they want. TS3 mentioned: *"...For me, it is very helpful to watch the lesson again. I watch slowly focusing on what I did not really understand during the [actual] lesson, so it's much better"*. Interestingly, some students stated that one of the advantages of distance education is the ease of passing exams. Although this was negatively perceived by some students, for some others, this represented an advantage.

Physical convenience and accessibility were also mentioned as key benefits of distance education. While taking lessons in traditional methods is seen as more effective and efficient for some students, others make an effort to go to school and are affected by physical factors such as time and cost. In this context, TS3 mentioned: *"...Distance education was better for me than going to school, I spent a lot of time going to school, it was a problem to go to school by bus due to financial reasons, saving time..."*. Although TS6 agreed on this, he argued that traditional education was more appropriate in terms of effectiveness and efficiency noting: *"...My house is very far from school, it was 3 hours to go and 3 hours to come. However, I still would prefer face-to-face learning..."*.

The study also identifies the advantages of distance education perceived by tourism academics. As seen in Fig. 1, academics perceive advantages including saving time and cost, more use of innovative techniques in lessons, and more time to concentrate on research activities.

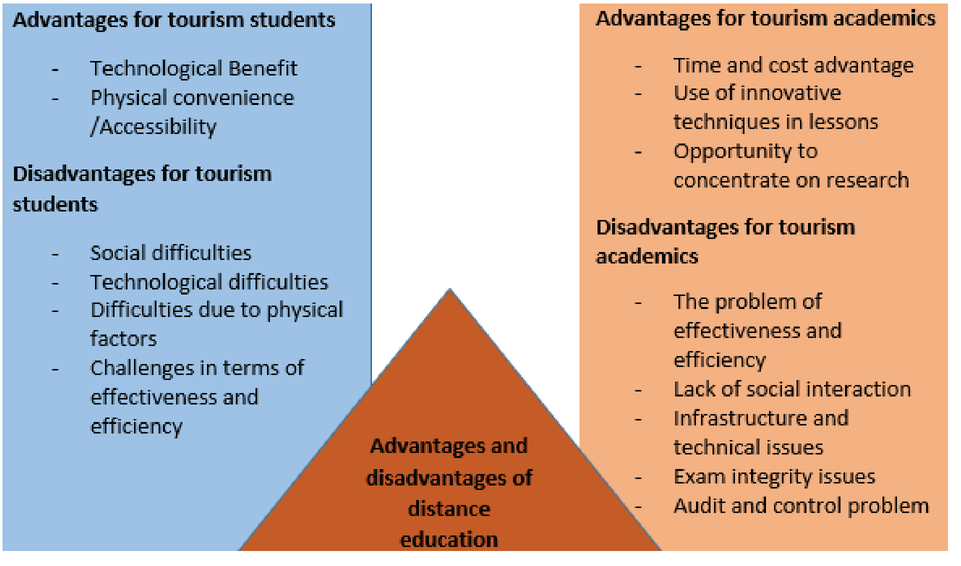

Figure 1. Distance Education in Tourism and Hospitality amid Covid-19

Tourism academics mentioned advantages such as flexibility of course hours and ease of teaching at any time and place. TA8 mentioned:

> *"...We save time, now we can connect virtually at any time. So there is no need anymore to get stuck in the traffic and go from one place to another for 1 hour. I think this is a huge advantage."*

One of the key advantages of distance education from the perspective of tourism academics seems to be the ability to focus on personal development and to concentrate on scientific research. Academics generally stated that the distance education process is beneficial in terms of concentrating on academic research. TA6 mentioned *"... It [online teaching] has been an opportunity to spare time for the research I am doing..."*. Similarly, TA7 noted: *"...I personally evaluate this process positively. I have been able to devote time to reading and doing research, I have been able to take part in many research projects, and this gave me an advantage as a faculty member..."*

Disadvantages of distance education amid Covid-19

Both tourism academics and tourism students mentioned that the experience of distance education brings some disadvantages. Tourism students frequently expressed issues related to the difficulties experienced in social, technological and physical terms as well as the problems related to efficiency and productivity (see Fig. 1). It is interesting that while the same issue is seen as a benefit for one student, it may be perceived as a problem for another. For instance, although the subject of distance education through technology is seen as an advantage for some students, some students describe this situation as a disadvantage. This situation also affected the distance education experience during the pandemic process.

For students, unsociability seems to be the key drawback of distance education. Specifically, students expressed the lack of a social environment that connects them with their peers and their lecturers. While in traditional education model, students are in close relationships with both their classmates and lecturers in the classroom and school environment, this situation has brought some changes in distance education courses. TS1 mentioned:

> *"...I think this process is disadvantageous because online education has started to be more like a meeting rather than a student-lecturer relationship. We miss the feeling and warmth of the campus, being side by side with our friends, trying to take notes of what the lecturer said, looking into the eyes of our lecturer, we somehow lost this warmth in online education".*

TS9 stated that there were some differences in the lecturer-student relationship and the social effects of this process due to the lack of face-to-face education. *"...There was no classroom atmosphere, most of my friends and I were getting out of bed and connecting straight to the lesson, so it wasn't exactly a school... No place, friends, note-taking, school and classroom atmosphere".*

Technology-related problems also emerge as key challenges for tourism students. Specifically, disruptions and disconnections caused by the internet of both the academics and the student during the lesson, background noise during the lesson, and technology-related problems during the exam harm the quality of the education. For instance, TS9 mentioned:

> *"...We need to make major renovations on the internet because we couldn't attend our classes on time, we couldn't take the exams; for example, I remember that I took the exam 5 minutes late. Even though I refreshed the page, I couldn't take the exam".*

Although relatively fewer than social and technological problems, the problems caused by physical factors also affected the effectiveness of the courses in the distance education process and were perceived as a disadvantageous situation for students. Since the physical environment provided in the school and classroom environment is not met in the courses given through distance education, it has been stated that this situation poses a problem for the students, and it is stated that there are many distracting elements in the lessons given in the home environment. For such reasons, it is expected that a student who continues his/her education life away from the classroom and school environment will consider this situation as a disadvantage. In this context, second year student TS6 expressed his opinion as follows: *"... Distractions are at the highest level at home, you are definitely more distracted than face-to-face education. Sometimes you just can't focus"*.

Another disadvantageous issue arises from the decrease in the effectiveness and efficiency of the distance education process for students. In this context, second year student TS10 expressed his opinion as follows: *". It [the pandemic] really affected all of us. I couldn't be productive, and everyone cheated in the exams including me.*

Within the scope of the research, besides the students' experiences of distance education, there were also problems related to the experiences of the academics. As it can be seen in Fig. 1, while there were common views with the students about the disadvantages of distance education, the academics experienced more problems and had more difficulties than the students in this process.

Qualitative data suggests that academics are mostly concerned about the effectiveness and efficiency of the courses taken by the students through distance education. They even agree that the lessons are not as effective as they are in traditional methods. TA4 noted:

> *"...I ask students to prepare a presentation, there is no obligation to turn the camera on in the presentation, this is an optional thing, so I cannot measure whether the student is reading from the text. They do not cite any sources..."*

Findings show that students do not participate in the lesson or even if they do, whether they are really effective in the lesson causes some concerns and reduces the effectiveness and quality of the lesson. In this context, one academic commented: *"...I do not think that distance education is of very high quality, there is little participation, and I do not know what to say because there is little participation. For example, there are 5-6 people in the class and some of them are hungry, I really don't know what to do..." TA6.* The concerns of the academics on this issue should be valid as some students doubt the effectiveness of the courses through distance education and state that they cannot be efficient in this process.

One key disadvantage is that distance education limits the social interaction in the student-lecturer and/or student-student relationship. Although issues such as making an eye contact with students, monitoring whether they are listening or understanding the lesson, being present in the classroom environment in the education given in traditional methods are socially important, these feelings and behaviors may be interrupted during the compulsory distance education process due to the pandemic. For this reason, one of the disadvantageous situations expressed in general terms in the interviews with the academics is due to the lack of social interaction. In this context, TA10 stated:

> *"...I think that face-to-face lessons would be more effective, after all, student-student interaction is also important in the classroom [...] Having access to the library, being in the classroom, communicating with each other and socializing is very important".*

Academics frequently stated the disadvantages experienced in terms of infrastructure and technical problems in distance education. It is stated that there are some adaptation problems in the rapid transition to distance education during the pandemic. Academics mentioned issues such as frequent disconnections and freezing during the lesson, not being able to open another page while teaching, and not being able to connect to the lesson. In this context, TA5 commented: *"...The university supposedly bought a system, but it breaks down, you cannot connect to the class, the student wants to ask questions or you want to tell the subject, there is a problem with the internet, there have been difficulties either from our university or from the infrastructure of the student...".* While this issue seems to be common, it should be noted that this may be largely dependent on the technological infrastructure of the universities.

The qualitative data shows that the vast majority of tourism academics are less likely to trust the results of the exams taken remotely. In this context, the student's ability to access information easily from different sources during the exam jeopardizes the integrity of online exams. Tourism students have already used similar statements about exam integrity and stated that they were able to access information easily even during the exam. In this context, TA3 noted: *"...I honestly don't think the exam* integrity *is maintained... Especially when there is a test, if 3-5 people come together, they can see almost all the questions in the question pool. You see, for example, the student took the exam in 3 minutes, you see, you know that he is cheating, but what you can say, in that sense, the exam integrity is a trouble...".* Another lecturer, on the other hand, stated that they took some precautions to ensure exam integrity. However, according to him, although precautions seem to have been taken, there were problems in control and monitoring. *"...We applied different systems, the student could not return to the previous question during the exam, he had to do the questions in one go, a time limit was imposed such as minimum 30 minutes and maximum 50 minutes, we* *were also creating a question bank, that is, if I was going to ask 20 questions, I was preparing 60 questions that confused students. questions go... We tried to minimize cheating in this way..."* TA2.

Tourism academics appear to be unhappy with their lectures being recorded and monitored. In this context, TA7 commented: *"…When the university administrations started to record the lectures during the lectures, these brought some responsibilities to us; I mean, while I was teaching the lesson, I felt that we were not as free as we used to be…".* Moreover, according to the participants, this situation is not only limited to the monitoring and control carried out by the senior management, but at the same time, the fact that the courses are recorded causes some reservations in terms of accessing the records of the students. In this context, TA9 expressed his view as follows: *"... Since the lessons are recorded, you have to be very careful with every word you say, I feel like the students are a bit open-eyed…".*

Discussion and Conclusions

The present study has discussed the distance education experience amid Covid-19 identifying its advantages and challenges. Drawing on the experiences of tourism and hospitality students and academics, the study identified the advantages and disadvantages of distance education from the perspectives of both studets and academics. Findings from the study contribute to the current literature and offer practical advice to different stakeholders in the higher education sector.

While many studies have been conducted on the benefits of distance education in various disciplines and the challenges that come with it since the outbreak of the pandemic (e.g., Rannastu-Avalos & Siiman, 2020; Aykol, 2020b; Buluk & Esitti, 2020; Göksu et al., 2021), research addressing distance education in the field tourism and hospitality remains limited. Existing studies mainly focus on the perspectives of tourism students (Aykol, 2020b; Buluk & Esitti, 2020; Göksu et al., 2021). While limited, some studies have focused on tourism and hospitality education (Ye & Law, 2021; Chandra et al., 2022; Işkın et al., 2022). Unlike previous current studies, in this study, the perspectives of both tourism students and tourism lecturers were examined in order to provide comprehensive answers to the research questions.

Based on the findings of the study, the transition of educational institutions to the distance education model with the Covid-19 pandemic has provided some advantages to both students and academics. While students can benefit from the convenience of watching the course recordings again in distance education modeling, unlike in traditional teaching, the lecturers have the opportunity to concentrate on academic studies thanks to the increased spare time. In fact, it is argued that distance education can potentially make education sustainable (Işkın et al., 2022).

While the pandemic has changed social interaction in tourism (Zhang et al., 2021), it has also affected distance education. Distance education has not come without some difficulties. In fact, students and academics complain about the lack of social interaction often associated with traditional education. Although it is difficult to fully provide the social benefit obtained in the physical teaching environment in distance education models, the techniques of distance education platforms used in universities can be developed or existing techniques can be used more effectively in order to increase this social benefit. For instance, having cameras on during the lesson can provide more effective communication and interaction. On the other hand, it is important for universities to work on infrastructure and use technology more effectively in order to reduce the difficulties experienced in the distance education process to some extent. Qiu (2021) notes that the use of technology facilities in tourism education during Covid-19 is essential. Moreover, it is necessary to provide academics with trainings that will increase the effectiveness of the distance education process to understand and eliminate the difficulties of the process as another common challenge for students and lecturers is the lack of efficiency and productivity. This result should be worrying for organizations that will adopt the distance education model.

The study has some limitations. First, the data related to students was collected from students at one university in Turkey and therefore the findings should be approached with caution. Second, due to financial constraints, data was collected directly by the author of this study, a tourism academic, and hence this might have created a social desirability situation. This may have also contributed to students being less open to sharing their experiences. Future research may consider these limitations to generate more accurate insights. There are also several opportunities for future research. Researchers may evaluate the outcomes of distance education in the field of tourism by drawing on the perspectives of different stakeholders, such as industry practitioners. It might also be interesting to examine the effect of distance education on students' attitudes toward post- graduate education in tourism and hospitality as well as their attitudes towards careers within the industry.

Peer-review: Externally peer-reviewed.
Conflict of Interest: The authors have no conflict of interest to declare.
Grant Support: The authors declared that this study has received no financial support.

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Journal of Tourismology

RESEARCH ARTICLE

Journal of Tourismology, 8(1), 27-48

DOI: 10.26650/jot.2022.8.1.1047512
http://jt.istanbul.edu.en/

Submitted: 26.12.2021
Revision Requested: 28.02.2022
Last Revision Received: 02.03.2022
Accepted: 05.03.2022
Published Online: 05.05.2022

Turkish Customers' Perceptions of Dining Experience in Asian Restaurants in Istanbul

Semra Aktas-Polat[1]

Abstract

This paper analyzes the perceptions of Turkish customers regarding their experiences at Asian restaurants in Istanbul. Within the scope of the study, 1,348 online reviews written in Turkish on TripAdvisor for Asian restaurants operating in Istanbul were analyzed with the latent Dirichlet allocation (LDA) algorithm and sentiment analysis. As a result of the analysis nine dimensions affecting the experiences of Turkish customers at Asian restaurants were determined, four of which were specific to the restaurant (view, staff, place, order) and five of which were related to food (real taste, food, sauce and spice, sushi, flavor). It was found that flavor and food are the main dimensions that positively affect Turkish customers' Asian restaurant experiences. Order was found to be the most important dimension that negatively affects them. To my knowledge, this is the first study interpreting the perception of Turkish customers' experiences of Asian restaurants through online reviews in Turkish.

Keywords

Restaurant experience, Asian restaurant, LDA, sentiment analysis, Istanbul

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To cite this article: Aktas Polat, S. (2022). Turkish customers' perceptions of dining experience in asian restaurants in Istanbul. *Journal of Tourismology, 8*(1), 27-48. https://doi.org/10.26650/jot.2022.8.1.1047512

Introduction

As places of intercultural exchange, ethnic restaurants can be thought of as micro-spaces designed for contact with an exotic place, another place, different people and cultures (Turgeon & Pastinelli, 2002). Ethnic restaurants are defined by diversity (Arvela, 2013) and provide the opportunity to taste different flavors and to experience exotic cultures from distant places (Turgeon & Pastinelli, 2002). Although these flavors have become a part of daily life, consumers' interest in restaurants offering flavors from different countries is increasing (Sloan, 2001). This situation has led to an increase in the popularity of ethnic cuisines, which in turn has given way to a rise in the number of such restaurants, allowing customers to cross ethnic boundaries and partake in the consumption of food offered by different ethnic communities (Van den Berghe, 1984).

Customers of ethnic restaurants serving cuisine from a different country (Ebster & Guist, 2004) seek unique cultural experiences through atmosphere and exotic cuisine (Ha & Jang, 2010). In the words of Van den Berghe (1984), the easiest way to experience another culture by proxy is to share food. The fact that consumers visit ethnic restaurants in their own neighborhood by making a trip vicariously enables them to have this experience (Germann Molz, 2007). The attraction of experiencing novel ethnic cuisine is associated with novelty and variety (Warde, 2000). However, people typically respond to new foods in two different ways: neophilia and neophobia (Rozin & Vollmecke, 1986). Neophobia is defined as the reluctance to try novel foods, and neophilia is defined as the overt willingness to try novel foods (Raudenbush & Capiola, 2012). Although these two responses are opposite to each other, they complement each other (van Trijp & van Kleef, 2008).

Restaurant services are experiential, and certain food-related attributes provide concrete clues which help customers evaluate the restaurant experience (Ponnam & Balaji, 2014). Food quality, service, physical environment, and price are defined as the four basic elements of restaurant experience (Nakayama & Wan, 2019). In addition, the dining experience includes the surprise and delight of a decorated and artistically presented meal which goes beyond the simple experience of eating at home (Arora & Singer, 2006). Since consumer attitude towards a dining experience can be measured by the difference between restaurant performance and customer expectations, dining experience studies from a customer perspective are considered together with restaurant characteristics (Johns & Pine, 2002). According to the Five Aspects of Meal Model—FAMM developed by Gustafsson (2004), the dining experience is based on five elements: room, meeting, product, athmosphere, and management control system.

Through experience, the world of human awareness is shaped and assumptions about the nature of the universe become almost a priori components in the perceptual process itself (Hallowell, 1955). Culture and the social context in which we live are important factors in evaluating the dining experience (Gustafsson et al., 2006). While culture changes, influenced by our experiences rather than our genes (Hofstede et al., 2010), one of the most obvious areas where this change can be seen is cuisine (Lu & Fine, 1995). The local people's acquaintance with the cuisines of different cultures can affect their lives and cause the change and transformation of the local cuisine (Polat & Aktas-Polat, 2020). Therefore, I think that the ethnic restaurant experience should be emphasized in order to understand the connection between culture and cuisine.

Analysis of food-related memories shows that individual memory of experiences is not only the subjective property of individuals, but is also part of a shared cultural experience (Lupton, 1994). Online reviews are one of the main ways to share experience and to learn first-hand about the experiences of others (Nakayama & Wan, 2019). Analyzing customer sentiments with user-generated content allows researchers to predict customer attitudes towards a product, service or brand (Park et al., 2016). Knowing the perceptions of consumers can also be a way for businesses to gain competitive advantage (Jang et al., 2009). Every day, new reviews are added to the reviews written about restaurants. Making sense of these reviews, which have become a useful source of information (Guo et al., 2017) for businesses that care about consumer demands, has become an important element in today's consumption research.

Online consumer reviews, in the extant literature, have been studied for purposes such as determination of the issues that are important in restaurant reviews (Huang et al., 2014; Jo & Oh, 2011), identification of the main topics used to describe the meal (Onorati & Giardullo 2020), satisfaction (Jia, 2020), the authenticity dimensions that are of value to customers in dining experiences (Le et al., 2021), exploring perceptions of Asian restaurants (Fanelli & Di Nocera, 2018; Park et al., 2016), and exploring cultural differences in online reviews (Nakayama & Wan, 2019). These studies focused mainly on reviews written in English (Huang et al., 2014; Jo & Oh, 2011; Le et al., 2021; Park et al., 2016) but some focused on the limited studies in different languages like Chinese (Jia, 2020) and Japanese (Nakayama & Wan, 2019). However, there is a huge gap in the extant literature of studies which examine the way in which customers from different cultures or countries perceive ethnic restaurants (Josiam et al., 2007).

Asian cuisine has become one of the most popular cuisines in the world in recent years (Ferdman, 2015) and the number of restaurants serving dishes from this cuisine has gradually increased in global food markets (Tey et al., 2018). In parallel with this, scholars have also begun to show an interest in this increase and have started conducting studies on the perception of Asian cuisine mostly through the eyes of American customers (Jang et al., 2009; Lee et al., 2012; Liu & Jang, 2009; Ma et al., 2011; Sukalakamala & Boyce, 2007), local Australian customers (Min & Han, 2017), and of other ethnic origin customers living in Malaysia (Josiam et al., 2007). However, despite the rising popularity of studies in this field due to differences in the texture and flavor of Asian food, more studies are needed in order to understand Asian cuisine, to identify its consumers, and to reveal the dimensions of consumers' experiences in the hospitality industry (Jang & Ha, 2009). This study focused on determining the perception of Turkish customers' experiences at Asian restaurants operating in Istanbul. In this study, it is assumed that the driving force behind the customers' visits to these restaurants is their neophilia tendency or their desire for novelty and variety as they seek alternative concepts (Warde, 2000). Within the scope of the study, seven research questions (RQs) were determined:

RQ1: What are the main dimensions that affect Turkish customers' experience of Asian restaurants?

RQ2: What is the sentiment polarity of the customers towards the basic dimensions that affect the experience?

RQ3: Which algorithm is the most powerful for sentiment classification in the context of customer ratings?

RQ4: What is the order of importance for the main dimensions that determine the customers' experience?

RQ5: Which dimensions have the most positive and most negative valence determining customers' experience?

RQ6: What are the most and least salient terms in online customer reviews?

RQ7: What are the most positive and negative terms in online customer reviews?

Method

Topic modeling, sentiment analysis, and a combination of dimensional and lexicon salience and valence analysis were used. In the context of the research questions, Figure 1 shows the processing map followed in the study.

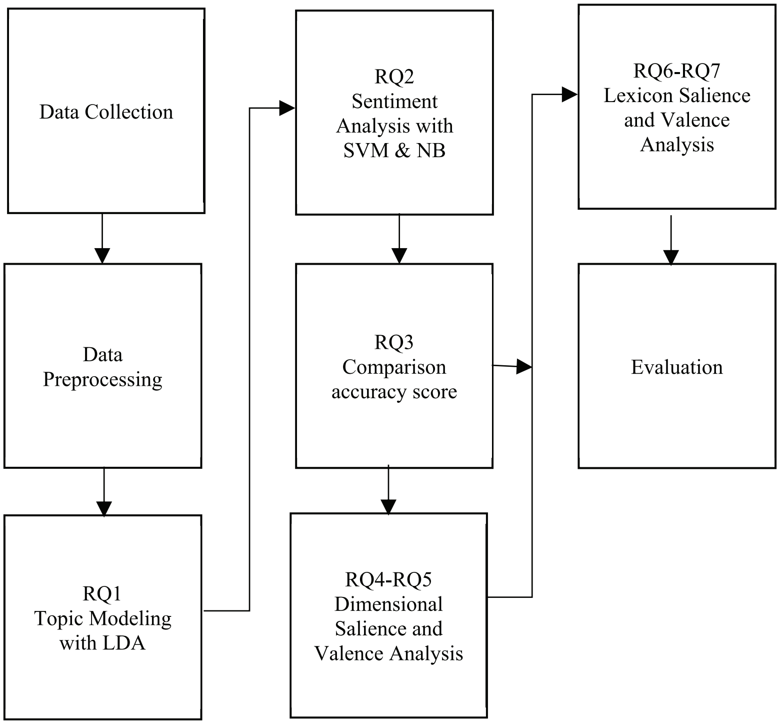

Figure 1. The Processing Map

Data Collection and Preprocessing

Online reviews, which provide a richer data source than traditional survey methods (Sutherland et al., 2020), were used in this study. The data set of the research consists of 1,348 manually collected Turkish reviews written on TripAdvisor during the period 2011–2021 (March) for 92 Asian Restaurants operating in Istanbul.

The data set was made ready for analysis by preprocessing with Zemberek TurkishTokenizer. All transactions in the research were done with Knime (the Konstanz Information Miner) Analytics Platform 4.4.0.

Topic Modeling with LDA

Topic modeling was used to determine the basic dimensions of the perception of Turkish customers' experiences of Asian restaurants. The data set, which was preprocessed for RQ1, was analyzed with a parallel LDA node. LDA is a widely used algorithm for topic modeling from unsupervised learning approaches (Alghamdi & Alfalqi, 2015). The basic idea of LDA is to represent documents as random mixes on confidential issues (Blei et al., 2003).

LDA reduces the complexity of customer reviews to a small number of simple probability steps and determines a probability distribution over all possible documents

(Griffiths & Steyvers, 2004). Thus, LDA enabled us to model the data set of customer reviews consisting of many words by reducing them to a smaller number of topics (Blei & Mcauliffe, 2007). Each topic produced with LDA could be considered as a shopping experience or a specific feature of the product expressed by customers in product reviews (Wang et al., 2018). LDA enables researchers to identify the dimensions that affect customers' experiences with minimal bias (Taecharungroj & Mathayomchan, 2019). The LDA algorithm is an algorithm used for dimension extraction in research on online restaurant reviews (Aktas Polat & Polat, 2022; Huang et al., 2014; Jia, 2020; Jo & Oh, 2011; Onorati & Giardullo, 2020).

The LDA algorithm has three parameters alfa (α), beta (β), and topic number (T), which have an effect on the results (Griffiths & Steyvers, 2004). In this study, the elbow method was used for T. The elbow method, which is a method that looks at the percentage of variance explained as a function of the number of clusters, can be performed using the k-means algorithm (Bholowalia & Kumar, 2014). The elbow point for T was determined by running the K-means algorithm with a Couting Loop Start node as loops 10 (maximum iteration). In the LDA added to the stream after the topic number was determined, the alpha (α) value 0.1 and the beta (β) value for the word distribution per topic were set to 0.001 (Hua et al., 2020).

Although recurring sets of terms are automatically identified by topic modeling, topic naming is based on manual intervention by researchers (Hindle et al., 2013). During the topic naming phase, the most frequently repeated words within the topic (Guo et al., 2017) and reviews associated with each topic were examined as a suggested approach for naming (Debortoli et al., 2016).

Sentiment Analysis with Machine Learning Algorithms

Sentiment analysis, one of the text mining methods, was carried out based on machine learning in order to determine the sentiments for the dimensions that shape the perception of Turkish customers' experience of Asian restaurants. This method had already been applied to restaurant samples in previous studies (Jo & Oh, 2011; Park et al., 2016). Sentiment analysis is a method that numerically deals with opinion, sentiment, and subjectivity in the text (Pang & Lee, 2008). Sentiment analysis can be performed at document level, sentence level and aspect-based level in three different ways (Feldman, 2013). In this study, sentiment analysis was performed on the basis of a supervised learning approach (Feldman, 2013), which assumes that training data is available for each class at the document level. In this context, on the basis of customer ratings, 1, 2, and 3-star reviews are labeled as negative, 4 and 5-star reviews as positive (Aktas-Polat & Polat, 2022; Taecharungroj & Mathayomchan, 2019) and the semantic orientation of the text (i.e. positive and negative) was detected (Lin & He, 2009).

