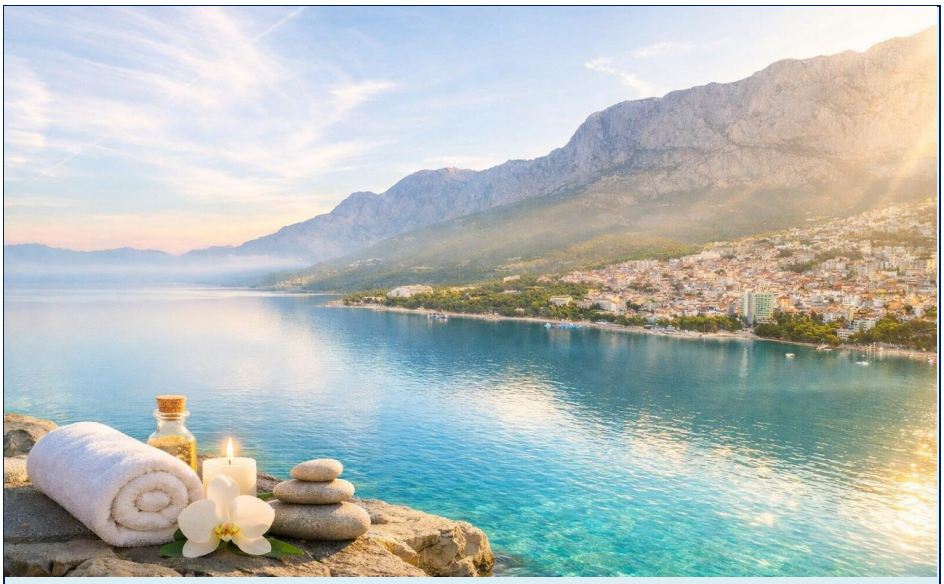

PERCEPTION OF KVARNER AS A TOURIST DESTINATION FOR BEAUTY AND HEALTH

Romina Alkier Tomić

Editor

Editor-in-Chief
Romina Alkier Tomić

PERCEPTION OF KVARNER AS A TOURIST DESTINATION FOR BEAUTY AND HEALTH

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EDITORIAL

In recent decades, the connection between the health and tourism sectors has become increasingly significant, resulting in the development of new forms of tourism supply, particularly aesthetic and dental tourism. These specific forms of health tourism enable destinations to develop tourism offers that go beyond traditional travel experiences, focusing on improving quality of life, personal appearance, and overall wellbeing of visitors.

In recent years, the Kvarner region has increasingly positioned itself as an attractive destination in the field of aesthetic and dental medical services, thanks to the combination of natural resources, well-developed healthcare infrastructure, highly qualified medical professionals, and competitive service prices. Due to these characteristics, Kvarner represents a particularly interesting area for scientific research on the perception of a tourist destination that integrates medical, aesthetic, and dental services into its tourism offer.

The scientific project "Perception of Kvarner as a Tourist Destination for Beauty and Health" (ZIP-UNIRI-116-3-23) aims to comprehensively investigate the perception of Kvarner as a destination offering a wide range of aesthetic and dental medical services that allow tourists to maintain and improve their health, appearance, and overall wellbeing. Special attention is given to identifying the factors that shape the perception of Kvarner as a destination of beauty and health, including the development of aesthetic and dental medical infrastructure, the professionalism of healthcare providers, cost competitiveness, as well as the attractiveness of the region's natural and cultural environment.

The research methodology combines quantitative and qualitative approaches. The quantitative component includes the analysis of survey data collected from domestic and international users of aesthetic and dental medical services, while the qualitative approach involves interviews with healthcare providers and key stakeholders in the tourism sector. This integrated approach enables a deeper understanding of the perception of Kvarner as a destination for aesthetic and dental tourism and the factors shaping its image on the international tourism market.

The results of this research are expected to provide significant scientific and practical value for various stakeholders, including government institutions, academia, and tourism and healthcare organizations. The findings will contribute to the development of effective and sustainable strategies for aesthetic and dental tourism development, thereby strengthening the competitiveness of Kvarner as an internationally recognized destination for beauty and health.

The project is funded by the University of Rijeka and conducted at the Faculty of Tourism and Hospitality Management, University of Rijeka.

This publication presents the scientific papers of the research team members produced within the framework of the project. The aim of the publication is to encourage scientific discussion, exchange of ideas, and further research in the field of aesthetic, dental, and health tourism.

The members of the research team who actively participated in the project are:

- *Romina Alkier Tomić*, PhD, University of Rijeka, Faculty of Tourism and Hospitality Management – Project Leader;
- *Daniela Gračan*, PhD, University of Rijeka, Faculty of Tourism and Hospitality Management;
- *Adriana Jelušić*, PhD, University of Rijeka, Faculty of Tourism and Hospitality Management;
- *Vedran Milojica*, University of Rijeka, Faculty of Tourism and Hospitality Management;
- *Jasmina Okičić*, PhD, Faculty of Economics, University of Tuzla;
- *Milena Podovac*, PhD, Faculty of Hotel Management and Tourism in Vrnjačka Banja.

Finally, we would like to thank all project team members, collaborators, and institutions whose support and expertise contributed to the successful implementation of this research.

Romina Alkier Tomić, PhD., Full Professor
Editor-in-Chief

MEASURING SATISFACTION OF TOURISTS WITH DENTAL SERVICES IN KVARNER REGION

Romina Alkier
Jasmina Okičić
Vedran Milojica

Abstract

The purpose of this paper is to determine the current state of dental tourism in Kvarner region through measuring their satisfaction with dental services. Relevant scientific literature was analyzed with the goal of addressing the relevance of measuring satisfaction of tourists with dental services. Empirical research was conducted on the respondents who used services of dental clinics in Kvarner region. A structured questionnaire with closed questions was distributed physically in dental clinics, and online. A total of 125 dental tourists participated in the research. Findings indicate a high level of satisfaction with quality of dental service, cultural proximity, quality of information, price, and supporting services. Based on the findings developmental activities for further improvement were proposed.

Key words: dental tourism, satisfaction, dental services, Kvarner region.

INTRODUCTION

Millions of tourists travel to other countries to use various medical services. Most common reasons are ability to get a particular procedure or treatment cheaper and of better quality than in their homeland, and from medical experts who speak tourist´s language and share their culture. Also, they might be interested in using medical procedures that are not approved in their homeland. The most common medical tourism services imply cosmetic surgery, fertility treatments, cancer treatments, transplantations, and dental services (CDC U.S. Centres for Disease Control and Prevention, n.d.). Dental services, as part of medical tourist offer belongs among the most prefered services, for which the demand is rising. The data published by Statista indicate that dental services are second most wanted in the plethora of medical tourism services (Statista, 2024). Many countries worldwide are developing dental tourism and are focused on providing high-quality dental care with affordable prices to tourists. *Poland* offers cheaper prices

for dental services in relation to numerous Western countries. Numerous clinics and hospitals have an acreditation from respected international bodies ensuring high quality standards of dental care. The most famous Polish destinations of dental tourism are Krakow and Warsaw. In Poland tourists can save up to 50% of the amount they would pay for dental services in private dental practices in the United States and United Kingdom. *Thailand* is famous for its world leading dental clinics. Dental specialists attended school and trained abroad before returning to their homeland and financing the opening of their own clinics. Some of these clinics have a JCI acreditation meaning they offer top quality services including dental services under sedation for patients who are afraid of major dental procedures. *Turkey* is another dental tourism destination that is visited by Eastern and Western tourists who prefer to use low cost and high-quality dental procedures in diverse cosmetic and orthodontic dental clinics. Medical tourism, and dental tourism has been recognized as relevant for the Turkish economy, and Turkish government is investing efforts in developing and promoting it. Dental specialists are world famous for their medical training abroad as well. Ministry of Health also contributes to its successful development through introduction of certifications, this way ensuring all dental service providers healthy experiences for dental tourists. *Dubai* is also becoming more and more famous for its dental tourism offer, considering that people from United Kingdom, Germany, United States, Austria and Switzerland travel there for dental procedurs conducted by top qualified dentists. Some of the most successful dental clinics have opened in Dubai to provide their services to tourists who visit Dubai; e) *Mexico* is visited significantly by Americans for dental services due to them being cheaper. *Croatia* is a famous health tourist destination which has been developing medical tourism offer, and in particular dental tourism. Due to growing number of dental clinics, it is offering cheaper dental services in comparison to other destinations. Healthcare services in Croatia operate under European Union law which guarantees safety for tourists who are in search of high quality, reliable and safe dental services (MTM Editorial Team, 2024). In order to be able to satisfy dental tourist´s needs, attention needs to be paid to the provision good quality medical (dental) services and ensuring maximum satisfaction of patients, in order to stimulate them to become loyal users of dental services, and to recommend it to others.

Dental clinics in Kvarner, and especially in Istria and Rijeka were among the first ones to recognize the potential of attracting patients from the rapidly developing Italian tourist market. They started conducting marketing activities in the late ninetites in Northern Italy. Good traffic connections, and affordable prices resulted in successful attraction of tourists motivated by dental services. Some dental clinics are doing their business quite successfully due to the following reasons: a) they have never compromised the quality of their work, as well as the used medical materials; b) attention is placed on dental professional´s knowledge and experience; and c) Kvarner is rich in tourist infrastructure. This way tourists can use the accommodation, and so much more. Croatia´s accession to the European Union also contributed significantly to its dental tourism development. Dental clinics started developing due to the increasing number of foreign patients, as more available funds were intended for investments into buying more contemporary equipment and education of dental professionals. This resulted in Croatia, and Kvarner as its region, becoming more recognizable and profiled as a high-quality and low-cost center of Croatian dental tourism (Total Croatia Dental, n.d.). In order to maintain this

success, dental clinics management needs to focus on improving their dental service offer and quality, measure the level of satisfaction of dental tourists, and based on the findings make the necessary improvements. The purpose of this paper is to determine the level of satisfaction of tourists who visit the Kvarner region due to its dental tourism offer and discuss potential improvements.

THEORETICAL BACKGROUND

Satisfaction represents a precondition of loyalty of medical service users (Ferreira et al., 2023; Alibrandi et al., 2023; Mammadov & Gasanov, 2017). Patient satisfaction represents the extent to which they are satisfied with the health care services provided by their health care providers. Patient satisfaction represents one of the most significant factors based on which it is possible to determine the achieved success of a particular health care facility (Manzoor et al. 2019). Satisfaction of patients with healthcare services are in focus of modern scientific research studies (Kim et al., 2008; Ziapour et al., 2016). Patients approach medical service providers with particular needs, and expectations that those will be met. In order to be able to satisfy them, primary focus needs to be placed on ensuring top quality of medical service, satisfying patient´s needs to the full, and if possible, to surpass them (Ferreira et al., 2023). This is in accordance with the research of Berkowitz et al. (2021) who state that satisfaction of patients may be influenuced by multiple factors, like their expectations of care (every patient approaches medical professional with expectation of experiencing top quality medical service), communication with the medical staff (patient must feel relaxed and trusting when talking to the doctor and other staff members), responsiveness of a doctor and other staff members (all the responses provided need to be based on knowledge, professionalism, understanding, and trust), cleanliness (during the medical procedure, and in the medical facility in general), ability of proper pain management (all medical services should be provided with minimum of pain, or completely painless), and timely responses on phone calls (setting up the appointments for a consult, delivering the test results when necessary, providing necessary information).

Dental tourism is one of the most developed elements of medical tourism in the world, registering a significant growth (Oltean et al., 2020). According to the American Dental Association, it is defined „as the act of travelling to another country for the purpose of obtaining dental treatment“. Dental tourists usually choose to travel abroad for dental services due to the cheaper prices, better level of quality in comparison to the offer of domestic dental clinics, avoiding long waiting for services in domestic dental clinics that are covered by the health insurance, or simply because some dental specialists do not offer specific dental services that tourists are searching for. Other elements of the tourist offer may also be taken into consideration in their decision-making process, and especially if their mind the destination is profiled as renowned and an attractive one (Demonja & Uglješić, 2020; American Dental Association (Resolution 28H-2008) 2009). Tourist destinations must have more value than just appropriate location for the patient, in order to be considered a dental tourist destination. The value of a dental service stimulates the satisfaction of dental tourists. Dental tourists are in search for high-quality dental services, which is the main motive when choosing a particular dental clinic, and a

dental destination. By quality of dental care, it is considered how dentists and other medical staff members in dental clinics provide care for their patients. Dental services need to be provided in an effective and safe manner. In order to achieve this, medical staff of the dental clinic need to uphold the acreditation standards. Providing good quality dental services represents the key for preserving the existing, as well as attracting new international patients. This is the reason why dental service providers are focused on creating value for their patients, in order to enable them to have top experiences, and make them feel satisfied. However, in order to make them feel satisfied, it is necessary to fullfill and surpass their expectencies. (Živković & Brdar, 2018; Chillimuntha et al., 2024; Zoltan & Maggi, 2010). In order to be able to achieve this success, it is important to measure the level of satisfaction of dental tourists and make necessary improvements in accordance with the research results. So far research published on dental tourism is still rather scarce in relation to medical tourism in general. Papers are mostly focused on determining dental tourist´s satisfaction with dental services, and the effect of their satisfaction on their revisit intention. Jaapar et al. (2017) conducted empirical research on inbound tourists from Europe, New Zealand, Australia, Southeast Asia and other countries. Their idea was to determine what is the precise profile of dental tourists, their motives for visiting a destination, and level of satisfaction. They have determined that quality of dental services, provision of good quality information about dental tourist offer, cultural similarities, ability to reduce costs, and provision of supporting services all contribute to dental tourist´s satisfaction. The focus of Kesar & Mikulić´s (2017) exploratory research was on determining the attitudes of dental tourists in terms of their satisfaction and dissatisfaction with attributes of dental tourist offer in the city of Zagreb. Their findings revealed that their satisfaction or dissatisfaction are determined mostly by the attributes like quality of product/services as well and professionalism and competence of dental clinic staff. On the other hand, attributes like appointment schedule, availability of information, and prices of dental service have proven to have a relatively weak influence on patient´s level of satisfaction. Akbar et al. (2022) analyzed the influence of quality of dental services, access to information about the offer of dental services, and possibility of saving costs on dental tourist´s satisfaction. The satisfaction with the offer can be considered satisfactory since a significant number of attributes were marked with a mark above 4,00, respectively a high mark. The following attributes were marked with a high level of satisfaction: possibility of selection of a preferred dentist (which indicates the loyalty to the professional), quality of registration system, decoration and design of the dental clinic, patient´s waiting time before being provided with the dental service, quality of equipment used for dental treatments, communication with dental tourists (provision of information about the dental services, information availabe in the waiting room), medical staff (their hospitality, dentists' professional behavior, throrough dental assesment, explaination of the potential choices in terms of dental treatments, answering patient´s questions, provided explanations regarding the treatment costs prior the actual treatment, provision of health advices, upholding of the scheduled appointment of the dental treatment, dentist´s competencies and qualifications), hygiene (of the dental procedure, sanitary facilities, and clinic in general), transportation services to the dental clinic, noise management, sense of safety during the stay in the dental clinic, provision of facilities for disabled, dental treatment costs, overall satisfaction of the dental treatment, etc. Only two attributes were marked

with a moderate mark (overcrowding in the dental clinic, and facilities provided by Bali Health Tourism Assembly).

Youssef Abouzied (2022) conducted the assessment of the influence of dental centres in promotion of dental tourist offer in Egypt. Attention was paid to satisfaction of tourists who visit Egypt for its dental services. A high level of satisfaction with dental services was determined in the study (patient´s sense of warmth when interacting with the dental centre, suitability of price of dental services and booking experience, quality of service provided by the sales service, accuracy of services provided and employees, marketing and promotion activities, and implementation of contemporary technology in dental services). Performance of employees in dental centres was also marked with a high mark (sense of appreciation during the interaction with the employees, employee experience in presentation of dental services and dealing with dental patients, employee attractiveness and clear way of communicating, time management and skills of persuasion, employee´s knowledge about dental services and use of positive language, interaction with patients in function of increasing their loyalty, sense of appreciation when a patient complains and employee´s interest in solving the problem). Research (Lwin et al., 2021; Saub et al., 2019; Akbar et al., 2020; Ramos & Cuamea, 2023) has also proven that tourist´s satisfaction with dental services significantly influences their revisit intention in the future. Findings like these have a significant relevance in further planning of developmental activities and improving the current state of dental tourist offer of a destination. The state of dental tourist offer in Kvarner region is unexplored, which justifies undertaking of the empirical research. Based on that, the authors propose the following research question: *How satisfied are dental tourists with the dental tourist offer of Kvarner?*

METHODOLOGY

Authors conducted empirical research to determine the level of satisfaction of tourists with dental services in the Kvarner region. A structured questionnaire with closed questions was used, and statements were prepared based on the research of Ramos and Cuamea (2023). A five-point Likert scale was used asking the respondents to mark their level of agreement with the offered statements. The questionnaire was distributed physically in dental clinics in Kvarner region, and online by using Google docs forms sent through e-mail by dental clinics personnel to their patients, and through social networks. The participation was voluntary, and anonimity was entirely preserved. A purposive sampling technique was applied, and a total of 125 respondents participated in the research in the period from May until September 2024. The collected data was analysed using the statistical package SPSS, and methods of descriptive statistics were implemented.

FINDINGS AND DISCUSSION

Following the authors will present the results of the empirical research. Table 1 represents the sociodemographic characateristics of the respondents.

Table 1. Sample description

Characteristic	Frequency	%
Respondent's sex		
Male	58	46.4
Female	67	53.6
Age category		
Age category: 25-34	21	16.8
Age category: 35-44	51	40.8
Age category: 45-64	30	24.0
Age category: 65+	23	18.4
Marital status		
Unmarried/single	13	10.4
Married	67	53.6
Separated/Divorced	7	5.6
Domestic partnership	37	29.6
Widowed/Widower	1	0.8
Education		
Senior middle school or less	2	1.6
Undergraduate	23	18.4
Graduate and above	88	70.4
Technical secondary school	12	9.6
Household income (in Euros)		
500,00 to 1,000	1	0.8
1,001 to 1,500	2	1.6
1,501 to 2,000	19	15.2
2,001 to 2,500	45	36.0
2,501 to 3,000	44	35.2
3,001 to 3,500	11	8.8
3,501 +	3	2.4
Employment status		
Employee	62	49.6
Retired	29	23.2
Self-employed	33	26.4
Student	1	0.8
Total	125	100

Source: Author's research

Within the sample prevail female respondents (53,6%), while there were 46,4% male respondents. None of the respondents chose the option of not expressing their gender. According to the age category, 40,8% of the respondents belong to the age group 35-44, followed by the ones in the age group 45-64 (24,0%), 65 and more (18,4%), and finally 25-34 (16,8%). In terms of their marital status, 53,6% of the respondents are married, 29,6% live in a domestic partnership, 10,4% are unmarried or single, 5,6% are separated or divorced, and 0,8% are widowed. The majority of the respondents have a graduate degree or more (70,4%), 18,4% have an undergraduate degree, 9,6% have a technical

secondary school diploma, while only 1,6% have a senior middle school diploma or less. In terms of the monthly household income, 36,0% of the respondents belong to the monthly income group 2,001 to 2,500€, followed by the groups 2,501 to 3,000€ (35,2%), 1,501 to 2,000€ (15,2%), 3,001 to 3,500€ (8,8%), 3,501€ and more (2,4%), 1,001 to 1,500€ (1,6%), and 500,00 to 1,000€ (0,8%). A total of 49,6% of the respondents are employed, 26,4% self-employed, 23,2% retired and 0,8% students. According to the country of origin, respondents were mainly from Italy (43.2%), followed by Slovenia (34.4%), Croatia (17.6%), Austria (3.2%) and Turkey (0.8%).