In this study the Support Vector Machine (SVM) and Naïve Bayes (NB) algorithms, which are the most used supervised machine learning algorithms in the field of tourism, were used (Kirilenko et al., 2018). The SVM and NB performances were compared by cross-validation. For cross validation, leave-one-out cross-validation (LOO-CV) was used. LOO-CV is recommended to obtain a reliable estimate of accuracy for a classification algorithm when the number of instances is small (Wong, 2015).

The performance of the algorithms was compared with the accuracy score which measures the ability of an estimator to accurately identify all examples, regardless of whether they are positive or negative (Jiao & Du, 2016) and it is the most commonly used in binary classification (Chicco & Jurman, 2020).

Dimensional and Lexicon Salience and Valence Analysis

In this study, Dimensional Salience-Valence Analysis (DSVA) developed by Taecharungroj and Mathayomchan (2019) was used for RQ4 and RQ5, while Lexical Salience-Valence Analysis (LSVA) was used for RQ6 and RQ7. LSVA, in the previous studies, was used for identifying factors that affect customer experiences (Taecharungroj et al., 2021), key words in online reviews and their impact on overall experience (Mathayomchan and Taecharungroj, 2020), and tourists' local experiences (Sangkaew & Zhu, 2020).

Salience can be used to identify the important factors determining customers' selection of a restaurant (Rhee et al., 2016) and to make inferences about customer awareness (Vermeulen & Seegers, 2009). In the present study, salience expresses the prominence of certain elements experienced at Asian restaurants in the memory of customers (Alba & Chattopadhyay, 1986). The following formula for Dimensional salience analysis was used (Taecharungroj & Mathayomchan, 2019):

$$Dimensional\ Salience = \frac{Dimension\ Reviews}{Total\ Reviews} \tag{1}$$

Valence is defined as the hedonic quality of an emotional experience (Barrett, 1996). For example, the term stress is low valence; the terms joy and elation are modeled as high valence (Stickel et al., 2009). In this study, dimensional valence analysis was used to determine the hedonic quality of dimensions that affect customer experience. Dimensional valence was calculated with the following formula based both on the observation of and on the expectation of positive reviews value obtained as a result of cross-tabulation analysis of the data set labeled on the basis of customer ratings for sentiment analysis (Taecharungroj & Mathayomchan, 2019):

$$Dimensional\ Valence = \frac{Observation\ No\ of\ Positive\ - Expectation\ No\ of\ Positive}{Total\ Reviews\ of\ Dimension} \qquad (2)$$

For LSVA, firstly, the term salience was calculated by taking the logarithm of the term frequency of ten terms assigned to each topic, with the suggestion of Taecharungroj and Mathayomchan (2019). For the term valence, the average value of the relevant category (positive or negative) of each term was calculated using the results of the most successful machine learning algorithm. This calculation was made with the following formula:

$$\mathrm{x} = \frac{1}{n}\sum_{i=1}^{n} xi \qquad (3)$$

where x represents the term, and n represents the number of online reviews. With this process, the ratio of the number of repetitions of the relevant term in the reviews assigned by the algorithm for each category (positive and negative) to the number of reviews assigned to the relevant category was calculated. For example, the SVM algorithm labeled 217 reviews as negative and 1,123 reviews as positive. If the term is exemplified over the term quality, the term quality is included in 36 negative reviews and 158 positive reviews. The negative mean of the quality term was 0.17 (36/217), while the positive mean was 0.14 (158/1123). After calculating the positive and negative averages of the terms under each dimension, the valence value of each term was calculated with the formula given below (Taecharungroj & Mathayomchan, 2019).

$$Term\ Valence = \frac{\bar{x}POS - \bar{x}NEG}{\bar{x}POS + \bar{x}NEG} \qquad (4)$$

where x represents the term, $\bar{x}$POS shows the positive mean of the term, and $\bar{x}$NEG shows the negative mean of the term.

Findings

The data set was composed of 1,348 online reviews written during the period 2011–2021 (March). The ratings were 57.3% 5-star, 23.4% 4-star, 9.1% 3-star, 4.5% 2-star, and 5.7% 1-star. As a result of the preprocessing, the most frequently repeated five words in the data set were flavor (n = 610), food (n = 601), service (n = 414), nice (n = 371), and place (n = 370). The Word Cloud is presented visually in Figure 2.

Figure 2. The Word Cloud

The Main Dimensions of Asian Restaurants Experiences

With the Elbow method, the topic number is set to nine. The LDA algorithm assigned 1,343 of 1,348 reviews to a topic. Table 1 presents the 10 words assigned to each topic.

Table 1
The Main Dimensions of Asian Restaurants Experience

View			Real Taste			Food		
Turkish	**English**	**Weight**	**Turkish**	**English**	**Weight**	**Turkish**	**English**	**Weight**
yemek	Food	229.0	yemek	food	351.0	yemek	food	391.0
manzara	view	184.0	restaurant	restaurant	178.0	fiyat	price	376.0
fiyat	price	147.0	guzel	nice	144.0	kalite	quality	291.0
mekan	place	143.0	tavsiye	recommendation	113.0	lezzet	flavur	290.0
lezzet	flavor	86.0	lezzet	flavor	111.0	Japon	Japan	250.0
arkadaş	friend	83.0	mekan	place	96.0	restoran	restaurant	210.0
servis	service	81.0	zaman	time	52.0	servis	service	167.0
tercih	preference	79.0	uygur	Uighur	48.0	uzakdoğu	Far east	99.0
akşam	evening	73.0	gercek	real	46.0	lokanta	restaurant	98.0
kokteyl	coctail	71.0	servis	service	45.0	hizmet	service	79.0
Staff			**Sauce and Spice**			**Sushi**		
Turkish	**English**	**Weight**	**Turkish**	**English**	**Weight**	**Turkish**	**English**	**Weight**
restoran	restaurant	334.0	yemek	food	208.0	sushi	sushi	1231.0
zaman	time	165.0	lezzet	flavor	200.0	lezzet	flavor	219.0
yemek	food	159.0	tavuk	chicken	162.0	mekan	place	145.0
lezzet	flavor	124.0	çorba	soup	141.0	fiyat	price	93.0
hizmet	service	80.0	pilav	rice	119.0	tercih	preference	58.0
servis	service	73.0	tavsiye	recommendation	100.0	tavsiye	recommendation	55.0
tekrar	repeat	69.0	baharat	spice	85.0	balık	fish	53.0
teşekkür	thanks	66.0	karides	shrimp	77.0	servis	service	53.0
personel	staff	57.0	tatlı	dessert	76.0	başarı	success	43.0
deneyim	experience	55.0	dondurma	ice-cream	58.0	deneme	try	38.0
Flavor			**Place**			**Order**		
Turkish	**English**	**Weight**	**Turkish**	**English**	**Weight**	**Turkish**	**English**	**Weight**
lezzet	flavor	382.0	mekan	place	147.0	servis	service	254.0
tavsiye	recommendation	345.0	garson	waiter	134.0	sipariş	order	240.0
mekan	place	339.0	çeşit	sort	109.0	garson	waiter	134.0
servis	service	273.0	şarap	wine	107.0	yemek	food	96.0
personel	staff	150.0	akşam	evening	85.0	müşteri	customer	87.0
yemek	food	150.0	rezervasyon	reservation	70.0	hesap	bill	72.0
ortam	ambiance	104.0	kalabalık	crowd	48.0	lezzet	flavour	55.0
keyif	pleasure	92.0	içeri	indoor	46.0	paket	package	43.0
güleryüz	delicacy	85.0	yemek	food	35.0	vasat	mediocre	43.0
kalite	quality	75.0	teras	terrace	34.0	şekil	shape	35.0

In addition to the terms used to determine the dimensions affecting the perception of Asian restaurant experience, online customer reviews were also checked to determine how these terms were used by the customers. Nine dimensions affecting Turkish customers' Asian restaurant experiences were determined. Four of these nine dimensions (view, staff, place, order) were related to the restaurant itself, and five of them (real taste, food, sauce and spice, sushi, flavor) were related to the food served.

Sentiment Polarity of Dimensions

The sentiment polarity of all dimensions for the RQ2 was determined by labeling them as positive and negative according to customer ratings. Table 2 presents the sentiment polarity of each dimension.

Table 2
Sentiment Polarity of Dimensions

Dimensions	Review Count	Positive		Negative	
		n	%	*n*	%
View	137	119	86.9	18	13.1
Real Taste	155	131	84.5	24	15.5
Food	217	172	79.3	45	20.7
Staff	132	106	80.3	26	19.7
Sauce and Spice	135	106	78.5	29	21.5
Sushi	174	141	81.0	33	19.0
Flavor	226	202	89.4	24	10.6
Place	66	52	78.8	14	21.2
Order	101	56	55.4	45	44.6
Total	1343	1085	80.8	258	19.2

According to Table 2, 80.8% of the data set was labeled as positive and 19.2% as negative. The dimension with the highest positive sentiment ratio was flavor with 89.4% while the lowest was order with 55.4%. Therefore, the dimension with the highest negative sentiment rate was order with 44.6% followed by sauce and spice with 21.5% and place with 21.2%.

The classification performance for RQ3 was compared with the accuracy scores of NB and SVM algorithms. It is important to reach around 70% accuracy for the hospitality industry (Taecharungroj & Mathayomchan, 2019). As a result of the analysis, the accuracy score of NB was 75.8%, while the accuracy score of SVM was 81.3%. Accuracy score above 70% was taken for both algorithms, and the SVM algorithm achieved better accuracy than the NB algorithm. The algorithm results that gave the best results were used for the analyses made for RQ6 and RQ7.

The Salience and Valence of the Dimensions

Table 3 presents the DSVA results for RQ4 and RQ5.

Table 3
Dimensional Salience and Valence

Dimensions	Total of Reviews	Positive Reviews		Valence (%)	Salience (%)
		Observed	Expected		
View	137	119	111	5.8	10.2
Real Taste	155	131	125	3.9	11.5
Food	217	172	175	–1.4	**16.2**
Staff	132	106	107	–0.8	9.8
Sauce and Spice	135	106	109	–2.2	10.1
Sushi	174	141	141	0	12.9
Flavor	226	202	183	8.4	**16.8**
Place	66	52	53	–1.5	4.9
Order	101	56	82	**–25.7**	7.5

According to Table 3, flavor (16.8%) and food (16.2%) were the dimensions with the greatest salience, while place (4.9%) was the least. Flavor (8.4%) had the highest positive valence, and order (–25.7%) had the highest negative valence. Figure 3 shows the salience and valence values of each dimension.

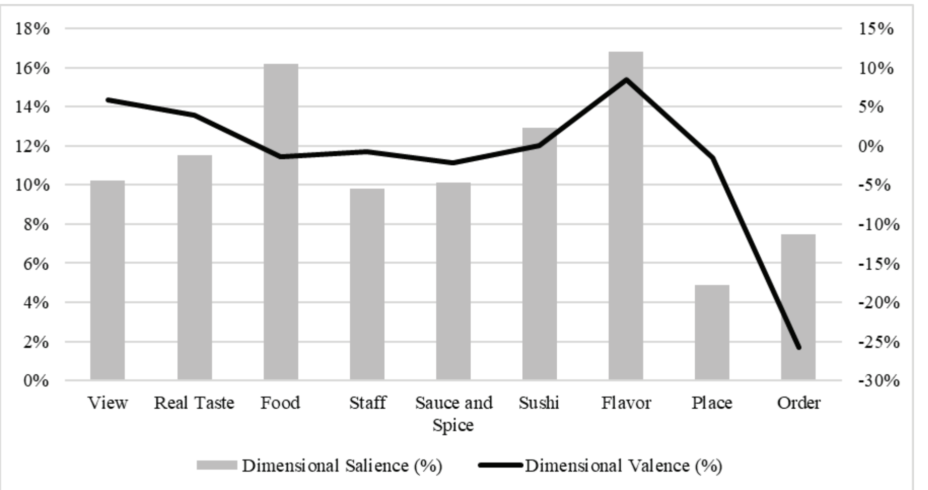

Figure 3. Dimensional Salience-Valence Analysis of the Dimensions

According to the DSVA results, it was found that Turkish customers focused more on flavor and food in their experiences at Asian restaurants, and the positive sentiment tone for the flavors they tasted was higher, but the negative sentiment tone was higher for orders.

The Salience and Valence of Lexicon of the Dimensions

The LSVA for RQ6 and RQ7 provided an in-depth analysis of the DSVA results performed in the previous stage, helping to identify possible terms that positively and negatively affected the dimensions related to experience (Taecharungroj & Mathayomchan, 2019). Figure 4 illustrates the LSVA results with bubble charts. The bubble size of each term was calculated by dividing the term weights given in the LDA result table to the maximum weight of each topic, as suggested by Taecharungroj and Mathayomchan (2019). The English equivalents of each term given in Table 1 were used during the bubble chart display and the interpretation of the results.

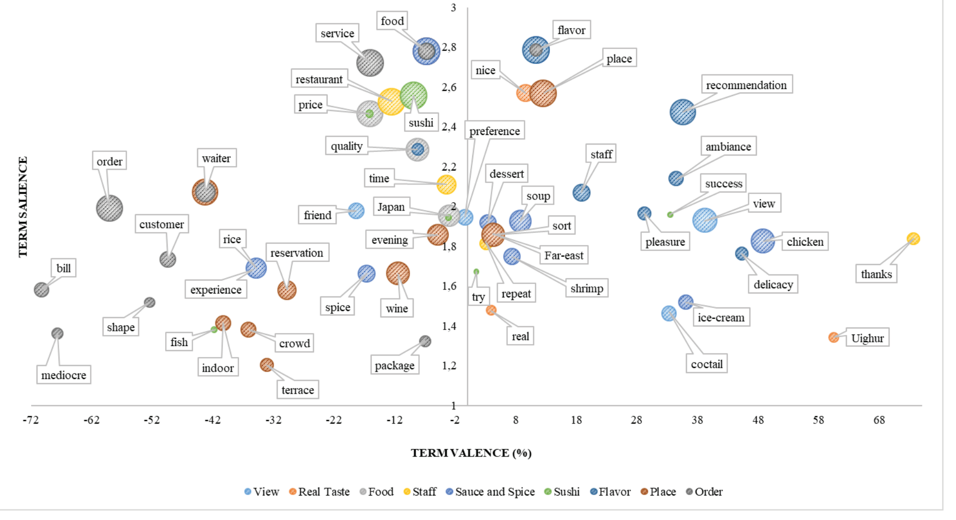

Figure 4. Valence and Salience of the Dimension Terms

According to the LSVA results, flavor was the term with the greatest salience and terrace was the term with the least. Flavor was the term with the highest salience in reviews assigned to dimensions other than place. In place, the term with the highest salience was food. However, the terms with the least salience were coctail in view, Uighur in real taste, Far East in food, experience in staff, ice cream in sauce and spice, fish in sushi, delicacy in flavor, terrace in place, and package in order dimension.

The view dimension was supported with the highest valence by view followed by coctail, place, and flavor. In the view dimension, the term with the lowest valence after price was friend which indicated the factors that caused the customer's negative thoughts. The real taste dimension was supported by the highest valence term Uighur, followed by terms such as recommendation, flavor, nice and real, while service, restaurant and food were negative terms for this dimension.

The food dimension was supported by the highest valence term flavor, while the lowest valence terms were service and price. The staff dimension, on the other hand, was supported by the terms thanks and staff with the highest valence terms. The lowest term valence of the staff dimension was experience. The sauce and spice dimension was supported by the highest valence term chicken followed by ice-cream and recommendation, while the most negative term of this dimension was rice. The sushi dimension was supported by the highest valence terms recommendation and success. The most negative term of this dimension was fish which came after price and service, and this shed light on the reasons for the negative thoughts of customers.

The flavor dimension was supported by the highest valence term, delicacy, followed by the terms recommendation and ambiance. The terms with the lowest valence for this dimension were service and quality. While the place dimension was supported by the highest valence term place, the lowest valence term was the waiter which came after crowd, terrace, and reservation. This indicated the reasons for the negative thoughts of the customers. Finally, the term bill was the lowest valence in the order dimension, where the only term with positive valence was flavor coming after terms such as mediocre, order, shape, and customer. This provided clues about the factors that caused negative thoughts of the customers.

According to the LSVA results, it was determined that while the food term had negative valence, the flavor term had positive valence. It was found that Turkish customers generally had a more positive perception of flavor than food. It was determined that Turkish customers have a positive perception towards the chicken, ice-cream, coctail, soup, shrimp, and dessert which they experienced in Asian restaurants. It can be stated that Turkish customers' approach to Uighur cuisine is positive, especially with the high positive valence attributed to the term Uighur. Regarding the restaurants visited in general, there was a positive perception towards elements such as staff, delicacy of the staff, view, ambiance, and place. In addition, it was clear from the study that the perception towards the Far East and the variety of menus of the restaurants was positive. Nevertheless, while customers were more positive about recommendation, they had a lower positive valence about revisit.

This study revealed that Turkish customers had a negative perception about sushi, wine, spice, rice, and fish. The negative perception about sushi coincides with the negative valence attributed to the term Japan. In addition, it became clear that customers had a negative perception of the terms quality, price, service, reservation, restaurant, crowd, waiter, customer. Although Turkish customers typically evaluated their experience as negative, our study revealed that they had a positive perception that such an experience was worth trying and that real flavors could be experienced. Finally, this study showed that Turkish customers were very sensitive about the timely and correct delivery of the order.

Discussion

Some scholars agree that the restaurant industry is a competitive one and that restauretors need to understand customer perception (Jang et al., 2009; Josiam et al., 2007; Lee et al., 2012; Liu & Jang, 2009; Ma et al., 2011; Min & Han, 2017; Sukalakamala & Boyce, 2007). In this study, which investigates the perception of Turkish customers towards their experiences at Asian restaurants, nine dimensions that affect customer experience were identified. Of these dimensions, view and place overlaps with the view and location defined for the restaurant experience (Oh & Kim, 2020; Pezenka & Weismayer, 2020). The staff and order dimensions support previous research (Büschken & Allenby, 2016; Situmeang et al., 2020) as factors affecting the restaurant experience.

It can be stated that the emergence of sushi as a stand-alone dimension in the perception of Asian restaurants experience supports the idea that Japan has succeeded in globalizing sushi (Min & Han, 2017, p. 166). Some scholars place particular emphasis on food (Ma et al., 2011) and flavor or taste (Fanelli & Di Nocera, 2018; Sukalakamala & Boyce, 2007) in their perception of the Asian restaurant experience. The food and flavor dimensions presented in this study supported this idea. In addition, some researchers agree on the importance of authenticity in the perception of Asian restaurant experience (Lee et al., 2012; Liu & Jang, 2009; Ma et al., 2011; Min & Han, 2017; Sukalakamala & Boyce, 2007). This study supported this view with the real taste dimension. Sauce and spice, which this study reveals as another dimension that shapes the perception of experience, overlaps with studies that point to spicy food among the attributes that affect the perception of Asian restaurants experience (Fanelli & Di Nocera, 2018; Jang et al., 2009; Josiam et al., 2007; Liu & Jang, 2009; Min & Han, 2017; Sukalakamala & Boyce, 2007). This study, unlike previous studies, revealed that sauces also play an important role in the perception of Asian restaurants experience. In this context, this study has confirmed the idea of seeking exotic food and seeking cultural experience (Ha & Jang, 2010) with Turkish customers focusing on food and flavor along with sauces and spices.

As a result of the analysis, the fact that most salience dimensions are flavor and food in addition to being the most common terms in customer reviews shows that Turkish customers focus on taste. Although the study supports studies that identify the term food as the most frequently cited term in restaurant reviews (Pezenka & Weismayer, 2020; Situmeang et al., 2020), it differs from these studies with the term flavor.

According to the sentiment analysis result performed on the basis of customer rating, flavor was the most positive dimension, while order was the most negative dimension. In the performance test of this classification, the SVM algorithm achieved the best result with an accuracy score of 81.3%. As a result of LSVA performed on the basis of SVM prediction results, flavor was the most salience term and terrace was the least salience term. However, these terms do not have a high negative effect when compared to the terms bill, mediocre, and order, which have high negative valence. It also does not have a highly positive effect compared to the terms thanks, Uighur, and chicken, which have high positive valence. The highly positive valence of the term Uighur supports the idea that the culture is reflected in customer reviews for the experience (Nakayama & Wan, 2019), and it can be evaluated with cultural proximity. Although cultural proximity is largely based on language, it can be attributed to cultural elements such as dress, ethnic types, gestures, body language, music traditions, religious elements (La Pastina & Straubhaar, 2005) and food, which is the finding of this study.

Theoretical Implications

The study showed that with topic modeling, the main dimensions that affect the customers' experience can be revealed and customers' perceptions of ethnic cuisines can be interpreted. Another contribution of the study is that the SVM algorithm performed 5.5% higher than the NB algorithm in polarity classification based on the customer ratings. In the study, it was also determined that flavor and food are the main dimensions affecting the perception of Asian restaurants experience. Therefore, it can be said that Turkish customers give more importance to the food itself and the taste of the food than other factors. In addition, it has been observed that Turkish customers pay attention to ordering in their dining experience related to a cuisine from a different culture or country. Finally, the study reveals that cultural proximity positively affects customers' food perceptions.

Managerial Implications

The topic of real taste, one of the findings of this study, and the flavor that customers especially focus on evokes the idea that ethnic restaurants will lose their originality to the extent that they try to appeal to the taste of foreigners (Van den Berghe, 1984). Although the customers' sentiments on the real taste for Asian restaurants operating in Istanbul have not yet turned into a negative direction (3.9%), the rate of positive valence is not high. The term flavor, which stands out in the analyses made on the basis of the term, has shown that the main reason for Turkish customers to go to Asian restaurants is flavor-oriented. Restaurant owners and managers should take into account that Turkish customers focus primarily on flavor and can be open to different experiences when customers' flavor expectations are met. Customers can set a number of criteria for encountering a different flavor and specify this in their orders. For this reason, it should not be ignored that if a common practice (e.g., a spice to be added to the food) for the staff working in these restaurants does not match the customer's expectation, the customer will be adversely affected by this experience. The business management should consider that the correct positioning of tables with a good view can be effective for the experience of the customers.

Limitations and future studies

The most important limitation of the study is that it only analyzes customer reviews written in Turkish for restaurants operating in Istanbul. For this reason, the number of online evaluations that make up the research data set was limited. Turkish customers' perceptions of Asian cuisine can be compared by analyzing the online Turkish reviews of the restaurants operating in other cities of Turkey or in other countries. In addition, the reviews written on different platforms other than TripAdvisor should be added to the analysis, so that Turkish customers' perception of Asian restaurants can be examined from a more holistic perspective. In particular, the negative reviews of customers contain important clues for the development of the business. In this context, only the detailed analysis of negative reviews will be able to determine the tolerance threshold for differences in restaurant experience. Finally, I think that the high number of restaurants serving Japanese, Chinese and Indian cuisines in the study, and accordingly the high number of online reviews, causes the cuisines of other Asian countries to remain in the background. I think that examining the cuisines of only one country or two countries for comparison purposes in future studies will be more beneficial in terms of homogeneity.

Conclusion

In this study, which focused on Turkish customers' perception of the experience of Asian restaurants operating in Istanbul, the dimensions that affect the experience were firstly determined with LDA. In the second stage, sentiment polarity for each dimension was determined on the basis of customer ratings, and classification performance was tested with machine learning algorithms. Flavor was the most positive dimension and order was the most negative dimension, while the SVM algorithm provided better accuracy. In the third stage, the dimensions that customers attach the most importance to and the hedonic quality of these dimensions were determined with DSVA. Accordingly, while flavor was the dimension with the highest salience in Asian restaurants experience, place was that with the least. While flavor was the dimension with the highest hedonic quality (the highest positive valence), order was the dimension with the lowest hedonic quality (the highest negative valence). At the last stage, the hierarchy of importance of the terms used in customer reviews and the hedonic quality of each term were determined with LSVA. Accordingly, the term flavor was that which had the most salience, and the term terrace was that which had the least. While the term with the lowest hedonic quality was bill, the term with the highest hedonic quality was thanks.

In conclusion, Turkish customers' perception towards the flavors they experience in Asian restaurants is positive. Turkish customers emphasize the restaurant attributes such as service, place, price, and quality in their reviews. Turkish customers are affected by the negative issues they experience such as price, quality, reservation, order, and bill. Turkish customers pay attention to the correct delivery of order, especially in the experience they will have for a new flavor or dish from a different cuisine.

Peer-review: Externally peer-reviewed.
Conflict of Interest: The author has no conflict of interest to declare.
Grant Support: The author declared that this study has received no financial support.

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Journal of Tourismology

RESEARCH ARTICLE

Journal of Tourismology, 8(1), 49-67

DOI: 10.26650/jot.2022.8.1.1038566
http://jt.istanbul.edu.en/

Submitted: 20.12.2021
Revision Requested: 13.03.2022
Last Revision Received: 17.03.2022
Accepted: 04.04.2022
Published Online: 30.05.2022

Using Sentiment Analysis of Online Hotel Reviews To Explore the Effect of Information and Communication Technologies on Hotel Guest Satisfaction

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Abstract

Online hotel reviews are a rich source of information regarding drivers of customer satisfaction or dissatisfaction with hotel services. In this paper, we study the impact of information and communication technologies (ICT) on the satisfaction of customers of 144 Algerian hotels through the analysis of 11310 online user reviews. The methodology adopted is based on the analysis of the sentiments expressed in the user reviews from one of the most used travel platforms, TripAdvisor. The results indicate that sentiment towards ICT contributes to satisfaction but not as much as sentiment towards other non-ICT services. Furthermore, we identified individually which ICTs contribute to satisfaction. We found that ICTs related to booking, comfort and entertainment were the ones that significantly contributed to satisfaction, while ICT related to safety and security did not. We believe that this study contributes to the literature because it uses innovative natural language processing techniques as opposed to traditional questionnaire-based approaches. Moreover, this study was conducted in a developing country where ICT adoption differs from that of developed countries.

Keywords

Information and communication technology, Sentiment analysis, Online hotel reviews, Hotel guest satisfaction, Algerian hotels

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To cite this article: Cherdouh, S., Kherri, A., Abbaci, A., & Kebir, S. (2022). Using sentiment analysis of online hotel reviews to explore the effect of information and communication technologies on hotel guest satisfaction. *Journal of Tourismology, 8*(1), 49-67. https://doi.org/10.26650/jot.2022.8.1.1038566

Introduction

Nowadays, the use of web-based travel platforms has become ingrained in the habits of travelers and tourists before, during and after their trips. Their use is not limited to online booking of airline tickets and hotel rooms but extends to other activities such as sharing travel experiences in which tourists express their adventures and misadventures, down to the smallest details about what they liked and disliked about their destination (He et al., 2017). This intensive exchange of information and user experiences has paved the way for the emergence of what is generally known as user-generated content and more specifically in the hotel industry as online hotel reviews.

Thanks to their open structure, online hotel reviews allow customers to describe and report exhaustively on their user experience and their perception of the services they have been offered (Zhao et al., 2019). As a result, online hotel reviews are considered a reliable source of information that can be used by other potential customers to support their decision to search, choose, and finally decide to book a hotel (Fang et al., 2016; Nusair et al., 2013; Chua & Banerjee, 2016). In addition to writing a textual review, all leading web-based travel platforms such as TripAdvisor, Booking and Expedia allow users to give an overall rating of their stay using a scale generally ranging from 1 (very dissatisfied) to 5 (very satisfied). This scale reflects the degree of customer satisfaction (Bulchand-Gidumal et al., 2011; Geetha et al., 2017) and thus represents a crucial interest for hotel companies as it determines future customer behaviors such as willingness to return and intention to recommend the hotel. For this reason, identifying what makes customers happy and what irritates them has long been the subject of numerous research studies (Padma & Ahn, 2020; Davras & Caber, 2019; Nunkoo et al., 2020; Ruan, 2020). Indeed, understanding customers' expectations and preferences is a critical step for hotel managers in order to improve and adapt their marketing strategy to meet the needs of their guests (Ahani et al., 2019).

Throughout the last few years, with the success of artificial intelligence and machine learning algorithms in other fields, the exploitation of knowledge extracted from online hotel reviews has surpassed the traditional use of questionnaires in satisfaction surveys. Indeed, many studies relying on text mining, natural language processing and sentiment analysis have been used on online hotel reviews in order to deduce customers' preferences and identify the drivers of their satisfaction (Berezina et al., 2016; Geetha et al., 2017; Zhao et al., 2019; Padma & Ahn, 2020; Shin et al., 2021; Ahani et al., 2019).

Information and communication technologies (ICTs) are among the services that have received particular attention from research studies regarding their effect on hotels' guest satisfaction. In fact, many studies have investigated and demonstrated that the presence of high-quality ICT equipment is a determining factor of satisfaction (Sirirak et al., 2011; Velazquez et al., 2015; Melian-Gonzalez & Bulchand-Gidumal, 2016; Chevers & Spencer, 2017; Moliner-Velazquez et al., 2019). However, the aforementioned studies were primarily based on surveys to investigate the effect of ICTs on satisfaction (Khoo-Lattimore et al., 2019). Our study focuses on the evaluation of the impact of ICTs on the overall satisfaction of hotel guests through the textual analysis of online hotel reviews. For this purpose, we rely on innovative and well-founded natural language processing techniques to evaluate the sentiment of sentences and to study the effect of this sentiment on the rating given by the user in his review. Therefore, the aim of this study is to answer the following research questions:

RQ1 *(a) Does customer review sentiment towards ICT components have a positive impact on the rating? (b) Is this impact greater than that of customer review sentiment towards other non-ICT services?*

RQ2 *Which of these ICT components, if any, contribute the most to the review rating?*

The remainder of this paper is organized as follows. Section 2 provides a literature review on ICT adoption in hotels, hotel guest satisfaction and sentiment analysis of online hotel reviews. Section 3 presents our methodology, with a focus on the measuring instruments and the adopted data analysis technique. Section 4 presents and discusses the major findings. Section 5 concludes the paper and provides future perspectives, as well as the main theoretical and managerial implications, and addresses the potential limitations of our study.

Literature Review

Relationship Between ICT Adoption and Hotel Guest Satisfaction

ICTs can be defined as any technology that is used to "*create, capture, manipulate, communicate, exchange, present, and use information in its various forms*" (Ryssel et al., 2004). Several studies found that ICTs in hotels contribute positively to customer satisfaction (Cobanoglu et al., 2011; Sirirak et al., 2011; Velazquez et al., 2015; Moliner-Velazquez et al., 2019; Chevers & Spencer, 2017). This can be explained among other things by the fact that customers have become more sophisticated, educated, and technologically experienced and pay more attention to personalized services (Kim & Ham, 2006).

Cobanoglu et al. (2011) show that not all ICT amenities impact guest satisfaction equally. Indeed, the authors pointed out that business essentials for travelers, such as express check-in/check-out, in-room telephone, in-room alarm clock, and universal battery chargers, were found to have a more positive impact than other ICT amenities on guest's overall satisfaction. Moreover, the study showed that the variety and type of ICT used are important factors that influence hotel selection and return intention. Furthermore, Sirirak et al. (2011) studied the relationship between ICT adoption and satisfaction by measuring ICT adoption using three factors: availability, integration, and intensity of usage. They found that ICT usage intensity has a significant positive relationship with customer satisfaction. More recently, Chevers & Spencer (2017)'s research on Jamaican hotels found a significant relationship between ICT adoption and hotel guest satisfaction. The authors classify ICTs according to hotel operational domains and claim that in-room ICTs have the most positive effect on guests' satisfaction. More specifically, Bulchand-Gidumal et al. (2011) demonstrated that offering free Wi-Fi can constitute a source of revenue for hotels because Wi-Fi contributes to enhancing customer satisfaction.

Despite the numerous research studies that have investigated the relationship between ICT and hotel customer satisfaction, it can be noted that the majority of them have mainly targeted hotel customers in developed countries. However, it has been argued in the literature that the level of ICT adoption in developed countries differs from that in developing countries (Ezzaouia & Bulchand-Gidumal, 2020). Furthermore, it has been shown that one of the main barriers to ICT adoption in developing countries is the lack of technological infrastructure, the poor quality of the Internet network (Zaied, 2012) and the high cost of acquiring software for the digitalization of business processes (Alrawadieh et al., 2021). In addition, the works of Ahmad et al. (2015) and Adebanjo et al. (2016) assert that the hesitation in adopting ICT in the hospitality industry in developing countries comes from the lack of awareness of the potential that the technologies can offer as well as the lack of financial resources to implement them. In response to these circumstances, there have been calls within the research community to study the impact of ICTs in the hospitality sector in developing countries (Mihalic & Buhalis, 2013).

Identifying Drivers of Hotel Customer Satisfaction Through Sentiment Analysis of Online Hotel Reviews

Online hotel reviews have grown in importance as a means of understanding customer perception as well as forecasting future behavior, particularly in the tourism and hospitality industries (Padma & Ahn, 2020). Indeed, they are considered by several academics as a meaningful emerging alternative to traditional approaches using face-to-face interviews or surveys in which it is difficult to capture and accurately assess customer satisfaction (Berezina et al., 2016; Gao et al., 2018). However, with the advent of big data and the exponential increase in the volume of user-generated content, it is inconceivable to process hotel reviews in their raw state. For these reasons, more and more researchers in the hospitality and tourism field have relied on innovative techniques from the field of natural language processing (NLP) such as opinion/sentiment analysis, language detection and topic classification.

Lu & Stepchenkova (2012) proposed a method for evaluating ecotourism experiences from online hotel reviews extracted from TripAdvisor. The authors identified 26 attributes that influence ecotourists' satisfaction with their ecolodge stays and aggregated them into seven categories: ecolodge settings, room, nature, service, food, location and value for money. The study carried out by Li et al. (2013) found that transportation convenience, food and beverage management, convenience to tourist destinations and value for money were important and excellent factors for assessing the satisfaction of those customers who are booking both luxury and budget hotels. Both studies from Xiang et al. (2015) and Zhang et al. (2016) rely on topic classification techniques to deconstruct hotel guest experience and examine its association with overall guest satisfaction. The work of Geetha et al. (2017) found consistency between customer ratings and actual customer sentiment polarity across hotels belonging to the two categories of premium and budget. Liu et al. (2017) combined language detection and sentiment analysis techniques on a collection of 412,784 online hotel reviews extracted from TripAdvisor with the aim of offering new insights into the determinants of hotel customer satisfaction depending on their native language. More recently, Zhao et al. (2019) investigated technical attributes of online textual reviews and found that a higher level of subjectivity and readability and a longer length of textual review lead to lower overall customer satisfaction, and a higher level of diversity and sentiment polarity of textual reviews lead to higher overall customer satisfaction.

Prior studies in the area of sentiment analysis of online hotel reviews suffer from two main shortcomings. First, it should be noted that the majority of studies focus on a single natural language processing library to analyze review sentiment. This poses a significant threat to their internal validity, as some libraries may give more accurate results than others. Second, past studies can be characterized as blind in that they do not focus on a specific service offered by the hotel, but seek to exhaustively discover which services contribute to guest satisfaction. In our study, we sought to fill this research gap by performing sentiment analysis using several different sentiment analysis libraries to mitigate the threat to the internal validity of our findings. On the other hand, we focus only on one category of services offered by hotels, namely ICT.

Methodology

Data Collection

For this study, we used TripAdvisor as our primary source of information. Founded in 2000, TripAdvisor is one of the largest and most popular platforms containing travel-related reviews. The number of online reviews on TripAdvisor is constantly growing and has exceeded one billion by the end of 2021 according to forecasts (Statista, 2021). TripAdvisor allows users to post, comment, and share trip suggestions, as well as rate hotels, restaurants, and destinations. An online hotel review on TripAdvisor contains various information such as the title of the review, the body of the review, the date of publication, the name of the hotel, the number of stars of the hotel, the city of the hotel, the country of the hotel as well as the overall rating that the user gave to the hotel.

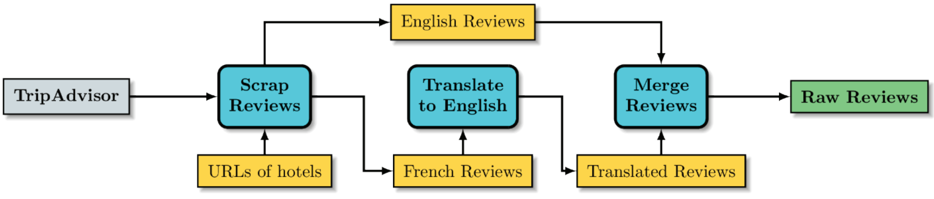

Figure 1. Data collection process.

As illustrated in Figure 1, the data collection process in our study goes through three steps. First, we developed a Python program to extract online hotel reviews from TripAdvisor. This program accepts as input a list of hotel URLs and produces as output a file containing all collected reviews. We manually collected the URLs of the first 144 Algerian hotels present on TripAdvisor sorted in the decreasing order of their value. After collecting all the hotel reviews of the hotels in question, we decided to keep only the reviews written in French and English because for all the other languages (Arabic, Italian, Chinese, etc.), the number of reviews was extremely small and to integrate them in our analysis would risk decreasing the reliability of our analysis. Since the majority of sentiment analysis libraries have been developed to handle texts written in English, we decided to translate all reviews written in French into English. The translation was done using a Python program that calls Google's t5 (Raffel et al., 2020) which is one of the most downloaded models for text translation hosted on Hugging Face Model Hub (HuggingFace, 2021a). The latter is a repository that hosts state-of-the-art machine learning models dedicated to natural language processing created by top AI researchers and web giants such as Google, Facebook and Microsoft (Wolf et al., 2020). Once the translation is complete, all reviews are collected and stored in a single JavaScript Object Notation (JSON) file containing relevant information about each review such as title, text, reason for stay, URL of the review, etc. JSON is a standard open file format that uses human-readable text to store and transmit data consisting of the following attributes: value pairs and arrays. A total of 11957 online hotel reviews were collected. Figure 2 illustrates the structure of a single review.

```
{
  "hotel_name": "Sheraton Annaba Hotel",
  "hotel_location": "Annaba",
  "hotel_country": "Algeria",
  "hotel_stars": "5 Star",
  "rating": 5,
  "title": "Great Stay for business",
  "text": "I really enjoyed my stay at the Sheraton Annaba with
      great service, friendly staff and the manager Mehdi, has been
       very helpful in handling our issues.  The building itself is
       fabulous and prices are within range of hotels of this
      standards in the country.  I would recommend this hotel to
      business travelers as it's well located, safe and includes
      high speed wifi access.",
  "date": "2017-08-27",
  "reason_of_stay": "BUSINESS",
  "url": "https://www.tripadvisor.com/ShowUserReviews-g1071600-
      d12063561-r517969346-Sheraton_Annaba_Hotel-
      Annaba_Annaba_Province.html"
}
```


Figure 2. Overview of the structure of a review.

Data Cleaning and Sample Profile

In order to perform a statistical analysis of the data and to eliminate outliers, we have kept, from among the 11957 user reviews, only the 11310 that concern 3, 4 and 5-star hotels. Upscale hotels were selected because they are more likely to invest in technology. Table 1 describes the profile of the hotel reviews we collected.

Table 1
Sample Profile

Characteristics	Frequency	Percentage (%)	Characteristics	Frequency	Percentage (%)
Hotel Category			*User Rating*		
3 Star	3618	31.99%	★☆☆☆☆	936	8.28%
4 Star	2923	25.84%	★★☆☆☆	940	8.31%
5 Star	4769	42.17%	★★★☆☆	1815	16.05%
Reason of Stay			★★★★☆	3248	28.72%
Business	6098	53.92%	★★★★★	4371	38.65%
Family	1822	16.11%	*Hotel Region*		
Couples	1346	11.90%	East	2244	19.84%
Solo	713	6.30%	West	2979	26.34%
Friends	644	5.69%	Center	6017	53.20%
Not available	687	6.07%	South	70	0.62%

Among the 11310 user reviews, almost half (42.17 percent) were written for 5-star hotels, followed by 31.99 percent written for 3-star hotels and 25.84 percent for 4-star hotels. Regarding the rating given by the users, 38.65 percent gave a rating of 5, 28.72 percent gave a rating of 4, 16.05 percent gave a rating of 3, 8.31 percent gave a rating of 2 and 8.28 percent gave a rating of 1. Finally, more than half (53.92 percent) of the users stayed for business purposes, while the remaining users stayed for other reasons.

Data Preprocessing

Since our research focuses on the analysis of the sentiment towards ICTs and on the study of its effect on the user rating, the data we have collected needs to be preprocessed to enable us to conduct the necessary statistical analyses. We describe in the following the different variables we calculated for each review *R*.

- $rating(R)$ denotes the rating of the review *R*. Its value is an integer within the range $[1, 5]$ where 1 indicates very unsatisfied and 5 indicates very satisfied.
- $sentences(R) = \{s_1, s_2, \dots, s_n\}$ denotes the set of sentences of the review *R*. We used the sentence tokenizer provided by the NLTK Python library (Bird et al., 2009) to divide the text of a review into several individual sentences.
- $sentiment_{lib}(s_i)$ denotes the sentiment score of the sentence s_i measured using the library lib. Its value is a float within the range $[-1.0, 1{,}0]$ where −1.0 indicates a negative sentiment and 1.0 indicates a positive sentiment. In order to mitigate the threat to the internal validity of our approach, we used four different sentiment analysis libraries, namely TextBlob (Loria, 2018), Vader (Hutto & Gilbert, 2014), Flair (Akbik et al., 2019) and Transformers (Wolf et al., 2020). TextBlob and Vader are both lexicon-based Python sentiment analysis libraries, i.e., for these two libraries the sentiment of a given text is an aggregate of weights assigned to the words in that text. For example, the words "*good*", "*great*" and "*happy*" have a positive weight, whereas the words "*horrible*", "*difficult*" and "*unhappy*" have a negative weight. Flair and Transformers are both machine learning-based Python libraries for sentiment analysis. That is to say that they both use supervised learning models trained on large text corpora. Machine learning-based sentiment analysis libraries generally offer better accuracy than lexicon-based libraries because they act not on the text itself but on a tree-like representation of the text that captures the intensity of the links between words. However, due to the computational and memory requirements to implement the supervised learning models, machine learning-based libraries require much more time to run compared to lexicon-based libraries.
- $sentiment_{lib}(R) = \sum_{s_i \in sentences(R)} \frac{sentiment_{lib}(s_i)}{|sentences(R)|}$ denotes the sentiment score of the review *R* measured by calculating the arithmetic mean of the sentiment score of all its sentences.
- $label(s_i)$ denotes a label associated with the sentence s_i. To associate a label with a sentence, we used a Python program that calls Facebook's bartlarge-mnli (Lewis et al., 2019) which is one of the most downloaded models for zero-shot classification hosted on Hugging Face Model Hub (HuggingFace,

2021b). Zero-shot classification is a challenging machine learning and natural language processing problem that aims to automatically associate an appropriate label with a piece of text among several labels (Yin et al., 2019). Figure 3 shows an example of the use of zero-shot classification.

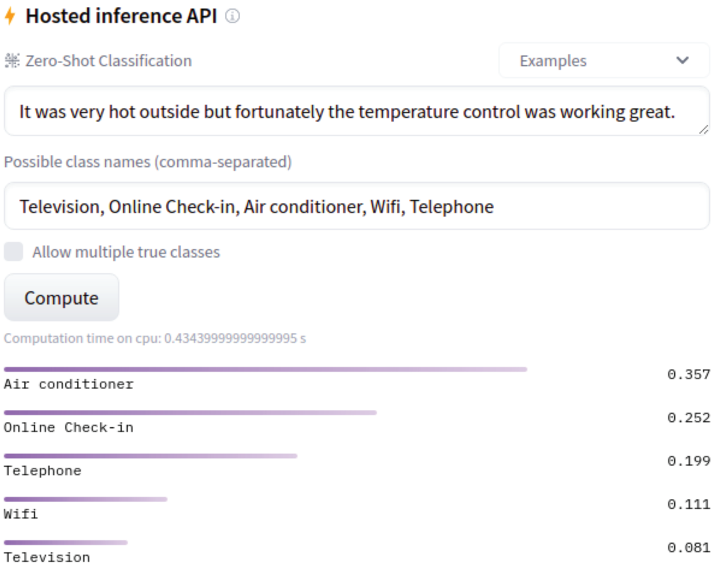

Figure 3. Zero-shot classification (screenshot taken from huggingface.co).

As illustrated in Figure 3, even though the words "*air*" and "*conditioner*" are not explicitly used in the sentence, "*Air conditioner*" has actually been found as the best candidate label among the other labels. In our study, we consider the following labels for ICT services: "*Electronic Safe Box*", "*Television*", "*Online Check-in*", "*Air conditioner*", "*Wi-Fi*", "*Email*", "*USB Charger*", "*Telephone*", "*Social Network*", "*Electronic Lock*", "*Web Site*" and "*ATM* ". For all other non-ICT services, we used the "*non-ICT services*" label.

Accuracy of Used Sentiment Analysis Libraries

Since the sentiment analysis libraries we used are the measuring instruments of our experiment, we found it useful to evaluate their degree of accuracy. To assess the accuracy, Pearson correlation analysis was applied to identify the correlation between $sentiment_{lib}(R)$ and $rating(R)$ for the 11310 reviews we collected. Table 2 presents the correlation test results.

Table 2
Results of Pearson Correlation Test

		$rating(R)$
$sentiment_{TextBlob}(R)$	Pearson's r	0.634***
	p-value	0.000
$sentiment_{Vader}(R)$	Pearson's r	0.680***
	p-value	0.000
$sentiment_{Flair}(R)$	Pearson's r	0.771***
	p-value	0.000
$sentiment_{Transformers}(R)$	Pearson's r	0.802***
	p-value	0.000

Notes: ***p<0.001

Table 2 shows a significant positive correlation between $sentiment_{lib}(R)$ and $rating(R)$ for the four libraries with r = 0.634, p < 0.001 for TextBlob, r = 0.680, p < 0.001 for Vader, r = 0.771, p < 0.001 for Flair and r = 0.802, p < 0.001 for Transformers. This indicates that the four libraries are highly accurate in analyzing the sentiment of hotel reviews. Moreover, it is worth noting the superiority of machine learning-based libraries compared to lexicon-based ones in terms of accuracy.

Findings and discussion

To address ***RQ1***, a multiple regression analysis was carried out using sentiment with hotel ICTs and sentiment with other non-ICT factors as the independent variables and rating(R) as the dependent variable. We measured sentiment with hotel ICTs and sentiment with other non-ICT factors using the following equations.

$$sentiment_{lib}^{ICT}(R) = \sum_{s_i \in sentences(R)}^{label(s_i) \in ICT} \frac{sentiment(s_i)}{|\{s_i / \, s_i \in sentences(R) \wedge label(s_i) \in ICT\}|} \tag{1}$$

$$sentiment_{lib}^{nonICT}(R) = \sum_{s_i \in sentences(R)}^{label(s_i) \notin ICT} \frac{sentiment(s_i)}{|\{s_i / \, s_i \in sentences(R) \wedge label(s_i) \notin ICT\}|} \tag{2}$$

In equation (1), $sentiment_{lib}^{ICT}(R)$ denotes the sentiment score towards ICTs of the review *R* measured using the library lib. It is obtained by calculating the arithmetic mean of the sentiment score of ICT-labeled sentences in the review *R*. In a complementary way, in equation (2), $sentiment_{lib}^{nonICT}(R)$ denotes the sentiment score towards other non-ICT services of the review *R* measured using the library lib. It is obtained by calculating the arithmetic mean of the sentiment score of sentences whose label is not an ICT in the review *R*. Table 3 summarizes the results of the multiple regression analysis.

Table 3
Regression Results Of Sentiment Score Towards ICTs And Sentiment Score Towards non-ICT Services On $rating(R)$

	$rating(R)$							
	TextBlob		**Vader**		**Flair**		**Transformers**	
	β	$p-value$	β	$p-value$	β	$p-value$	β	$p-value$
$sentiment_{lib}^{ICT}(R)$	1.31	0.000***	0.84	0.000***	0.43	0.000***	0.81	0.000***
$sentiment_{lib}^{nonICT}(R)$	2.80	0.000***	2.18	0.000***	1.06	0.000***	1.81	0.000***
R	0.602		0.679		0.724		0.771	
R^2	0.363		0.461		0.524		0.594	
$Adjusted\ R^2$	0.362		0.460		0.524		0.594	
$F-Statistics$	606		911		1173		1558	
$p-value$	0.000***		0.000***		0.000***		0.000***	

Notes: ***p<0.001

It can be seen that the variation of the rating is explained by the two independent variables using the four sentiment analysis libraries with an $adjusted\ R^2$ of 36.2% (p-value < 0.001) for TextBlob, 46% (p-value < 0.001) for Vader, 52.4% (p-value < 0.001) for Flair and 59.4% (p-value < 0.001) for Transformers. Furthermore, the results of the multiple regression analysis indicate that for all sentiment analysis libraries, both sentiment score of ICT-labeled sentences and sentiment score of sentences whose label is not an ICT have a significant relationship with overall guest satisfaction (p-value < 0.001). Moreover, with respect to β coefficients, it can be noticed that, using the four sentiment analysis libraries, the sentiment score of the sentences that were not labeled ICT had a contribution towards rating more than twice than that of ICT labeled sentences.

In summary, the results show that the sentiment towards ICTs has a significant impact on the user rating and consequently on their satisfaction. However, this impact is not as important when compared to other non-ICT services such as staff service, comfort, location, restaurant and room quality. This can be explained by two reasons related to the sample profile. Firstly, more than two-thirds of the online hotel reviews we collected were from premium category hotels (4 and 5-stars). The remaining reviews came from 3-star hotels. Premium category hotels are known to be impeccable in terms of the ICT facilities they offer. As a result, reviews of this category of hotels do not focus mainly on ICT facilities and usually mention other intangible services such as the politeness or helpfulness of staff and the cleanliness of rooms (Sirirak et al., 2011; Xu & Li, 2016). Second, more than half of the hotel reviews we collected were written by business guests. Guests belonging to this segment are usually older than leisure guests and therefore their online reviews are more sensitive to comfort, quietness of room and food. This is consistent with the findings of the study by Xu et al. (2019a).

To answer ***RQ2***, we conducted a linear regression analysis using sentiment with each single hotel ICT as the independent variable and $rating(R)$ as the dependent variable. We measured sentiment with each single hotel ICT using $sentiment_{lib}^{ICT}(R)$ defined in equation (1) by each time replacing ICT with a single hotel ICT among the following: "*Electronic Safe Box*", "*Television*", "*Online Check-in*", "*Air conditioner*", "*Wi-Fi*", "*Email*", "*USB Charger*", "*Telephone*", "*Social Network*", "*Electronic Lock*", "*Web Site*" and "*ATM*". Table 4 summarizes the results of the linear regressions we conducted. Each row of this table contains the regression result for a given ICT and indicates the value of $adjusted\ R^2$, β coefficients and p-values obtained using the four sentiment analysis libraries.

Table 4
Regression results of sentiment score for each ICT on $rating(R)$

	$rating(R)$							
	TextBlob		**Vader**		**Flair**		**Transformers**	
$sentiment_{lib}^{ICT}(R)$	$Adj. R^2$	β	$Adj. R^2$	β	$Adj. R^2$	β	$Adj. R^2$	β
Electronic Safe Box	0.603	-13.79	-0.092	0.57	0.251	0.50	0.437	0.87
Television	0.186***	1.99	0.251***	1.12	0.313***	0.72	0.368***	1.36
Online Check-in	0.180***	2.13	0.284***	1.33	0.331***	0.83	0.473***	1.69
Air Conditioner	0.176***	2.06	0.280***	1.25	0.287***	0.84	0.391***	1.16
Wifi	0.150***	1.33	0.180***	0.91	0.242***	0.59	0.334***	1.20
Email	0.150***	2.46	0.244***	1.46	0.303***	0.97	0.484***	2.03
USB Charger	0.103	2.17	0.200	1.22	0.465**	1.03	0.212	1.45
Telephone	0.064***	1.46	0.152***	1.05	0.158***	0.71	0.182***	1.14
Social Network	0.049	1.31	0.094	0.97	0.000	0.31	0.055	0.85
Electronic Lock	0.013	1.24	-0.038	0.35	0.060	0.46	0.133	1.11
Website	-0.257	7.91	-0.144	-1.99	0.319	-39.30	-0.160	2.00
ATM	-0.004	0.36	0.038*	0.63	0.008	0.23	0.107**	0.99

Notes: *p<0.005, **p<0.01, ***p<0.001

At first glance, with regard to the values of $adjusted\ R^2$ and β coefficients, it can be noted that the contribution of each ICT component varies from one library to another. Nevertheless, it can be highlighted that regardless of the used sentiment analysis library, the variation of the rating given by the customer is significantly explained by the following six ICT components: "*Television*", "*Online Check-in*", "*Air conditioner*", "*Wi-Fi*", "*Email*" and "*Telephone*".