Table 2. Satisfaction with quality of dental service

	N	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**
Personalized care	125	4	5	4.76	.429
Dental clinic with a certification/accreditation scheme	125	3	5	4.75	.452
Qualified and competent dental professionals	125	3	5	4.73	.482
High quality/standard of dental care	125	3	5	4.66	.491
Variety of payment methods: insurance/debit/credit card	125	3	5	4.62	.518
Variety of dental specialist services	125	3	5	4.59	.510
Cleanliness and sanitation of the facilities	125	3	5	4.52	.533
Use of high technology for dental care	125	2	5	4.34	.671
Valid N (listwise)	125				

Source: Author's research

Results from table 2 indicate a high level of satisfaction with the quality of dental services, since all of the arithmetic means are above 4,00. The highest mark was registered for personalized care (AM=4.76), followed by dental clinics being certified respectively having an accreditation scheme (AM=4,75), qualifications and competency of dental professionals (AM=4,73), high quality and standard of provided dental care (AM=4,66), variety of payment methods (AM=4,62), variety of dental specialist services (AM=4,59), cleanliness and sanitation of the facilities (AM=4,52), and use of high technology for dental care (AM=4,34).

Table 3. Satisfaction with cultural proximity

	N	Minimum	Maximum	Mean	Std. Deviation
Communication using the language that I am familiar with	125	2	5	4.50	.630
Geographical proximity (i.e. not far from the tourist's country)	125	2	5	4.10	.745
Familiarity with the city	125	2	5	4.00	.833
Family/relatives/friends place of residence	125	1	5	3.97	.803
Valid N (listwise)	125				

Source: Author's research

The results for cultural proximity show that the highest level of satisfaction has been expressed with resopondent´s ability to communicate in the language that they are familiar with (AM=4,50), followed by the geographical proximity to the respondent´s country of residence (AM=4,10), familiarity with the city (as a tourist destination) (AM=4,00), and family/relatives/friends place of residence (AM=3,97).

Table 4. Satisfaction with quality information

	N	Minimum	Maximum	Mean	Std. Deviation
Communicate/consult with dental providers via the internet/telephone	125	2	5	4.60	.568
Availability of information on dental clinics offering dental care	125	3	5	4.58	.543
Word-of-mouth (i.e. recommendations from relatives/friends)	125	2	5	4.53	.547
Patient testimonial (i.e. good reviews on the internet, social media, Web pages, etc.)	125	2	5	4.50	.617
Valid N (listwise)	125				

Source: Author's research

Quality of information is of significant importance, and in particular in the decision-making process when choosing a dental clinic, and a destination. The respondents expressed the highest level of satisfaction with communicate/consult with dental providers via the internet and/or telephone (AM=4,60), followed by the availability of information on dental clinics offering dental care (AM=4,58), word-of-mouth (i.e. recommendations from relatives/friends) (AM=4,53), and patient testimonial (i.e. good reviews on the internet, social media, Web pages, etc.) (AM=4,50).

Table 5. Satisfaction with price

	N	Minimum	Maximum	Mean	Std. Deviation
Affordable dental care (lower prices compared to my city of residence)	125	3	5	4.67	.535
Quality ratio price	125	2	5	4.62	.577
Valid N (listwise)	125				

Source: Author's research

Prices of dental services represent one of the most important reasons for choosing a dental clinic and a dental destination. The AM for affordable dental care (lower prices compared to my city of residence) was 4,67, while for quality ratio price it was 4,62.

Table 6. Satisfaction with supporting services

	N	Minimum	Maximum	Mean	Std. Deviation
Tourist facilities and attractions (restaurants, museums, etc.)	125	2	5	4.29	.579
Transport service/connectivity	125	2	5	4.19	.605
Easy access to the city	125	2	5	4.18	.559
Valid N (listwise)	125				

Source: Author's research

In terms of the supporting services, the highest mark was given for Tourist facilities and attractions (restaurants, museums, etc.) (AM=4,29), followed by the transport service/connectivity (AM=4.19), and easy access to the city (AM=4,18).

DISCUSSION AND CONCLUSION

The paper analyzes the relevance of measuring the level of satisfaction on the example of dental tourists in the Kvarner region. Analysis of the theoretical findings indicates that dental tourism is developing significantly. Dental tourists choose to travel more and more due to the cheaper and better-quality dental services abroad. Kvarner region has been registering growth of dental tourism development over the years, however, as previously stated, no empirical research has been conducted in order to determine its current state. *Quality of medical (dental) services* represents a precondition of tourist´s satisfaction and loyalty (Akbar, et al., 2020; Chillimuntha et al., 2024; Zoltan & Maggi, 2010; Jaapar et al., 2017; Kesar & Mikulić, 2017). The results of empirical research have shown a high level of satisfaction among dental tourists who choose to visit the Kvarner region for its dental service. The results of satisfaction indicate that dental service providers are investing significantly in quality and diversity of their dental service, obtaining contemporary technologies used for the purpose of providing dental services, and employment of top-quality dental professionals. Dental providers with the best qualifications and competencies will be able to provide the highest level of quality and standard of dental care to their patients. *Cultural proximity* indicates how similar cultures

are among two or more countries (Takayama, 2013). Cultural proximity is extremely relevant in tourist´s behaviour and perceptions, in the sense that the greater the similarity of the percieved culture of a particular destination, the greater the possibility for them to choose it for their holiday (Guan et al., 2022). Our results have shown that dental tourists have expressed the highest level of satisfaction the ability of communicating in a familiar language, which significantly contributes to their entire positive experience and reduces any possibility of potential missunderstanding. Geographical proximity can also be a significant factor in dental tourist´s decision-making process. Some tourists can spare an extremely limited amount of time for dental procedures, or maybe they are not interested in traveling to a far away destination. They also might prefer to choose a destination based on how they feel familiar with the characteristics of its offer, or if they have friends and family there who they might visit along the way. This is the reason why they might be more prone to choose dental destinations in their vicinity. *Quality of information* (their clarity and appropriateness) represents a precondition of tourists being able to make an informed decision on whether a particular dental procedure is right for them, and based on that knowledge decide to visit a destination. Medical (dental) services are intangible prior to the purchase, which means that dental service providers need to provide detailed and correct information about the dental tourist offer in order to earn their patient´s trust. Online reviews also represent an important source of information and can contribute to the positive decision-making (Runnels & Carrera, 2012; Moslehifar et al, 2016; de la Hoz-Correa et al., 2018; Ahani et al., 2021). High level of satisfaction with quality of information in our study indicates that dental service providers are focused on establishing excellent communication and provision of consults with (potential) patients online and by telephone, providing detailed and quality information, as well as the insight into the online reviews of patients who used their services. Forsyth & Dwyer (2009) emphasize that competitiveness of *prices* represents one of the most important components in achieving destination´s competitiveness on the tourist market, considering that studies (Zoltan & Maggi, 2010; Papakoca & Petrovski, 2021; Chongthanavanit, 2018) have proven their importance in the decision-making process. Satisfaction with the prices was also expressed as high which means that dental services provided are affordable for them, respectively they are lower in relation to the prices in their place of residence, and that the quality of dental services provided justifies the price they were charged for. *Supporting services* contribute to the overall experience of dental tourists as well, despite not being the primary motive of visit (Jaapar et al., 2017; Vengesayi et al., 2013; Robustin et al., 2020). Dental tourists have expressed high level of satisfaction with them which means that they are interested in exploring them and spending additional funds.

In order to maintain this positive trend, dental service providers propose the following: a) monitoring the changes on the dental tourist market and well as the the motives of the dental tourists who choose to visit Kvarner, and make the necessary changes in terms of improving quality of dental tourist offer; b) employ top-quality dentists and invest in expansion of their knowledge and competencies; and c) conduct appropriate promotional activities. In terms of the limitations of this research, the authors emphasize the small statistical sample. They will continue collecting the data, based on which it will be possible to make more general conclusions.

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DENTAL TOURISM: WHAT INFLUENCES DENTAL TRAVELERS´ REVISIT INTENTION TO KVARNER?

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Abstract

This paper aims to determine tourists' satisfaction with the elements of dental tourist offers in the Kvarner region and its influence on their future revisit intention. A structured questionnaire was used online and distributed on-site in dental clinics. The respondents were visitors to Kvarner because of the use of dental medical services. A purposive sampling technique was applied and data were collected from May to June 2024. In total, 103 valid responses were obtained. The basic measurement instrument used was based on the dental traveler model developed by Ramos and Cuamea (2023). An exploratory factor analysis was used to determine the factors of the dental traveler model. The following factors were determined: quality services (F1), quality information and price (F2), supporting services (F3), and cultural proximity (F4). It has been determined that all factors are significant predictors of return intention. These findings can be used as a starting point for further improvement of dental tourist offers by their providers and in developing marketing strategies aimed at attracting new and preserving loyal dental tourists. This study has potential methodological limitations, owing to the poor sample size. Small samples can generally lead to biased results; therefore, further work is required to gain a more complete understanding of the effects of quality service, quality information and price, supporting services, and cultural proximity on return intention.

Key words: dental tourism, dental tourists, dental services, Kvarner.

INTRODUCTION

Medical tourism has been registering progressive growth due to the increase in tourists' mobility, its positive economic effects on the destination´s economy, and global public health (Oltean et al., 2020 according to Enache et al., 2020; Hall, 2011; Turner, 2008; Bookman and Bookman, 2007). Its development has significantly changed the healthcare system in numerous countries that have chosen to focus on its development. The aim is to provide tourists with high-quality medical services at lower costs for tourists and, at

the same time, to earn profit. The development of this type of offer has enabled many destinations to profile themselves as targets for tourists who travel, motivated by medical services (Alkier et al., 2021; Lubowiecki-Vikuk and Dryglas. 2019). Dental tourism is one of the most developed elements of medical tourism. It participates in world medical tourist flows with 15%, being the second most developed one after cosmestic surgery (25%) (Statista, 2024). It is expected that the global dental tourist market will grow at a CAGR of 12,22% in the period 2024-2029, respectively from 4,221 million USD in 2024 to USD 7,513 million in 2029. The current market drivers of dental tourism development are the yearly increase in the world population suffering from dental illnesses, the aging population, and the high costs of dental services (Market Data Forecast, 2024). Worldwide, destinations are actively developing dental tourism. According to the Medical Travel Market (2024), the leading dental tourism destinations are Poland, Thailand, Turkey, Dubai, Mexico, and Croatia.

In Croatia, dental tourism has registered growth due to significant investments in its quality and advertising on social media. Dental clinics situated near state borders are attracting foreign tourists motivated by cheaper and high-quality dental services, particularly those from neighboring countries such as Slovenia, Italy, Austria, and Germany. Advertising activities on social networks have enabled dental clinics to promote their services more efficiently and reach a larger number of potential visitors. Dental clinics that were able to recognize this and take advantage of the opportunities were able to develop their business further and achieve competitive advantages in relation to their competition (Demonja & Uglješić, 2020). For decades, Croatia has been actively developing its health tourism offer and registering success in the world tourist market. The results of the pilot research TOMAS Health Tourism conducted in 2018 support this. In terms of visit frequency to Croatia for dental services, 43,4% of foreign visitors visit six or more times, and 29,5% visit to 3-5 times per year, indicating that they are loyal consumers. Tourists expressed high levels of satisfaction with the elements of dental tourist offers (staff kindness, cleanliness of space, equipment quality, quality of individual treatments and procedures, staff expertise, total offer of the clinic, diversity of dental services, offer innovativeness, price-quality ratio, availability of information about the offer, atmosphere, organizing transport and/or stay, completeness of information about treatments and procedures, and adaptability of the clinic to tourists with special needs). Adherence to the arranged time of appointment was the only element that was given a moderate mark (Marušić et al., 2018). Previous results show high satisfaction of tourists with dental tourist offers and their loyalty, which can indicate that Croatia is progressing in this segment. In order to be able to plan its future development, further research needs to be conducted, and in particular in Kvarner region, a destination with a rich tradition in health tourism development. Kvarner has the potential to become even more recognizable in the tourist market due to its dental tourism offer. This study aimed to determine the satisfaction and factors that influence a tourist´s intention to revisit Kvarner for its dental services. After the introduction, the theoretical background is presented, followed by the methodology, findings, and concluding remarks.

THEORETICAL BACKGROUND

A large number of research papers has been published focusing on satisfaction of tourists with medical services, and their intention to revisit the destination (Anish et al., 2016; Kesar & Mikulić, 2017; Rahman et al., 2018; Mikulić et al., 2020; Chitthanom, 2020; Bader et al., 2023, etc.). Tourists' satisfaction with medical (dental) services (Alsarayreh et al., 2017; Jaapar et al., 2017; Oh & Kim, 2017; Sánchez-Rebull et al., 2018) and their influence on their revisit intention (Quintal & Polczynski, 2010; Singh & Singh, 2019; Farruk et al., 2020; Cham et al., 2021) represent an important concept of consumer behavior in tourism. In order to be able to fully satisfy the needs of dental tourists, dental service providers need to focus on providing them high-quality dental services and tracking their level of satisfaction and intention to revisit. The information obtained enables dental service providers to determine where to focus on improving the quality of dental services and the patient´s entire experience (Sharka et al., 2024; Lin et al., 2020; Righolt et al., 2019). Jaapar et al. (2017) emphasized that the quality of dental services needs to be the primary focus for future success of dental tourism development, which is why world dental tourism destinations have focused on improving quality standards of dental care, resulting in tourists' greater satisfaction, positive word of mouth, and growth of revisiting intention (Barrowman et al., 2010). Stimulating tourists to revisit brings the following positive effects: 1) a significant increase in the destination´s tourism revenue and a reduction in marketing costs due to repeat visitors being stimulated to revisit; 2) showing a tendency to revisit a destination indicates that tourists are satisfied with the provided services; and 3) interest in positive word-of-mouth to others (Heydari Fard et al., 2019; Darnell & Johnson, 2001). A small number of published studies (Siripipatthanakul, 2021; Intzes & Nuangjamnong, 2024; Sharka et al., 2024) have analyzed the level of satisfaction of patients with dental services and their loyalty to the dental service provider. Siripipatthanakul and Vui (2021) focused on determining the mediating effect of dental patients' levels of satisfaction with dental practice factors and patient loyalty. Patient satisfaction has been determined to be a relevant mediator between factors related to dental practice (dental services, staff services, facilities, and prices) and patient loyalty. In addition, it has been determined that dental services, staff services, and prices have a direct influence on patient satisfaction. Similar findings were found in a study by Siripipatthanakul and Bhandar (2021), who determined that the most important factors influencing dental patients' satisfaction and loyalty (tendency to revisit the dental clinic and recommend) were patients' perceptions of dental staff services, prices, and facilities. Sharka et al. (2024) observed the effects of factors affecting the quality of dental services on patients' intention to revisit dental clinics. Factors related to *dental medical staff* (professionalism and knowledge, ability to explain the treatment plan in a clear and precise way, ability to answer any question, and their clinical skills), *cost-effectiveness* (provision of quality dental services at a reasonable price, provision of free dental services, and provision of high-quality dental care in good value at current price), and *responsiveness* (providing timely information on dental service performance, providing fast service to patients, willingness to help them, and interest in providing them with answers to their questions) have a significant influence on revisit intention. Alhidari and Alkadhi (2018) discovered that a patient´s perceived value influences their loyalty towards their dental service provider. However, e-WOM and the price of dental services have proven to have no effect. Intzes and Nuangjamnong (2024) also determined the

presence of a relationship between dental service quality and the satisfaction of dental patients, as well as the precondition of patient loyalty.

According to the American Dental Association (2009), dental tourism is defined as "the act of traveling to another county for the purpose of obtaining dental treatment." It represents a subcategory of medical tourism, in which the primary aim of a person is to travel to another country searching for dental treatments that they cannot afford within their local healthcare delivery system (Ancy et al., 2020). Dental tourism has been registering significant growth owing to its continuous progress in the development of quality of materials, dental techniques, and technology, which enables providers of dental services in developing countries to provide dental services to tourists at a cheaper cost in comparison to their competition in developed countries. Dentistry services, particularly cosmetics, are very expensive. Many dental clinics offer high-quality dental services, including advanced procedures and top dental materials, in accordance with international standards, all at cheaper prices than in the tourist´s country (Onesimo et al., 2017; Youssef Abouzied, 2022). Research on dental tourism, particularly focusing on tourists' satisfaction and revisit intentions, is scarce. Lwin et al (2021) analysed the foreign tourist´s satisfaction with dental services, and which elements influence their satisfaction. The results showed a high level of satisfaction with dental services. The respondents evaluated the quality of dental services, location, accessibility, and appeal of the destination as factors that have a positive and significant influence on the satisfaction of dental tourists. Saub et al. (2019) analyzed satisfaction of inbound tourists with experienced dental services, and their revisit intention. Significant satisfaction was determined with the dental facilities in the clinic, technical competencies, and interpersonal factors. Dental clinic facilities and dentists' technical competencies were the main factors influencing tourists' intention to revisit. Akbar et al. (2020) analyzed the relationship between quality of dental services and cultural equality to satisfaction, and loyalty in dental tourism by conducting a systematic review of the literature. Dental service quality and cultural equality had a significant impact on the satisfaction and loyalty of dental tourists. Ramos and Cuamea (2023) determined that factors such as quality of service, cultural proximity, price, and support services have the most significant influence on tourists revisit intention.

For the purpose of our study, quality services, quality information, price, cultural proximity, and supporting services were chosen as pull factors because they motivate tourists to choose a particular destination and use medical (dental) services during their stay. *Quality of service* (QoS) represents a precondition for achieving business success. Tourists who experience a high level of quality dental services will develop a sense of trust towards the dental service provider, be satisfied, and become loyal patients. On the other hand, dental clinics will get better reviews of their performances (online and mouth-to-mouth), build an excellent reputation, and achieve competitive advantages in the medical tourist market. To do that, the provision of dental services needs to be based on the maximum level of expertise, as well as the professional behavior of staff in dental clinics. Particular attention needs to be paid to developing a diverse offer of dental services, implementing quality standards, investing in the most recent technology necessary for provision of dental services, certifications, and employing qualified and competent dental professionals who will provide personalized care to patients. *The*

quality of information about the dental tourist offers directly reflects the dental tourists' decision-making process, developing a sense of trust in the dental service provider, as well as on the entire experience in a dental clinic, and during their stay in a destination. The information needs to be provided in detail, precisely, transparently, and clearly, which enables patients to make better decisions for themselves. When discussing *costs*, dental tourists search for dental care services that are in accordance with their home budget. However, they expected to achieve value for money. Being able to obtain high-quality dental services at lower prices compared to dental services provided in their home country will stimulate them to travel abroad and become loyal patients. *Supporting services* have a strong influence on the revisit intention of dental tourists because of their effect on their entire travel experience and, in particular, their sense of comfort. Being able to organize transport services for a dental tourist from the airport or bus station to the clinic and vice versa can significantly affect them feeling relaxed and without worry during their stay. Easier access to the destination is very important if they are traveling by car. Offers of tourist facilities (such as restaurants, coffee shops, museums, and galleries) that are not a primary motive for a visit also contribute to their unique experiences. *Cultural proximity* is „a measurement of differences in tourists' home culture in relation to the culture at the destination" (Kastenholz, 2010). The closer the cultural proximity of a dental destination to the dental tourist´s home country, the greater the potential for them to revisit in the future. Dental tourists wish to feel comfortable and familiar with their surroundings. They can experience this by communicating with their dental service provider and the domestic population in the destination in the language that they know, having their family and friends in the vicinity, not being too far from their home country, being familiar with the specifics of the destination they are visiting, etc. (Ramos & Cuamea, 2023; Lwin et al., 2021; Akbar et al., 2020; Ancy et al., 2020; Jaapar et al., 2017; Chang et al., 2016; John & Larke, 2016; Hall, 2014; Lertwannawit, & Gulid, 2011; Gill & Singh, 2011).

The findings presented in this chapter indicate the importance of measuring the satisfaction and revisit intentions of dental tourists. To date, only a small number of research papers on this topic have been published, which justifies this research. Awareness of the elements of dental services is relevant for dental tourists, and their level of satisfaction and influence on their revisit intention are significant for dental service providers and destination management, since they indicate what can be improved and developed further. In accordance with the previous statement, the following hypothesis was proposed: S*atisfaction with the elements of dental tourists positively affects the return intention of dental tourists.*

METHODOLOGY

Data source and sample

For this research, the authors used a structured questionnaire with closed questions to collect data, divided into several sections. The first section addresses the dental traveler model developed by Ramos and Cuamea (2023). The second section addresses dental travelers' revisit intention developed by Alkier et al. (2019). The final section covered

the socioeconomic characteristics of the respondents. A purposive sampling technique is used. Data were collected from May to June, 2024. The questionnaire was distributed both physically in dental clinics and online using Google Docs. A total of 100 questionnaires were distributed in physical form, of which 30 were completed correctly. The remaining samples were electronically collected. In total, 103 valid responses were obtained. The sociodemographic characteristics are presented in the following table.

Table 1. Sample description

Characteristic	Frequency	%
Gender		
Male	49	47.6
Female	53	52.4
Total	103	100.0
Age		
Age category: 25-34	17	16.5
Age category: 35-44	47	45.6
Age category: 45-64	27	26.2
Age category: 65+	12	11.7
Total	103	100
Marital status		
Unmarried/single	11	10.7
Married	59	57.3
Separated/Divorced	7	6.8
Domestic partnership	25	24.3
Widowed/Widower	1	1.0
Total	103	100
Education		
Senior middle school or less	2	1.9
Undergraduate	19	18.4
Graduate and above	70	68.0
Technical secondary school	12	11.7
Total	103	100
Household income (in Euros)		
500,00 to 1,000	1	1.0
1,001 to 1,500	2	1.9
1,501 to 2,000	18	17.5
2,001 to 2,500	40	38.8
2,501 to 3,000	35	34.0
3,001 to 3,500	5	4.9
3,501 +	2	1.9
Total	103	100
Employment status		
Employee	56	54.4
Retired	18	17.5
Self-employed	28	27.2
Student	1	1.0
Total	103	100

Source: Author's research

Most respondents were female (52,4%). According to age, most belonged to the group 35-44 (45,6%), followed by 45-64 (26,2%). A total of 68% have a graduate degree or more. They also have high purchasing power; 38,8% have a monthly income of 2,001,00 to 2,500,00€, and 34,0% have 2,501,00 to 3,000,00€. Most respondents were from Italy (45.6%), Slovenia (31.1%), Croatia (21.4%), Austria (1.0%), and Turkey (1.0%).

Variables and methods

In this research, the authors used the dental traveler model developed by Ramos and Cuamea (2023) and the dental travelers' revisit intention by Alkier et al. (2019). Exploratory factor analysis, correlational analysis, and regression analysis were used to gain a better understanding of the relationships between selected variables.

RESULTS

Variables

The authors used a Likert scale ranging from 1 to 5 (1-total disagreement, and 5-total agreement) to evaluate the elements of the dental tourist offers. Table 2 presents the Arithmetic Mean and Standard Deviation of the variables used in this study.

Table 2. Scales, variables, arithmetic means and standard deviations

Scale	Item	N	Min	Max	x̄	SD
Dental traveler model	High quality/standard of dental care	103	3	5	4.65	.499
	Use of high technology for dental care	103	2	5	4.33	.706
	Dental clinic with a certification/accreditation scheme	103	3	5	4.74	.464
	Qualified and competent dental professionals	103	3	5	4.73	.489
	Cleanliness and sanitation of the facilities	103	4	5	4.56	.498
	Personalized care	103	4	5	4.76	.431
	Variety of dental specialist services	103	3	5	4.61	.509
	Variety of payment methods: insurance/debit/credit card	103	3	5	4.64	.521
	Communication using the language that I am familiar with	103	2	5	4.48	.654
	Family/relatives/friends place of residence	103	1	5	3.96	.779
	Geographical proximity (i.e. not far from the tourist's country)	103	2	5	4.11	.726
	Familiarity with the city	103	2	5	4.07	.744
	Word-of-mouth (i.e. recommendations from relatives/friends)	103	2	5	4.53	.557
	Communicate/consult with dental providers via the internet/telephone	103	2	5	4.59	.585
	Patient testimonial (i.e. good reviews on the internet, social media, Web pages, etc.)	103	2	5	4.50	.640

Table 2. *(continued)*

Scale	Item	N	Min	Max	x̄	SD
	Availability of information on dental clinics offering dental care	103	3	5	4.59	.550
	Affordable dental care (lower prices compared to my city of residence	103	3	5	4.62	.562
	Quality ratio price	103	2	5	4.58	.603
	Transport service/connectivity	103	2	5	4.18	.590
	Easy access to the city	103	2	5	4.15	.550
	Tourist facilities and attractions (restaurants, museums, etc.)	103	2	5	4.26	.577
Dental travelers' revisit intention	I would like to use dental services in Kvarner again.	103	2	5	4.59	.568
	I feel familiar with the dental services in Kvarner.	103	2	5	4.42	.634
	Using dental care services in Kvarner makes me feel relaxed physically and mentally.	103	2	5	4.36	.608
	Costs associated with the dental care services in Kvarner are acceptable for me	103	3	5	4.54	.520
	Variety of dental care services in Kvarner stimulates me to use them again	103	3	5	4.49	.558
	Uniqueness and specificity of dental service offer stimulates me to revisit Kvarner.	103	3	5	4.47	.557
	Apart from dental care services, uniqueness, specificity and preservation of natural resources stimulates me to revisit Kvarner.	103	3	5	4.29	.651
	Apart from dental care services, uniqueness, specificity and preservation of cultural resources stimulates me to revisit Kvarner.	103	1	5	4.05	.845
	I would like to revisit Kvarner due to it being a famous tourist dental destination.	103	2	5	4.29	.571
	I would like to revisit Kvarner due to its high-quality dental care facilities.	103	1	5	4.39	.630
	This destination is worth visiting.	103	1	5	4.51	.624

Source: Author's research

The data in the previous table indicate a high level of satisfaction. The results for quality of service indicated that the highest level of satisfaction was determined for personalized care provided by personnel, followed by dental clinics with certification/accreditation schemes, employment of qualified and competent dental professionals, quality and standard of dental care, and diversity of dental specialist services. In terms of cultural proximity, the highest score was given for the ability to communicate in a language with which the patient was familiar. For the quality of information, the highest score was given to communication and ability to consult dental providers via the internet/telephone, and availability of information on dental clinics offering dental care. When discussing prices, dental tourists expressed a high level of satisfaction with affordable dental care (lower prices compared to the city of residence and quality ratio price). In terms of support services, the highest result was registered for tourist facilities. The results for revisit intention can also be considered satisfactory. All are above 4,00, which indicates that dental tourists are very interested in revisiting Kvarner.

Results of exploratory factor analysis

The authors used an exploratory factor analysis to determine the factors of the dental traveler model. Table 2 presents the factorability of these 21 items. The Kaiser-Meyer-Olkin measure of sampling adequacy was determined to be higher than the recommended value of .6. Bartlett's test of sphericity has also proven to be significant ($\chi 2 = 1174.68$, $p < .05$). The findings showed five factors accounting for 63.40% of the variance. table shows the rotated component matrices.

Table 3. Rotated Component Matrix

	Factor			
	Quality service	**Quality information and price**	**Supporting services**	**Cultural proximity**
High quality/standard of dental care	.739			
Use of high technology for dental care	.805			
Dental clinic with a certification/accreditation scheme	.735			
Qualified and competent dental professionals	.710			
Cleanliness and sanitation of the facilities	.601			
Personalized care	.646			
Variety of dental specialist services	.793			
Variety of payment methods: insurance/debit/credit card	.762			
Communication using the language that I am familiar with				.614
Family/relatives/friends place of residence				.796
Geographical proximity (i.e. not far from the tourist's country)				.669
Familiarity with the city				.817
Word-of-mouth (i.e. recommendations from relatives/friends)		.566		
Communicate/consult with dental providers via the internet/telephone		.821		
Patient testimonial (i.e. good reviews on the internet, social media, Web pages, etc.)		.823		
Availability of information on dental clinics offering dental care		.831		
Affordable dental care (lower prices compared to my city of residence		.737		
Quality ratio price		.620		
Transport service/connectivity			.859	
Easy access to the city			.888	
Tourist facilities and attractions (restaurants, museums, etc.)			.735	

Source: Authors' research

According to the findings presented in the previous table, the extracted factors can be interpreted as follows: quality service (F1), quality information and price (F2), supporting services (F3), and cultural proximity (F4). These factors have also been identified by Ramos and Cuamea (2023), who separated quality information and price into two factors.

Instrument validity

The authors assessed whether the subscales were satisfactorily reliable. They also calculated the total score for each construct for the items representing each factor (Table 4).

Table 4. Scale statistics

Factor	Number of items	AM	SD	Cronbach's Alpha
Quality service	8	37.02	3.07	.880
Quality information and price	6	27.43	2.70	.864
Supporting services	3	12.59	1.52	.860
Cultural proximity	4	16.61	2.22	.760
Return intention	11	48.40	5.30	.934

Source: Authors' research

"Cronbach's alpha is a measure of reliability that ranges from 0 to 1, with values of 0.60 to 0.70 deemed the lower limit of acceptability" (Hair et al., 2014). Having that in mind it may concluded that all scales had an acceptable level of reliability.

Relationship between selected constructs

Prior to the regression analysis, the authors conducted a correlational analysis to determine whether there was any relationship between return intention and the selected factors. There was a positive correlation between return intention and quality service, $r(101) = .637$, $p = .000$; return intention and quality information and price, $r(101) = .539$, $p = .000$; return intention and supporting services, $r(101) = .593$, $p = .000$; and return intention and cultural proximity, $r(101) = .402$, $p = .000$. However, since this study aims to assess the impact of extracted factors, i.e. quality service (QS), quality information and price (QIP), supporting services (SS), cultural proximity (CP) on return intention (RI), the regression model is specified as

$$RI = a+b1*QS+b2*QIP+b3*SS+b4*CP+ \varepsilon.$$

The model was significant, $F(4,98) = 45.34$, $p < 0.001$, meaning that at least one predictor had a significant influence on dental tourists' return intention. Furthermore, the model explained 64.9% of the variance in return intention, with an adjusted R^2 of 0.635. Since the VIF scores were below five for all predictors, there was no multicollinearity concern. The residual plots presented random dispersion, which affirms the model assumptions. This hypothesis has been confirmed since all the factors have proven to be significant

predictors, that is, QS, $p < 0.01$; QIP, $p < 0.01$; SS, $p < 0.01$; and CP, $p < 0.05$, indicating a positive effect on return intentions.

CONCLUDING REMARKS

The purpose of this research was to determine the level of satisfaction of tourists with a dental tourist offer and its influence on the intention to revisit the Kvarner region. The body of literature focused on determining the level of satisfaction of tourists with dental tourism services and its influence on their revisit intention to the destination has proven to be rather scarce, which is not the case with medical tourism. It has been determined that tourists'satisfaction with dental services has a positive influence on their revisit intentions (Saub et al., 2019., Akbar et al., 2020; Ramos & Cuamea, 2023). Research on Croatia and the Kvarner region as dental tourism destinations is non-existent, which justifies this research. The results showing the level of satisfaction can be considered satisfactory, considering that the majority of the elements were marked with an average mark above 4,00. The exception was the element family/relatives/friends' place of residence, which was given a lower mark. It has also been determined that dental tourists show a positive intention to revisit Kvarner in the future due to their dental services, since the quality of service (QS) (Ramos & Cuamea, 2023; Siripipipatthanakul, 2021; Saub et al., 2019), supporting services (SS) (Ramos & Cuamea, 2023; John & Larke, 2016; Lwin et al., 2021), and cultural proximity (CP) (Ramos & Cuamea, 2023; Rafferty et al., 2014) have proven to be significant predictors. Previous research results are partially in accordance with the research of Ramos and Cuamea (2023), who determined in their research that the quality of information does not influence dental tourists revisit intention. The present findings indicate that the state of dental tourism offers can currently be considered satisfactory. In addition to its theoretical contribution, this study also has some practical implications that could be considered useful for both dental service providers and destination management. Dental tourists in Kvarner expressed a high level of satisfaction with dental services. To maintain this, it is necessary to track international trends and make necessary investments in the quality and diversity of dental care procedures, high technology necessary for providing those services, aesthetics of the dental clinic, and employment of top-quality dental professionals. Maintaining good relations with the patients also represents a significant precondition of success, which is why it is advisable to invest in the knowledge of employees in dental clinics (learning about new dental procedures, learning foreign languages necessary for business, improving employees' communication skills, etc.). Prices need to be formed in such a way that they are competitive in relation to other dental service providers, and that they are still sufficiently cheaper than others and enable dental service providers to achieve profit. Quality must justify price. Supporting services also represent an important part of the experience of dental tourists, and they must be provided (transport services, possible arrangements of discounts for restaurants and hotels, etc.). Accordingly, all developmental activities need to be promoted.

This study has potential methodological limitations, owing to the poor sample size. Small samples can generally lead to biased results; therefore, further work is required to gain a more complete understanding of the effects of quality service, quality information and

price, supporting services, and cultural proximity on return intention. However, these findings can be used as a starting point for further improvement of dental tourist offers by their providers and destination management and in developing marketing strategies aimed at attracting new and preserving loyal dental tourists.

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AN ANALYSIS OF DENTAL TOURISTS' MOTIVATIONS FOR VISITING KVARNER

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Abstract

The aim of this paper is to determine the motives of tourists who choose to visit Kvarner region for its dental tourism offer. Authors used a structured questionnaire prepared according to research of Jaapar et al. (2017), which was distributed both physically in dental clinics, as well as online through e-mail and social networks. Data was collected in the period of end of July until October 2025. A total of 136 correctly filled questionnaires were cllected. The data was analyzed with SPSS 21.0, and for data analysis descriptive statistics was used. Findings indicate Kvarner being recognized as a dental tourism destination, since dental tourists visit it motivared primarily by its Dental Care Quality, Dental Care Information access, Cultural Similarity and Cost savings. Supporting services have proven to be the weakest motivating factor. Taking into account the lack of research of this topic, and in Kvarner in particular, these findings can be used by both dental service providers and destination management in the process of improving current dental tourist offer and achieving greater competitiveness on the (dental) tourist market. Due to a small statistical sample it is advised to continue collecting data to get a clearer insight into the motives of dental tourists who visit Kvarner.

Key words: dental tourism, dental tourists, motives, Kvarner.

INTRODUCTION

Over the years medical tourism as a specific form of tourism offer has been registering a rapid and strong development (Alkier et al., 2021), which is confirmed by the latest findings published by Fortune Business Insights (2025) stating that: 1) in 2024 global medical tourism market was estimated at 31.23 billion USD, and 2) that in 2025 it will achieve growth from 38,20 billio USD to 162,80 billion USD in 2032 (CAGR 23,0% in the forecasted period). According to the latest data published by United Nations World

Tourism Organization, Europe as the largest destination region participated the most in the world tourist turnover (747 million of international tourist arrivals (UNWTO, 2025), as well as in medical tourism flows (36.41% in 2024) (Fortune Business Insights, 2025). As visible, world destinations are actively developing their medical tourist offer and actively investing in promotion in order to profile themselves as healthy destinations (Alkier et al., 2021; Lubowiecki-Vikuk & Dryglas, 2019; Barač Miftarević, 2022). Republic of Croatia has been developing its medical tourism offer over the years (Barač Miftarević, 2022; Alkier et al., 2021; Gredičak & Demonja, 2020; Kesar & Rimac, 2011; Najdanović & Palić, 2023), however, very little research has so far been focused on dental tourism. Alkier et al. emphasize in their research that there is a growing number of dental clinics in Croatia, and especially near the state borders that are increasingly focusing on dental tourism offer development by investing in the improvement of quality and diversity of their dental services, and online promotion activities. They offer them according to the cheaper prices, this way successfully attracting tourists from various, but in particularly neighboring countries like Germany, Slovenia, Austria and Italy (Alkier et al., 2024). Kvarner is a Croatian region that is very attractive to tourists. Over the years it has been actively developing its medical tourism offer, with a particular accent to dental tourism in the last ten years. Due to affordable prices and high-quality dental services, not just Kvarner, but other Croatian regions as well are registering growth of this tourist offer (Tomak, 2021). Despite the growing developmental trend, up until now little research has been focused on determining attitudes of dental tourists in Croatia, while research focused on Kvarner region is non-existent. The purpose of research is to determine what are the motives that stimulate tourists to visit Kvarner for its dental tourist offer. The structure of this paper is as follows: after the introduction, authors will present the theoretical considerations of loyalty and satisfaction of dental tourists, methodology, results of the empirical findings, and discussion and conclusion.

THEORETICAL CONSIDERATIONS OF MOTIVATION OF DENTAL TOURISTS

Creating a tourist offer tailored to the specific demands, needs and desires of tourists and their motives for travel was a rarity in the tourism market in the past due to the significant dominance of the classic sun-sea-sand offer. Today that is not the case which is witnessed by many changes that were registered over the years. Accent is paid to the fast changes in qualitative trends, respectively traditional tourism offers, although still dominant, has been significantly transformed into new forms of tourism called Specific forms of tourism, influenced by the changes in tourist preferences, tourism industry, information and communication technology, as well as tourism management and tourism policies. More significant attention is paid on undertaking marketing activities. Development of specific forms of tourism, differentiation of the offer as well as market segmentation enabled for destinations to enter the tourist market in an easier manner (Živković & Brdar, 2018; Ivanović et al., 2016; Alkier Radnić, 2003, 231). In line with the increasingly intense changes, the World Tourism Organization recommends that tourist destinations monitor tourist behavior and, in accordance with their attitudes and preferences, develop and offer tourist products and services that will satisfy their needs. This will ultimately enable destinations to differentiate more successfully in the tourism

market and achieve competitive advantages (Živković & Brdar, 2018; WTO, 1998). Further attention needs to be paid to determining the motives of tourists when choosing their holiday destination, and how satisfied they are with their experiences.