However, we can observe that there are two exceptions: "*ATM*" and "*USB Charger*". Indeed, "*ATM*" has been identified by Vader and Transformers as an ICT component that contributes to rating. And "*USB Charger*" has been identified only by Flair as the ICT component that surprisingly contributes the most to rating ($adjusted\ R^2$ = 0.465, β = 1.03, p-value< 0.01).

In conclusion, we can say that among the twelve ICTs we initially considered, the sentiment towards only six of them, namely "*Television*", "*Online Check-in*", "*Air conditioner*", "*Wi-Fi*", "*Email*" and "*Telephone*", was found to have a significant impact on the rating. This is supported by the use of four different sentiment analysis libraries. In addition, sentiment towards two other ICTs namely "*ATM*" and "*USB Charger*" was found to contribute to the rating. But this was not supported by all sentiment analysis libraries.

In order to better understand and discuss the reasons why the ICTs mentioned above contribute positively to the rating, we thought it would be useful to visualize them according to their operational domain in the hotel as is commonly done in the literature (Siguaw et al., 2000; Sigala, 2003; Ham et al., 2005; Beldona & Cobanoglu, 2007; Sirirak et al., 2011; Chevers & Spencer, 2017). The ICTs we have chosen for this study belong to two domains, namely in-room and front office. However, some ICTs such as "*Wi-Fi*", "*Telephone*", and "*USB charger*" do not belong exclusively to one of the operational domains but can straddle both.

Figure 5 illustrates the distribution of ICTs and highlights those that contribute significantly to the rating.

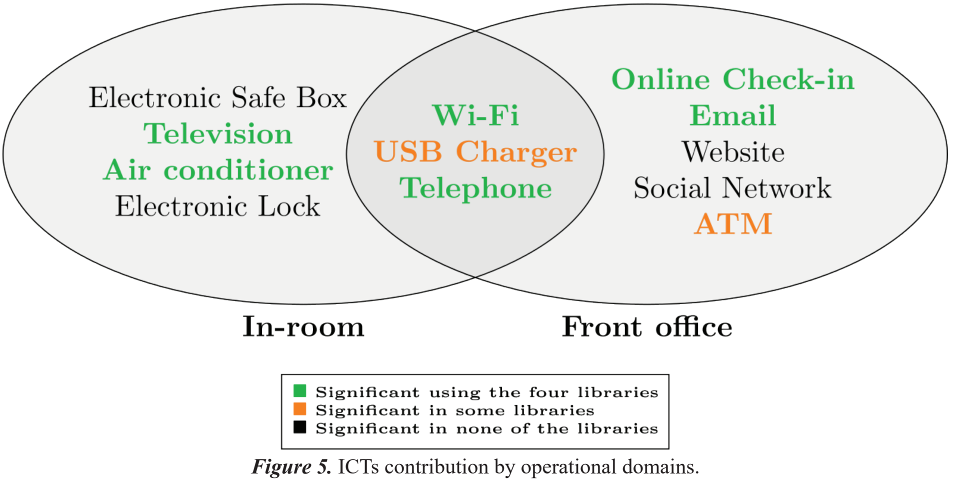

Figure 5. ICTs contribution by operational domains.

We can observe from Figure 5 that among the ICTs belonging to the front office, only those related to booking, namely "*Online Check-in*", "*Email*" and "*Telephone*", contribute significantly to the rating according to the four sentiment analysis libraries used. On the other hand, "*ATM*" was also found to contribute to the rating but only in two of the four sentiment analysis libraries. Although it is difficult to extrapolate on the reasons that may have led to these results, we suppose that even though online payment has been recently adopted in Algeria, its implementation is progressing slowly. This forces customers to book their rooms through traditional means such as phone, email or cash payment using money withdrawn from ATMs available in the lobby.

Regarding in-room ICTs, it was surprising to see that those related to safety and security (“*Electronic Safe Box*” and “*Electronic Lock*”) did not contribute significantly to the rating. Again, this can be explained by reasons related to the sample profile. Indeed, premium category hotels are known to be blameless in terms of security and safety. We suppose that for this reason ICTs related to safety and security were not the central topics of the majority of hotel reviews. In fact, only the ICTs related to comfort and entertainment such as “*Air Conditioner*”, “*Television*”, “*Wi-Fi*” and “*Telephone*” were found to contribute positively to the rating. Moreover, “*USB charger*” which is an ICT available in both rooms and lobbies was found to contribute significantly to the rating by only one of the four sentiment analysis libraries. This can be explained by the fact that the majority of online hotel reviews were written by business guests. They are likely to bring with them smart devices such as laptops, tablets and smartphones that need to be charged at least once or twice a day.

Conclusion, Implications and Limitations

This study contributes to the tourism and hospitality literature by investigating the impact of information and communication technologies on hotel customer satisfaction in a developing country, Algeria.

Our approach is based on the use of innovative sentiment analysis techniques from natural language processing to extract knowledge from online hotel reviews collected on TripAdvisor, one of the most used travel platforms. Unlike past studies proposed in the literature, we used four different sentiment analysis libraries. Two of these libraries are lexicon-based, and the other two are machine learning-based. Our choice to use multiple sentiment analysis libraries was motivated by the goal of mitigating the threat to the internal validity of the study. Although the four sentiment analysis libraries we used differed in terms of accuracy and precision, the results obtained were consistent with respect to the research questions we initially posed. Indeed, the results we obtained indicate that information and communication technologies have a positive impact on the rating given by the user and therefore contribute to customer satisfaction. Nevertheless, this impact is two times smaller than that of other non-ICT services. Furthermore, we also identified which ICTs contribute to the rating and found that ICTs related to room booking, comfort and entertainment were the ones that contributed significantly to the users’ rating. It was also surprising to find that ICTs related to safety and security did not contribute significantly to the rating.

Theoretical Implications

In terms of theoretical implications, our study mainly contributes to the existing body of knowledge on the assessment of the impact of ICT adoption in the hotel sector in developing countries.

To the best of our knowledge, our study is one of the few to focus on the relationship between satisfaction with hotel ICTs and overall guest satisfaction in Algerian hotels. We hope that it can provide a solid foundation for future research on ICTs and their impact in developing countries in general and in Algeria in particular. Furthermore, the approach we followed and the way we orchestrated the different natural language processing libraries to process the data from online hotel reviews can be generalized and serve as a framework that may be useful for academics and researchers conducting further research regarding the evaluation of other factors that may contribute to the rating. In addition, researchers can use our approach in other emerging contexts in developing countries, such as rental of homes and apartments, private rooms, and other properties, as well as to assess the impact of ICTs on other customer segments.

Managerial Implications

The results of this research have managerial implications for hotel managers as well as for policymakers.

Due to their open structure, online hotel reviews are a reliable source that can reflect the drivers of satisfaction and dissatisfaction of hotel guests (Ye et al., 2014). However, as the number of online hotel reviews increases, it becomes more difficult for hotel managers to identify trends that can explain customer satisfaction (Calheiros et al., 2017). The approach adopted by our study addresses this problem by using innovative natural language processing techniques.

Therefore, the findings of this research can provide very useful insights to hotel managers in Algeria about the preferences of their guests. In addition, they can help managers to better understand the expectations of guests in terms of ICTs and their operational domains. Furthermore, the findings obtained can also be exploited by hotel managers of other developing countries that have the same tourism potential as Algeria. For example, the results indicate that ICTs related to booking such as telephone and email contribute significantly to customer satisfaction, especially in a context where electronic payment is not yet offered by the majority of hotels. This brings us to the managerial implications for policymakers. Indeed, the Algerian government should make the widespread adoption of electronic payment in all economic sectors, and particularly in the tourism sector, a priority.

Limitations and Future Research

Despite the interesting findings of our study, we can note some limitations related mainly to the profile of the sample as well as the measurement instruments we used.

Algeria is a country where the majority of tourist attractions and hotels are concentrated in the north of the country and operate in a context steeped in cultural and sometimes religious traditions specific to this country. Therefore, the results should be used with caution, taking into account the contextual aspects of the country. In addition, due to the low number of online hotel reviews in budget hotels, the profile of the sample we studied came from 3, 4 and 5-star hotels only and it would be inappropriate to conclude that these results are also valid for other hotel categories or other types of accommodation. Furthermore, it is important to point out that more than half of the online hotel reviews collected were written by business customers whose needs differ from those of customers in other segments (Zhang et al., 2019; Kim et al., 2020). Moreover, future studies need to be conducted to include other ICT components, such as teleworking technologies that became almost the norm during the COVID-19 pandemic. Finally, the textual nature of online hotel reviews as well as the languages in which they are expressed can be a limit to the findings because on the one hand sentiment analysis remains a research-intensive field where it is still a challenge for the machine to understand some of the subtleties related to natural language such as irony, humor and sarcasm. Also, it is important to note that many online hotel reviews are not well written and contain grammatical or punctuation errors.

Peer-review: Externally peer-reviewed.
Conflict of Interest: The authors have no conflict of interest to declare.
Grant Support: The authors declared that this study has received no financial support.
Author Contributions: Conception/Design of study: S.C., A.K., A.A., S.K.; Data Acquisition: S.C., A.K., A.A., S.K.; Data Analysis/Interpretation: S.C., A.K., A.A., S.K.; Drafting Manuscript: S.C., A.K., A.A., S.K.; Critical Revision of Manuscript: S.C., A.K., A.A., S.K.; Final Approval and Accountability: S.C., A.K., A.A., S.K.

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Journal of Tourismology, 8(1), 69-87

DOI: 10.26650/jot.2022.8.1.1078475
http://jt.istanbul.edu.en/

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Journal of Tourismology

Submitted: 25.02.2022
Revision Requested: 24.04.2022
Last Revision Received: 05.05.2022
Accepted: 24.05.2022
Published Online: 30.05.2022

RESEARCH ARTICLE

Examining the Relationship Between Job Insecurity, Organizational Commitment and Turnover Intention in the COVID-19 Process

Serap Özdemir Güzel[1], Fatma Doğanay Ergen[2]

Abstract

With the onset of the COVID-19 pandemic, many sectors have begun to be affected. The tourism sector is one such sector and has been heavily affected by restrictions on international movement of. Affected by this situation, hotels have decided to close their doors or have adopted a limited-service approach. For this reason, tourism employees have become unable to see their way in an uncertain process and have encountered different practices such as hourly paid work, being sent on unpaid leave, and being given a short-term employment allowance. The reflections of this negative impact on the employees are a matter of curiosity. In this context, this study aims to reveal the relationship between job insecurity, organizational commitment, and turnover intention in five-star hotels during the COVID-19. To enable this, data were collected using a questionnaire. The study results support the conceptual model that includes the variables of job insecurity, organizational commitment, turnover intention and organizational response to COVID-19. Organizational Response to COVID-19 was found to have a negative and significant effect on job insecurity and also to have a positive and significant effect on organizational commitment. Job insecurity has a negative and significant effect on organizational commitment. Organizational commitment has a negative and significant effect on turnover intention and job insecurity was found to have a positive and significant effect on turnover intention.

Keywords

Affective commitment, Normative commitment, Job insecurity, Hotel employees, Turnover intention, Pandemic

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To cite this article: Ozdemir Guzel, S., & Ergen, F. D. (2022). Examining the relationship between job insecurity, organizational commitment and turnover intention in the COVID-19 process. *Journal of Tourismology, 8*(1), 69-87. https://doi.org/10.26650/jot.2022.8.1.1078475

Introduction

A crisis is an unexpected, suddenly developing, faced without any preparation and fast-moving situation (Akdağ, 2005: 3). It possesses latent risks and opportunities (Canyon, 2020: 6). During a crisis, organizations need to take measures to ensure sustainable development. COVID-19 is considered the worst global crisis since the Second World War and is seriously affecting public health. It has also caused unprecedented disruptions in economies and labour markets (Vo-Thanh, Van Vu, Nguyen, Nguyen, Zaman & Chi, 2021a). Concrete steps are needed to re-evaluate current business practices and rapidly develop innovative strategies that protect the health and safety of both guests and employees to save hotels (Sharma, Shin, Maria & Nicolau, 2021). In this process, the job security of hotel employees depends on the current and future actions taken by the hotels in the COVID-19 crisis, and the perceived job security increases the organizational commitment of the employees (Filimonau, Derqui & Matute, 2020).

It is predicted that employees who work in hotels that had a limited capacity or who closed their doors during the COVID-19 process, have thoughts such as fear of losing their job and changing jobs. In this context, do the internal customers, who are very valuable for hotels, have job anxiety about turnover intention considering their organizational commitment? Although there are studies on organizational commitment, job insecurity and turnover intention for hotels during the COVID-19 process (Elshaer & Azazz, 2022; Vo-Thanh, Vu, Nguyen, Nguyen, Zaman & Chi, 2021b; Ağbay & Akbudak, 2021; Filimonau, Derqui & Matute, 2020), the absence of a study examining the relationship of the concepts together has been decisive in choosing to conduct this study. Furthermore, no study has been found on employees of five-star hotels in Istanbul. In this context, it is thought that the study is important both in terms of its subject and application area. The aim of this study was to evaluate how employees were affected during the COVID-19 process and whether this effect created job insecurity and accordingly, the effect on their turnover intention. In addition, the relationship between job insecurity and turnover is also evaluated with organizational commitment. The study aims to contribute to the literature on job insecurity and turnover intention of employees in times of crisis. Moreover, the effect of organizational commitment on employees' turnover intention and the effect of feelings of job insecurity on leaving the job during crisis periods will guide the sector managers in their human resource planning.

Literature Review

Organizational Response to COVID-19

Every business must adopt an effective COVID-19 response plan to stay competitive and retain their employees during and after the pandemic. When a pandemic breaks out, the business can become a place of high risk of infection, and employees can feel vulnerable, anxious, fearful, panicked or even exhausted. Therefore, the business must take prompt and adequate measures to build trust and reassure employees (Vo-Thanh, Vu, Nguyen, Nguyen, Zaman & Chi, 2021b).

Past experiences of crisis and disaster should have prompted hotels to invest in contingency planning so that they can anticipate how the future may develop and assign specific roles and tasks within the appropriate response to COVID-19 given the available resources (Sigala, 2020; Filimonau, Derqui & Matute, 2020). At the same time, hotel managers should pay attention to the needs and psychological state of the employees during the crisis, provide positive and sufficient safety information to the employees and demonstrate the crisis response capabilities of the hotel. They should encourage positive information such as hotel security response strategies and the effectiveness of security management, thus reducing the perceived risk to employees (Zhang, Xie, Wang, Morrison, & Stefaniak, 2020). All these measures, which have emerged as a corporate response to the pandemic, may positively affect the perceived job security of senior hotel managers and thus be reflected in their commitment to stay in current employment after COVID-19 ends (Filimonau, Derqui & Matute, 2020).

Institutional response to any disaster and crisis needs to be timely, transparent and robust, but some key contextual factors (i.e., hotel sizes, hotel resources, and government regulations/support) also appear to have strong effects on the hotels' responses to crises (Filimonau, Derqui & Matute, 2020; Le & Phi, 2021). On the other hand, hotels which are organizationally more resilient are more active in implementing effective responses to the COVID-19 crisis. Organizational flexibility facilitates the capacity of hotels to respond to the current pandemic and all future crises through careful implementation of actions that can ensure business survival in the long run (Filimonau, Derqui & Matute, 2020). Therefore, the measures taken by hotels against the pandemic, their innovative strategies and their intervention methods may differ.

It can be seen that hotels have implemented several innovations, especially in response to the COVID-19 crisis. These innovations include raising hygiene standards, having procedures that ensure social distance, and regulations in reservation and cancellation policies (Shin & Kang, 2020). In addition to hygiene and protection, it is also known that hotels have taken some measures such as the reorganization of the servicescape, investments in technology and digital innovations, reorganization of customer waiting time, personnel training and up-to-date communication (Bonfanti, Vigolo & Yfantidou, 2021). In response to the COVID-19 crisis experienced by five-star chain-managed hotels, it can be seen that they take measures in the form of offering competitive prices, donating meals and critical materials to the community, enforcing cleaning standards and disinfection rules, introducing new cleaning technologies, providing flexibility in reservation and cancellation policies, training employees on new cleaning standards, infection prevention and safety procedures, and discounts for customers. Moreover, it is noteworthy that some practices such as employees taking unpaid leave , layoffs, stopping the renewal of contracts, non-payment of salaries, cutting salaries, and making tax and insurance deductions from salaries have been implemented (Salem, Elkhweskly & Ramkissoon, 2021).

Organizational Commitment

Like many constructs in organizational psychology, commitment has been conceptualized and measured in various ways (Allen & Meyer, 1990). When the definitions of organizational commitment are examined, Porter, Steers, Mowday and Boulian (1974: 604) defined organizational commitment as *"the strength of an individual's identification with and involvement in a particular organization"*. According to Mowday, Steers, and Porter (1979: 226), it is *"an active relationship with the organization such that individuals are willing to give something of themselves to contribute to the organization's wellbeing"*. While Reichers (1986: 508) defined it as *"a belief in and willingness to exert effort on behalf of organizational goals and values",* Chang (2008: 279) defined it as *"congruence between the goals of the individual and the organization whereby the individual identifies with and extends effort on behalf of the general goals of the organization".* Allen and Meyer (1990: 14) stated that *"a psychological state that binds the individual to the organization (i.e., makes turnover less likely)".*

The literature review shows that the relationship between organizational commitment and various concepts has been investigated. According to the studies, there is a significant relationship between organizational commitment and job satisfaction (Öztürk, Hançer, & Im, 2014; Günlü, Aksaraylı, & Perçin, 2010), while a high level of organizational commitment reduces the intention to leave (Kang, Gatling, & Kim, 2015), and has positive effects on attitudinal loyalty (Yao, Qiu, & Wei, 2019). In addition, it can be seen that organizational education affects organizational commitment positively (Bulut & Çulha, 2010), and service quality is positively affected by the impact of organizational commitment (Dhar, 2015). Additionally, working conditions, direct rewards, relations with managers and human resources policies are related to developing a high level of organizational commitment in the business (Almeida, Monroy & Perez, 2015).

Commitment is characterized by at least three factors: (1) a strong belief in and acceptance of the organization's goals and values, (2) a willingness to exert considerable effort on behalf of the organization and (3) a firm desire to maintain organizational membership (Porter, Steers, Mowday & Boulian, 1974: 604). In addition, organizational commitment is evaluated with three components - affective, continuance and normative. Affective commitment is "an emotional attachment to, identification with, and involvement in, the organization". Continuance commitment is "based on the costs that employees associate with leaving the organization". A normative component is "the feelings of obligation to remain with the organization" (Allen & Meyer, 1990: 1). Employees with a strong affective commitment continue to work in the organization because they want to, those with strong continuance commitment have to do so, and those with strong normative commitment think they should do it (Meyer & Allen, 2004: 2). The most common approach to organizational commitment in the literature is that the individual who is strongly committed to the organization identifies with the organization, takes part in the organization and enjoys membership in the organization, which is accepted as an emotional commitment to the organization (Allen & Meyer, 1990).

Turnover Intention

The relationship between an organization and its employees is both critical and fragile. Also, continuing with their jobs or leaving the organization is shaped by many factors such as organizational culture and relational satisfaction (Kim, Tam, Kim, & Rhee, 2017: 308). Hotels in the service sector are labor-intensive businesses and service quality is shaped by "human" qualities. Therefore, the human element is a key resource for the hotel industry. Employee turnover rate is high in hotels, which makes it difficult to provide a workforce, increases personnel expenditures and training costs, and increases the probability of losing excellent employees (Chang & Chang, 2008; Cho & Son, 2012; Gok, Akgunguz & Alkan, 2017).

Turnover is expressed as *"the action of leaving an organization by his/her will"* (Cho & Son, 2012: 105). Turnover is classified as functional turnover and dysfunctional turnover. Functional turnover (low performance) means that the organization evaluates the employee negatively and the organization wishes the employee to leave or the employee wants to leave. In order to ensure the interests of the organization, such employees should be excluded from the system. On the other hand, dysfunctional turnover (high performance) means the organization evaluates the employees positively and wants the employees to continue to work, but the employees leave. Whether leaving the job voluntarily or involuntarily, the behaviour of the employees after leaving the job is considered as leaving the job (Chang & Chang, 2008). Turnover intention is expressed as *"a conscious and deliberate willfulness to leave the organization"* (Tett & Meyer, 1993: 262). Turnover intention is the psychology or thought process before forming the behaviour of leaving the job. Therefore, it is believed that the intention to leave can be regarded as an idea or thought. Regardless of the effect, when the employee creates the thought of leaving the current service area, it is considered as turnover intention (Chang & Chang, 2008).

A number of factors have been considered as the antecedents of turnover intention, and these are organizational, job, employees and external factors. Organizational factors include organizational characteristics, organizational climate/culture, and interpersonal relations in organizations. Job-related factors include role stress, work intensity, financial rewards, characteristics of working conditions, and employee access to power. Employee factors include demographic factors and behavioural/attitudinal reactions of employees. Finally, work-life balance is an example of an external factor taking place in the foreign labour market (Takase, 2010). When turnover intention studies are examined, it can be seen that the probability of employees having turnover intention is lower in the presence of an organization-employee relationship (Kim, Tam, Kim & Rhee, 2017). It has been determined that employees over 40 years old and married do not have a clear turnover intention and are more motivated to work compared to younger and single employees (Bajrami, Terzic, Petrovic, Radovanovic, Tretiakova, & Hadoud, 2021). It has been demonstrated that employee engagement to work fully mediates the relationship between job insecurity perceptions and turnover intention (Jung, Jung, & Yoon, 2021). With the emergence of the COVID-19 pandemic, which affects many areas of life, employees may expect more from the businesses they work for, beyond the measures taken, in order to address their concerns about health and safety (Ayyıldız, Çam & Kuş, 2021). Therefore, it is important for hotels to increase their efforts to create a high level of customer-service awareness, improve service quality and reduce employee turnover (Chang & Chang, 2008).

Job Insecurity

Job insecurity as a work-related stress factor has been studied for over thirty years and the concept is associated with results such as decreased job satisfaction, organizational commitment and performance, as well as increased sickness and employee turnover rates (Pienaar, De Witte, Hellgren & Sverke, 2013). First of all, when the concept of occupational safety is examined, Probst (2002) defines occupational safety as *"the perceived stability and continuity of one's job as one knows it"*. The aforementioned definition states that the employee's perception of occupational safety can be affected by both the continuation of the job and the stability according to the desired characteristics of the job. It is claimed that job insecurity exists when the employee perceives that the future of the job is unstable or at risk (Probst, 2003: 452). When the definitions of job insecurity are examined, Greenhalgh and Rosenblatt (1984) state job insecurity as *"the perceived powerlessness to maintain the desired continuity in a threatened job situation"* (De Witte, 2005: 1), while Sverke, Hellgren and Naswall (2002: 243) define it as *"the subjectively perceived likelihood of involuntary job* *loss".* Focusing on the subjective experience of the individual points to a difference between perceptions and objective reality and emphasizes how interpretations of a situation constitute subjective reality. Therefore, two employees in the same situation may experience different degrees of job insecurity because they will perceive and interpret the situation differently.

The hotel industry experienced an employment shock earlier than other industries, with a sharp decline in the number of employees and a dramatic increase in the amount of temporary leave (Jung, Jung & Yoon, 2021). Considering that COVID-19 has already transformed into a labour market and economic crisis, organizational restructuring through downsizing has become a common solution (Vo-Thanh, Vu, Nguyen, Nguyen, Zaman & Chi, 2021a). Therefore, the global crisis inevitably changed the normal perception of job insecurity. Job insecurity levels increase due to the unpredictability of the duration and severity of the crisis (Bajrami, Terzic, Petrovic, Radovanovic, Tretiakova & Hadoud, 2021). Job insecurity experienced during the pandemic has also been reflected in the reactions and behaviours of employees. It has been revealed that employees' perceptions of job insecurity have a negative effect on their commitment (Jung, Jung & Yoon, 2021), while perceived job insecurity is a strong predictor of job motivation, job satisfaction, and turnover intention. Worrying about the negative effects of potentially dangerous working conditions and questioning the rationale for exposing themselves to such risks reduces their motivation and job satisfaction. However, feeling insecure at work seems to be an important predictor of high turnover intention. Alongside this, increased job insecurity caused by COVID-19 is seen as a strong predictor of turnover intention as employees are considering looking for a new job despite being "survivors" (Bajrami, Terzic, Petrovic, Radovanovic, Tretiakova & Hadoud, 2021). Furthermore, it has been revealed that the job insecurity experienced by hotel employees during the COVID-19 process has significant effects on the anxiety and depression levels of the employees (Quintana, Nguyen, Cabrera, & Diaz, 2021).

During COVID-19, when a business implements good responses to the crisis, employees believe that the business has a positive orientation towards their health, work and well-being. This, in turn, helps employees feel confident about their job and respond in the form of positive behaviours and attitudes such as job performance (Vo-Thanh, Vu, Nguyen, Nguyen, Zaman & Chi, 2021b). At the same time organizational response to COVID-19 affects perceived job security and enhances managers' organizational commitment (Filimonau, Derqui & Matute, 2020). In this context, we propose the following hypothesis:

H_1: Organizational response to COVID-19 has a significant positive influence on organizational commitment.

Measures that emerged as an institutional response to the pandemic will increase their satisfaction with the COVID-19 response, which means the general perception of the employees regarding the support and assistance provided by their employers in the fight against the pandemic, and will make the employees feel that they have support in coping with this crisis (Mao, He, Morrison, & Stefaniak, 2021). Thus, the perceived job security of the employees will be affected positively (Filimonau, Derqui & Matute, 2020). During COVID-19, when a business has implemented good responses to the crisis, employees believe that the business has a positive orientation towards their work. Thus, employees can feel safe about their work (Vo-Thanh, Vu, Nguyen, Nguyen, Zaman & Chi, 2021b). In this context, we propose the following hypothesis:

H_2: Organizational response to COVID-19 has a significant negative influence on job insecurity.