Tourist motivation is increasingly complex today, encompassing a growing number of reasons for travel beyond the classic offer of beach tourism, and health improvement is one of them. As such, it is extremely important in deciding about choosing a holiday destination and is significantly related to the image of a tourist destination that individuals form before and after visiting the destination (Birin, 2017). Socioeconomic factors that can be considered as motives that have significantly contributed to the increase in the number of dental tourist trips are: 1) the cost of dental services in one's own country being too high; 2) the inability to quickly access dental services; 3) people's interest in using dental services elsewhere; 4) the cost of dental services is more expensive compared to the cost of traveling to another destination; and 5) the possibility of obtaining information via the Internet about the offer of dental services, regulations on their provision, service prices, waiting times, and adherence to standards related to the quality of dental services (Dwiastuti & Ratih, 2025; Akbar et al., 2020; Trohel et al., 2016). Following, the results of selected research studies will be presented, showing the most relevant motives of tourists for traveling abroad for dental services. The research of Jaapar et al. (2017) presents the attitudes of tourists who visited Malaysia due to dental services. Findings show that they were motivated mostly by Dental Care Quality (AM=4.39), dental care information access (AM=3.87) and Cost-savings (AM=3.78). Supporting services (AM=3.59) were marked as a moderate motivator, while cultural similarity (AM=3.18) has proven to be the least relevant. Within the Dental Care Quality construct all the elements (qualified and competent dental professionals, high quality/standard of dental care, dental clinic with certification/accreditation scheme, use of high technology for dental care, personalized care, availability of several dental specialist services under one dental clinic and ease of payment via insurance/debit/credit card) were marked above 4.00, indicating its strong relevance in the decision-making process of dental tourists. Access to information about the dental care services is also relevant for them since all the elements (good reviews by others via internet/media, convenient communication with dental providers via internet/telephone, recommendation from relatives/friends, and availability of information on dental clinics offering dental care) were marked just a bit below 4.00, still indicating strong relevance. In terms of Cost-savings, affordable dental care, convenient location of dental clinic and reasonable cost for quality accommodation have proven to be strong motivators, while less interest was shown for using attractive travel/tourism packages and opportunity to visit other tourist attractions. Within supporting services, excellent transport service/connectivity and wide choices of accommodation were the stronger motivators, while less interest was expressed in the availability of language interpreters and good services provided by MHTC. In terms of cultural similarity, only communication using the language that dental tourists were familiar with, and vicinity of their home country has proven to be the most relevant, which was not the case with family and relatives being in a destination, availability of amenities for religious practices and easy availability of food choices. Carmagnola et al. (2012) conducted empirical research on Italian tourists who used dental services abroad. Their main motives for traveling abroad were cheaper price of dental services, as well as possibility of getting full rehabilitation

within a one-week period after their dental work. Besides cheaper price of dental services, the reasons for searching dental services abroad were previous negative experiences with Italian dental service providers (i.e. single prosthetic session lasting up to 6 hours). After using dental services abroad, dental tourists expressed speed of service provision, as well as interaction with the surroundings and the dental staff (their kindness, humane approach, interest in their further treatment procedure, sense of ease, etc.) as positive motivators. In the research of Kotollaku (2024) as motivators for visiting Albania dental tourists expressed good quality of dental services provided by professionals, implementation of high-quality technology, low prices, warranty for dental services, flexibility in arranging the appointment, short period of waiting for the treatment, and visiting a new destination. Cuamea et al. (2017) did a research in Tijuana, Mexico and determined five crucial factors influencing the decision-making process of dental tourists: 1) "Quality-Price Factor" (cleanliness of the clinic, services provided by staff of the clinic, quality perceived by the patients, the price of separate treatments, the treatment follow- up and the speed of service); 2) "Facilities and Technology Factor" (the location of the clinic in the city, physical appearance of facilities (Facade), technology used for dental procedures and swiftness of service); 3) "Length of Time and Price of Treatments Factor" (number of visits required for each treatment, and the total cost of treatment); 4) "Credit Factor" (enabling dental tourists to make partial payments during each visit); and 5) "Urban Image Factor" (referred to driving conditions, like signs, traffic density, conditions of street). Keleş et al. (2026) determined that dental tourist´s motives for visiting Turkey were affordability of dental treatments, implementation of good quality technology, dentists' experiment, short time for providing dental treatments, easy arrangement of dental appointments, and low costs for travel and accommodation. Lower motivation was registered for getting dental treatments unavailable in the home country of dental tourists, tourist attractions, proximity to home country, and cultural and religious affinity. Findings of Filippi et al. (2017) show similar results as previously mentioned, respectively, in terms of motives consider the ratio of price and benefits experienced from dental services, competence of dental professionals, friendliness of the staff, quality of consultation, no reimbursement respectively more favorable treatments, modern equipment for providing dental services, short waiting time for making an appointment, perception of staff in dental clinic as reliable and trustful, and short waiting times in the waiting room.

As visible from previous findings, determining motives through empirical research is significant. Findings like these enable the following:

- determining what are the exact most relevant drivers of dental tourism demand to prevent any type of decisions being made purely on assumptions (Chawla, 2025);
- dental tourists need to be divided into segments to determine their profiles as well as motives since not everybody value dental tourism offer elements in the same manner (Jaapar et al., 2017; Živković & Brdar, 2018);
- determining what are the attribute of dental tourist offers in clinics, and in a destination in general that tourists consider in their decision-making process to plan (dental) tourist offer (Cuamea et al., 2017);
- enabling easier and faster access to dental services through establishment of a planning system which will reduce their time of waiting (Prastiwi et al., 2025);

- sense of safety represents one of the most relevant factors in a decision-making process of tourists when choosing their destination and going on a holiday. It is necessary to ensure that dental tourists feel safe during the process of dental treatment, during their stay in a destination, and post-treatment, respectively after returning home (Doughty et al., 2024);
- satisfaction determinants are closely connected with motives and need to be measured due to their positive experience of dental tourist´s experience, loyalty in the future and interest in positive Word-of-Mouth (Lwin et al., 2021);
- lower prices of dental services also represent one of the leading motives for dental tourists who decide to travel abroad. However, lower prices do not mean lower quality services. Dental service providers focus on offering cheaper high-quality dental services, this way more easily attracting tourists. This value needs to be communicated properly without providing false hopes (Chawla, 2025);
- findings from tracking motives can provide tourism policymakers with valuable insights into better understanding the reasons why people choose to travel abroad for dental services, as well as for forming guidelines for establishing better regulations and finding ways to address ethical and sustainable challenges (Alkier Tomić et al., 2025).

METHODOLOGY

The questionnaire was adapted from the study of Jaapar et al. (2017). Its original instrument contained 2 constructs; however, the satisfaction construct containing 31 items was removed for the purposes of this study. The final version included a motivation construct with 25 items. Questions were focused on determining the sociodemographic structure of dental tourists, their preferences in terms of company during their travel, main purpose of visiting Kvarner, used sources of information about dental care, type of dental care they received during their stay, and their motives for visiting Kvarner (in terms of dental services). A 5-point Likert scale was used for determining the motives (1-least relevant to 5-most relevant), while others were multiple choice questions. A purposive sampling technique was implemented, and collection of data was conducted from the end of July until October 2025. The distribution of the questionnaire was two-fold: a) physically at the reception desks of dental clinics, and 2) online through Google docs form. A total of 136 respondents participated willingly in this research. Internal consistency was assessed using Cronbach's alpha.

Table 1. Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N
.835	.789	25

Source: Author's research

The 25-item scale demonstrated strong internal consistency (Cronbach's $\alpha = .835$), exceeding the recommended threshold of .70 (Tavakol & Dennick, 2011).

EMPIRICAL FINDINGS

In this chapter authors will present the results of empirical research. The following table presents demographic characteristics of the respondents.

Table 2. Demographic structure of respondents

	Frequency (*N* = 136)	
Gender	*N*	%
Female	75	55.1
Male	61	44.9
Age	*N*	%
Lower middle-aged (31-45)	53	39.0
Upper middle-aged (46-59)	44	32.4
Young adult (18-30)	30	22.1
Seniors (60+)	9	6.6
Country of origin	*N*	%
Slovenia	48	35.3
Croatia	25	18.4
Germany	22	16.2
Austria	22	16.2
Italy	19	14.0

Source: Author's calculation based on SPSS 21.0

An insight into the sociodemographic characteristics of dental tourists indicates that most of the respondents are female (55.1%), while 44,9% are male. According to the age group, 39% of the respondents belong to the age group 31-45, followed by the age groups 46-59 (32,4%), 18-30 (22,1%), and 60+ (6.6%). According to the country of origin, most of the respondents, 35,3% are from Slovenia, followed by Croatia (18,4%), Germany (16,2%), Austria (16,2%) and Italy (14,0%).

Table 3. Travel company during a journey

	Frequency (*N* = 136)	
	N	%
With spouse only	72	52.9
Alone	29	21.3
With family/relatives	17	12.5
With friends	13	9.6
With business associate	2	1.5
With children only	2	1.5
Others	1	0.7

Source: Author's calculation based on SPSS 21.0

When choosing their travel company, the respondents prefer to travel mostly with their spouses (52,9%), alone (21,3%), with family/relatives (12,5%), friends (9,6%), business associates (1,5%), and their children (1,5%). Only 0,7% of the respondents choose other options.

Table 4. Main purpose of visit

	Frequency (*N* = 136)	
	N	%
Dental care	125	91.9
Holiday	6	4.4
Business	3	2.2
Conferences	1	0.7
Visiting friends and relatives	1	0.7

Source: Author's calculation based on SPSS 21.0

In terms of the respondent´s main purpose of visit, 91,4% of them tend to visit Kvarner primarily for using dental care services, 4,4% due to holiday, 2,2% for business, 0,7% for conferences, and 0,7% for visiting friends and relatives.

Table 5. Source of information about dental care

	Frequency (*N* = 136)	
	N	%
Internet	123	90.4
Friends/relatives visited Kvarner	57	41.9
Friends/relatives living in Kvarner	44	32.4
Health facilitator	13	9.6
Referred by professionals	11	8.1

Source: Author's calculation based on SPSS 21.0
Possibility of choosing multiple answers

When searching information about dental care in Kvarner, most of the respondents (90,4%) rely mostly on internet, 41,9%, followed by the recommendations of friends and relatives who visited Kvarner (41,9%), friends and relatives who live in Kvarner (32,4%). Lowest result was recorded for health facilitators (9,6%) and references by professionals (8,1%).

Table 6. Type of dental care received

	Frequency (N = 136)	
	N	%
Examination	76	55.9
Simple filling	67	49.3
Consultation	56	41.2
Scaling and polishing	38	27.9
Teeth whitening	36	26.5
Implant	31	22.8
Orthodontics	28	20.6
Root canal treatment	23	16.9
Oral surgery	20	14.7
Other	15	11
Crown/bridge/veneer	13	9.6
Gum surgery	9	6.6
Dentures	5	3.7

Source: Author's calculation based on SPSS 21.0
Possibility of choosing multiple answers

During their stay in Kvarner dental tourists consulted dental professionals due to having an examination (55.9%), simple fillings (49.3%), consultation about future procedures (41.2%), scaling and polishing (27.9%), and teeth whitening (26.5%). A bit lower result was registered for having Implants (22.8%), using Orthodontics services (20.6%), having Root canal treatment (16.9%), and Oral surgery services (14.7%). Lowest result was registered for using other services (11%), having Crowns/bridges/veneers (9.6%), Gum surgery (6.6%), and Dentures (3.7%).

Table 7. Motives of dental tourists for visiting Kvarner

DENTAL CARE INFORMATION ACCESS	**AM**	**SD**
Availability of information on dental clinics offering dental care	4.85	0.355
Convenient communication with dental providers via Internet/telephone	4.71	0.485
Recommendation from relatives/friends	4.24	1.200
Good reviews by others via Internet/media	3.90	1.282
Average mark Dental Care Information Access	**4.43**	**0.494**
DENTAL CARE QUALITY	AM	SD
High quality standard of dental care	4.93	0.262
Personalized care	4.93	0.262
Qualified and competent dental professionals	4.91	0.285
Dental clinic with certification/accreditation scheme	4.71	0.473
Use of high technology for dental care	4.22	.875
Ease of payment via insurance/debit/credit card	4.04	1.043
Availability of several dental specialist services under one dental clinic	3.96	1.238
Average mark Dental Care Quality	**4.53**	**0.398**

Table 7. *(continued)*

COST SAVINGS	AM	SD
Affordable dental care	4.97	0.170
Convenient location of dental clinic	4.87	0.400
Reasonable cost for quality accommodation	2.70	1.657
Opportunity to visit other tourist attractions	2.18	1.441
Attractive travel/tourism package	2.14	1.340
Average mark Cost Savings	**3.37**	**0.765**
CULTURAL SIMILARITY	AM	SD
Communication using the language that I am familiar with.	4.80	.718
Not far from the tourists' country	4.58	.907
Easy availability of appropriate food choices	3.54	1.419
Family/relatives/friends are here	2.77	1.563
Availability of amenities for religious practices	2.54	1.664
Average mark Cultural Similarity	**3.64**	**0.842**
SUPPORTING SERVICES	AM	SD
Excellent transport service/connectivity	4.91	.310
Good services provided by Kvarner Cluster of Health Tourism	3.58	1.221
Wide choices of accommodation	2.79	1.697
Availability of language interpreter	1.76	1.541
Average mark Supporting Services	**3.26**	**0.869**

Source: Author's calculation based on SPSS 21.0

Data in the previous table presents the motives of dental tourists when visiting Kvarner. Findings indicate that when choosing Kvarner for dental services, tourists are motivated mostly by Dental Care Quality (AM=4.53) and Dental Care Information Access (AM=4.43) and Cultural Similarity (AM=3.64). Cost Savings (AM=3.37) and Supporting Services (AM=3.26) have proven to be the least relevant motivators when choosing Kvarner as a dental tourist destination.

CONCLUDING REMARKS

The purpose of this study was to determine motives of tourists who choose to visit Kvarner for its dental services and settle the basis for future research. Even though dental tourism is experiencing strong growth and development worldwide, it remains significantly unexplored within the medical tourism segment, and especially in Croatia and Kvarner. Empirical findings of this study indicate quite strongly that Kvarner has been recognized as a destination of dental tourism, considering that 91.9% of the respondents stated that they visited Kvarner primarily motivated by dental services. In their decision-making process when choosing Kvarner they rely on information on the internet, as well as Word-of-Mouth from friends and relatives who visited, or who live in Kvarner. The results presenting the motives show that they are motivated by *Dental Care Quality* which is in in accordance with the results of studies of Jaapar et al. (2017) and Lubowiecki-Vikuk (2018). Cuamea et al. (2017) determined Quality-Price and

Facilities and Technology being a strong motivator. Dental tourist destinations (like Hungary) are focused significantly on providing high quality dental education to their students. This, accompanied with use of high-quality materials, ensuring quality through implementation of ISO standards, as well as positive experiences and high level of satisfaction of dental tourists enable them to take a competitive position on the dental tourism market (Kovacs et al. (2013). In Kvarner region, the Faculty of Dental Medicine, University of Rijeka is educating excellent personnel in accordance with the latest trends. The recognition of its quality is supported by the fact that in 2024 its dental medicine study program received 232 applications for 30 enrollment spots, and 44 high school graduates have marked it as their first choice (Šestan Kučić, 2024). For Kvarner region to maintain its competitive position, it is necessary to consider ways of talent retention in the future to maintain the level of quality of its dental care services. *Dental Care Information access* has also proven to be relevant motivator which is in accordance with Jaapar et al. (2017) and Peručić (2019) indicating that dental service providers will need to continue focusing on provision of up-to-date and reliable information about dental tourist offer as well as testimonials given by dental tourists, considering its relevance in decision-making process. C*ultural similarity* has also proven to be relevant in our study, which is not in accordance with the study of Jaapar et al. (2017) where it was evaluated as the least relevant motivator when observing average mark. A bit deeper insight indicates that most relevant motivators were easier communication during dental tourist´s stay in a destination (Gheorghe et al.,2017; Jaapar et al., 2017) and as well as due to the vicinity of their country of origin (Jaapar et al., 2017). Easy availability of appropriate food choices was evaluated slightly higher in our study which is not in accordance with Jaapar et al. (2017). Vicinity of family/relatives/friends and amenities for religious practices have proven to be the least relevant which is in accordance with Jaapar et al. (2017). Dental service providers will have to focus in the future on additional improvements in their foreign language skills (if necessary) to ensure their effortless communication with dental tourists. This will also make them feel welcome and familiar with the dental clinic/office and the destination. The results for *cost savings* indicate affordability of dental care services and convenient location of dental clinic to be relevant motives which is in accordance with findings of Jaapar et al. (2017), Peručić (2019), Lubowiecki-Vikuk (2018) and Gheorghe et al. (2017). However, results for reasonable cost for quality accommodation, opportunity to visit other tourist attractions, and using an attractive travel/tourism package have proven to be less motivating in relation to the Malaysian dental tourists (Jaapar et al. (2017).

Dental service providers will need to continue forming prices that will ensure them profit, while at the same time being acceptable for patients. This will contribute towards their satisfaction and loyalty. Supporting services have proven to be moderately relevant motivator in the decision-making process of dental tourists. High motivation was registered for excellent transport service/connectivity and well as good services provided by Kvarner Cluster of Health Tourism which is in accordance with Jaapar et al. (2017). Wide choices of accommodation and availability of language interpreter have proven to be less motivating which is not in accordance with Jaapar et al. (2017). Dental service providers will need to invest in their quality and diversity to make dental tourists stay more convenient, considering that according to Alkier et al (2024) supporting services influence the satisfaction of dental tourists, and their revisit intention.

Considering the significant lack of research focused on dental tourism at the global level, as well as its poor research at the level of the Kvarner region, it can be justified to say that this research is justified. In addition to contributing to theory, the findings and discussions presented in the paper can be of significant benefit to both dental service providers and tourist destination management However, this study has also some limitations due to the sample size, which is why it is necessary to continue monitoring what are the motives that stimulate dental tourists to visit Kvarner. Based on the findings like these they will be able to develop better marketing strategies focused on attracting new and preserving loyal dental tourists (Alkier et al (2024).

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IMPACT OF DENTISTRY AND AESTHETIC SURGERY ON SUSTAINABLE HEALTH TOURISM IN RURAL AREAS: A THEORETICAL MODEL

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Abstract

The paper explores the establishment and growth of private dental and aesthetic surgery practices in rural areas, focusing on their long-term sustainability. It examines how these practices can be integrated with economic development, leading to improved accessibility to healthcare, economic growth, demographic balance, and environmental sustainability. The study also delves into healthcare practices' environmental impact, information technology use, public health, and interdisciplinary collaboration to promote sustainability. The proposed strategic model offers recommendations for Croatian policymakers, healthcare providers, and local communities, including the provision of telemedicine, local business development through medical tourism, the adoption of eco-friendly healthcare practices, and the implementation of an effective marketing strategy. In conclusion, the study suggests that developing private dental and cosmetic surgery services in rural areas can transform these areas into sustainable communities, benefiting both residents and medical tourists.

Key words: aesthetic surgery, dentistry, environmental sustainability, health tourism, rural development, thematic network analysis.

INTRODUCTION

The paper presents the results of the qualitative analysis of articles discussing investment in private dental and aesthetic surgery practices in rural areas. These investments present both a significant challenge and an opportunity for qualitative changes in community life and the initiation of economic development associated with tourism (Tsekouropoulos et al., 2023). For instance, developing private health infrastructure in rural areas enhances dental care and directly and indirectly decreases rural-urban migration (Giribabu et al., 2019). Medical tourism, particularly in dental and cosmetic procedures, is a rapidly

growing industry that rural areas should embrace to boost their economic potential as unexplored travel destinations (Swenson & Bansal, 2024). Croatia, with its rich natural and cultural heritage, risks losing out on the benefits of medical tourism if it does not take action. Investing in sustainable practices and offering dental and cosmetic procedures can attract more tourists, leading to increased income for the local population and improved healthcare infrastructure.

This would also have positive impacts on social and environmental aspects. A more robust healthcare infrastructure is always advantageous for a community, and success in one area can lead to growth in rural entrepreneurship and employment. However, it is essential to ensure that healthcare provision through sustainable policies does not harm ecosystems or deplete natural resources (Paunović et al., 2024).

The authors of this study conducted a thematic analysis of literature published from 2014 to April 30, 2024, to theoretically demonstrate the potential development opportunities and the actual impact of dental and aesthetic surgery and medical tourism on the sustainable development of rural areas in Croatia. They used Google Scholar as the primary source for their analysis.

The study's final contribution is a formation of a theoretical model based on the results from the thematic analysis of available literature. This model will provide a foundation for further research studies and policy strategies for sustainable development. It integrates learning models and theories from health economics, development studies, and sustainable development. The model offers a valuable tool for understanding the complex interrelationships between health services and sustainable rural development.

We focus on the following research questions through qualitative research, including the analysis of research and professional texts:

1) What is the impact of dental and cosmetic surgery development on the accessibility of health services in rural areas?
2) What are the economic consequences of the development of dental and cosmetic surgery for rural areas?
3) How does developing these health services affect rural communities' migration patterns and demographic stability?
4) What are the social and environmental implications of developing dental and cosmetic surgery for sustainable rural development?
5) What is the potential role of health tourism in supporting sustainable rural development?

In our discussion, we will explore the hidden meanings within texts, consider new findings to address research questions and emphasise the importance of policy implications. These findings have been developed based on proven results to guide decision-makers, health professionals, researchers, and local communities in implementing development strategies to achieve sustainable development in rural areas. Integrating dental and aesthetic services with medical tourism can pave the way for sustainable development, improved quality of life, and economic growth for rural populations.

THEORETICAL BACKGROUND

Dental and aesthetic surgery development and medical tourism are opportunities for sustainable development in rural areas. The main challenge is the inadequate healthcare infrastructure in rural areas, impacting residents' quality of life. Technology, such as telemedicine, can help bridge the gap. Developing dental and aesthetic surgery services can also contribute to economic growth through medical tourism, ultimately benefiting rural economies.

Sustainable development and environmental perspectives are crucial for rural areas. Integrating dental and aesthetic surgery sessions with sustainability practices can lead to long-term benefits for the local population. For example, according to Qureshy et al. (2017), medical tourism can be sustainable if it has minimal environmental impact and substantially benefits the local population. Similarly, Streimikiene et al. (2021) suggest that promoting green practices in healthcare can make rural areas more attractive to tourists and residents, contributing to sustainability. This involves building energy-efficient healthcare facilities, managing waste, and using renewable resources. These practices not only make healthcare services more eco-friendly but also appeal to eco-conscious tourists, enhancing the reputation of rural health service providers as pioneers in sustainable medical tourism (Charati et al., 2024; Mittal et al., 2020).

Providing dental and aesthetic surgery services in rural areas is believed to help retain the population and improve living standards, thus reducing migration to urban centres (Bernard et al., 2023). Medical tourism could also support economic growth in rural areas. However, success in this endeavour requires strategic marketing and collaboration with tourism and healthcare networks (Figueiredo et al., 2024).

Recent trends in medical tourism and healthcare development show a growing interest in integrating advanced technologies and sustainable practices. For example, the healthcare sector has embraced telemedicine and digital health platforms, creating new opportunities for enhancing rural healthcare (Gurupur & Miao, 2022). Additionally, the concept of personalised and patient-centred care has various applications that influence the structure of rural health development (Kesar & Mikulić, 2017). It is important to note that in the future, Artificial Intelligence (AI) and Machine Learning (ML) may be used in diagnostics to improve the accuracy of treatment plans. AI and ML features can offer valuable insights for healthcare professionals, enabling them to deliver higher-quality care more efficiently. Furthermore, AI and ML have the potential to streamline processes, reduce costs, and enhance the patient experience (Alowais et al., 2023).

Additionally, numerous cross-border collaborations and healthcare partnerships support rural healthcare services (Svensson, 2017). International partners are becoming increasingly involved, granting rural health providers access to a broader range of expertise, resources, and technologies, ultimately enhancing service sustainability. However, they also bring specific cultural, financial, and service quality risk factors (Demonja & Uglešić, 2020).

METHODOLOGY

Thematic Analysis

The study utilised thematic analysis of texts, which enables identifying, analysing, and reporting patterns or themes within the data. This method provides minimal organisation for description and yields rich details from the data set (Attride-Stirling, 2001). Additionally, it provides access to various aspects of the research topic in an interpretive way.

Documents

The study employed a thematic network to synthesise the main findings of 150 articles published between 2015 and April 30, 2024. These articles focused on sustainability in dentistry and aesthetic surgery, including its emerging patterns and relationship with developing countries. Due to its wide range of content, Google Scholar was used for article selection, with 237 texts being rejected.

Inclusion and exclusion criteria

Inclusion Criteria: papers published in English related to at least three primary keywords were included. This encompasses peer-reviewed journal articles, review articles and conference papers. Studies with empirical data, theoretical insights, or extensive review articles related to the theme were also considered.
Exclusion Criteria: articles not available in full text, papers from non-peer-reviewed sources, and studies unrelated to the research questions were excluded from the research.

RESULTS

Thematic analysis

The authors conducted a thematic analysis to identify key themes and patterns in the selected literature. The authors followed these steps:

- Coding: each paper's key concepts and findings were coded and categorised according to the research objectives.
- Thematic network analysis: the co-occurrence matrix and network graph was used to analyse the implicit relationships between the themes. This helped the authors to identify the central themes and how they are linked.

Findings

The following results were identified through thematic analysis:

1. Descriptive statistics

The landscape of research topics in sustainability, dentistry, aesthetic surgery and rural development over the last decade is shown in the descriptive statistics. Key findings are:

- Publication Trend: the total number of analysed papers has increased from 2014 to 2024, reaching a peak of 20 in 2023.
- Analysis by keywords: The most frequent word in the keyword lists is "sustainability", which appears 75 times in the paper. Other recurring keywords include "dentistry", which appears 68 times, "aesthetic surgery", which appears 50 times, and "rural development", which appears 45 times. This indicates a significant focus on these particular areas of sustainability integration.
- Contributions from Journals: The critical journals in this area include Tourism Management, International Journal of Contemporary Dental & Medical Reviews, Gender, Place & Culture, Sustainability, Review of Tourism Research, Globalization & Health, Journal of Medical and Dental Science Research, European Journal of Social Science Research, Rural Society, and Current Issues in Tourism. The analysed papers illustrate the interdisciplinary nature of research in this area, with contributions from various journals focusing on healthcare, sustainability, and rural development.
- Limitations of the study: Database coverage - relying on specific academic databases may have excluded relevant studies not indexed in these sources. Language limitation - limiting the search to English-language publications may have excluded relevant research published in other languages. Subjectivity of analysis - Thematic analysis involves a degree of subjectivity that may influence the interpretation of the results.
- Thematic Analysis: the main themes are the environmental impact of healthcare practices, the integration of digital technology, sustainable development in rural areas, public health, and interdisciplinary collaboration for sustainability. These themes are central to ongoing discussions and research efforts to make healthcare services more sustainable and promote rural development and tourism.

Table 1 summarises the key themes and challenges identified through the text's thematic analysis. The table results offer valuable insights for future research and policy efforts to promote sustainable health practices in dentistry and cosmetic surgery and support sustainable development and tourism in rural areas.

Table 1. Global Theme

Global theme	Sub-theme 1	Sub-theme 2
Environmental Impact of Healthcare Practices	Resource Consumption	Waste Management
Integration of Digital Technology	Accessibility and Infrastructure	Training and Adoption
Sustainable Tourism Development in Rural Areas	Infrastructure Deficiencies	Economic Constraints
Public Health and Community Well-being	Healthcare Access	Health Education
Interdisciplinary Approaches to Sustainability	Collaboration Barriers	Policy and Regulation

Source: Author's analysis

Table 1 summarises the key global themes identified from the thematic analysis of the reviewed papers, along with their associated sub-themes. Each global theme represents a significant area of focus within the research landscape, emphasising critical issues and challenges being addressed by scholars and practitioners (Attride-Stirling, 2001).

1) The environmental impact of healthcare practices:
   - Resource consumption represents a significant issue in healthcare. This sub-theme addresses the high resource usage levels, such as materials and energy, particularly in dental and surgical procedures. This underscores the necessity for more efficient resource use to minimise environmental damage.
   - Waste management is a pivotal aspect of environmental impact assessment in healthcare. This sub-theme addresses the challenges associated with the disposal and management of medical waste. Implementing effective waste management practices is of paramount importance to reduce environmental pollution and ensure the safety of the public.

2) The incorporation of digital technology:
   - Accessibility and Infrastructure: this sub-topic focuses on the challenges of implementing digital healthcare solutions, such as teledentistry and telemedicine, in areas with limited digital infrastructure. It emphasises the need to improve digital accessibility to enhance healthcare delivery.
   - Training and Adoption: this subtopic stresses the importance of adequately training healthcare professionals to adopt and use digital technologies effectively. Overcoming resistance to new technologies and ensuring proper usage is crucial for successful integration and the long-term development of rural areas.

3) Sustainable development in rural areas:
   - Infrastructural deficiencies: this sub-theme addresses the lack of vital infrastructure in rural areas, including access to clean water, sanitation, and electricity. These deficiencies hinder the delivery of healthcare services and the implementation of sustainable development initiatives
   - Economic Constraints: this sub-theme focuses on the financial limitations that hinder rural communities' ability to invest in sustainable infrastructure and healthcare improvements, posing a significant obstacle to sustainable rural development.

4) Public Health and Community Well-being:
   - Healthcare Access: this sub-theme addresses the challenges of delivering sufficient healthcare services to rural and remote populations. Geographic isolation and transportation issues frequently restrict access to essential healthcare.
   - Health Education: this sub-theme underscores the significance of educating communities about sustainable health practices and preventive care. Effective health education initiatives are vital for enhancing public health outcomes and promoting community well-being.

5) The potential of interdisciplinary approaches to sustainability:
   - Collaboration barriers: this sub-theme highlights the challenges in achieving effective interdisciplinary collaboration among various stakeholders, including healthcare providers, environmental scientists, policymakers, and community organisations. Collaboration is essential for addressing complex sustainability issues.
   - Policy and regulation: this sub-theme concerns developing and implementing policies that support sustainability in healthcare and rural development. It addresses the complexities involved in developing and implementing such policies. The necessity for comprehensive policies and the challenges presented by regulatory frameworks are crucial areas of focus for future research.

DISCUSSION

The discussion will start with a comprehensive overview of the research questions in the context of the development of dentistry and aesthetic surgery. This includes their contribution to the sustainable development of rural areas, including tourism. The responses to these questions will help clarify the results of the Thematic Network.

The development of dentistry and cosmetic surgery in rural areas significantly improves the accessibility of health services. It helps to build the health infrastructure for other health services in private healthcare (Barnett et al., 2017). One significant finding is that these services attract health workers to rural health systems, enhancing the overall quality of healthcare in the community (Esu et al., 2021). Additionally, the integration of telemedicine allows access to health services even in remote areas, reducing the health disparities between urban and rural areas. Telemedicine provides solutions for limited health resources and enables timely health consultations and follow-up services, which are crucial for sustainable healthcare in rural areas (Haleem et al., 2021).

Investing in private dental and cosmetic surgery clinics in rural areas significantly impacts the local economy (Ancy et al., 2020). The development of infrastructure for medical tourism, including hotels, restaurants, and transport services, benefits both directly and indirectly from foreign patients. This economic growth creates employment opportunities for residents and reduces migration to urban centres. The potential for growth in medical tourism is high due to the stimulation of local investment and the direct impact on the labour market. Establishing these services also increases the demand for supportive services like catering, trade, and transport, creating a chain of economic growth in the region (Beladi et al., 2019).

The development of health services considers migration patterns and demographics. Research indicates improved health services contribute to better living conditions, strengthening social cohesion, and reducing demographic imbalances. This is because people are not forced to travel to urban centres in search of better health services, reducing the migration of young people from rural areas (Morton et al., 2017).

In addition, the development of health services is believed to lead to a better standard of living and improved health status for rural people, ultimately contributing to the sustainable development of rural areas (Kruk et al., 2018). It is also important to introduce "green" practices in health facilities to minimise environmental impact and attract environmentally conscious tourists (Soares et al., 2023).

Building energy-efficient facilities and implementing sustainable practices can help control environmental impacts and attract environmentally conscious tourists in the long term (Connell, 2013). It is crucial to address issues such as high resource consumption and challenges in waste management to reduce environmental damage and ensure public safety (Antoniadou et al., 2021). Efficient management of clinical practices, including using energy-efficient appliances and recycling medical waste, can significantly contribute to sustainability (Mittal et al., 2020).

Integrating digital technologies in healthcare, such as telemedicine, is a game-changer for rural health services. Efforts should be made to improve digital infrastructure and train health workers to use such technologies (Condry & Quan, 2021). The extensive use of telemedicine will likely contribute significantly to urban-rural disparities, such as providing timely and high-quality remote medical care.

Economic constraints and a lack of infrastructure are the main barriers to sustainable tourism development in rural areas. Therefore, it is necessary to invest in basic infrastructure and encourage economic investment in rural communities (Apostolopoulos et al., 2020). This includes improving access to clean water, sanitation, and electricity, which is essential for successfully implementing sustainable development initiatives.

Public health and community well-being are equally important. Providing health services and health education in any community is crucial for public health and well-being (Das et al., 2020). While private health services are essential, they are still limited by public and private insurance companies' ability to offer the insured a wide range of services (De Wolf & Toebes, 2016). Health education helps increase awareness of sustainable healthy practices (Choirudin et al., 2023). Health outcomes and knowledge of preventive measures tend to increase with better health education campaigns. Similarly, better access to health services can enhance the general well-being of the population, contributing to sustainable development (Winklmayr et al., 2023).

A multidisciplinary approach is essential regarding sustainability. Sustainability issues are inherently complex, and involving stakeholders, such as health professionals, environmentalists, and policymakers, may be the only way forward (Roblek & Dimovski, 2024). Future research should continue to focus on implementing policies that support sustainability. Interdisciplinary approaches can provide comprehensive solutions for sustainable health and rural development by bringing together experts from different fields and perspectives in the search for best practices and solutions.

Thus, it could be concluded that integrating dental and aesthetic services into medical tourism could influence the sustainability of developing rural areas by improving health

services, boosting the local economy, maintaining demographic balance, and introducing practices that support environmental sustainability. To achieve this, policies focus on improving health infrastructure, telemedicine services, economic investment to promote medical tourism, green practices in health services, and strategic marketing initiatives that address competitiveness issues to attract medical tourists. Policies focused on rural areas can include the impact on their sustainable development, which in turn can contribute to the quality and growth of the economic life of the rural population.

The study has identified several shortcomings in the current global solutions for researching the phenomenon under consideration. These shortcomings have been used to formulate recommendations for improving private dental and aesthetic surgical services in rural areas. These recommendations are expected to significantly contribute to the sustainable development of rural areas in Croatia. A conceptual model has been created to develop these recommendations, as shown in Figure 1.

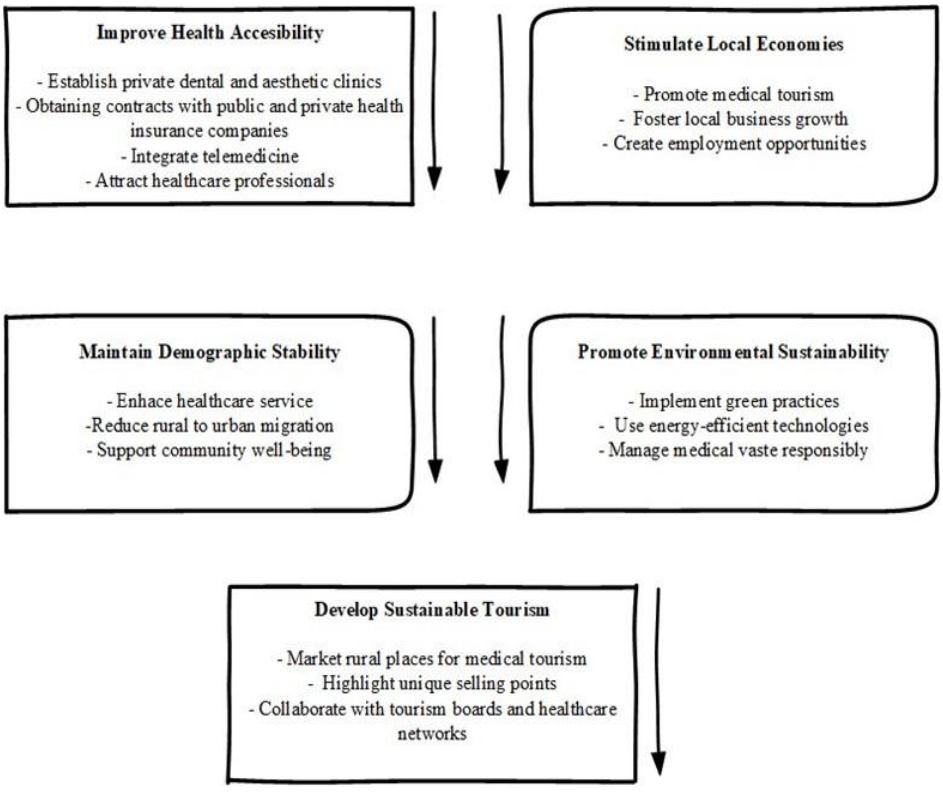

Figure 1. Strategic model for the emergence of private dental and aesthetic surgery in rural areas

Source: Author's analysis

The strategic model proposed in Figure 1 has been customised to meet the specific needs of Croatia, and Kvarner region. It is based on a series of exemplary practices. By integrating medical tourism with dental and aesthetic services, there is potential to significantly contribute to the sustainable development of rural areas, enhancing the quality of life and fostering economic growth. Engagement with various stakeholders, such as health investors, local authorities, businesses, and the community, will be necessary to implement the model. Implementing sustainable practices across all health and tourism services is a prerequisite for successfully realising the proposed model.

CONCLUSION

The emergence of private dental and cosmetic surgery services in rural areas can have several positive impacts, including improving healthcare access, boosting local economies, maintaining demographic stability, and promoting eco-friendly tourism. A strategic model tailored to the needs of Kvarner region, and Croatia has been developed through the analysis of these practices. The study findings suggest that establishing dental and cosmetic surgery clinics and introducing telemedicine significantly improves access to healthcare in rural areas. Offering incentives to attract medical personnel to rural areas is crucial in reducing health disparities between urban and rural areas. The growth of medical tourism will create new job opportunities and reduce the need for people to relocate to urban areas, helping to sustain the rural population and prevent young people from leaving rural areas.

This will ultimately improve living conditions and achieve demographic stability in rural communities. Implementing green practices and energy-efficient technologies can potentially reduce the environmental impact of healthcare services. Responsible management of medical waste and using sustainable materials appeal to eco-conscious tourists and contribute to the sustainable reputation of healthcare providers. The marketing of rural areas as medical tourism destinations and the collaboration with tourism boards can enhance the sustainability and growth of tourism. Promoting distinctive selling points, such as personalised care, tranquil settings, and cultural experiences, enhances the destination's appeal to tourists. Increased collaboration between healthcare investors, local authorities, businesses, and the community is recommended to implement the model successfully. Long-term sustainability requires investments in health and digital infrastructure and sustainable technologies. Training residents for work in health and support industries is crucial. Implementing health education programs to enhance community health is imperative. Effective marketing campaigns to promote medical tourism and the unique features of rural health services are also important. Green practices and responsible waste management in healthcare services will contribute to sustainable development. Implementing these recommendations will contribute to the sustainable development of Kvarner, and in general Croatia's rural areas, enhance the inhabitants' quality of life, and stimulate economic and tourism growth. Developing private dental and cosmetic surgery services may be pivotal in transforming rural areas into dynamic and sustainable communities that will attract residents and visitors.

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ECONOMIC BENEFITS AND ETHICAL QUESTIONS OF DENTAL AND AESTHETIC TOURISM IN EUROPE: THEMATIC AND SEMANTIC ANALYSES OF ARTICLES

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Abstract

This study reviewed dental and aesthetic tourism research. The review is based on thematic and sentiment analyses of scientific articles. The results show that this type of tourism plays an important role in the economic development of tourist destinations such as Croatia, Hungary, and Turkey. Lower prices and high-quality services were identified as reasons for health tourists' decisions. Health tourism users not only seek medical services but also take the opportunity to engage in other tourist experiences. However, it is important to note the major risks associated with these procedures, which include infections, failed implants, and inadequate postoperative support. Therefore, countries that promote medical tourism must improve their regulations and ensure that health professionals are monitored and sanctioned in the event of professional complications and incorrect or inadequate postoperative care. It is important to ensure ethical marketing.

Key words: dental tourism, aesthetic tourism, Europe, thematic analysis, sentiment analysis.

INTRODUCTION

Over the last few decades, dental-aesthetic tourism has emerged as a significant sector of global health tourism (Ancy et al., 2020). Patients primarily seek these services for cost savings, treatment availability, and assurance of quality care (Das & Hammer, 2014). Many patients also combine treatment with travel to enhance the appeal of such services. Nonetheless, these trends have raised significant concerns regarding patient safety, quality of care, local healthcare systems, and sustainability. This study uses a mixed-methods approach, combining quantitative and qualitative analyses, to explore themes within the European dental-aesthetic tourism literature.

Thematic analysis reveals key patterns, whereas sentiment analysis captures the emotional tones related to these themes (Alejandro & Zhao, 2024). This review addresses economic, healthcare, ethical, and sustainability perspectives within this context.

The authors posed the following research questions:

1. What primary themes emerge from European dental and aesthetic tourism analyses?
2. Which emotions and perspectives are associated with these themes?
3. How do economic drivers intersect European ethical and sustainability concerns?
4. What impact does dental and aesthetic tourism have on the healthcare systems of patients' home countries?
5. What marketing strategies promote dental and aesthetic tourism, and what ethical dilemmas arise?
6. How does inadequate postprocedural support affect patient experiences?

Grounded in strong theoretical foundations, this study highlights the complexities of dental and aesthetic tourism, addressing its societal implications, ethical challenges, and unique factors specific to the European context.