It can be seen that there is a negative relationship between job insecurity and organizational commitment (Vujicic, Jovicic, Lalic, Gagic & Cvejanov, 2015). It is thought that there will be a negative relationship between job insecurity and organizational commitment during COVID-19. We propose the following hypothesis:

H_3: Job insecurity has a significant negative influence on organizational commitment.

The common point of the commitment studies examined in the literature is that commitment is associated with turnover. Employees with strong commitment are the least likely to leave an organization (Allen & Meyer, 1990). There are also studies showing a negative relationship between organizational commitment and turnover intention in hotels (Lee, Huang, & Zhao, 2012; Kalidass & Bahron, 2015). Based on this research, we propose the following hypothesis:

H_4: Organizational commitment has a significant negative influence on turnover intention.

The prevalence of job insecurity after the COVID-19 pandemic appears to be a strong predictor of turnover intention among hotel employees and positively and significantly affects their turnover intention (Alyahya, Elshaer, & Sobaih, 2022; Bajrami, Terzic, Petrovic, Radovanovic, Tretiakova & Hadoud, 2021; Jung, Jung & Yoon, 2021). Based on this research, we propose the following hypothesis:

H_5: Job insecurity has a significant positive influence on turnover intention.

Based on the literature, our model is shown in Figure 1.

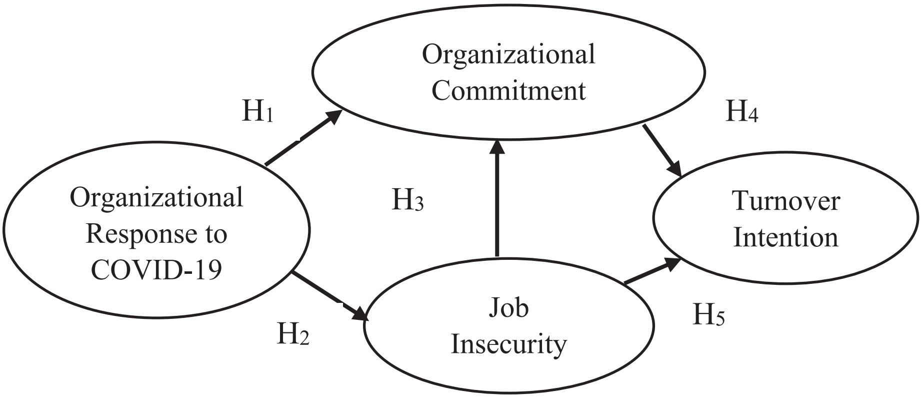

Figure 1. Research model.

Methodology

Sampling and Data Collection

The population of the study consists of employees of a five star hotel operating in Istanbul. The fact that Istanbul has the highest number of international chain groups and brands and bed capacity has been effective in the selection of Istanbul. (Ministry of Culture and Tourism, 2021). Due to the COVID pandemic, convenience and purposeful sampling methods were chosen in data collection. Data were collected with an online questionnaire in 2021. In total 130 useable questionnaires were obtained. Due to the closed or limited capacity of the hotels during the pandemic, a limited number of employees were reached. According to Hair, Hult, Ringle and Sarstedt (2014: 20) "the minimum sample size should be 10 times the maximum number of arrowheads pointing at a latent variable anywhere in the PLS path model". It means, based on the organizational commitment scale consisting of 12 items, 120 data is considered sufficient. Partial Least Squares (PLS) path modelling which is used for small sample size, was employed to test the research model (Ringle, Wende & Becker, 2015).

Measurement

The questionnaire consisted of two parts. The first part consists of demographic questions, while the second part contains measure items of job insecurity, organizational commitment, turnover intention and organizational response to COVID-19. A five point Likert scale was used where 1= strongly disagree, 2= disagree, 3= neutral, 4= agree and 5 = strongly agree.

Scales from previous studies were used to measure the constructs. Organizational commitment was measured using 12 items adapted from Meyer and Allen (2004). Job insecurity was measured using 8 items which which developed by De Witte (2000) and then simplified by Pienaar, De Witte, Hellgren, and Sverke (2013). The turnover intention was measured using 6 items adapted from Dwivedi (2015). Organizational response to COVID-19 was adapted from Filimonau, Derqui and Matute (2020).

Findings

When the demographic findings of the participants were examined, 49.2% of the participants were women and 50.8% were men. Considering the level of education, the majority (47.7%) had a bachelor's degree. According to the data obtained, 33.87% of them were associate degree graduates. In terms of age groups, 40% of the participants were in the 26-35 age range, 28.5% were 25 and under, 25.4% were in the 36-45 age range. The number of participants aged 46 and over was 6.2%. Their marital status was 46.2% single and 53.8% married.

Assessment of the Measurement Model

When the reliability and validity values of the model were examined, it was apparent that the factor loads of some items were below 0.7 (Hair, Ringle & Sarstedt, 2013). If the factor load is 0.6, it may not be removed if it does not make any changes in the value (Hair, Hult, Ringle & Sarstedt 2017). So only JI6, OC3, OC4, OC5, OC7, OC8, OC12, ORC-F4, and TI6 items were removed. Composite reliability and Rho.-A were both above 0.70 (Dijkstra & Henseler, 2015). The Average Variance Extracted was above 0.5 (Hair, Hult, Ringle & Sarstedt, 2017). Discriminant validity was examined through the accurate HTMT ratio approach (Henseler, Ringle & Sarstedt, 2015). All composite reliability indicators were above a suggested threshold of 0.7 and the AVE critical value 0.5 was achieved and the factorial loadings were all above 0.6.

Table 1

Construct Reliability and Validity of Measurement Model

Construct	Factor loadings	Cronbach's Alpha	Rho_A	CR	AVE
Job Insecurity		**0.841**	**0.860**	**0.875**	**0.502**
JI_1	**0.637**				
JI_2	**0.659**				
JI_3	**0.675**				
JI_4	**0.729**				
JI_5	**0.719**				
JI_7	**0.775**				
JI_8	**0.752**				
Organizational Commitment		**0.819**	**0.836**	**0.868**	**0.523**
OC_1	**0.801**				
OC_2	**0.712**				
OC_6	**0.763**				

OC_9	**0.646**				
OC_10	**0.710**				
OC_11	**0.697**				
Organizational Response to COVID-19: Future Actions		**0.848**	**0.927**	**0.895**	**0.684**
ORC_F1	**0.656**				
ORC_F2	**0.918**				
ORC_F3	**0.886**				
ORC_F5	**0.823**				
Turnover Intention		**0.856**	**0.868**	**0.897**	**0.635**
TI_1	**0.801**				
TI_2	**0.791**				
TI_3	**0.741**				
TI_4	**0.879**				
TI_5	**0.766**				

Convergent validity of the measures model was established (Table 1). “In a well-fitting model, the structural VIF coefficients should not be higher than 4.0” (Garson, 2016: 77). The variance inflation factor (VIF) of the indicators was below 2.696. For discriminant validity the Hetero-Trait-Mono-Trait (HTMT) value was used and the HTMT value was below a suggested threshold of 0.90 (Henseler, Ringle & Sarstedt, 2015: 121). According to the Fornell-Larcker criterion, “for any latent variable, the square root of AVE should be higher than its correlation with any other latent variable” (Garson, 2016: 67). Table 2 shows that discriminant validity was established.

Table 2

Discriminant Validity of the Measurement Model

Heterotrait-Monotrait Ratio (HTMT)				
	Organizational Response to COVID-19	**Organizational Commitment**	**Turnover Intention**	**Job Insecurity**
Organizational Response to COVID-19				
Organizational Commitment	0.355			
Turnover Intention	0.389	0.660		
Job Insecurity	0.377	0.561	0.716	
Fornell-Larcker Criteria				
Organizational Response to COVID-19	0.829			
Organizational Commitment	0.324	0.723		
Turnover Intention	-0.358	-0.583	0.797	
Job Insecurity	-0.372	-0.538	0.623	0.708

Assessment of Structural Model

The Bootstrapping test with 500 method was implemented to test the hypothesized relationships. When VIF values were examined, all values were below 2.69 which was lower than the suggested threshold of 3.3 (Hair, Risher, Sarstedt & Ringle, 2019). All R^2 values were above the critical value 0.05 with the minimum value being 0.132. Q^2 values were greater than 0 which shows the model had predictive relevance. f^2 values were also greater than 0. According to Cohen (1988), an f^2 effect size of .02 is a small effect size, 0.15 is a medium effect and 0.35 is a high effect size. In Table 3, the f-square values are established.

Table 3
F-square Values

	Organizational Response to COVID-19	Job Insecurity	Organizational Commitment	Turnover Intention
Organizational Response to COVID-19		0.161	0.026	
Job Insecurity			0.292	0.252
Organizational Commitment				0.165
Turnover Intention				

Hypothesis testing was performed with the results from testing the internal model. Table 4 shows the values of testing hypothesis. Organizational Response to COVID-19 was found to have a negative and significant effect on job insecurity (β= -0.37, $p<0.01$) and also to have a positive and significant effect on organizational commitment (β= 0.20, $p<0.01$) hereby supporting H1 and H2.

Job insecurity has a negative and significant effect on organizational commitment (β= -0.53, $p<0.01$) thus supporting H3. Organizational commitment has a negative and significant effect on turnover intention (β= -0.34, $p<0.01$) thus supporting H4 and job insecurity was found to have a positive and significant effect on turnover intention (β= 0.43, $p<0.01$). So H5 was supported.

Table 4
Hypothesis Test Results

Hypothesis	Direction	Beta	t-value	p-value	Result
H1	Organizational Response -> Job Insecurity	-0.377	5.503	0.000	Supported
H2	Organizational Response -> Organizational Commitment	0.202	4.073	0.000	Supported

H3	Job Insecurity -> Organizational Commitment	-0.537	8.793	0.000	Supported
H4	Organizational Commitment-> Turnover Intention	-0.348	5.198	0.000	Supported
H5	Job Insecurity -> Turnover Intention	0.437	7.413	0.000	Supported

p<.01

Conclusion

COVID-19 has negatively affected all sectors and especially the tourism sector. In this process, hotels worked at limited capacity, employees were left on unpaid leave or were placed under state-supported quarantine. In this period, businesses decided to shrink in terms of employment in line with the decisions taken by the state. The reflections of all these developments on the employees in hotels have also been a matter of curiosity. Thus, this study aimed to reveal the relationship between job insecurity, organizational commitment and turnover intention in five-star hotels during the COVID-19.

The study results support the conceptual model that includes the variables of job insecurity, organizational commitment, turnover intention and organizational response to COVID-19. Job insecurity affects organizational commitment negatively and significantly which is consistent with previous studies (Jung, Jung & Yoon, 2021: 4). At the same time, it has been determined that there is a positive and significant relationship between job insecurity and turnover. There was an inverse and significant relationship between organizational commitment and turnover. This situation proves once again how important organizational commitment is for businesses. This result shows parallelism with other research results in the literature (Allen & Meyer, 1990; Kalidass & Bahron, 2015). Another result obtained was that an organizational response to COVID-19 was found to have a negative and significant effect on job insecurity and also a positive and significant effect on organizational commitment. This means that the measures taken by the business against COVID-19 are sufficient, reducing job insecurity. At the same time, it affects organizational commitment positively.

Theoretical Implications

The study holds a number of theoretical implications. First, although there are early studies on Organizational Response to COVID-19 (Vo-Thanh, Vu, Nguyen, Nguyen, Zaman & Chi, 2021a; Filimonau, Derqui & Matute, 2020; Bonfanti, Vigolo

& Yfantidou, 2021), there is no study on the relationship between organizational response to COVID-19 and organizational commitment. Therefore, this study contributes to tourism studies by filling a gap in the literature regarding the relationship between organizational response to COVID-19 and organizational commitment. Second, although there is a study revealing a negative relationship between job insecurity and organizational commitment (Vujicic, Jovicic, Lalic, Gagic & Cvejanov, 2015), it is considered important to examine this relationship during the COVID-19 process. In this context, the study provides new theoretical contributions to methods, findings and implications for future research on the relationship between employee job insecurity and organizational commitment. Third, organizational commitment is associated with turnover (Allen & Meyer, 1990; Lee, Huang & Zhao, 2012; Kalidass & Bahron, 2015). This will contribute to the literature by examining and comparing this relationship during the COVID-19 process. Finally, job insecurity of hotel employees after the COVID-19 pandemic affects positively and significantly their turnover intention (Alyahya, Elshaer & Sobaih, 2022; Bajrami, Terzic, Petrovic, Radovanovic, Tretiakova & Hadoud, 2021; Jung, Jung & Yoon, 2021). It supports the study by showing similarities with the results of this study. While there are studies on organizational commitment, job insecurity and intention to leave the hotel during the COVID-19 process (Elshaer & Azazz, 2022; Vo-Thanh, Vu, Nguyen, Nguyen, Zaman & Chi, 2021a; Vo-Thanh, Van Vu, Nguyen, Nguyen, Zaman & Chi, 2021b; Ağbay & Akbudak, 2021; Filimonau, Derqui & Matute, 2020), it seems that there are no studies examining the relationship of concepts together. In this study, the relationship of the concepts has been revealed through surveying hotel employees. The results extend previous research on the subject and have novel theoretical implications for understanding how global crises like COVID-19 affect the hotel industry.

Practical Implications

Travel restrictions brought along with COVID-19 have had a significant impact on the hotel industry. The pandemic crisis in question caused uncertainty in the industry, and the closure or downsizing of businesses was also reflected in the behaviour of employees. Especially in this process, it has become even more important that hotels do not lose their qualified employees. Therefore, the results of this study bring to the fore the issues that the hotel management will need to pay attention to both in this process and in possible pandemic crises.

First of all, it is underlined once again that organizational commitment is important. Training and activities should be organized, and improvements should be made to increase organizational commitment. Ensuring that employees are informed about the new processes that organizations enter during the crisis will help minimize the uncertainty experienced. The fact that job insecurity is directly proportional to the turnover intention, especially in times of crisis, sector managers should hold meetings and develop an open communication policy with their teams in order to eliminate the concerns that may arise among employees. Elimination of uncertainties will prevent employees from feeling job insecurity and also their intention to leave will be positively affected.

Limitations and Future Research

The study has some limitations. One limitation of the study is that it was carried out with employees of one five-star hotel operating in Istanbul. At the same time, due to the pandemic, we had to use convenience and purposeful sampling to reach the participants. The fact that the study was carried out with 130 hotel employees is also among the limitations of the study. The limited number of studies in the literature on the relationship between the concepts that constitute the subject of the study is another limitation of this study.

For future studies, first of all, the perspectives of old and new employees can be compared and the number of participants can be increased. Conducting studies in cities such as Antalya and Muğla, where levels of tourism are high and the effects of the pandemic crisis are felt more, will contribute to the literature in terms of revealing comparative results. In addition, it is thought that it is important to carry out studies with employees in different tourism businesses.

Peer-review: Externally peer-reviewed.
Conflict of Interest: The authors have no conflict of interest to declare.
Grant Support: The authors declared that this study has received no financial support.
Author Contributions: Conception/Design of study: S.Ö.G., F.D.E.; Data Acquisition: S.Ö.G., F.D.E.; Data Analysis/Interpretation: S.Ö.G., F.D.E.; Drafting Manuscript: S.Ö.G., F.D.E.; Critical Revision of Manuscript: S.Ö.G., F.D.E.; Final Approval and Accountability: S.Ö.G., F.D.E.

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Journal of Tourismology

RESEARCH ARTICLE

Journal of Tourismology, 8(1), 89-114

DOI: 10.26650/jot.2022.8.1.1020512
http://jt.istanbul.edu.en/

Submitted: 29.12.2021
Revision Requested: 25.02.2022
Last Revision Received: 08.06.2022
Accepted: 13.06.2022
Published Online: 30.06.2022

A Meta-Analytic Review in the Tourism and Hospitality Literature: Antecedents of Intention to Quit

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Abstract

This study examines the major antecedents of turnover intention and their interrelationships. The primary goal of this study is to determine the effect sizes of the surveyed associations through the use of meta-analysis. Scopus, GoogleScholar, and Web of Science databases were examined for 3,927 studies. This meta-analysis draws on 42 relevant studies. The research was conducted in accordance with PRISMA guidelines. The results of the analysis indicate that both the association between work satisfaction and intention to leave (r=-0.515) and the relationship between organizational commitment and desire to leave (r=-0.508) have a high and negative effect size. Empowerment and turnover intention have a moderate and negative effect size (r=-0.405). However, organizational dedication has a significant positive effect on job satisfaction (0.659). The findings indicate that employment type acts as a moderator in the link between work satisfaction and intention to quit. Additionally, the type of workplace acts as a moderator in the association between organizational commitment and intention to resign, and in the relationship between organizational commitment and job satisfaction. It is extremely rare for moderators to be identified in a meta-analysis study. This study identified major modifiers and outcomes, and contributed to the body of knowledge. The study's findings can be applied by managers in the tourism and hospitality industries.

Keywords

Affective commitment, Normative commitment, Job insecurity, Hotel employees, Turnover intention, Pandemic

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To cite this article: Erkasap, A., & Ozkan, A. H. (2022). A meta-analytic review in the tourism and hospitality literature: Antecedents of intention to quit. *Journal of Tourismology, 8*(1), 89-114. https://doi.org/10.26650/jot.2022.8.1.1020512

Introduction

Employees working in the tourism and hospitality industry must be able to develop positive interactions with clients. Employees represent the organization in this industry, and customers accept them as such. Organizations in labor-intensive industries such as tourism and hospitality strive to build the best teams possible since they require a high level of institutional quality to remain in a competitive environment. In the hospitality industry, institutional quality is critical, because when clients sense excellence, they are attracted and dedicated to tourism and hospitality organizations (Fu et al., 2019).

Managers require time to assess their staff's interactions with customers. When managers view their employees as reliable, they make an effort to reduce their intention to leave, because the replacement of personnel may cause unexpected difficulties in developing healthy relationships with customers. This risk will add up to the risk of customer loss. As a result, turnover and the intention of the employees to quit will pose serious risks to the institutional quality of tourism and hospitality businesses.

In a congested labor market, high turnover rates can always create a bottleneck. Tourism and hospitality businesses may encounter similar bottlenecks in certain places. For instance, tourism and hospitality firms require bilingual workers. Certain roles require employees to be able to communicate in foreign languages to engage with foreign consumers. This is a critical requirement for some firms, yet it can be difficult to find people who speak foreign languages in particular areas. Occasionally, the region may lack the employees with requisite foreign language skills. Additionally, certain talents, such as being a chef, might be uncommon in specific places. As a result, if the intention to quit is not managed, voluntary turnover may cause a variety of consequences (DiPietro & Condly, 2007).

The intention to quit can be accepted as the initial stage of the turnover process. Tourism and hospitality firms make efforts to retain employees when they become aware of their intention to leave. In particular, the intention to quit of employees who have uncommon skills is tracked using the intention to quit metrics. These metrics are used to determine an employee's intention to leave their job (Xu et al., 2018). The findings of such a measurement can be more useful since they allow the managers to take various necessary precautions to keep the employees working for that organization. Employees with a strong intention to leave may have a tendency to harm the organization or may disregard critical obligations that are important for the business.

Numerous researchers have demonstrated that there are a great number of antecedents of intention to quit as a variety of elements can impact one's intention to quit. Porter and Steers (1973) defined intention to leave as the result of perceived unhappiness. This description placed a premium on job satisfaction. Indeed, many researchers (Lu et al., 2002; Freund, 2005) identify work satisfaction as the primary predictor of intention to leave, and this is corroborated by several meta-analysis studies (Kim and Kao, 2014; Choi and Kim, 2016; Tett and Meyer, 1993). However, meta-analyses of this type are extremely rare in the tourism and hospitality industries.

Job satisfaction is defined as "a pleasant or positive emotional state resulting from an evaluation of one's job or experience" (Locke, 1976). In the 1950s (Weitz, 1952), a distinction between job satisfaction and discontent was made, however, this distinction was unrelated to the factors impacting job satisfaction. Frederick Herzberg's (1966) Two Factor Theory attempted to classify these factors into two main categories, motivational factors (recognition, status, etc.) and hygiene factors (job security, quality of supervision, etc.), and demonstrated that when the employees perceive the presence of motivational factors, the employees will be satisfied, but when they perceive the absence of hygiene factors, they will tend to get dissatisfied.

Job satisfaction is a component in the success of tourism and hospitality businesses. Employees that are satisfied with their jobs are able to generate a favorable impression on their guests. A person feels better when he comes in contact with happy people. According to the principle of emotional cognition, satisfaction will spread from one satisfied individual to another (Doherty, 1997). However, staff who are dissatisfied with their jobs have a detrimental impact on customers in a tourism and hospitality firm. They may also make errors as a result of their diminished job satisfaction (Lillo-Banuls, Casado-Diaz, and Simon, 2018).

Organizational commitment is another key factor determining employees' intention to quit in the aforementioned industry (Lin, Jang, and Roberts, 2018; Meija, Wang, and Zhao, 2018). Yang (2010) collected data from 11 different international hotels and concluded that both job satisfaction and organizational commitment have a negative and significant effect on job satisfaction. If employees are intrinsically linked to the organization, they are not expected to leave (Meyer and Herscovitch, 2001). Organizational commitment can be defined as providing a connection and adherence to the organization and a preference for employment with that company over another (Cho et al, 2016).

The concept of commitment was reframed via the lens of side-bet theory (Becker, 1960) and organizational commitment is distinguished from occupational commitment (Ritzer and Trice, 1969). The three-component approach defined organizational commitment and identified three subdimensions: affective commitment, continuity commitment, and normative commitment (Meyer and Allen, 1991). Continuance commitment is a type of organizational commitment that emerges as a result of an employee's fear of losing his or her job or position in a company, while normative commitment refers to the commitment that arises as a result of the organization's or employee's ethical principles and standards. For instance, the owners or managers may be relatives of the employees, which may alter the employees' normative commitment, or a financial crisis may impair the employees' continuation commitment. Indeed, only affective commitment is influenced by organizational characteristics, and some of these factors are controllable.

Employees in the tourism and hospitality industries have a greater likelihood of contributing to their organization than employees in a variety of other industries. Client expectations might be unpredictable, and in some instances, an employee's initiative alone can result in customer satisfaction. Employees with a greater organizational commitment pay more attention to these situations and make a greater effort to ensure client pleasure in these instances (Kim, Leong, and Lee, 2005). Employees with a lesser organizational commitment, on the other hand, may dismiss client expectations. Because these employees may also have a high intention to quit, they may view their job as transient and overlook their interactions with customers.

Management policies aimed at reducing intention to leave include the strongest antecedents of intention to quit that are not mutually exclusive. Humborstad and Perry (2011) discovered that empowerment, organizational commitment, and work satisfaction all have a negative and significant effect on the intention to leave. Job satisfaction is already well recognized as the most powerful predictor of intention to quit (Tett and Meyer, 1993; Choi and Kim, 2016). Pagilagan (2017) identified organizational commitment and empowerment as the primary antecedents of intent to resign. The research cited above that discusses the strongest predictors of intention to quit are meta-analyses.

Empowering employees can help lessen the likelihood of their quitting (Martin, 2010). The term "empowerment" refers to a collection of innovative and sophisticated human resource management strategies (Kanter, 1977). Empowerment strives to develop employees' capabilities, and these contributions instill confidence and happiness in employees, hence decreasing their likelihood to quit (Meyerson and Kline, 2008). Several studies have identified empowerment as a significant predictor of intention to quit (Griffeth, Hom, and Gaertner, 2000; Slatten, Svensson, and Svaeri, 2011; Thurston and Glendon, 2018).

Seasonal peaks occur in certain tourism and hospitality enterprises. Organizations tend to hire more staff during these periods of growth. However, finding experienced staff is not always attainable. Part-time seasonal laborers, in particular, might be inexperienced. Additionally, they may be unaware of the job's unique requirements. Nowadays, every business is seeking to innovate in order to improve customer demand. These developments may occasionally necessitate the acquisition of new job-related skills. As a result, empowerment is a constant requirement in a tourism and hospitality firm (Hancer, 2001), as there is competition in the market. The organizations operating in the tourism and hospitality industry require more skilled employees. Even the most skilled cooks may need to improve themselves.

The purpose of this article is to examine the connections between job satisfaction, organizational commitment, empowerment, and intention to quit in the tourism and hospitality industries. As a result, meta-analysis is used. We shall investigate the effect sizes of the links between the surveyed constructs. Additionally, a forest plot for each correlation will be created, and the study will examine how possible moderators may alter these relationships.

Relationships between Concepts and Hypothesis Development

The work of organizations in the tourism and hospitality industry is labor-intensive. Unlike capital-intensive businesses, labor-intensive businesses rely more on labor than on capital (Erfanian and Neto, 2008). As a result, labor-intensive businesses, such as hospitality groups, cannot ignore the causes and effects of intention to quit (Lillo-Banuls, Casado-Diaz, and Simon., 2018). To comprehend these relationships, past study findings should be quantitatively integrated through the use of meta-analysis (Hedges and Olkin, 1985). The meta-analysis technique, with which our model is also evaluated, has been employed by several studies to elucidate the elements affecting turnover (Mor Barak, Nissly, and Levin, 2001; Griffeth, Hom, and Gaertner, 2000).