RESEARCH METHODOLOGY

Selection criteria

A semi-systematic method was used to select relevant articles from scientific literature databases, focusing on publications from 2014 to October 31, 2024. The inclusion criteria were peer-reviewed and early-access articles on aesthetic tourism, dental tourism, economic models, social impact, risks, and benefits. The search used key terms such as dental tourism, aesthetic tourism, economic impact, and sustainable development. Initial searches in Google Scholar, PubMed, and Scopus yielded 532 articles, with an additional 28 articles from WOS. After removing duplicates, a total of 478 articles were identified. Titles and abstracts were assessed using the ASReview software, resulting in the rejection of 164 articles for lack of research connections, 23 for insufficient references to dental tourism, and 62 for irrelevance.

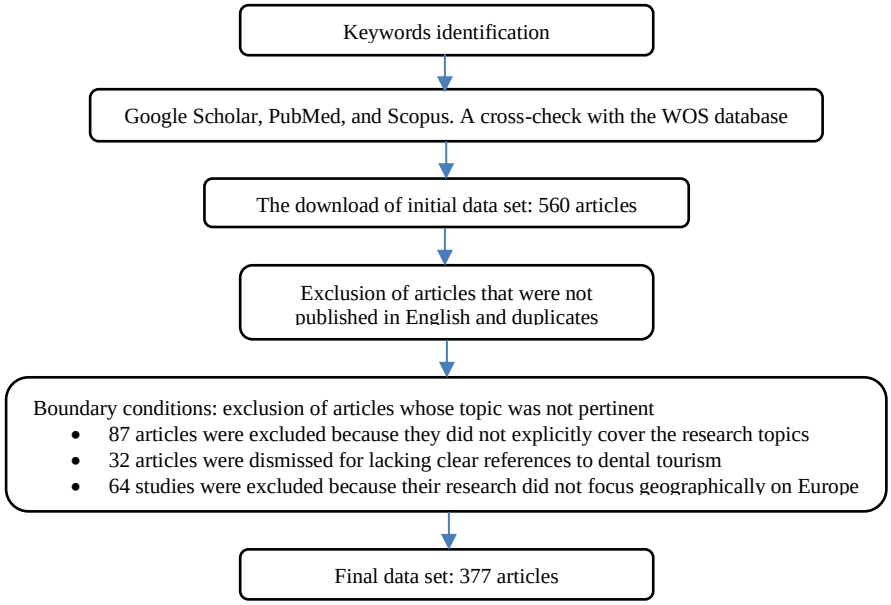

Figure 1. Articles search strategy
Source: Author's research

This resulted in a final set of 377 articles published between 2014 and October 31, 2024. The top ten primary sources included Aesthetic Plastic Surgery, Sustainability, Annals of Tourism Research, Journal of Vacation Marketing, Tourism, Ekonomski Vjesnik, Interdisciplinary Description of Complex Systems, Journal of Travel Medicine, Tourism and Hospitality Management and Current Issues in Tourism.

Thematic and Sentiment Analysis

Thematic network and sentiment analyses were conducted using the following seven steps:

***First step**: Identifying key ideas, themes, and tones*

A thematic network and sentiment analysis of a systematic literature rewiev identified 80 themes focused on dental and aesthetic tourism, highlighting key ideas and topics relevant to these industries.

1. Economic Attractiveness and Affordability
   - Dental and aesthetic tourism: The quality of the procedures is generally very high compared to that of their home countries, and they are significantly cheaper, attracting many international patients. This affordability is a significant draw for patients seeking these services.

- For example, affordable dental treatments are available in Croatia and Turkey, often as part of travel packages.

2. Patient-specific risks and complications of the procedure itself
   - A deplorable example of postoperative complications, such as infections, wound dehiscence, and implant failure has been observed mainly in dental treatment as well as cosmetic surgery abroad. These risks are important for patients to consider when making their decisions.
   - Example: Reports of multiple drug-resistant infections after surgery performed in less developed countries.

3. Effects on the healthcare systems in their home countries
   - Problems caused by medical tourism often lead to extra costs and difficulties in operating healthcare systems in patients' home countries. This impact on local healthcare systems is a significant consideration in the medical tourism debate.
   - Example: The UK taxpayer will have to pay the cost of complications arising from cosmetic procedures abroad.

4. Marketing and promotion research strategies
   - Aggressive social media marketing for dental and aesthetic procedures is frequently promoted at affordable prices without sufficient emphasis on risks.
   - Example: Deceptive advertisements targeting tourists looking for fast, low-cost aesthetic solutions.

5. Tourism Experience with Integration
   - Combining healthcare with travel makes dental and cosmetic tourism an appealing option.
   - For example, Croatia promotes dental tourism more successfully due to its scenic beauty and cultural heritage.

6. Sustainability and Ethical Practices
   - The shortage of regulations in the medical tourism field, combined with the pressure on resources that this type of services uses, creates sustainability issues.
   - Ethical marketing strategies and improving patient education can reduce harm and facilitate informed decision-making, such as contacting licensed dental treatment facilities abroad.

7. In Aesthetic tourism, interests in cultural and aesthetic appreciation
   - Wellness tourism often integrates cultural and natural attractions in the same place to enhance patients' experiences.
   - For example, people receiving aesthetic treatments often desire opportunities for authentic cultural experiences in the countries where they undergo their procedures.

8. Follow-up with Patients after Procedures and Care
   - The lack of structured postoperative care and follow-up services is a major problem that can cause patient deterioration.

- Example: Patients abroad who need dental work or aesthetic surgery often have trouble finding their local medical specialist for post-treatment.

Each theme highlights the interplay among economic opportunities, patient perspectives, and inherent issues in dental/aesthetic tourism issues.

***Second step**: Coding*

References were retrieved from the literature databases and organised in an Excel spreadsheet, including the title, author, journal name, abstract, keywords, and metadata. Selected articles were reviewed and coded using the framework of Bandara et al. (2015), focusing on medical risks, economic drivers, sustainability, culture and aesthetics, and post-treatment consequences relevant to cosmetic and dental tourism.

1. Key Elements of the Coding Process:
   - The frequency of identified terms was analysed to determine main themes, highlighting thematic coherence and recurring patterns.

2. Assignment of Codes:
   - Ideas related to similar topics were grouped and uniquely coded (Saldaña, 2009) to facilitate practical understanding of the collected data.

3. Logical Alignment:
   - Codes were linked to key concepts to ensure analytical coherence, with overarching goals guiding the refinement of codes (Creswell, 1998).

4. Iteration and Validation:
   - The initial coding framework was maintained, and new codes were incorporated as needed. Regular discussions helped clarify discrepancies (Williams & Moser, 2019).

The coding process systematically captured all the relevant ideas. Collaboration among analysts, although not formally measured for inter-rater reliability, enhanced consistency in interpretations. The final codes synthesised the articles' content into meaningful groups that support broader analyses. Table 1 outlines the primary codes and key aspects of the research.

Table 1. Theme and codes

Theme	Codes
Economic Appeal and Cost-Effectiveness	Affordable treatment', 'High-quality services', 'Cost as a primary motivator', 'Seasonal offers for tourists', 'Competitive pricing in clinics', 'Cost-to-quality ratio', 'Discounted bundled packages', 'Revenue boost for host countries', 'Medical tourism partnerships', 'Economic incentives for providers'
Complications of the procedure itself	'Infection risks', 'Post-operative complications', 'Surgical errors abroad', 'Multidrug-resistant infections', 'Implant failures', 'Lack of access to care', 'Overseas clinic quality issues', 'Under-regulated medical facilities', 'Long-term health impacts', 'Inconsistent patient outcomes'
Impact on Home-Country Healthcare Systems	'Healthcare system strain', 'Resource allocation challenges', 'Revision surgeries at home', 'Financial burden on public health', 'Cross-border infection risks', 'Ethical dilemmas in care prioritisation', 'Emergency management of complications', 'Repatriation issues', 'Increased demand for specialists', 'Policy gaps in cross-border care'
Marketing and Promotion Research Strategies	'Social media promotions', 'Misleading advertising', 'Focus on affordability', 'Success testimonials', 'Lack of risk disclosure', 'Partnerships with travel agencies', 'Clinic reputation management', 'Use of influencers for marketing', 'Discount offers on social media.'
Integration with Tourism Experiences	'Cultural attractions', 'Relaxation packages with treatment', 'Natural beauty destinations', 'Post-treatment travel experiences', 'Seasonal tourism campaigns', 'Combining leisure with medical care', 'Destination recovery plans', 'Partnerships with tourism boards', 'Appeal of exotic locations', 'Health-focused tourism events'
Sustainability and Ethical Practices	'Cultural attractions', 'Relaxation packages with treatment', 'Natural beauty destinations', 'Post-treatment travel experiences', 'Seasonal tourism campaigns', 'Combining leisure with medical care', 'Destination recovery plans', 'Partnerships with tourism boards', 'Appeal of exotic locations', 'Health-focused tourism events'
In Aesthetic tourism, interest in cultural and aesthetic appreciation	Authentic cultural experiences, 'Aesthetic appeal of landscapes', 'Heritage-focused tourism', 'Integration of local culture', 'Culturally rich recovery settings', 'Cultural sensitivity in care', 'Aesthetic labour in clinics', 'Enhanced tourist satisfaction', 'Influence of cultural heritage', 'Visual appeal in tourism.'
Post-procedure follow-up and Patient Support	'Lack of structured follow-up', 'Challenges in accessing care', 'Dependence on home-country systems', 'Unclear follow-up protocols', 'Inadequate post-op resources', 'Communication gaps with surgeons', 'Delayed management of complications', 'Costs of follow-up abroad', 'Patient dissatisfaction post-surgery', 'Limited post-op care standards'

The codes described in Table 1 demonstrate the central concepts connected to each theme (informed by Stage Two of the analysis). These codes enabled a systematic and in-depth review of the recurring elements within the text. They provide clarity in detecting patterns and frameworks that can be applied during the thematic analysis, which takes place at later phases of the third stage.

***Third step**: Themes Design Process*

Step 3 involved reviewing codes to identify patterns and creating broader thematic groups (Attride-Stirling, 2001). Initially, codes were examined for similarities, and related codes were grouped into meaningful clusters. In the next phase, thematic patterns

are established based on these similarities, which helps future analysis (Roblek & Dimovski, 2024). Themes are developed from the repetitive characteristics within the codes (see Table 2).

Table 2. Theme, codes, and theme description

Theme	Codes	Theme description
Economic Appeal and Cost-Effectiveness	Affordable treatment, Cost savings, Bundled packages, Revenue boost, Competitive pricing	Discusses one of the factors that drive people to travel from their country to another country for medical care: (Economics — affordability & economics).
Complications of the procedure itself	Infection risks, post-operative complications, Surgical errors, Implant failures, Quality concerns	Addresses potential medical complications, infections, and the quality of procedures abroad.
Impact on Home-Country Healthcare Systems	Healthcare system strain, Financial burden, Revision surgeries, Ethical dilemmas, Policy gaps	Explores the complex consequences of medical tourism on home-country healthcare systems, including ethical and resource-based dilemmas.
Marketing and Promotion Research Strategies	Social media promotions, Misleading ads, Testimonials, Influencer marketing, Discount campaigns	Examines marketing techniques to lure visitors, focusing on actionable ethics and advertising effectiveness.
Integration with Tourism Experiences	Cultural attractions, Recovery tourism, Seasonal campaigns, Destination recovery plans, Leisure packages	Focuses on the fusion of travelling experiences and medical options based on cultural and natural attractions.
Sustainability and Ethical Practices	Eco-friendly practices, Clinic accreditation, Ethical advertising, Resource conservation, Transparency	Emphasises the importance of sustainable and responsible tourism to ensure development without compromising environmental preservation.
In Aesthetic tourism, interest in cultural and aesthetic appreciation	Authentic experiences, Aesthetic labour, Cultural heritage, Landscape appeal, Tourist satisfaction	Analyses cultural and aesthetic factors that facilitate the public appeal of tourism and positive experiences for tourists
Post-procedure follow-up and Patient Support	Lack of follow-up, Complication management, Home-country dependence, post-op dissatisfaction, Delayed care	It highlights that once treatment is over, many patients find themselves in the dark due to post-treatment care and follow-up protocols where there are few concrete guidelines on what needs to be followed.

Group themes help identify key patterns in the text. Each theme consists of several codes representing critical aspects of the analysed material. In the fourth step, these themes are evaluated for relevance and alignment with the initial codes. The codes are then organised under each theme and re-validated to ensure consistency between the themes, their corresponding source codes, and the overall dataset. Furthermore, each theme is refined to minimise any overlaps.

***Fourth step**: Reevaluating previously discussed themes*

The third step involved evaluating the comprehensiveness of the flights and addressing all relevant aspects of the articles. If deemed insufficient, modifications would be necessary. Ensuring the integration of all codes into existing themes and identifying commonalities for theme development was crucial. The themes were elucidated clearly and precisely, facilitating a more comprehensive understanding of the key issues in dental and aesthetic tourism issues. The authors consulted the most recent literature on this topic. Subsequently, they verified that all topics adequately covered the theme of the paper and that no alterations were necessary.

***Fifth step**: Identification and Definition of Themes*

Here, the authors appropriately title and descriptively define each theme. This is of utmost importance, as it enables a more detailed and nuanced understanding of the identified themes and their role in explaining the analysed theme. These definitions form the theoretical basis for upcoming analytical procedures, including sentiment analysis.

Identified Themes and Their Definitions:

1. Economic Drivers and Cost-Effectiveness:
   The authors analyse which economic incentives are crucial for developing successful aesthetic and dental tourism. Special attention is paid to reducing the costs of medical tourists and achieving benefits for medical tourism destinations by forming adequate medical service packages at competitive prices.
2. Patient Risks and Complications:
   Medical patients may encounter risks when using medical services abroad, and the authors emphasised the possibility of infection occurrence and development, errors in surgical procedure performance by medical staff, and the low quality of medical care and support provided after medical procedures.
3. Healthcare System Implications:
   The authors analyse how the development of medical tourism affects the home healthcare system, how to successfully respond when complications arise in treating patients, how to adress the ethical issues present in the case of allocating resources, and the current regulatory limitations.
4. Marketing and Promotion Practices:
   The authors assess the strategies medical service providers use to motivate patients to visit their facilities and utilise the service. Special attention is paid to advertising activities on social networks, including patient reviews, and ethical issues in the case of false advertisements that prioritise favourable prices over safe and reliable medical services.
5. Integration of Tourism Experiences:
   The authors debate a tourism offer that combines medical treatments with other tourist activities that can be practised during a stay at a destination, and how cultural activities contribute to strengthening the appeal of the medical tourism offer.

6. Sustainability and Ethical Challenges:
   The authors emphasise the importance of providing medical tourism services while adhering to ethical principles and principles of sustainable development. Emphasis is placed on conserving natural resources and practising environmentally friendly medical methods.
7. Cultural and Aesthetic Appeal:
   The authors consider how the influence of a tourist destination's cultural heritage and the beauty of its landscape strengthen the attractiveness of medical tourism offerings.
8. Post-Treatment Support and Follow-Up:
   The authors consider how to provide medical care to tourists after they use medical services abroad and return home. They pay attention to inadequately organised medical protocols and dependence on local medical services.

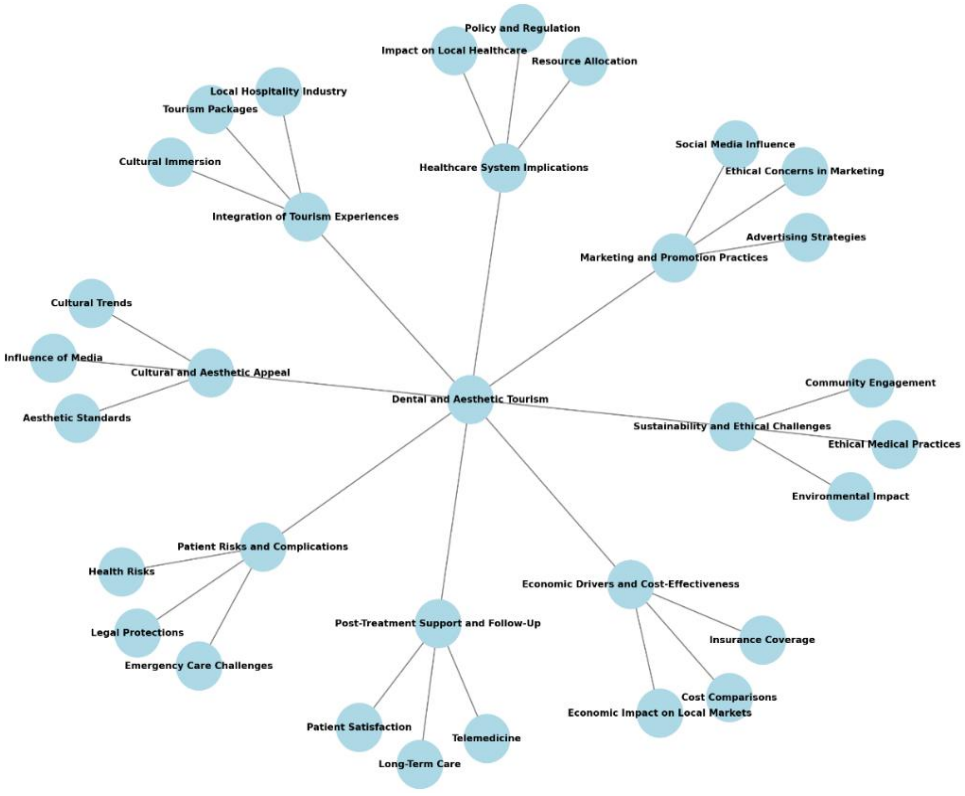

Figure 2. Hierarchical visualization of themes and sub-themes in dental and aesthetic tourism

This hierarchical framework categorises key aspects of the main theme, serving as a foundation for evaluation. It provides stakeholders—researchers, policymakers, and

industry experts—with a structured approach to addressing the challenges, opportunities, and ethical issues in dental and aesthetic tourism. The sixth step employed thematic definitions to facilitate the analysis phases, presenting codes, frequencies, and citations in a table, followed by sentiment analysis.

***Sixth step**: Themes, code, frequency and quotes*

In Table 3, the authors summarise the main themes identified in the analysis. They provide at least five citations for each theme to ensure a comprehensive understanding, following best practices in qualitative research (Creswell & Poth, 2018; Wankhade et al., 2022). This approach reveals the complexity of the data by capturing a range of emotions, including strong, neutral, and mild feelings (Patton, 2014; Sandelowski, 1995). While five quotes per theme offer a solid foundation, adding more could highlight nuances and varying tones, ultimately presenting a fuller picture of the data (Braun & Clarke, 2006).

Table 3. Theme, frequency, codes and quotes

Theme	**Frequency & Frequency Category**	**Associated Codes**	**Illustrative Quotes**
Economic Drivers and Cost-Effectiveness	45 (high frequency)	Affordable treatment, Cost savings, Bundled packages, Revenue boost, Competitive pricing	– "Lower treatment costs abroad make dental and aesthetic tourism attractive." – "Bundled packages enhance affordability and accessibility." – "Competitive pricing drives medical tourism to emerging destinations." – "Revenue from medical tourism boosts local economies." – "Patients find quality care at lower costs in destinations like Turkey."
Patient Risks and Complications	38 (high frequency)	Infection risks, Post-operative complications, Surgical errors, Implant failures, Quality concerns	– "Post-operative care is often inadequate, leading to increased risks of complications." – "High infection risks are a concern with medical tourism." – "Complications from low-quality implants are prevalent in cosmetic procedures." – "Surgical errors due to under-regulated clinics can harm patients. – "Quality standards in some destinations do not meet global expectations."
Healthcare System Implications	25 (middle frequency)	Healthcare system strain, Financial burden, Revision surgeries, Ethical dilemmas, Policy gaps	– "Home-country healthcare systems face significant strain treating medical tourists' complications." – "Revision surgeries add financial burdens to national health services." – "Ethical dilemmas arise in prioritising medical tourist complications." – "Cross-border care requires better policy frameworks." – "Public health systems are unprepared for imported infections."

Table 3. *(continued)*

Theme	Frequency & Frequency Category	Associated Codes	Illustrative Quotes
Marketing and Promotion Practices	30 (high frequency)	Social media promotions, Misleading ads, Testimonials, Influencer marketing, Discount campaigns	– "Social media heavily promotes affordability, often overlooking critical risks." – "Testimonials are a key factor in influencing patients." – "Discount campaigns attract international patients." – "Influencer marketing is popular in promoting medical tourism destinations." – "Misleading ads exaggerate clinic capabilities."
Integration of Tourism Experiences	28 (middle frequency)	Cultural attractions, Recovery tourism, Seasonal campaigns, Destination recovery plans, Leisure packages	– "Combining medical treatments with leisure tourism increases destination appeal." – "Cultural attractions create memorable recovery experiences." – "Seasonal campaigns offer discounts to medical tourists." – "Post-treatment leisure enhances patient satisfaction." – "Natural beauty boosts medical tourism destinations."
Sustainability and Ethical Challenges	22 (middle frequency)	Eco-friendly practices, Clinic accreditation, Ethical advertising, Resource conservation, Transparency	– "Sustainability practices are essential to balance tourism growth and environmental impact." – "Eco-friendly clinics appeal to conscious tourists." – "Accreditation ensures ethical operations." – "Resource conservation is vital for sustainable medical tourism." – "Transparency builds trust among medical tourists."
Cultural and Aesthetic Appeal	20 (low frequency)	Authentic experiences, Aesthetic labour, Cultural heritage, Landscape appeal, Tourist satisfaction	– "Cultural immersion enhances patient satisfaction during medical tourism." – "Aesthetic appeal of landscapes adds value to tourism destinations." – "Authenticity in cultural experiences attracts patients." – "Local heritage enriches the medical tourism experience." – "Scenic recovery settings improve patient perceptions."
Post-Treatment Support and Follow-Up	18 (low frequency)	Lack of follow-up, Complication management, Home-country dependence, Post-op dissatisfaction, Delayed care	– "Lack of structured follow-up care leaves patients dissatisfied after procedures abroad." – "Delayed complication management worsens outcomes." – "Home-country systems bear the burden of post-op care." – "Clear follow-up protocols are absent in many destinations." – "Patients express frustration with inadequate post-op care."

The first column lists key themes in the analysis related to dental and aesthetic tourism, covering economics, patient injuries, marketing, and post-market surveillance. The second column shows the frequency of each theme, highlighting those that need further investigation. High-frequency themes include economic drivers, Cost-Effectiveness, and Patient Risks and Complications. At the same time, cultural and aesthetic appeal, post-treatment support, and follow-up have lower frequencies but are still significant.

The third column provides codes representing crucial concepts within each theme, such as „misleading promotions“ under Marketing and „ethical practices“ including „Eco-Friendly Practices“ under Sustainability. The final column includes five relevant quotes for each theme, reflecting a range of opinions, such as the impact of inadequate post-treatment care on dissatisfaction and the appeal of lower costs overseas.

The authors analytically categorise related topics in Table 3 and provide a more detailed overview using appropriate codes and quotes. This facilitates a deeper understanding of key issues in dental and aesthetic tourism.

***Seventh step**: Sentiment analysis*

As part of the sentiment analysis, the authors analysed the presence of positive, negative or neutral sentiments associated with each identified topic. This assessment aimed to determine the emotional tones (Boukes et al., 2020) and which emotional tone and attitude dominates within the analysed text (Kratzwald et al., 2018). This analysis visually represented the distribution of the identified sentiments by topic (Gandhi et al., 2023). TextBlob (Bonta et al., 2019) was applied, using a defined list of terms to which unique sentiment values are assigned. What needs to be emphasised is that each word influences the final tone of the text (Chandrasekaran & Hemanth, 2022). In Table 4, the authors present the sentiment analysis results by topic.

Table 4. Sentiment analysis

Theme	Sentiment Score	Sentiment Category	Insights
Economic Drivers and Cost-Effectiveness	0.85	Positive	The overwhelmingly positive sentiment in this section underscores the significant cost savings, affordability, and economic benefits that drive medical tourism's growth.
Patient Risks and Complications	-0.75	Negative	The negative sentiment in this section serves as a stark reminder of the significant concerns about post-operative care, risks of infection, and inconsistent quality standards that need immediate attention in medical tourism.
Healthcare System Implications	-0.6	Negative	Sentiments focus on ethical dilemmas, resource strain on home-country healthcare systems, and lack of international policy frameworks.
Marketing and Promotion Practices	-0.1	Neutral to Slightly Negative	Concerns about misleading advertisements are balanced by the effectiveness of promotional strategies in attracting patients.

Table 4. *(continued)*

Theme	Sentiment Score	Sentiment Category	Insights
Integration of Tourism Experiences	0.7	Positive	Sentiment in this section underscores the potential of combining medical treatments with cultural and leisure tourism to enhance patient satisfaction.
Sustainability and Ethical Challenges	0.05	Neutral	Balanced sentiment highlights the importance of eco-friendly practices and ethical considerations, with challenges in implementation.
Cultural and Aesthetic Appeal	0.65	Positive	Positive sentiment emphasises the value of cultural immersion, aesthetic labour, and scenic recovery settings in enhancing patient satisfaction.
Post-Treatment Support and Follow-Up	-0.5	Negative	Dissatisfaction arises from a lack of follow-up care, delayed complication management, and dependence on home-country systems for post-op support.

Evaluating the average sentiment of quotes (Taboada et al., 2011) is essential for providing a clearer understanding of the sentiment analysis findings in Table 4. This section outlines key findings about sentiment values and their implications. The sentiment analysis was conducted using a combination of natural language processing techniques and sentiment lexicons, enabling a comprehensive evaluation of the sentiment scores.

Dental and aesthetic tourism, as segments of medical tourism, are experiencing significant growth and development worldwide due to the increased availability of medical services at more favourable or more competitive prices and the greater comfort of patients during their stay in the destination. To continue their successful growth, it is necessary to analyse the situation to identify opportunities and challenges for future development. By utilising medical tourism services, patients can access high-quality medical care in developed destinations such as Croatia and Turkey at affordable prices. It is undoubtedly necessary to highlight the creation of new jobs, as well as the improvement of healthcare standards, which have a positive impact on the local economy.

Medical service providers strive to develop their offerings of medical services at prices that are acceptable to patients. This should be approached with great caution, considering potential risks (development of infections, errors in surgical procedures, etc.). Poorly developed quality standards, or their absence, can also significantly contribute to this. Complications arising from the use of medical services abroad can have negative implications for the domestic healthcare system, leading to ethical dilemmas. The importance of marketing activities in medical tourism is twofold: a) they attract the attention of potential users, highlight the advantages and benefits of medical services, and encourage them to use them, and b) they significantly influence how patients perceive the risks involved in using them, which reduces the contrast between their expectations and the outcome. In addition to the standard use of medical services, patients are often interested in new experiences based on the destination´s cultural heritage and tradition, contributing to their satisfaction during their stay.

However, there is also the problem of sustainability of the tourist destination. The growing number of tourist trips motivated by medical services can have negative implications for the destination's economic system and contribute to the development of over-tourism. In such cases, special attention should be paid to developing and implementing ecological strategies that are crucial for establishing a balance between the provision of medical services and the development of tourism in the destination. The expansion of the dental-aesthetic tourism industry must address ethical, social, and environmental factors while maintaining profitability. Stakeholders should prioritise Transparency to build trust. While there are cost advantages and positive cultural interactions, it is crucial to tackle risks associated with post-procedural care. Balancing the appealing benefits, such as affordability and improved patient experiences, against potential risks is essential. By focusing on sustainability and effective follow-up measures, the sector can thrive, benefiting patients and providers while becoming a lucrative global industry. In the final step, a scatter plot was prepared using MATLAB to display the sentiment scores for the different aesthetic and dentist tourism themes, including the main aspects, as shown in Figure 3.

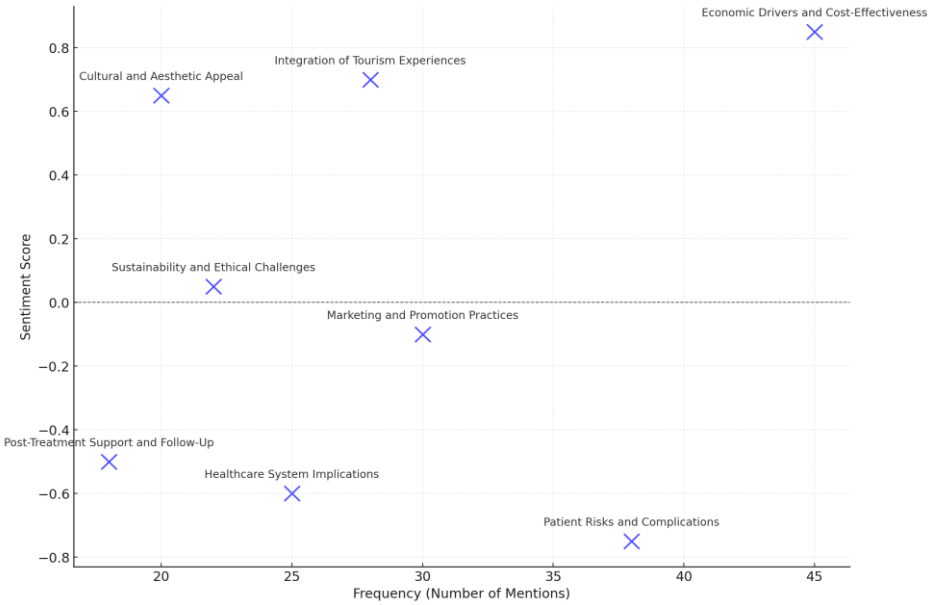

Figure 3. Semantic analysis of themes *vs.* frequencies

The scatter plot illustrates the relationship between sentiment scores and the frequency of mentions for each theme. Key features include:

1. Frequency + Sentiment - The Themes Placed:
   - Themes have positive sentiment (i.e., placed above the zero horizontal neutral line.
   - Negative Sentiment Themes (e.g. Patient Risks and Complications) are below the neutral line.

2. Text Labels:
   - Each point is labelled with the theme it belongs to.

3. Insights on Frequency and Sentiment:
   - High-frequency themes (on the right-hand side of the chart) are usually more important in conversations.
   - The sentiment scores of the themes are too high (either highly positive or highly negative), so devote better attention.

This is useful for understanding which themes are the most discussed and how they are perceived. Sentiment score and frequency analysis provide useful insights into the strengths, weaknesses, and opportunities available to dental tourism and aesthetics. Based on these findings, here are strategic priorities and corresponding recommendations. For instance, based on the high sentiment score and frequency of mentions, it is recommended that the focus be on promoting the financial benefits of medical tourism. Similarly, the negative sentiment themes highlight areas for improvement, such as enhancing patient safety measures and improving post-procedure care.

1. Key Findings

   a) Top Positive Themes by Impact:
      - Financial considerations, including cost-effectiveness: With a high sentiment score (0.85) and mention frequency (45), consumers appreciate affordability and package deals.
      - Patients travel overseas for treatment primarily due to the cost savings and value for money.
      - Tourism experience integration: Medical Tourism + Leisure (21 mentions) + Culture (7 mentions) = a high positive sentiment score of 0.70 with a moderate frequency of mentioning it, which suggests effectiveness in appeal.
      - Psychologically, patients appreciate a better embargo of aesthetic or cultural features to help recover from surgery.

   b) Sentiment Themes (negative)
      - Patient Factors and Adverse Events: Negative sentiment (-0.75) and frequency (38 mentions); safety-inflection inconsistency with a significant potential for infection risk in the field.
      - Follow-Up Support and Treatment: The negative sentiment (-0.50) and low frequency (18 mentions) indicate dissatisfaction with post-procedure care and reliance on the healthcare systems within the patient's home country for follow-up support and treatment.

   c) Neutral and Mixed Sentiments
      - Sustainability of Ethical Problems: Neutral (0.05) and spectrum presence are strong signals, with a mention frequency 22x, which denotes an acknowledgement of ethical dilemmas regarding the impact of sustainability on anthropocentric needs.

- Marketing Strategies: A neutral to slightly negative sentiment (-0.10) indicates that marketing is perceived as effective yet elicits thoughts about deceptive advertising.

d) Emerging Opportunities:
   - Appeal of Heritage and Culture: Positive (0.65) but infrequent (20 mentions); opportunity to market cultural heritage and beautiful recovery environments that attract patients.

2. Strategic Insights

a) Monetize Economic storehouses:
   - Focus on cost-effectiveness and competitive pricing in the advertisements.
   - Collaborate with insurance companies to offer policies designed for medical tourism.

b) Triage the Safety of Patients:
   - Establish international standards of accreditation to ensure uniformity in quality and safety.
   - Enhancing education about risks, infection prevention protocols and post-operative care among the patients.
   - Offer insurance that covers complications or revision surgery when needed.

c) Reinforce Follow-Up Care:
   - General measure: develop organised follow-up protocols, remote consultation with telemedicine, and partner with healthcare providers in home countries for appropriate post-surgical care.
   - Identify and document blunt responsibilities for, among others, follow-up care before starting the treatment.

d) Improve integration of tourism efforts:
   - Develop holistic packages that combine natural beauty, art, culture, and recreational options into a comprehensive, unified offering.
   - Collaborate with local tourism and hospitality sectors to promote a flawless patient journey.

e) Committed to something Sustainable:
   - Implement sustainability programs, such as renewable energy and waste reduction projects for clinics.
   - Create Transparency to win consumer trust with people-first approaches. Hiring locals and buying material from local suppliers helps stimulate the regional economy.

f) Make Marketing Strategies more precise:
   - Create an ideal campaign to avoid misleading representation.
   - Collaborate with credible influencers and health professionals for marketing campaigns.
   - Make the best use of patient reviews/testimonials to create trustworthiness.

g) Capitalize on the culturally relevant for expansion:
   - Promote destinations that offer a natural environment adequate for healing and integrate the cultural experiences of local or regional communities into individual recovery plans.
   - Picturesque locations such as natural landscapes or historical places.

3. Prioritization to act upon

a) Addressing the Immediate Issues:
   - Consumer sentiment analysis reveals a strong negative sentiment expressed by consumers regarding "Patient Risks and Complications" and a weak performance in related content. It is necessary to focus on supporting these areas or closely tie them together with "Post-Treatment Support."

b) Expansion Opportunities:
   - Bring in tools to endorse the integration of Tourism Experiences and cultural heritage, appealing to a broader demographic reach.

c) Commitment to Sustainable & Ethical:
   - We can lead the effort to normalize industry practices in response to growing global environmental awareness by effectively addressing sustainability-related issues and tackling ethical challenges head-on. By doing so, we can help the industry navigate significant challenges and seize growth opportunities, while providing a more comprehensive experience that better meets patients' needs.

***Eighth step**: Integration and synthesis of results*

The thematic and sentiment analyses provided a comprehensive overview of interactions between dental and aesthetic tourism, linking key themes to sentiments for actionable insights.

1. High-Level Themes and Interrelations:

- Economics-Based Cost Effectiveness: This recurring theme, with positive sentiment, highlighting the appeal of affordable,high-quality care. In a decision-making process, the cost evaluation may outweigh the potential risks to the patient.
- Complications and risks for the patient: This is a significant negative theme, reflecting concerns about regulatory and postoperative issues relating to post-treatment support and systemic healthcare challenges.
- Implications for the healthcare system: Medical tourism services can still pose significant challenges for the healthcare system in the countries where tourists reside, as even a favourable outcome may necessitate additional support during the recovery period.
- Marketing and promotional activities: When forming marketing strategies, special attention should be paid to Transparency and adherence to ethical principles (implementation of ethical marketing). Potential patients will be

provided with clear and precise information about medical services, which can contribute to reducing feelings of fear and anxiety.
- Combining medical and tourist services during a stay in a destination: After using medical services, patients can explore the cultural and historical heritage or engange in recreational activities during their stay in the destination. In doing so, the sustainability of the destination must be considered.
- Challenges related to ethics and sustainability principles: Adhering to ethical practices and sustainability principles is a prerequisite for successfully developing (medical) tourism offerings.
- The importance of culture and aesthetics in a destination: Although under-researched, this topic highlights how exploring cultural and historical heritage increases tourists' sense of satisfaction during their recovery in a destination.
- Providing medical support and monitoring recovery progress: This topic highlights the lack of continuous medical care for a more successful recovery. Monitoring recovery progress needs to be improved to reduce risks for patients.

The interconnectedness of previously linked topics highlights their complexity and the potential for improvements in aesthetic and dental tourism.

2. Synthesis of Sentiments

The authors identified apparent differences between positive and negative topics by conducting sentiment analysis.
- Facilitative aspects imply combining medical services with new experiences related to cultural and historical heritage during a stay in the destination. These trips are financially beneficial for patients and enhance their overall well-being.
- Among the negative topics, the authors identified risks for patients, weak regulation of medical tratments, and their negative impact on the health system. Ways of improvement must be considered to achieve greater success in the tourism market.
- Ethical and sustainability challenges are neutral or mixed topics. Dealing effectively with these challenges and practising adequate marketing practices will enable further development of the medical tourism offer.

3. Broader Implications

a) Financial incentives and experience stimuli
   The number of medical tourism trips is expected to continue grow significantly, thanks to the ongoing improvement of medical services at more affordable prices. Combining medical services with other forms of offers at the destination (based on cultural and historical heritage, gastronomy, recreation, etc.) will increase the satisfaction of medical tourists and the destination's attractiveness in the tourist market.

b) Systemic Issues
The study's results suggest the need for a more robust regulatory framework and enhanced information exchange among medical service providers at the international level. Utilising state-of-the-art tools for postoperative patient support can mitigate the risks associated with patients seeking medical services abroad.

c) Ethics & Sustainability
To ensure the sustainable growth of the medical tourism industry, it is essential to enhance the quality of communication and management systems while promoting environmental awareness and sustainability. Tourism destination stakeholders must strive to balance profits with positive impacts on the destination's environment and community.

4. Stakeholder Recommendations

a) Healthcare Providers
Healthcare providers must strive to enhance patients' support systems after they have utilised medical services at the destination. This can be achieved by establishing global cooperation to reflect on and improve the quality of medical care over time.

b) Policymakers
Policymakers need to develop a robust and high-quality management system that enables the efficient provision of medical services across borders, while minimising negative implications for the local healthcare system in the patient's country of origin.

c) Tourism Boards
Tourism boards must actively promote the environmental awareness of a destination by using environmentally friendly promotional practices.

DISCUSSION

The authors emphasise the complexity of dental and aesthetic tourism research in Europe. To assess the sustainability of the medical tourism industry, various aspects are considered, with a focus on patient safety, financial factors, and marketing strategies. Thematic and sentiment analysis linked research results with practical industry examples. Key topics identified include finances, healthcare system implications, patient risks, marketing strategies, travel experiences, cultural attractions, environmental challenges, and post-service support. Patient risks, financial factors, challenges, and development opportunities are prominent topics. Economic factors highlight the cost-effectiveness of dental tourism. Due to lower prices, patients from Western Europe often opt for dental and cosmetic services in Croatia, Hungary, and Turkey. This trend benefits patients seeking affordable medical services and boosts the local economy of host destinations. Connell (2015) and Pforr et al. (2020) emphasise the importance of medical service prices in tourists' destination choices. Conversely, Yilmaz and Aktas (2021) argue that low prices may obscure risks, such as service complications and quality concerns, which are exacerbated by patients' limited knowledge of European regulatory practices. Clear information and stricter safety regulations can mitigate these risks.

Medical tourism can strain the healthcare system of the patient's home country, especially if complications arise from services abroad (Virani et al., 2020).