According to several investigations, the direction of the link is primarily negative for work satisfaction and intention to quit (Huang, 2006; Yang, 2008), as well as organizational commitment and intention to quit (Huang, 2006; Yang, 2008; Walsh, 2016; Guchait and Back, 2016; Kim, Leong, and Lee, 2005). As some investigations have demonstrated, empowerment also has a significant effect on the intention to quit (Force, 2008; Keller, 2005; Okuyucu, 2014). Choi and Kim (2016) found a positive and large effect size between job satisfaction and organizational commitment, and it was the largest effect size of this study. As a result of the above debate, the following hypotheses were proposed:

H1: Job satisfaction has a significant effect on intention to quit

H2: Organizational commitment has a significant effect on intention to quit

H3: Empowerment has a significant effect on intention to quit

H4: Job satisfaction has a significant effect on organizational commitment

Previous researchers examined the association between job satisfaction and intent to leave among managers (Spector et al., 2007; Masuda et al., 2012), and discovered a distinction between how managers and employees view job satisfaction and intention to quit (Huang, 2011). Thus, being a manager or a subordinate may operate as a moderator variable in the associations between intent to leave and job satisfaction. This hypothesis was also examined for other types of relationships:

H5: Job level acts as a moderator for job satisfaction's effect on the intention to quit

H6: Job level acts as a moderator for organizational commitment's effect on the intention to quit

H7: Job level acts as a moderator for empowerment's effect on the intention to quit

H8: Job level acts as a moderator for job satisfaction's effect on organizational commitment

Several scholars examined the impact of the workplace on the relationship between job satisfaction and intention to leave, and discovered some noteworthy conclusions (Decker, Kojetin, and Bercovitz, 2009; Dickey, Watson, and Zangelidis, 2011). The workplace can have a major impact on organizational commitment and, thus, on turnover intention. Another study demonstrated the effect of occupational disparities on the connection between work satisfaction and intention to quit (Frenkel, Sanders, and Bednall, 2013). Job changes can also have an effect on job satisfaction and its relationship to intention to quit. The findings of the studies indicated that it is possible to assess the moderating effect of workplace type and occupation on the surveyed connections. This study examined the moderating influence of the following two variables:

H9: Occupation acts as a moderator for job satisfaction's effect on intention to quit

H10: Occupation acts as a moderator for organizational commitment's effect on intention to quit

H11: Occupation acts as a moderator for empowerment's effect on intention to quit

H12: Occupation acts as a moderator for job satisfaction's effect on organizational commitment

H13: Workplace acts as a moderator for job satisfaction's effect on intention to quit

H14: Workplace acts as a moderator for organizational commitment's effect on intention to quit

H15: Workplace acts as a moderator for empowerment's effect on intention to quit

H16: Workplace acts as a moderator for job satisfaction's effect on organizational commitment

Job satisfaction and intention to quit are associated, however, the intensity of this association varies by country. Some studies discovered considerable evidence to support this assertion (Huang, 2011; Luu and Hattrup, 2010). Guchait and Back (2016) indicated that nation has an effect on the link between organizational commitment and intention to leave. This study contrasted the outcomes of analyzing data collected from participants in the United States (US), South Korea, and India. Doede (2017) asserted that ethnic disparities have an effect on the link between job satisfaction and intention to quit.

The country-level allocation of data is incompatible with the moderating test. As a result, the moderating effect of region was examined. Additionally, the region plays a significant role in the tourism and hospitality industries for a variety of reasons, including geopolitical factors. The continent was used as the region's metric in this study. This study examined the effect of region on the relationships examined, and the following hypotheses were tested:

H17: Region plays a moderating role in the relationship between work satisfaction and intention to quit.

H18: Region plays a moderating role in the relationship between organizational commitment and intention to quit.

H19: Region plays a moderating role in the relationship between empowerment and intention to quit.

H20: Region plays a moderating role in the relationship between job satisfaction and organizational commitment.

Methodology

Design of the Study

This meta-analytic review compiled works published in the tourism and hospitality industries. To design this meta-analytic review, the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) criteria (Moher et al., 2009) were followed.

Search Strategy

The databases Web of Science, GoogleScholar, and Scopus were used to conduct the review for this study. This study made use of proceeding papers, articles, master's theses, and doctoral dissertations. The studies were accessed using the keyword sections of search engines. The databases were searched using the terms "job satisfaction," "organizational commitment," "empowerment," and "intention to quit."

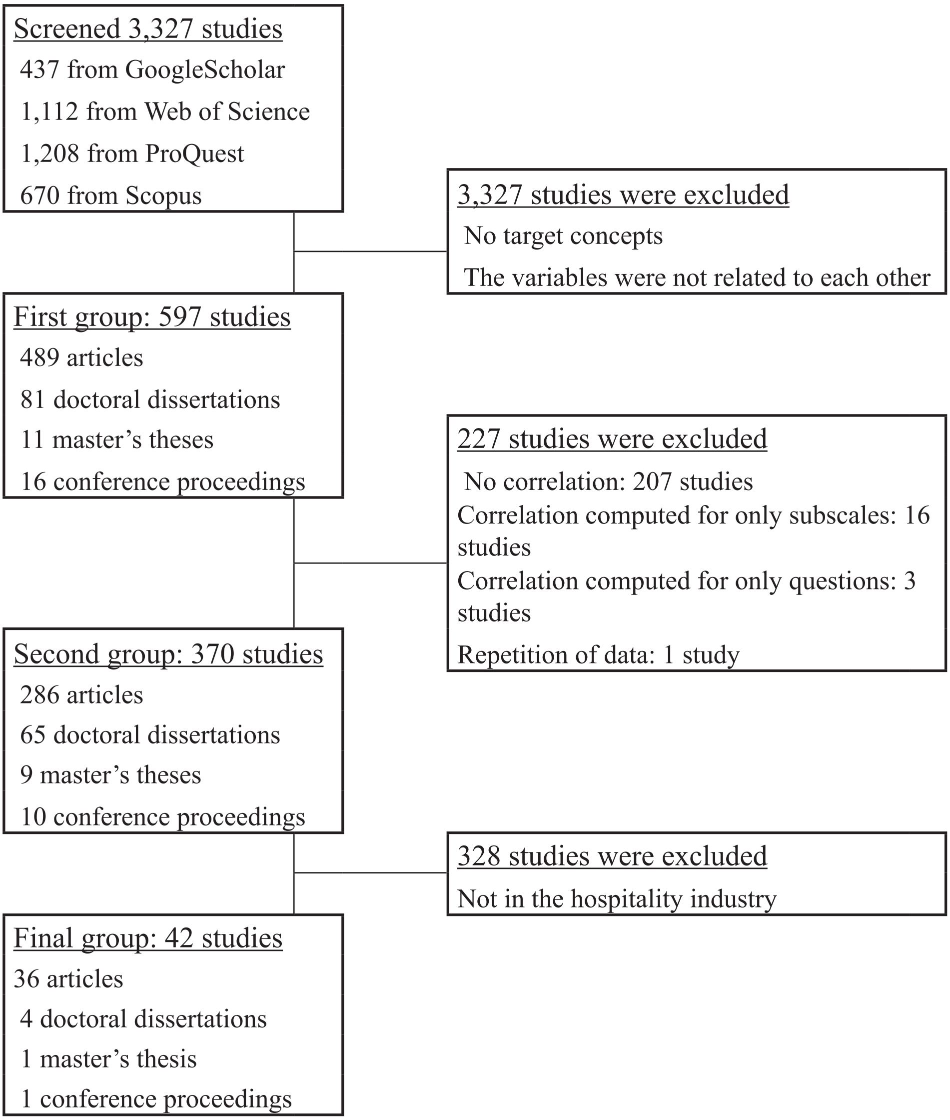

Figure 1. Flow chart of study selection process.

Figure 1 shows how the final data was eventually formed. 3,927 studies were reviewed for this meta-analytic review. 3,330 of them used the surveyed variables, but they did not relate them to each other. After this process, 597 studies formed the first group. 227 of these studies were removed due to several reasons: 207 studies related the chosen variables to each other, but they did not provide correlation values, 16 studies used only the subscales of organizational commitment and job satisfaction to find the correlation values, 3 studies used only the questions to compute the correlation coefficients, and 1 study used the same data with another one. The second group included 370 studies. But 328 of these studies were not in the tourism and hospitality industry and these studies were removed. Finally, the authors collected and used 42 suitable studies for this study.

Coding Process

The authors of this study designed the coding process of this study together and coded the collected studies to determine the distinctive characteristics of the studies. The coding form included any characteristics that can be distinctive, such as occupation, workplace, and country. After the coding process, the author determined the possible moderator variables to be collar color, occupation, workplace, and region.

Table 1
Summary of Studies

	Researchers and publication year	Sample Size	Type of Facility	Occupation/ position	Country	Quality Rating
1	Akgündüz and Bardakoğlu, 2017	333	Hotel	Employee	Turkey	9/H
2	Bellou, 2008	120/66	Restaurant	Employee/ manager	Greece	9/H
3	Bilgin and Demirer, 2012	271	Hotel	Employee	Turkey	9/H
4	Bufquin et al., 2017	781	Restaurant	Employee	USA	9/H
5	Busser et al., 2018	235	Hotel	Employee	USA	9/H
6	Chan and Ao, 2018	303	Casino	Employee	China	9/H
7	Cheng et al, 2016	355	Travel agency	Tour leader	Taiwan	9/H
8	Chiang and Birtch, 2011	284	Hotel	Employee	China	9/H
9	Cho et al., 2009	416	Tourist Organization	Employee	USA	9/H
10	Ferreira et al., 2017	525	Hotel	Employee	Portugal	9/H
11	Guchait and Back, 2016	255/256/ 280	Restaurant	Employee	USA/South Korea/ India	9/H
12	Hancer, 2001	924	Restaurant	Employee	USA	9/H
13	Huang, 2006	240	Hotel	Chef	Taiwan	9/H
14	Humborstad and Perry, 2011	290	Hotel	Frontline service worker	China	9/H
15	Jang and George, 2012	609	Hotel	Employee	USA	9/H
16	Jang and Kandampully, 2018	213	Restaurant	Frontline service worker	USA	9/H

17	Karatepe and Kılıç, 2007	296	Hotel	Frontline service worker	North Cyprus	9/H
18	Karatepe and Uludağ, 2007	677	Hotel	Frontline service worker	North Cyprus	8/H
19	Kim et at., 2005	249	Restaurant	Employee	South Korea	9/H
20	Kim et al., 2015	432	Hotel	Manager	South Korea	9/H
21	Kim et al, 2016	310	Casino	Employee	South Korea	9/H
22	Lages, 2012	700	Restaurant	Frontline service worker	UK	9/H
23	Larsen et al., 2012	216	Cruise Ship	Employee	Various	9/H
24	Lee, 2000	250	Tourist Organization	Employee	USA	9/H
25	Lee et al., 2012	276	Restaurant	Employee	South Korea	9/H
26	Lin et al, 2018	160	Restaurant	Employee	China	9/H
27	Liu, 2010	65	Restaurant	Chef	USA	9/H
28	Lu and Gursoy, 2016	677	Hotel	Manager	USA	9/H
29	Lu et al., 2002	859	Hotel	Frontline service worker	Taiwan	9/H
30	Meija et al., 2018	316	Hotel	Employee	China	9/H
31	Nadiri and Tanova, 2010	208	Hotel	Manager	North Cyprus	9/H
32	Namasivayam and Zhao, 2007	93	Hotel	Employee	India	9/H
33	Needham, 2018	58	Restaurant	Employee	USA	9/H
34	Riggs, 2012	290	Hotel	Employee	Jamaica	9/H
35	Shafique et al., 2018	196	Tourist organizations	Employee	Pakistan	7.5/M
36	Slatten et al, 2011	1076	Service Company	Frontline Employee	Norway	9/H
37	Tongchaiprasit and Ariyabuddhiphongs, 2016	145	Hotel	Chef	Thailand	9/H
38	Walsh, 2016	387	Tourist organizations	Employee	USA	9/H
39	Wong and Laschinger, 2015	139	Hotel	Manager	Canada	9/H
40	Yang, 2008	428	Hotel	Employee	Taiwan	7/M
41	Yang, 2010	671	Hotel	Employee	Taiwan	9/M
42	Young and Corsun, 2010	213	Hotel	Chef	USA	8/H

Table 1 includes how the collected studies were coded. The name of the authors, publication year, sample size, type of workplace, occupation, and country are shown, together with the quality evaluation scores. The quality rating scale of Zangaro and Soeken (2007) was used for the quality assessment of the collected studies. This quality rating scale includes 10 items. The studies were scored from 1 to 9. The last item refers to the total score of the study. If the item was scored between 1 and 4, its quality was accepted as low, scoring between 5 and 7 was accepted as medium, and a score which was equal to 8 or more than 8 was accepted as high. The study by Shafique et al. (2018) is scored as 7.5, because another researcher who assisted the author in scoring the quality of the studies scored this study as 7, and the author scored it as 8.

Findings

Data and Publication Bias

The software used to analyze the collected studies is called Comprehensive Meta-analysis Software (CMA). 4 data sets were used. The first one had the Pearson correlation values regarding the relationship between job satisfaction and intention to quit (23 samplings-23 studies). The second one consisted of the Pearson correlation values regarding the relationship between organizational commitment and intention to quit (22 samplings-19 studies). The third one included the Pearson correlation values regarding the relationship between empowerment and intention to quit (4 samplings-4 studies). The fourth one included the Pearson correlation values regarding the relationship between job satisfaction and organizational commitment (18 samplings-18 studies)

Table 2
Heterogeneity Analysis Results

	Q	I^2
1st set	350.275	93.719*
2nd set	254.417	91.746*
3rd set	37.106	91.915*
4th set	309.993	94.516*

*: significance at .01 level

Heterogeneity analysis results are shown in table 2. These results suggested that all data sets are significantly heterogeneous at the .01 level. I*2* shows the degree of variability as a percentage as it changes between 1 and 100. The highest I*2* belongs to the fourth data set which includes the relationship between job satisfaction and organizational commitment. The lowest I*2* belongs to the second data set, which includes the studies correlating organizational commitment and intention to quit. Because of heterogeneity, random sampling assumption was used during analyses.

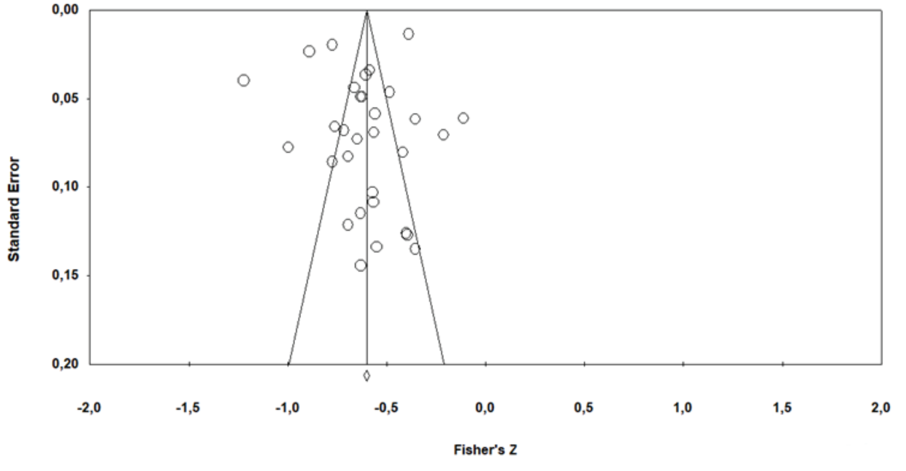

Figure 2. Funnel plot of 1st data set.

Publication bias is revealed when the analysis results show that a part of the data may be missing. A missing part of the data decreases the reliability of the collected data. The effect sizes should be corrected by using an artifact correction method when there is low reliability. Funnel plots can be used to observe the publication bias. The funnel plot of the first set regarding the relationship between job satisfaction and intention to quit is shown in figure 2. The allocation of the studies is symmetrical. A symmetrical distribution shows that there is publication bias.

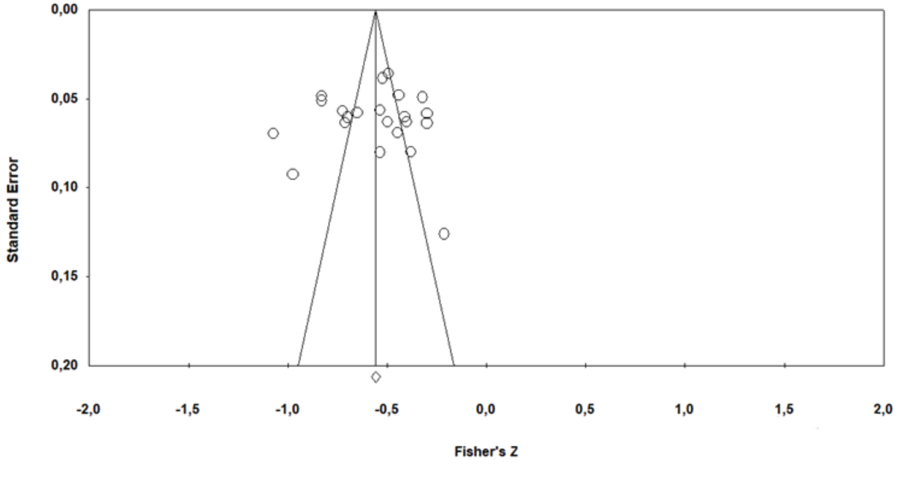

Figure 3. Funnel plot of 2nd data set.

The funnel plot of the second data set regarding the relationship between organizational commitment and intention to quit is shown in figure 3. This funnel plot shows that there is no publication bias. Figure 4 showed the funnel plot of the third data set, which indicated symmetrical distribution. These two funnel plots included no sign of publication bias.

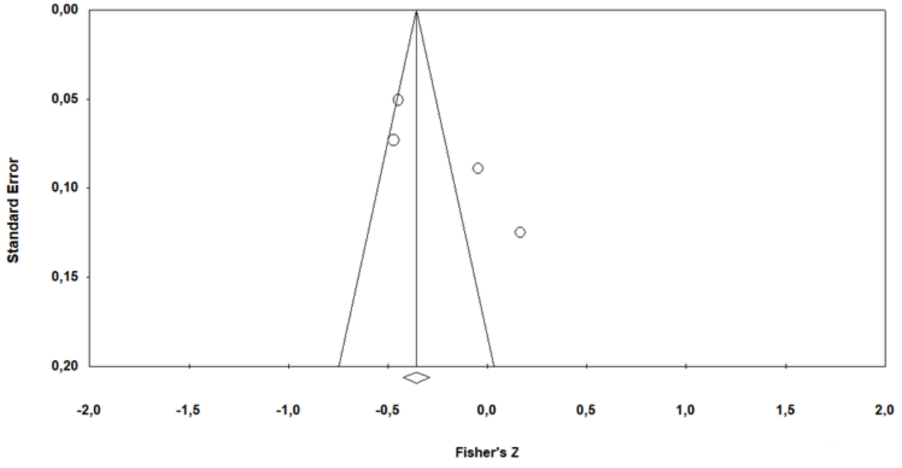

Figure 4. Funnel plot of 3rd data set.

The funnel plot of the fourth data set is indicated in figure 5. The allocation of the fourth data set is also symmetrical. No sign of any publication bias was detected. Using a quantitative analysis technique will provide more accurate results about publication bias. As all the data sets are heterogeneous, Duval and Tweedie's trim and fill test as used with a random-effects model.

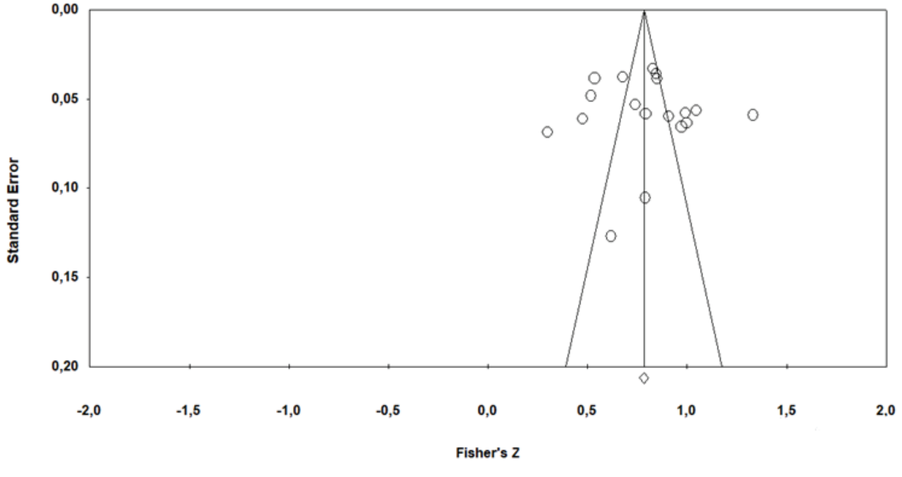

Figure 5. Funnel plot of 4th data set.

Table 3 showed the results of Duval and Tweedie's trim and fill test results. All 4 data sets were tested and no publication bias was detected. One can see that there is no difference between the observed values shown at the top lines and the adjusted values shown in the bottom lines. There are also no trimmed studies.

Table 3
Duval and Tweedie's Trim and Fill Test Results

1st data set			**Confidence Interval (CI)**		
1st data set (N=8718)	**Trimmed studies**	**Point estimate**	**Lower limit**	**Upper Limit**	**Q value**
Observed values		-.51508	-.57516	-.44947	350.27502
Adjusted values	0	-.51508	-.57516	-.44947	350.27502
2nd data set (N=6845)	**Trimmed studies**	**Point estimate**	**Lower limit**	**Upper Limit**	**Q value**
Observed values		-.50812	-.56797	-.44293	254.41675
Adjusted values	0	-.50812	-.56797	-.44293	254.41675
3rd data set (N=1676)	**Trimmed studies**	**Point estimate**	**Lower limit**	**Upper Limit**	**Q value**
Observed values		-.40538	-.56298	-.21934	37.10562
Adjusted values	0	-.40538	-.56298	-.21934	37.10562
4th data set (N=7159)	**Trimmed studies**	**Point estimate**	**Lower limit**	**Upper Limit**	**Q value**
Observed values		.65929	.59791	.71299	309.99328
Adjusted values	0	.65929	.59791	.71299	309.99328

The first data included 8,718 subjects, the second data set included 6,845 subjects, the third data set included 1,676 subjects and the fourth data set included 7,159 subjects. According to Duval and Tweedie's trim and fill test results, second, third and fourth data sets also did not include any publication bias. The results are similar to the results of the funnel plot analysis.

Findings Related to Effect Sizes

The results and graphics represented in this part are produced using Comprehensive Meta-Analysis Software (CMA), and figure 6 indicates the relative weight of the correlation gained from the collected studies and the forest plot of the data, including the correlation values regarding the relationship between job satisfaction and intention to quit. One expects to monitor the direction and the strength of the relationship using the effect sizes of the data (Borenstein et al., 2009). The forest plot shows the weight and interval of the studies. The first data set's effect size is -.515 (r = -.515).

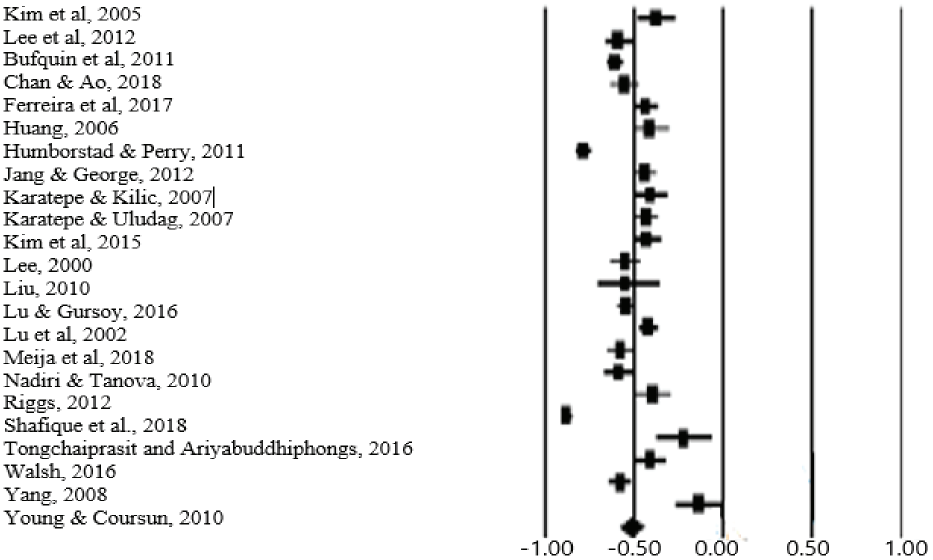

Figure 6. Forest plot of the 1st data set.

Figure 7 shows the forest plot and relative weight of the studies in the data set, including the correlation values regarding the relationship between intention to quit and organizational commitment where organizational commitment is the antecedent. The results of the analysis carried out using Comprehensive Meta-Analysis Software (CMA) showed that this effect size is -.508 (r = -.508). The strength of this effect size is closer to the effect size of previous data.

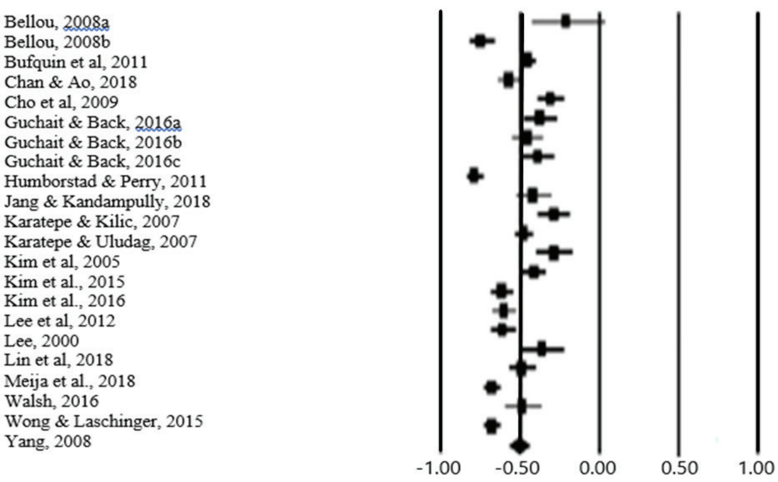

Figure 7. Forest plot of the 2nd data set.

Figure 8 indicates the forest plot and relative weights of the correlational values regarding the relationship between intention to quit and empowerment where empowerment is the antecedent. According to the analysis results, this effect size is -.405 (r = -.405).

Figure 8. Forest plot of the 3rd data set.

In figure 9, the forest plot of the correlation values regarding the relationship between job satisfaction and organizational commitment is shown. There is a positive impact of job satisfaction on organizational commitment and the effect size of this relationship is .659 (r = .659). This effect size is the highest and these two variables have the strongest relationship.

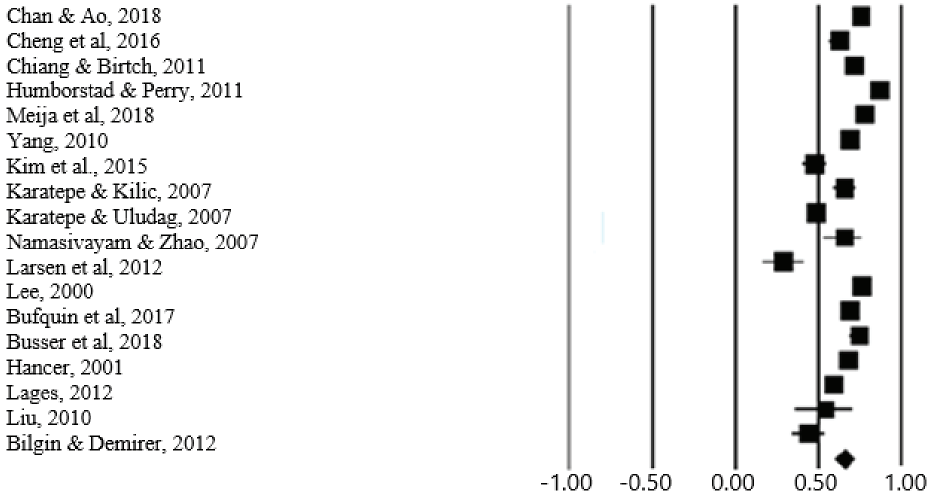

Figure 9. Forest plot of the 4th data set.

Moderator Analyses

The moderator analysis results regarding the correlations between job satisfaction and intention to quit are shown in Table 4. According to the analysis results, the moderating effect of job level is not significant. But the moderating effect of occupation type is significant at a .01 level of significance. Other moderators are not significant.

Table 4
Moderator Analysis Results of 1st Data Set

Concepts	k	N	r	CI		Q	Qb
				lower limit	upper limit		
Job satisfaction-intention to quit	23	8718	-.515*	-.575	-.449	350.275	
Moderator (job level)							0.021ns
White collar employees	3	1323	-.522	-.604	-.429		
Blue collar employees	20	7395	-.514	-.583	-.437		
Moderator (occupation)							10.561**
Chef	3	598	-.262	-.428	-.079		
Employee	13	4675	-.554	-.628	-.470		
Frontline	14	2122	-.538	-.692	-.336		
Manager	3	1323	-.522	-.604	-.429		
Moderator (workplace)							1.892ns
Hotel	16	6514	-.477	-.541	-.409		
Restaurant	4	1371	-.540	-.639	-.425		
Tourist organization	3	833	-.670	-.872	-.271		
Moderator (region)							
Asia	12	3854	-.554	-.651	-.559		1.901ns
Europe	2	733	-.510	-.644	-.347		
North America	9	4131	-.460	-.536	-.377		

***p < .01; **p < .05; *p < .10; ns: not significant

Table 5 showed the moderator analysis results regarding the correlations between organizational commitment and intention to quit. Moderator analysis results showed that only type of workplace is a variable moderating the relationship between organizational commitment and intention to quit at a .05 level of significance.

Table 5
Moderator Analysis Results of 2nd Data Set

Concepts	k	N	r	CI			
				lower limit	upper limit	Q	Qb
Organizational commitment -intention to quit	22	6845	-.508*	-.568	-.443	254.417	
Moderator (job level)							0.009ns
White collar employees	4	872	-.517	-.723	-.226		
Blue collar employees	18	5973	-.505	-.566	-.438		
Moderator (workplace)							9.486**
Casino	2	613	-.597	-.646	-.543		
Hotel	7	2523	-.539	-.650	-.406		
Restaurant	10	2656	-.449	-.528	-.364		

Tourist organization	3	1053	-.551	-.737	-.388		
Moderator (region)							0.561ns
North America	8	2621	-.475	-.567	-.371		
Asia	12	4038	-.523	-.602	-.434		
Europe	2	186	-.536	-.872	-.146		

****p < .01; **p < .05; *p < .10; ns: not significant*

The number of studies included in the third data set was not adequate for testing any hypotheses regarding the moderating variables for the correlation between empowerment and intention to quit. Table 6 indicated the moderator analysis results of the fourth data set related to the correlation between job satisfaction and organizational commitment. Job level and region were not revealed as a significant moderator, but the workplace is a significant moderator according to the analysis results.

Table 6
Moderator Analysis Results of 4th Data Set

Concepts	k	N	r	CI			
				lower limit	upper limit	Q	Q^b
Organizational commitment-job satisfaction	18	7159	.659*	.598	.713	309.993	
Moderator (job level)							2.170ns
White collar employees	2	787	.557	.386	.690		
Blue collar employees	16	6372	.671	.607	.726		
Moderator (workplace)							6.416*
Hotel	10	3525	.656	.573	.727		
Restaurant	4	2470	.645	.586	.698		
Travel agency	2	571	.479	.088	.743		
Various	2	593	.822	.679	.905		
Moderator (region)							0.035ns
North America	7	3226	.664	.565	.744		
Asia	11	3933	653	.581	.715		

****p < .01; **p < .05; *p < .10; ns: not significant*

After the moderator analyses testing the moderating effect of possible moderator, the possible moderating effect of publication year was tested by forming two different groups: the first group included the studies published between 1998 and 2008, and the second group included the studies published between 2009 and 2019. These two groups were used for this moderator analysis, and moderator analysis results indicated that there is no moderating effect of the publication year.

Discussion

The quality of tourism and hospitality organizations has been closely linked to intention to quit. Managers and leaders of these organizations should accept that these constructs are related to some other variables. Among these variables, job satisfaction, organizational commitment, and empowerment are the variables most commonly suggested in the literature as associated with intention to quit (Humborstad and Perry, 2011; Tan, 2007; Okuyucu, 2014; Meyerson, 2007). These variables are also vital for the tourism and hospitality industry, because this is a labor-intense industry.

The surveyed relationships' effect sizes are significant. According to Cohen's (1988) criteria, the effect size of the data set including the correlation values of the correlations between empowerment and intention to quit is *medium*, and the effect size of the other data sets are *large.* A previous study (Coi and Kim, 2016), which was conducted in the health industry, also found that the effect size of the interrelationships between job satisfaction, organizational commitment, and turnover intention is large and the highest effect size among these relationships is the effect size of the relationship between organizational commitment and job satisfaction. This study supported these findings for the tourism and hospitality industry. Tett and Meyer (1993) confirmed these findings generally.

The moderator analysis results were consistent with the structure of the relationships. Job satisfaction was expected to be affected by the type of occupation. The results showed that the type of occupation moderates the relationship between job satisfaction and intention to quit. Organizational commitment was expected to be affected by the organization. According to the results, the type of workplace is a moderating variable between organizational commitment and intention to quit.

Type of occupation can affect the expectations related to the job. If an employee expects more from a job, low job satisfaction may lead to a higher intention to quit. But employees expecting less from a job can keep on working with lower job satisfaction, because they were ready to work with lower job satisfaction. Consequently, the results of this meta-analysis revealed that type of occupation is a moderator for the relationship between job satisfaction and intention to quit.

Organizational commitment has strong connections with the organization. Different types of workplace cause different expectations in the mind of employees. According to the results, the employees of restaurants expect the least from the workplace. The effect size of the relationship between organizational commitment and intention to quit is the lowest for the employees working in restaurants. That is why they keep on working with lower organizational commitment. But the employees of other workplaces avoid working with lower organizational commitment. Therefore, the effect sizes of such relationships in these workplaces are higher. The moderator analysis results also supported these findings and showed the workplace as a significant moderator for the relationship between organizational commitment and intention to quit.

Limitations and Future Research

The number of studies was not adequate to evaluate the moderating effect of some variables. If the number of studies surveying the relationship between these variables increases in the future, future meta-analysis studies may have the chance of analyzing the effect of such moderating variables.

During this meta-analysis research, only the studies in English, Turkish, and German were reviewed. The studies in other languages were not reviewed. But a meta-analysis study should aim to reach all possible studies. A future study may feature collaboration with authors who can search studies in different languages.

Conclusion

This study found that the surveyed antecedents have a significant and negative effect on intention to quit. The results also showed that the effect size of the correlations between organizational commitment and job satisfaction is significant and positive. Moreover, this relationship has the highest effect size. This meta-analysis study determined that type of occupation is a moderator of the relationship between job satisfaction and intention to quit, and type of workplace is a moderating variable affecting the correlations between organizational commitment and intention to quit.

Peer-review: Externally peer-reviewed.

Conflict of Interest: The authors have no conflict of interest to declare.

Grant Support: The authors declared that this study has received no financial support.

Author Contributions: Conception/Design of study: A.H.Ö., A.E.; Data Acquisition: A.H.Ö.; Data Analysis/Interpretation: A.H.Ö., A.E.; Drafting Manuscript: A.H.Ö., A.E.; Critical Revision of Manuscript: A.H.Ö., A.E.; Final Approval and Accountability: A.H.Ö., A.E.

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Journal of Tourismology

RESEARCH ARTICLE

Journal of Tourismology, 8(1), 115-137

DOI: 10.26650/jot.2022.8.1.1059252
http://jt.istanbul.edu.en/

Submitted: 17.01.2022
Revision Requested: 13.03.2022
Last Revision Received: 10.06.2022
Accepted: 13.06.2022
Published Online: 30.06.2022

Health Service Quality and Patient Communication In Medical Tourism

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Abstract
This study investigates the perceptions of patient communication and medical service quality in relation to the demographic and occupational characteristics of medical staff working in Alanya. A significant relationship was found between perceptions of patient communication and the field of expertise of the staff and the foreign language they speak. This indicates that, in medical tourism contexts, the patient communication perceptions of medical staff affect first-hand perceptions of health service quality. To increase health service quality and patient communication motivation, it is recommended that revenues from patients or insurance companies be distributed to all staff involved with medical tourists. Furthermore, apart from doctors and nurses, staff believe health service quality and communication are low. Therefore, it is recommended to provide in-service training for this area.

Keywords
Medical tourism, Medical staff, Health care, Communication, Quality

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To cite this article: Gul, T., Degirmencioglu, A.O., Bulur, B., Dag, E., Basturk, Y. A., & Daglı, M. (2022). Health service quality and patient communication ın medical tourism. *Journal of Tourismology, 8*(1), 115-137. https://doi.org/10.26650/jot.2022.8.1.1059252

Introduction

Tourism is a rapidly developing and diversifying industry that is a prominent field in international commerce and a key source of revenue for developing countries (UNWTO, 2021). The inflow of foreign currency has benefited developing economies by reducing unemployment and increasing economic prosperity. As a developing country, Turkey's tourism industry has recently seen an increase in the number of visitors and gross tourism earnings (Bulut and Yalçın, 2015: 102). Turkey is regarded as one of the leading tourism destinations in the Mediterranean basin owing to its geographical characteristics, ancient sites, natural beauty, and climate conditions (Edinsel and Adıgüzel, 2014: 175). Because of the varied terrain across the country's seven geographical regions, tourists can experience all four seasons. As a peninsula, Turkey offers diverse tourism alternatives (Evci and Tezcan, 2005: 100).

Beyond being a recreational activity, tourism has become a consumer industry meeting individual needs worldwide. The sustainability of tourism as a service industry depends on several factors: providing high-quality products; ensuring tourists enjoy good experiences with these products; attaching importance to domestic residents; ensuring the sustainability of native culture; and preserving natural resources, and the historical and cultural heritage for future generations (Kervankıran, 2014: 151).

Tourists pass through various decision stages before, during, and after their holiday travel. During the planning stage, they focus on transportation opportunities, potential routes, accommodation capabilities, attractive locations, and activities. The latest developments in communication and transportation infrastructure have eliminated accessibility impediments in tourism. The perceptions gained during this process directly affect their future decisions (Emir and Avan, 2010: 206).

In medical tourism, defined as travel for treatment and care conducted in different areas from where individuals live (Anvekar, 2012: 109), individuals requiring medical treatment can compare services in their home countries with those in other countries. For host countries, medical tourism yields higher income than conventional tourism, a fact which has encouraged countries to concentrate on this sector. Meanwhile, developed countries have outsourced medical care through mutual agreements with other countries offering superior medical services to provide health services for their citizens. Accordingly, countries competing in the medical tourism sector emphasize their superior medical services advances in technological and medical training (Kördeve, 2016: 52). Prominent countries in medical tourism, including India, Singapore, Thailand, Philippines, Hungary, and Turkey, have introduced novel policies and strategies to sustain their competitive leverage in the global market (Aktepe, 2013: 175-176).

Turkey's up-to-date and well-qualified medical institutions and physicians have attracted increasing numbers of medical tourists. The Ministry of Health has identified three core medical tourism service domains: *Advanced Age and Handicapped Tourism, Thermal Medical Tourism and Spa-Wellness,* and *Medical Tourism* (Kaya et al., 2013: 5). Turkey offers various advanced treatments, including cardiovascular surgery, radiotherapy, robot surgery, transplants, infertility treatments (e.g., in-vitro fertilization), plastic surgery, dental treatments, and dialysis (Türkiye Sağlık Turizmi Derneği, 2021).

Medical services are generally cheaper in developing than developed countries. Medical tourists also usually prefer developing countries since transportation is more convenient and there is no waiting time, while the infrastructure, technology, and professionalism are adequate (Karagülle, 2021). Medical tourism requires a multi-stakeholder approach due to the many stakeholder sectors, including transportation, tourism, communication and information, travel, finance, construction (for new investments), private and public medical institutions, mediating institutions, assisting and consulting companies, and insurance companies. To ensure robust medical tourism, every stakeholder, at every level, must contribute effectively (Kaya et al., 2013).

Alanya Province is an important medical tourism destination in Turkey. Besides being a well-known coastal tourism destination for Europe, the Balkans, the Middle East, Central Asia, and Siberia, Alanya is known for its high-quality dental, optometric, cardiovascular, cosmetic, infertility, and surgical treatments. (Alanya Turizm Tanıtma Vakfı, 2022). Alanya received 1.5 million foreign visitors in the first eight months of 2021, which exceeded the yearly total for 2020 (Yılmaz, 2021) despite the Covid-19 pandemic conditions. Table 1, which shows the number of public and private health institutions working under the Ministry of Health, indicates the importance given to health tourism in Alanya.

Table 1
Medical Institutions in Alanya Under the Province Ministry of Health (Ministry of Health, 2022)

Alanya Medical Centers			
Medical Centers	**n**	**Medical Centers**	**n**
➢ Public Hospitals	1	➢ Private Polyclinics	5
➢ Private Hospitals	2	➢ Private Practices	51
➢ Family Health Centers	72	➢ Physical Therapy Units	1
➢ Private Dental Clinics	32	➢ Health Cabinets	1
➢ Private Dental Practices	77	➢ Private Dialysis Centers	1
➢ Oral and Dental Health Hospitals	1	➢ Alcohol and Drug Addiction Treatment Clinics	1
➢ Private Eye Hospitals	1	➢ Healthy Life Centers	1
➢ Private Medical Centers	1	TOTAL	248

A number of studies have evaluated the quality of services at medical tourism destinations (Gilson et al., 1994; Zerenler and Öğüt, 2007; Eleuch, 2011; Fullerton and McCullough, 2014; Taqdees et al., 2017; Bilgin and Göral, 2017; Kondasani, Panda, and Basu; 2019). These studies focus on measuring the patients' perceptions of communication, service quality, and satisfaction. In contrast, few studies have evaluated the perceptions of medical staff in health tourism destinations regarding patient communication and the quality of medical services (Canver, 2015). Accordingly, the present study offers a unique perspective by investigating the relationship between patient communication and medical staff's perceptions of medical tourism service quality and comparing these perceptions in terms of demographic and professional variables.

A quantitative survey was used as the data collection method. The survey had two scales and another section to record the respondents' demographic and professional details. Before further analysis, the survey data were tested for reliability using Cronbach's alpha. Based on the reference values of $\alpha>0.600$, reported by Akgül and Çevik (2003: 430) and Ural and Kılıç (2006: 290), data were reliable.

Confirmatory factor analysis and validity analysis were conducted on the scale questions (Canver, 2015). Regression analysis was then used to determine the effect of the medical staff's perceptions of patient communication on their perceptions of medical service quality and how these perceptions were affected by their demographic and professional characteristics. The relationships between the variables were tested using correlation analysis. The novel findings of this study make an important contribution to the literature.

Literature Review

Communication and Communication in Medical Services

As part of the interaction between individuals and/or institutions within a society, communication is a significant phenomenon existing for interaction among individuals and/or institutions within society. Communication could take place person-to-person, person-to-institution, and institution-to-society for information exchange. Individuals need communication so that they can perceive all phenomena outside themselves and gather information (Vardarlıer and Öztürk, 2020: 2). Communication within the scope of medical services assists medical staff to understand the needs of patients and their families; learning how to manage their chronic health conditions; and gaining healing results with the treatment (Arnold and Boggs, 2016: 6). The ways care, courtesy, compassion, and understanding are shown to patients and the usage of knowledge and skill relax patients and allow them to be more cooperative and adopt a more participative attitude (Tanşu, 2021: 19). Accurate communication established with the patient and patient's relatives during the medical services is directly effective on medical service satisfaction (Kaya et al., 2017: 65).

Service and Quality Concepts and Medical Service Quality

Service is regarded as a product in which production and consumption take place simultaneously by both humans and machines for the ultimate benefit of human beings (Kesmez and Savaş, 2014: 2). That is to say, each service produced has its own unique characteristics. The fact that the service has an intangible feature causes the perception of quality during consumption to be quite high (Güven and Sarıışık 2014: 22-23). When the quality concept is compared with other industries, it is rather difficult to explain from the dimension of the service industry. In the service industry, quality is a concept ensuring the provision of service matching customer needs and demands, maintaining a stable success level, without any flaw or defect. It can be measured and evaluated, and is expected to be directly related to customer satisfaction (Murat and Çelik, 2007: 2). In a study conducted by Parasuraman et al. (1988), the service quality concept is considered and five fundamental concepts effective on service quality are suggested: *physical (concrete) characteristics*: physical resources, equipment outfitting of personnel; *reliability*: provision of services promptly, constant format and without any defect; *eagerness*: personnel's readiness and eagerness for providing service; *trust*: keeping service provision away from danger, risk, and suspicion; *empathy*: significance attached to customers, personal care, and being sensitive to customers. For medical services, several studies have suggested seven key dimensions (Sevimli, 2006: 48; Korkmaz and Çuhadar, 2017: 74):

- Efficiency: the effort exerted to treat health conditions
- Effectiveness: Successful medical outcomes
- Productivity: Minimizing costs during the treatment period
- Optimality: Sustaining the balance between cost and healing
- Reasonability: Communication between patient and medical staff, and meeting the patient's needs
- Legitimacy: Appropriateness to the patient's social preferences
- Impartiality: Justice in the provision of medical services

Like other industries, the health industry continuously evolves due to technological advances. Therefore, service quality is considered particularly important in the medical industry. It can be defined as the difference between patient expectations and their post-service perceptions. That is, satisfaction levels increase if the provided medical services meet the patient's expectation. This in turn determines the patient's preference for that medical institution (Temizkan, 2018: 148).

Medical Tourism Concept and Medical Tourism in Turkey

By combining medical treatment and entertainment activities – depending on individuals' health status – medical tourism has significant potential as a style of tourism (Dunets et al., 2020: 2215). Medical tourism facilities include hotels with spas and hospitals and clinics specializing in thermal springs (TÜROFED, 2021: 71). Until the 20th century, medical tourism primarily involved citizens from underdeveloped countries travelling because their countries lacked proper treatments. In the 21st century, however, this trend has reversed, with medical tourists from developed countries choosing developing countries for their cheaper and better quality medical services (Kantar and Işık, 2014: 17). Medical services in developed countries steer citizens of these countries to tourist destinations to access low-cost yet well-equipped medical services. Tourists needing treatment prefer destinations offering high-quality services in institutions equipped with modern and advanced medical devices and well-educated specialists (Horowitz and Rosensweig, 2007: 28). Medical tourism activities make a significant contribution to the economy by exporting services and developing the health industry (Tontuş, 2018: 69). Given this importance, Turkey has worked to enhance its international reputation in this field. Figure 1 shows the number of health tourists visiting Turkey from 2012 to 2019, gross medical tourism revenue, and per capita medical tourism spending.

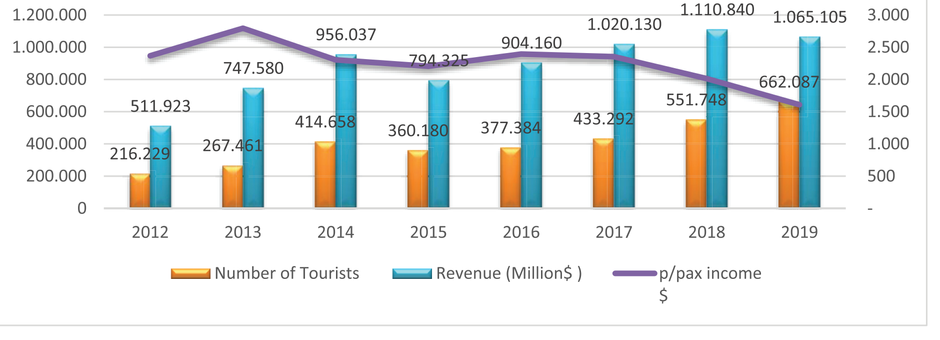

Figure 1. Health Tourist Arrivals in Turkey, Health Tourism Revenue, Health Tourist Spending, 2012-2019 (USHAS, 2021)

Both the number of medical tourists and gross medical tourism income increased, although per capita spending decreased. Thus, revenues from medical tourism contribute to the economic welfare of the host countries and provide a competitive advantage. International medical tourism has grown due to increasing international information exchange, domestic and global strategic partnerships, and international technology and knowledge transfers. Moreover, countries accepting international patients foster the exchange of social and cultural values, and the development of international relationships (Soysal, 2017: 171-172).

Research Questions

Based on this literature review, this study addresses two main research questions:

1. Do the patient communication perceptions of medical staff affect their perceptions of health service quality?

2. Is there a significant correlation between medical staff's perceptions of patient communication and the perceptions of medical service quality?

Methodology

Study Design

This was a descriptive study.

Study model and hypotheses

The study investigated the perceptions of medical staff regarding patient communication and medical service quality in medical institutions in Alanya Province, Turkey. The study focused on personnel from three private and one public medical institution that accept patients for medical tourism and that wished to improve their service quality.

The study hypotheses were based on various previous studies. Taqdees et al. (2017) investigated medical service quality, patient satisfaction, and patient loyalty in six private hospitals in Pakistan, while Ahmed et al. (2017) studied 204 patients from medical institutions across Bangladesh, to compare the appropriateness of medical services, service quality, patient satisfaction, and patient loyalty in relation to demographic variables. Meesala and Paul (2018) used a comparative service quality scale to measure patient satisfaction and loyalty in 40 private hospitals in Hyderabad, India. Lee et al. (2012) measured service quality, patient satisfaction and loyalty, and employment performance for 196 medical staff and 196 patients receiving medical service from four hospitals with capacities of at least 500 beds. Finally, Aljumah et al. (2017) interviewed 389 medical tourists in Malaysia to measure patient loyalty, trust, and perceived value.

From these studies, the following two hypotheses were developed regarding the objectives of the present study.

H_1: Medical staff's perceptions of patient communication affect their perceptions of medical service quality.

H_2: Medical staff's perceptions of patient communication correlates significantly with their perceptions of medical service quality.

Figure 2 shows the model developed in line with the study's objectives, and the position in the model of the two main hypotheses.

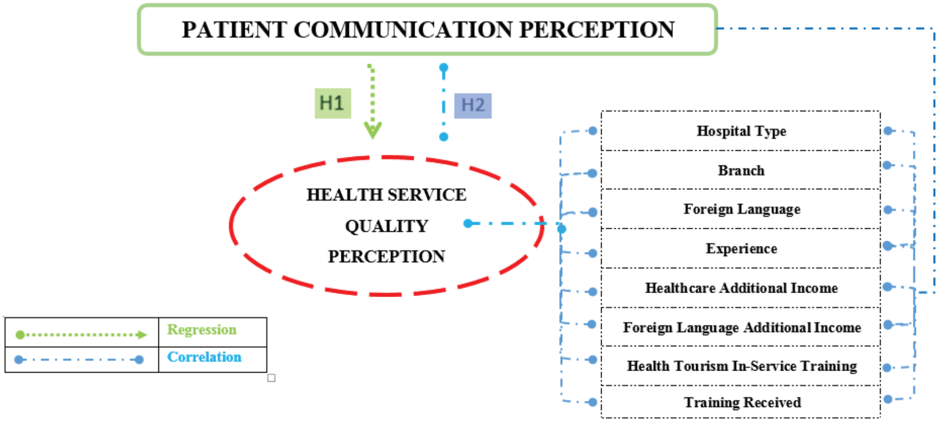

Figure 2. Study Model

Study Group

Field research was conducted in the city of Antalya in Alanya Province during 2020. Regarding the universe of the study, there were a total of 1,855 medical staff across public and private medical institutions in Alanya Province, as detailed in Table 2.

Table 2

Distribution of Healthcare Professionals across Institutions in Alanya Province

STAFF TITLES	Specialist Physician (Prof, Doc., Asst. Doc.)	Specialist Physician (Exp.)	Family Physician (Exp).	General Practitioner	Dentist	Nurse	Midwife	Health Officer (Community Health + ATT + X-ray + Lab. + Medical Sector + ..)	Biologist	Pharmacist	Other Health Personnel (Anesthetist + Prm + Dental Tech. + Dialysis Tech. + Dietician + FTR + Psik. + Perf. + Audio….)	Officer	Technician (Elec.+Eletr. Etc.)	Crew	TOTAL
Public Health Centers	54	123	1	34	43	329	76	98	4	7	249	6	14	36	1074
Private Health Centers	23	117	4	27	4	169	8	161	11	3	108	13	10	123	781
Total	77	240	5	61	47	498	84	259	15	10	357	19	24	159	**1855**

Alanya's 1,855 medical staff serve a local population of 350,000 residents. In addition, the hospitals serve medical tourists, which limited the time available for medical staff to respond to the survey. Thus, not all medical staff at these institutions could be accessed because the hospital administrations wanted to avoid any disruption in the provision of their medical services.

Random sampling was adopted as the most appropriate method to represent the universe for meeting the study objectives. This involved interviewing any medical staff encountered in the hospital for data collection purposes (Özdamar, 2001; Arıkan, 2004; Kılıç, 2013). The required sample size was determined using the following formula (Özdamar, 2001; Ural ve Kılıç, 2006; Şahin, 2007; Köroğlu, 2011).

FORMULA

$$\text{Sample Size} = \frac{2500.\mathbf{N}.(1.96)^2}{[25(\mathbf{N}-1)] + [2500*(1.96)^2]} = ?$$

RESULT

$$\text{Sample Size} = \frac{2500.\mathbf{1855}.(1.96)^2}{[25(\mathbf{1855}-1)] + [2500*(1.96)^2]} = 318.39$$

Applying this formula indicated a required sampling size of at least 318.39 participants. Accordingly, 400 survey forms were distributed. However, only 177 valid forms were returned. The low response rate was probably because medical workers faced intense work pressure during the Covid-19 pandemic. In short, it was not possible to reach the calculated sample size in this study.

Data Collection Tools

The data collection tool, a survey, was limited to two scales and some demographic questions due to the long working hours of healthcare workers during the Covid-19 pandemic. Both scales were obtained from Canver (2015). The participants responded to the items concerning patient communication and medical service quality using a five-point Likert-type scale.

KMO and Barlett tests were conducted to perform factor analysis and determine the accuracy of this decision on the scale items used to measure perceived patient communication and perceived medical service quality. Tables 3 and 4 summarize the analyses for perceived communication and perceived medical service quality, respectively.

Table 3
Validity Analysis of Perceived Patient Communication

FACTOR ANALYSIS	Factor Load	$\bar{x}$	α
PCP7 - Concerning the limited medical service provided	0.787	2.21	0.833
PCP6 - On applying hospital rules	0.724		
PCP8 - Regarding Additional Treatment and Procedures	0.717		
PCP9 - Monitoring treatment outcome	0.715		
PCP3 - From patients recovering from their cultures	0.661		
PCP2 - Communication with patient relatives	0.648		
PCP1 - Communication with the patient	0.629		
PCP5 - Concerning the physics of the hospital	0.567		
PCP10 - Treatment related	0.480		
PCP4 - Meals served to the patients at the hospital	0.458		

For the perceived patient communication scale, the KMO test value was 0.784. Since this value was greater than 0.500 (p>0.500), the selected sample size was valid for explaining the items of the work satisfaction scale. The chi-square value for Bartlett's test was 684.101, while the degrees of freedom and asymptotic significance value were p:0.000/ and p<0.050. This indicated that the communication scale could be subjected to factor analysis. Finally, the Cronbach's Alpha value (α) was 0.833, which indicated acceptable reliability.

Table 4
Validity Analysis of Perceived Health Service Quality

FACTOR ANALYSIS	Factor Load	x̄	α
HSQP9 – Hospital's implementation of international standards	0.830	4.16	0.899
HSQP8 - Medical staff of the hospital	0.826		
HSQP7 - Good technical equipment of the hospital	0.824		
HSQP11 - Impact of quality accreditation certificate	0.787		
HSQP6 - Short, effective, and fast service delivery	0.765		
HSQP10 - Referral of intermediary institutions	0.706		
HSQP2 - Providing a high standard of healthcare	0.703		
HSQP4 - Being in a cheap country for accommodation and transportation issues	0.671		
HSQP3 - Geographically close to the patient's home country	0.626		
HSQP5 - Turkey has many touristic features	0.569		
HSQP1 - Low cost of treatment	0.515		

For the perceived medical services quality scale, the KMO test value was 0.873. Since this value was greater than p>0.500, the selected sample size was valid to explain the scale items. The chi-square value for Bartlett's test was 1110.282 while the degrees of freedom and asymptotic significance values were p:0.000 and p<0.050. This indicated that the perceived medical service quality scale could be subjected to factor analysis. Finally, the Cronbach's Alpha value (α) was 0.899, which indicated acceptable reliability.

The factor analysis results indicated that there were two valid factors. These factor loadings were reasonably distributed within the dimensions of communication and quality.

Results

Table 5

Participants' Demographic and Professional Characteristics

Hospital Type			**Do You Require Side Payment for the Medical Services Provided within to Medical Tourists?**		
	n	**%**		**n**	**%**
Public	91	51.4	Yes	103	58.2
Private	86	48.6	No	39	22
Profession			Partially	35	19.8
	n	**%**	**Do You Require Side Payment for Your Foreign Language Skills?**		
Doctor	21	11.9		**n**	**%**
Nurse	75	42.4	Yes	92	52
Health Officer	3	1.7	No	57	32.2
Technician	51	28.8	Partially	28	15.8
Medical secretary	11	6.2	**In-Service Training**		
Patient Consultant (Guide)	16	9		**n**	**%**
Professional Experience (years)			Yes	49	28.7
	n	**%**	No	97	54.8
1-5	84	47.5	Partially	31	17.5
6-10	55	31.1	**Foreign Languages**		
11-15	21	11.9		**n**	**%**
16-20	7	4	English	90	52
21+	10	5.6	German	18	10
			Russian	11	6.2
			None	58	33

Table 6 summarizes the respondents' scores for the perceived communication scale items.

Table 6

Mean Scores for Patient Communication Scale Items and Normality Test Results

	$\bar{X}$	**S.S.**	**$\bar{X}$**	**Normality Test (Shapiro Wilk)a**	**Chosen Test Type**
PCP1 - I have trouble communicating with the patient.	2.39	0.840			
PCP2 - I have problems communicating with patients' relatives.	2.36	0.835			
PCP3 - I have problems with patients' cultural behaviors.	2.33	0.849			
PCP4 - I have problems with the meals served to the patients in the hospital.	2.44	1.054			
PCP5 - I have problems with the hospital's physical facilities.	2.24	0.846			
PCP6 - I have problems with applying hospital rules.	2.22	0.918	2.21	0.006	Non-Parametric
PCP7 - I have problems implementing the health service provided to the patient.	2.01	0.765			
PCP8 - I have problems with additional treatment and procedures.	2.02	0.812			
PCP9 - I have problems monitoring patients' treatment results.	1.86	0.796			
CP10 - I have problems with patients regarding treatment costs.	2.20	0.875			

Table 7 summarizes the responses to the perceived communication scale items.

Table 7

Mean Scores for Perceived Medical Service Quality Scale Items and Normality Test Results

	X̄	S.S.	X̄	Normality Test (Shapiro-Wilk) a	Chosen Test Type
HSQP1 - Low cost of treatment	4.24	2.21	4.16	0.000	Non-Parametric
HSQP2 - Providing a high standard of healthcare	3.88	1.280			
HSQP3 - Geographically close to the patient's own country	4.25	1.117			
HSQP4 - Being in a cheap country for accommodation and transportation	4.01	1.017			
HSQP5 - Turkey having many touristic features	4.33	0.938			
HSQP6 Short, effective, and fast service delivery	4.25	0.968			
HSQP7 - Good technology in the hospital	4.20	0.995			
HSQP8 - Good medical staff in the hospital	4.28	0.987			
HSQP9 – Hospital implements international standards	3.97	1.175			
HSQP10 - Referral of intermediary institutions	4.08	1.081			
HSQP11 - Quality accreditation certificate positively affects service	4.24	1.023			

The medical staff's perceptions of patient communication and medical service quality were analyzed in terms of their demographic and professional characteristics. First, a normality test was conducted, which indicated that the data collected were non-parametric. Given that there were at least two groups to be compared, the Mann Whitney-U test, one of the gap analyses, was used, while the Kruskal Wallis test was used when the number of groups was at least three. Tables 8 and 9 summarize the analysis results.

Table 8 compares the perceptions of public and private hospital medical staff. While there was no significant difference between sectors for perception of patient communication, there was a significant difference between sectors for perception of medical service quality.

Table 8

Comparative Analysis of Perceptions in Public and Private Hospitals

MANN WHITNEY-U	PCP			HSQP		
HOSPITAL SECTOR	**n**	**Mean Rank**	**p**	**n**	**Mean Rank**	**p**
Public Hospital Health	91	88.88	0.975	91	64.24	0.000
Private Hospital Health	86	89.12		86	115.20	

PCP : Patients' Communication Perception. HSQP : Health Service Quality Perception

Table 9 compares the medical staff in terms of various demographic and professional characteristics. Profession had a significant effect on the medical staff's perceptions of patient communication, but not on their perceptions of medical service quality.

Table 9
Comparative Analysis of Perceptions based on Demographic and Professional Characteristics

KRUSKAL-WALLIS			PCP			HSQP		
Profession		**n**	**Mean Rank**	**p**	**df**	**Mean Rank**	**p**	**df**
Doctor	a	21	78.60		b	88.40		
Nurse	b	75	98.84		a,e,f	93.54		
Health Officer	c	3	83.67		-	89.33		
Health Technician	d	51	98.34	0.002	e,f	92.94	0.193	N/A
Medical secretary	e	11	47.77		a,e	50.50		
Patient Consultant (Guide)	f	16	56.09		b,d	82.34		
Language		**n**	**Mean Rank**	**p**	**df**	**Mean Rank**	**p**	**df**
English	a	90	59.92		d	55.23		b
German	b	18	57.31	0.047	d	77.53	0.048	a,d
Russian	c	11	65.05		-	70.36		-
No Foreign Language	d	58	104.22		a,b	83.48		b
Occupational Experience (years)		**n**	**Mean Rank**	**p**	**df**	**Mean Rank**	**p**	**df**
1-5	a	84	92.64			87.26		
6-9	b	55	95.51			103.43		
11-14	c	21	59.40	0.062	N/A	77.95	0.180	N/A
16-19	d	7	75.21			83.79		
21+	e	10	94.40			51.10		
Medical Tourism Service Side Income		**n**	**Mean Rank**	**p**	**df**	**Mean Rank**	**p**	**df**
Yes	a	103	87.16		b	95.51		
No	b	39	105.36	0.040	a	85.44	0.084	N/A
Partially Payment	c	35	76.19		b	73.81		
Foreign Language Side Income		**n**	**Mean Rank**	**p**	**df**	**Mean Rank**	**p**	**df**
Yes	a	92	84.511			100.24		b,c
No	b	57	90.474	0.469	N/A	72.56	0.005	a
Partially Payment	c	28	97.446			82.79		a
Medical Tourism In-Service Training		**n**	**Mean Rank**	**p**	**df**	**Mean Rank**	**p**	**df**
Yes	a	49	82.89			99.36		
No	b	97	92.35	0.570	N/A	85.15	0.249	N/A
Partially Time	c	31	88.19			84.68		

PCP : Patients' Communication Perception. HSQP : Health Service Quality Perception

Foreign language knowledge had a significant effect on medical staff's perceptions of patient communication but not on service quality. Length of experience had no significant effect on perceptions for either scale. Receiving additional payment for treating medical tourists had a significant effect on perceptions of patient communication but not on service quality. Conversely, the staff's language skills had no significant effect on perceptions of patient communication but a significant effect on perceptions of medical service quality. Finally, the respondents' medical tourism training had no significant effect on perceptions for either scale.

A simple linear regression analysis was conducted to analyze the effect of hospital medical staff's perceptions of patient communication and perception of medical care quality. As Table 10 shows, perceived patient communication significantly affected perceived medical care quality (p:0.002-p<0.05).

Table 10

Regression Analysis Results for Effect of Perceived Patient Communication on Perceived Medical Care Quality

Size	Unstandardized Coefficients		Standardized Coefficients	t	p	Tolerance
	B	Standard Error	β			
Constant	3.443	0.232		14.841	< .001	1.000
PCP	0.323	0.102	0.233	3.163	0.002	1.000
Dependent Variable: HSQP						
$R = 0.233$	$R^2 = 0.054$ $F_{(2,1003)} = 10.003; p<0.000$		$\Delta R^2 = 0.049$		Durbin-Watson= 1.270	

More specifically, the two variables were positively correlated (R= 0.233), with perceived patient communication explaining 5.4% of the variance in perceived medical care quality ($R^2 = 0.054$). In other words, a 1% increase in medical staff's perception of patient communication resulted in a 0.323% increase in perception of quality. Based on these results, H_1 (Medical staff's perception of patient communication is effective on medical service quality) was accepted (F=10.003; p<0.05). The Durbin Watson value was 1.270, which indicated no autocorrelation, while the t-test results for the regression coefficients were significant (t=3.163; p<0.05).

Table 11 shows the correlations between the demographic and professional variables and the respondents' perceptions of patient communication and medical care quality.

Table 11

Correlations between Demographic and Professional Variables and Perceived Communication with Patients and Perceived Health Care Quality

	PCP		HSQP	
	r	p	r	p
Hospital Type	-0.006	0.937	.453**	0.000
Profession	-.187*	0.013	-0.083	0.27
Foreign Language	.211**	0.005	-0.033	0.66
Experience	-0.099	0.188	-0.065	0.387
Medical Service Side Income	-0.096	0.205	-.233**	0.002
Foreign Language Side Income	0.029	0.705	-.166*	0.027
Medical Tourism Service Training	0.077	0.311	-0.097	0.197
Training	-0.118	0.117	.229**	0.002
PCP			.233**	0.002
HSQP	.233**	0.002		

There was a significant correlation between perceived patient communication and perceived service quality (r=.233; p:0.002). There was a significant negative correlation between profession and perceived patient communication (r=-.187; p:0.013). A significant correlation was determined between medical staff's foreign language skill and their perception of patient communication (r=.211; p:0.005). A positive correlation was determined among variables. Based on the analysis findings, the correlation level was estimated as 21.1%. A positive and significant correlation was determined between the hospital type of medical staff (Public-Private Hospital) and their perception of medical tourism quality (r=.453; p:0.000), due to analysis findings, the correlation level was estimated the correlation level was estimated as 45.3%. The main purpose of public hospitals is to provide public health services without paying any fee. Private hospitals do not have such a basic purpose other than just emergency health services. In this respect, it is thought that private hospitals give more importance to health tourism and the quality of the service provided in health tourism. In this context, it can be said that the findings obtained have significant results. A negative significant correlation was determined between medical staff's request for additional payment for medical services given under the scope of medical tourism and their perception of medical tourism quality (r=-.233; p:0.002).

Discussion and Conclusions

In medical health tourism, the perceptions of a destination can be damaged if its health professionals lack sufficient knowledge, skills, and equipment to provide good quality medical care. Therefore, both the host country and those working in the specific destination need to have high levels of knowledge, skills, and awareness (Acar and Turan, 2016: 18). Focusing on medical tourism in Turkey, the present study investigated medical staff's perceptions of patient communication and medical service quality in medical institutions located in Alanya City. Given that interaction, relationships, and differences between medical staff's perceptions of patient communication and medical service quality are crucial in medical tourism, this study used survey scales to measure these perceptions in relation to key professional and demographic variables.

Regarding the professional and demographic characteristics of the sample, most of the participants were medical staff, primarily nurses and medical technicians. A majority of the medical staff know English, although a third cannot speak any foreign language. The participants all had at least five years' experience in their profession. A majority of medical staff requested additional payment for providing medical tourism services and believed that they deserved additional compensation for their foreign language skills. Finally, a majority had not received any extra medical tourism training. This suggests that there is a training deficiency that could be remedied by offering in-service training activities.

There were several significant findings regarding the relationship between the medical staff's perceptions of patient communication and medical service quality and the demographic and professional variables. First, medical staff in private hospitals had higher perceptions of medical service quality.

This is important because a previous study (ESCAP, 2009) reported a significant correlation between medical service quality and patient satisfaction while the institution's medical service quality was the most fundamental requirement for patient satisfaction. Similarly, Nazem and Mohammed (2015: 105-108) reported a significant correlation between medical service quality and satisfaction among international patients at private hospitals in Penang, Malaysia, as did Abd Manaf et al. (2015: 54) for patients in Malaysia

Second, in the present study, medical staff's perceptions of patient communication were not affected by working in private or public hospitals, although the perceived level was slightly higher among private hospital employees. The importance of this is emphasized by Aljumah et al. (2017: 585), who concluded that "[the] behaviour, approach and attitude showed to patients are important in forming the stable relationship between medical institutions and patients."

Third, the medical staff's professions had no effect on their perceptions of medical service quality, although perceived levels were higher for nurses and medical technicians whereas they were particularly low for medical secretaries. Conversely, profession did have a significant effect on medical staff's perception of service quality, with perceived levels being higher for nurses and medical technicians' perceptions and lower for medical secretaries and patient consultants. As Wu (2011: 4877-4880) reports, medical staff must exhibit perfect professionalism, technical competency, effectiveness, and courtesy to gain patients' confidence, which means that their professions emphasize social skills such as empathy, personal attention, understanding patients' needs, and giving care.

Finally, a fundamental communication factor in medical care is rapid responses to patients' requests. The present results relate closely to previous research. For instance, Buzcu and Birdir (2019: 322-324) argue that interventions and treatment in medical tourism need to be implemented quickly. However, this may sometimes be hindered due to patient communication difficulties. Accordingly, timely interventions with significant decisions would introduce positive results.

In the present study, medical staff's foreign language skills significantly influenced their perceptions of both patient communication and medical service quality in that medical staff with no foreign language skills had higher perceptions. This may because these staff were particularly aware of their language deficiencies and paid close attention to their communication with patients. Our findings support Acar and Turan (2016: 34), who noted the significance of awareness for medical staff providing medical tourism services, identified deficiencies with in-service training in the medical tourism industry, and suggested further projects to eliminate these deficiencies. Sarwar et. al. (2012) concluded that medical tourism service perceptions depend on quality accreditation certificates as well as low-cost treatments, high standards of medical service, accommodation, cheap transport, and attractive touristic characteristics in the destination. The findings also suggest that medical staff should develop their language skills based on the nationalities of medical tourist visitors. In the case of Alanya, these are predominantly Russian.

Regarding compensation, medical staff's perceptions of patient communication were unrelated to receiving additional compensation for their foreign language skills, whereas perceptions of service quality were higher among medical staff who requested additional compensation for their foreign language skills. Similarly, Özdemir and Kervankıran (2011: 15) emphasize the importance of offering material benefits to medical tourism personnel for their foreign language skills.

There were also significant differences in medical staff's perceptions based on their requests for extra compensation for providing medical tourism services. More specifically, personnel who responded "yes" or "partially." This indicates that medical staff want to receive their share of the revenue provided by medical insurance companies for treating medical tourists in both public and private hospitals. Similarly, Erigüç et al. (2018) claim that medical institutions have higher employment costs than other industries because of the higher competency of and specialization of medical staff.

Medical tourists visiting Turkey come particularly from those countries where Turkey has a positive reputation regarding medical tourism services. Indeed, both public and private medical institutions have made substantial investments to provide high-quality medical services, especially in Istanbul, Antalya, Ankara, and Izmir (Aydın, 2012: 94). The 11th Development Plan issued by the Republic of Turkey Presidency Department of Strategy and Budget prioritizes promotion and investment activities to develop medical tourism, improve Turkey's reputation, strengthen its competitiveness, increase the quantity and quality of its medical service capacity, and establish the necessary legal infrastructure, accreditation, and auditing processes.

Due to the profitability of medical tourism and its contribution to the country's economy, awareness of medical tourism has increased. There are many signs of this. For example, seminars, symposiums, and congresses have been organized and attended by both local and international participants. The Ministry of Health and the Ministry of Culture and Tourism have both supported congresses to help medical tourism develop to the desired level (Aydın, 2012: 92-94). The Ministry of Health has established the Department of Medical Tourism to promote Turkey's international medical services. USHAŞ (International Medical Services A.Ş.) was established to support public and private industries' activities in medical tourism, while the Republic of Turkey Department of Strategy and Budget set concrete targets for medical tourism within its development plans. Public hospitals operating under the Ministry of Health have established international patient departments while private medical institutions increasingly offer treatment to foreign medical tourists.

In providing medical services to health tourists, it is critical to develop the appropriate accreditation and quality concepts and procedures (Kayral, 2018; Hoş, 2016). The standards of accredited medical institutions should conform to international codes, so accreditation should be cascaded across all medical institutions by achieving the required levels of patient communication and medical service quality. As Aydın (2012) notes, it is essential for both private and public hospitals to obtain and then maintain international accreditation to enhance the place of medical tourism in a country's development. In short, it is crucial for medical institutions to maintain quality certification and continuously meet quality accreditation criteria.

Peer-review: Externally peer-reviewed.

Conflict of Interest: The authors have no conflict of interest to declare.

Grant Support: The authors declared that this study has received no financial support.

Author Contributions: Conception/Design of study: T.G., A.Ö.D., B.B., E.D., Y.A.B., M.D.; Data Acquisition: T.G., A.Ö.D., B.B., E.D., Y.A.B., M.D.; Data Analysis/Interpretation: T.G., A.Ö.D., B.B., E.D., Y.A.B., M.D.; Drafting Manuscript: T.G., A.Ö.D., B.B., E.D., Y.A.B., M.D.; Critical Revision of Manuscript: T.G., A.Ö.D., B.B., E.D., Y.A.B., M.D.; Final Approval and Accountability: T.G., A.Ö.D., B.B., E.D., Y.A.B., M.D.

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AIM AND SCOPE

Journal of Tourismology (JoT) publishes two issues per year; one in December and the other in June. *JoT* is an open access journal without any submission or processing charges or fees that aims to be a comprehensive and innovative publication for scholars to present views and ideas at international level on key issues that shape tourism knowledge and industry from past to present.

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Encyclopedia of Informatics]. İstanbul, Turkey: Papatya Yayıncılık.

d) Turkish Book with Multiple Authors

Tonta, Y., Bitirim, Y., & Sever, H. (2002). T*ürkçe arama motorlarında performans değerlendirme* [Performance evaluation in Turkish search engines]. Ankara, Turkey: Total Bilişim.

e) Book in English

Kamien R., & Kamien A. (2014). *Music: An appreciation.* New York, NY: McGraw-Hill Education.

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Bassett, C. (2006). Cultural studies and new media. In G. Hall & C. Birchall (Eds.), *New cultural studies: Adventures in theory* (pp. 220–237). Edinburgh, UK: Edinburgh University Press.

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Erkmen, T. (2012). Örgüt kültürü: Fonksiyonları, öğeleri, işletme yönetimi ve liderlikteki önemi [Organization culture: Its functions, elements and importance in leadership and business management]. In M. Zencirkıran (Ed.), *Örgüt sosyolojisi* [Organization sociology] (pp. 233–263). Bursa, Turkey: Dora Basım Yayın.

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b) English Article

de Cillia, R., Reisigl, M., & Wodak, R. (1999). The discursive construction of national identity. *Discourse and Society, 10*(2), 149–173. http://dx.doi.org/10.1177/0957926599010002002

c) Journal Article with DOI and More Than Seven Authors

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d) Journal Article from Web, without DOI

Sidani, S. (2003). Enhancing the evaluation of nursing care effectiveness. *Canadian Journal of Nursing Research, 35*(3), 26–38. Retrieved from http://cjnr.mcgill.ca

e) Journal Article wih DOI

Turner, S. J. (2010). Website statistics 2.0: Using Google Analytics to measure library website effectiveness. *Technical Services Quarterly, 27,* 261–278. http://dx.doi.org/10.1080/07317131003765910

f) Advance Online Publication

Smith, J. A. (2010). Citing advance online publication: A review. *Journal of Psychology.* Advance online publication. http://dx.doi.org/10.1037/a45d7867

g) Article in a Magazine

Henry, W. A., III. (1990, April 9). Making the grade in today's schools. *Time, 135,* 28–31.

Doctoral Dissertation, Master's Thesis, Presentation, Proceeding

a) Dissertation/Thesis from a Commercial Database

Van Brunt, D. (1997). *Networked consumer health information systems* (Doctoral dissertation). Available from ProQuest Dissertations and Theses database. (UMI No. 9943436)

b) Dissertation/Thesis from an Institutional Database

Yaylalı-Yıldız, B. (2014). *University campuses as places of potential publicness: Exploring the politicals, social and cultural practices in Ege University* (Doctoral dissertation). Retrieved from Retrieved from: http://library.iyte.edu.tr/tr/hizli-erisim/iyte-tez-portali

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Tonta, Y. A. (1992). *An analysis of search failures in online library catalogs* (Doctoral dissertation, University of California, Berkeley). Retrieved from http://yunus.hacettepe.edu.tr/~tonta/yayinlar /phd/ickapak.html

d) Dissertation/Thesis abstracted in Dissertations Abstracts International

Appelbaum, L. G. (2005). Three studies of human information processing: Texture amplification, motion representation, and figure-ground segregation. *Dissertation Abstracts International: Section B. Sciences and Engineering, 65*(10), 5428.

e) Symposium Contribution

Krinsky-McHale, S. J., Zigman, W. B., & Silverman, W. (2012, August). Are neuropsychiatric symptoms markers of prodromal Alzheimer's disease in adults with Down syndrome? In W. B. Zigman (Chair), *Predictors of mild cognitive impairment, dementia, and mortality in adults with Down syndrome.* Symposium conducted at the meeting of the American Psychological Association, Orlando, FL.

f) Conference Paper Abstract Retrieved Online

Liu, S. (2005, May). *Defending against business crises with the help of intelligent agent based early warning solutions.* Paper presented at the Seventh International Conference on Enterprise Information Systems, Miami, FL. Abstract retrieved from http://www.iceis.org/iceis2005/abstracts_2005.htm

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Herculano-Houzel, S., Collins, C. E., Wong, P., Kaas, J. H., & Lent, R. (2008). The basic nonuniformity of the cerebral cortex. *Proceedings of the National Academy of Sciences, 105,* 12593–12598. http://dx.doi.org/10.1073/pnas.0805417105

h) Proceeding in Book Form

Parsons, O. A., Pryzwansky, W. B., Weinstein, D. J., & Wiens, A. N. (1995). Taxonomy for psychology. In J. N. Reich, H. Sands, & A. N. Wiens (Eds.), *Education and training beyond the doctoral degree: Proceedings of the American Psychological Association National Conference on Postdoctoral Education and Training in Psychology* (pp. 45–50). Washington, DC: American Psychological Association.

i) Paper Presentation

Nguyen, C. A. (2012, August). *Humor and deception in advertising: When laughter may not be the best medicine.* Paper presented at the meeting of the American Psychological Association, Orlando, FL.

Other Sources

a) Newspaper Article

Browne, R. (2010, March 21). This brainless patient is no dummy. *Sydney Morning Herald, 45.*

b) Newspaper Article with no Author

New drug appears to sharply cut risk of death from heart failure. (1993, July 15). *The Washington Post,* p. A12.

c) Web Page/Blog Post

Bordwell, D. (2013, June 18). David Koepp: Making the world movie-sized [Web log post]. Retrieved from http://www.davidbordwell.net/blog/page/27/

d) Online Encyclopedia/Dictionary

Ignition. (1989). In *Oxford English online dictionary* (2nd ed.). Retrieved from http://dictionary.oed.com

Marcoux, A. (2008). Business ethics. In E. N. Zalta (Ed.). *The Stanford encyclopedia of philosophy.* Retrieved from http://plato.stanford.edu/entries/ethics-business/

e) Podcast

Dunning, B. (Producer). (2011, January 12). *in Fact: Conspiracy theories* [Video podcast]. Retrieved from http://itunes.apple.com/

f) Single Episode in a Television Series

Egan, D. (Writer), & Alexander, J. (Director). (2005). Failure to communicate. [Television series episode]. In D. Shore (Executive producer), *House;* New York, NY: Fox Broadcasting.

g) Music

Fuchs, G. (2004). Light the menorah. On *Eight nights of Hanukkah* [CD]. Brick, NJ: Kid Kosher.

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