Additionally, the social impacts of medical tourism are substantial (Hanefeld et al., 2014). Marketing strategies are essential for promoting dental and aesthetic tourism, but ethical issues must be addressed to prevent false advertisements that exaggerate outcomes and minimise risks. Social media and influencer marketing can erode patient trust. This study found a lack of scientific research on medical services in European tourist destinations, which attract tourists with affordable treatments and unique cultural experiences, enhancing satisfaction. European destinations leverage natural, cultural, and historical resources to develop tourism products alongside medical services. Concerns about sustainability and resource impact necessitate innovative development activities that integrate sustainability into healthcare management and health-motivated travel (Hanefeld et al., 2015; Figueiredo et al., 2024; Gajić et al., 2023; Fritz, 2021). The study emphasises the role of cultural and historical resources in patient satisfaction, with European destinations using these to create a healthy environment and foster connections (Pforr et al., 2020). Sentiment analysis revealed mixed sentiments, with some positive aspects regarding cultural experiences and cost savings from affordable medical services. However, post-service medical care regulation deficiencies force patients to rely on healthcare in their home country. Research by Verra et al. (2016) and Androutsou and Metaxas (2019) suggest that European destinations face challenges in international healthcare coordination, underscoring the need for enhanced cooperation and teamwork.

Sentiment analysis reveals ambivalence towards medical tourism, appreciating its affordability and cultural benefits, but critiquing risks of patient safety and the burdens on the healthcare system. Profit motives may compromise patient care, and complications from abroad can overtax local health services, particularly those that lack international care standards (Hanefeld et al., 2012; Crooks eet al., 2015). Marketing efforts, including social media and celebrity endorsements, risk ethical dilemmas by overstating the affordability and success od products (Crooks et al., 2011). Poor post-treatment support and follow-up also exacerbate problems and increase patient distress (Eissler & Casken, 2013; Snyder et al., 2011).

CONCLUSIONS

European dental and cosmetic tourism is growing in the international tourism market, primarily due to affordable medical services and the opportunity to enjoy additional services during their stay at the destination. However, their development also causes ethical dilemmas and overloads the healthcare system of the tourist´s country of origin. Numerous European destinations, such as Croatia and Hungary, have recognised their advantages and are actively developing their medical tourism offers, while offering additional services based on new experiences. Specific challenges have also been identified, including inadequate medical support during the tourist recovery period and poorly formed regulatory frameworks, which increase the risk for tourists when using medical services abroad. At the same time, it makes it challenging to coordinate the provision of medical care across borders in Europe. It has been determined that offering

medical services at lower prices and the attractiveness of the destination´s culture create positive sentiments, while concern about patient safety creates negative feelings. The medical tourism sector also faced sustainability issues and ethical challenges, necessitating a more effective regulatory approach. Future development of the destination's tourism policy should focus on enhancing patient safety systems, implementing a more effective management system that adhering to sustainability principles, and enganging in target marketing activities. In this study, the authors primarily used secondary data related to Europe,offering insight into the current situation. However, this approach also has its limitations, making it necessary to highlight the lack of quantitative data required for a comparative analysis between regions. The authors believe that future research should focus on examining patients' attitudes and considering their perspectives, investigating regulatory frameworks in more detail, and assessing the implications of medical tourism. It is also advisable to conduct comparative studies between European and non-European destinations to determine which practices best contribute to achieving competitive advantages in the tourism market and to identify the challenges they face. This approach to development would enable the formation of a sustainable medical tourism market that balances the achievement of economic growth for the destination with ethical responsibilities.

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PERCEPTIONS, PREFERENCES, AND TRAVEL INTENTIONS OF FOREIGN TOURISTS TOWARD COSMETIC SURGERY SERVICES IN KVARNER

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Abstract

The aim of this paper is to determine perception, preferences and travel intentions of foreign tourists for cosmetic surgery in the Kvarner region, an emerging destination for medical tourism. Empirical research was conducted in 2025 on a sample of 361 respondents with prior experience or interest in using cosmetic surgery services abroad. A structured questionnaire was used to assess social influence, perceived behavioural control, perceived risks, medical service quality and destination attributes, and behavioural intentions. Findings indicate that tourists perceive Kvarner's cosmetic surgery services as high-quality, trustworthy, cost-effective, and low risk when compared with the treatments in their home countries. They expressed strong confidence in being able to organize their travel arrangements, communication with cosmetic surgery service providers, and managing their post-procedural recovery process. They are strongly interested in traveling abroad, and to Kvarner in particular, in the next three years to use cosmetic surgery services, as well as to revisit the destination due to them. Beyond medical treatments, the variety of cosmetic services, and the relaxing experience of treatment further reinforce their revisit intentions. Social influence from family and peers have proven to be moderate, which indicates that tourist´s decisions are largely self-driven. This study contributes to the literature of medical tourism by providing destination-specific insights into the foreign tourist's decision-making processes. Practical implications are offered for healthcare providers, destination managers, and policymakers who are interested in improving competitiveness of Kvarner as a medical tourist destination through development of integrated medical tourism offer, quality assurance of cosmetic surgery services, and building a sense of trust.

Key words: theory of planned behaviour, medical tourism, cosmetic surgery, Kvarner.

INTRODUCTION

The increase in international mobility of patients as well as medical professionals, accompanied by significant capital investments, the exchange of medical technologies and well-established regulatory frameworks among world countries contributed to the formation of new patterns of provision and use of health services. Patients are traveling more internationally to use some form of medical services, whether we discuss dental work, infertility treatment, cosmetic surgery, etc. This resulted in development of medical tourism as a specific form of tourism (Lunt et al., 2011), which significantly changed the healthcare scene of countries that decide to focus on developing it through provision of high-quality medical services by top skilled medical professionals at the lower prices. This enables destinations to profile themselves as more attractive and competitive on the medical tourism market (Alkier et al., 2021, 479; Lubowiecki-Vikuk and Dryglas, 2019a; 2019b).

Cosmetic surgery belongs among the most developed segments of medical tourism, considering that a significant number of patients decide to travel abroad to use higher quality and often much cheaper procedures compared to those in the country where they live. According to ISAPS (2025, 9-41) a total of 17,415,678 procedures were performed worldwide in 2024, top five being eyelid surgery (2,115,360 procedures, +72,60% in relation to 2020), Liposuction (2,087,189 procedures, +36,8% in relation to 2020), Breast Augmentation (1,658,615 procedures, +2,1% in relation to 2020), Scar Revision (1,156,446 procedures, n.d. for comparison) and Rhinoplasty (1,083,631 procedures, +27,1% in relation to 2020). According to gender, five top surgical procedures for women were Liposuction (1,792,323 procedures), Eyelid Surgery (1,625,597 procedures), Breast Augmentation (1,611,758 procedures), Abdominoplasty (945,636 procedures) and Scar Revision (836,458 procedures), while men were interested in Eyelid Surgery (489,763 procedures), Gynecomastia (383,656 procedures), Scar Revision (319,987 procedures), Liposuction (294,866 procedures), and Rhinoplasty (287,398 procedures). Previously presented indicators showed growth of interest for surgical beauty treatments. Changes in beauty standards, accompanied by cultural values and rapid development of medical technology indicate cosmetic surgery becoming even greater global phenomenon than ever before (Statista, 2025). In the Republic of Croatia aesthetic medicine and plastic surgery services represent an important element of its medical tourism offer, which is why its service providers are actively investing in quality of its services, introduction of new medical technologies, and education of its medical personnel. All the improvements are actively promoted online through official websites and social media (Ordinacija.hr, 2025; Alkier Tomić et al., 2025). Kvarner region, as a Croatian destination with the longest tradition of health tourism development, has been developing its medical tourist offer in the last few decades, with special attention paid to cosmetic surgery and aesthetics. However, research studies focused on Croatia, and Kvarner region as a destination of beauty and health are practically non-existent. The aim of this study is to determine the perception, preferences and travel intentions of foreign tourists for cosmetic surgery in the Kvarner region. Its findings provide a significant contribution to both theory and practice. The paper is structured in the following order: after the introduction, authors will present the theoretical background, methodology, empirical findings, discussion and conclusion.

THEORETICAL BACKGROUND

Medical tourism has gained on importance over the years and is recording significant progress and development (Samir and Karim, 2011; Connel, 2006; Connell, 2013; Siddoo et al., 2024; Jalali et al., 2025; Mo et al., 2025). This is supported by the findings of Fortune Business Insights according to which in 2025 the size of medical tourism market was estimated at 38.2 billion USD, and it is forecasted that it will reach 250.02 billion USD by 2034, respectively a CAGR of 23.31% in the observed period. European region took a dominant position on the medical tourism market in 2025 by participating with 36.51% in the total market share (Fortune Business Insights, 2026). The size of the cosmetic medical tourism market was globally estimated at 7.23 billion USD in 2025, and it is forecasted that it will reach 48.74 billion USD by the year 2034, respectively a CAGR of 23.71% in the observed period. European region dominated in this segment as well in 2025 by participating 58.83% in the total market share. Cosmetic medical tourism market trends indicate an increase of medical tourists who are aware of the present beauty standards, they are well informed about the advantages of aesthetic procedures and have rising disposable income that they are willing to spend on this type of services. Increasing interest for plastic surgery interventions contributes significantly to the growth of the overall cosmetic medical tourism market. The cosmetic procedures can be invasive (liposuction, rhinoplasty, eyelid surgery) or non-invasive (such as Botox injections, dermal fillers, etc.). The growing interest in such treatments contributes to the increase of the number of patients and strengthening the cosmetic surgery market. Data from the International Society for Aesthetic Plastic Surgery published in June 2024 show that in 2023, approximately 2.2 million liposuction and 1.1 million rhinoplasty procedures were performed. Significance and the developmental potential of this type of offer was recognized by government authorities of many world countries who choose to organize marketing campaigns, to form better market opportunities for cosmetic service providers, as well as for potential patients. Well prepared and conducted campaigns in a form of educative events, social media campaigns, and use of informative resources can increase the awareness about all the effects, benefits and safety of cosmetic procedures among consumers, based on which potential patients will be able to make an informed and positive decision about having a procedure. The positive effects are twofold: a) there will be an increase of medical procedures which will have a positive effect on the revenue of service providers; and b) patient´s needs will be satisfied (Fortune Business Insights, 2026). Tourist destinations should plan future development and improvement of their cosmetic medical tourism offer in accordance with the preferences of tourists/patients, which is possible to determine by conducting empirical research studies. Studies on medical cosmetic surgery tourism focus significantly on determining their motives (Lestari, 2025; Robertson et al., 2021) as well as perceived quality and satisfaction with medical services (Majeed et al., 2020; Park et al., 2021; Ramos & Cuamea, 2019; Campbell et al., 2020).

However, throughout the years Theory of planned behaviour developed by Ajzen (1991) has been significantly implemented in research studies focused on determining interrelations of how constructs *subjective norms* (Roll Bennet, 2022; Boguszewicz-Kreft et al., 2020; Seow et al., 2017), *perceived behavioural control* (Liang et al., 2019; Martin et al. (2011), and *attitudes* (Liang et al., 2019; Park et al., 2021) influence

behavioural intention. *Perceived benefits* (Liang et al., 2019; Chaulagain et al., 2021) and *perceived risks* (Boguszewicz-Kreft et al., 2022; Liang et al., 2019; Nam, 2020) were added later in the study of Seow et al. (2017) with the aim of determining its influence on behavioural intentions of medical tourists (Liang et al., 2019; Boguszewicz-Kreft et al., 2020), considering they have exceptional importance in the decision-making process about choosing and visiting a destination (Ajzen, 1991; Bui, 2024).

Subjective norms reflect individuals' views on how important the opinions and attitudes of other people in their social environment are to them about how they should behave (Zhuang et al., 2021; Bilgihan et al., 2015; Ajzen, 1991). In the context of medical cosmetic tourism, they imply whether tourists who choose to undergo cosmetic surgery procedures base their decisions on whether or not their friends and relatives expect them to do so (meaning their approval and/or encouragement, or possibly quite the opposite, disapproval), and what their expectations are regarding the reaction of these people after they learn that the individual has undergone cosmetic procedures. Studies show that subjective norms can contribute towards formation of a significant social pressure that can significantly influence making a positive or negative decision to travel and undergo cosmetic procedures (Ajzen, 1991; Dash, 2021; Nguyen et al., 2020; Boguszewicz-Kreft et al., 2020; Roll Bennet, 2022). Empirical studies of Liang et al. (2019), Dash (2021), and Seow et al., 2017) confirm a positive influence of subjective norms on medical tourist´s decision-making process for visiting a destination and using medical cosmetics services. From the above, it is visible that subjective norms explain the influence of social pressure and expectations of other, relevant persons for the individual. However, in addition to social expectations, the perception of one's own control over behavior also also has a significant role in forming intentions (Ajzen, 1991).

Perceived behavioural control indicates how capable a tourist feels to organize their journey abroad, with the aim of experiencing high-quality medical services, and to what extent the outcome of the entire journey will be successful. The high score of this construct indicates that a tourist who makes a decision to go on a journey motivated by cosmetic surgery procedures feels confident and capable enough to successfully organize and implement the entire travel process (communication and agreement with the medical institution regarding the arrival and use of cosmetic procedures, transportation to the medical institution and back home, receiving a cosmetic procedure), and that they can have an influence on a positive medical outcome through successful communication with medical staff, following the instructions received in the post-period, and a safe return home. The above can positively influence making a positive decision to go abroad for a cosmetic procedure (Liang et al., 2019; Boguszewicz-Kreft et al., 2022; Seow et al., 2017). Following, it is necessary to observe individual evaluation of this type of behaviour, which within Theory of Planned Behaviour is defined through formed attitudes (Ajzen, 1991).

Attitudes in tourism include feelings and beliefs which have a significant impact on behavioural intentions of tourists (Almeida García et al., 2015). The attitudes formed about cosmetic surgery influence whether potential patients will travel motivated by this type of service, and if yes, how will they evaluate their overall experience during their stay in a medical facility and in a destination. During their stay and after using cosmetic

surgery services, patients will evaluate their experience in the context of whether it is worth using them, whether they achieved value for money, if the service used improved their appearance and quality of life, to what extent were they satisfied with the overall experience, etc., which significantly affects the formation of a patient's sense of satisfaction and trust in the provider of cosmetic surgery services, and the formation of a positive attitude towards the destination itself (Majeed et al., 2020; Park et al., 2021). Park et al. (2021) analysed relevance of hospitals as providers of cosmetic surgery services and facilitating agents in development of cosmetic surgery medical tourism. The findings indicate quality of cosmetic surgery services (tangibles, sense of safety, empathy) having a positive influence on patients' attitudes towards medical tourism, which reflects their sense of satisfaction with medical tourism offer. It has also been proven that quality of service provided by the facilitator has a moderating effect of hospitals' service quality dimensions on service satisfaction. Findings of Majeed et al. show that perceived quality of cosmetic surgery services positively influences tourists' intentions in the form of formation of emotional attachment, sense of trust and visit intention both directly and through mediating role of joint co-creation (Majeed et al., 2020). Considering that within Theory of Planned Behaviour attitudes are formed based on the assessment of expected behavioural outcomes, following authors will discuss perceived benefits.

Through *Perceived benefits* tourists can evaluate what they have received during their stay in a destination in a form of services and experiences in relation to what they spent (money, free time) (Petrick, 2002, 119). Study of Chen and Chen (2010) indicates possibility of perceived value being a better predictor of repurchase intention in relation to quality and satisfaction (Cronin, 2000; Oh, 2000) which is why measuring it is extremely important due to enabling service users to compare the value among services and at the same time it helps tourist service providers to determine their strong and weak points according to the dimensions of value (Petrick, 2002, 120). When it comes to cosmetic procedures or aesthetic surgery, patients consider the perceived quality of the medical service received (e.g., the competence and expertise of the medical staff) and whether the experience met their expectations as part of the benefits achieved. Empirical studies (Majeed et al., 2020; Menvielle et al., 2011) have shown that the higher patients perceive the quality of the medical service, the more likely they will make a positive decision to visit an aesthetic tourism destination (directly or indirectly through shared co-creation of value.

Perceived risk is of exceptional relevance in cosmetic surgery tourism since it can be a deciding factor based on which potential patients decide whether to travel and visit a particular cosmetic surgery facility and use their services. Risk perception needs to be monitored regularly and closely because findings like these can help service providers, and destination stakeholders to take appropriate actions. In her study Nam (2020, 138-142) determined that infleunce of risk perception influences medical tourist´s decision-making process. Patients in this case were most concerned about not experiencing all the advantages of cosmetic surgery like high-quality medical services, saving costs, and surgical outcomes they wished. Concern was expressed for potential lack of experience of medical staff, which might have negative influence on outcome and level of satisfaction. These findings indicate that the higher the medical risk perception, the

greater the concern and reduction of confidence in traveling for cosmetic services. Based on the findings Nam also proved the importance of segmentation of tourist´s profiles on how they perceive risks ("Risk Sensitive," "Risk Neutral" and "Risk Concerned"). Findings like these represent crucial information based on which it is mandatory to plan appropriate communication and support provision, since different groups of medical tourists need different approach and provision of information, based on their level of concern. Additionally, medical tourists expressed concern regarding the potential complications in the post-procedure period (pain, infections, etc.) and how this might influence their holiday. No concern was expressed for the period after returning home. Liang et al. (2019) determined that perceived risk had a negative influence on the attitude, perceived behavioural control and subjective norms of medical tourists. Boguszewicz-Kreft et al. (2022) determined a strong negative impact of perceived risk on attitude of medical tourists, respectively, if they perceive the risk as greater, they will have a less favourable attitude about medical tourism services. The findings presented within this chapter explain the relevance of observing influence of subjective norms, perceived behavioural control, and attitudes, perceived benefits and perceived risks on behavioural intention of tourists traveling for cosmetic surgery procedures. Findings like these can be of significant use for both cosmetic surgery providers and destination stakeholders and provide insight for further improvements. So far a limited number of research studies were focused on cosmetic surgery tourism which justifies this study. Based on the theoretical framework, two hypotheses were developed. It was hypothesized that tourists perceive Kvarner's cosmetic surgery services as high-quality, trustworthy, cost-effective, and low risk (H1). To examine the predictors of tourists' intention to reuse cosmetic surgery services in Kvarner, it was hypothesized that subjective norms, perceived behavioral control, attitudes together with perceived benefits and risks predicted revisit intention (H2).

METHODOLOGY

Data Source and Sample

A structured questionnaire was used for data collection for the purpose of this study. Its first part addressed intentions of tourists who used cosmetic surgery services in the last five years and was developed based on the study of Martin et al. (2011) which was extended by Liang et al. (2019). The second section assessed travellers' revisit intentions based on the framework developed by Alkier et al. (2019). The final section collected respondents' socioeconomic characteristics. The data was collected in 2025. Authors implemented convenience sampling method since questionnaire was distributed both online through Google docs form, and physically in the cosmetic surgery clinics. In total a 361 correctly filled questionnaire by foreign tourists was collected and used for the statistical analysis. Following the sociodemographic characteristics of the respondents are presented.

Table 1. Sample characteristics

Variable	Category	Frequency	%
Gender	Female	240	66.5
	Male	120	33.2
	Prefer not to say	1	0.3
	Total	*361*	*100.0*
Age	18–24	3	0.8
	25–34	34	9.4
	35–44	178	49.3
	45–64	141	39.1
	65+	5	1.4
	Total	*361*	*100.0*
Education level	Graduate and above	301	83.4
	Undergraduate	59	16.3
	Technical secondary school	1	0.3
	Total	*361*	*100.0*
Country of origin	Germany	106	29.4
	Italy	90	24.9
	Slovenia	75	20.8
	Austria	61	16.9
	Serbia	21	5.8
	Bosnia and Herzegovina	6	1.7
	North Macedonia	1	0.3
	Spain	1	0.3
	Total	*361*	*100.0*
Marital status	Married	186	51.5
	Unmarried / single	105	29.1
	Separated / divorced	70	19.4
	Total	*361*	*100.0*
Travel companionship	With partner	160	44.3
	Friends/acquaintances	99	27.4
	Alone	53	14.7
	Family members	49	13.6
	Total	*361*	*100.0*
Employment status	Employee	195	54.0
	Self-employed	161	44.6
	Retired	3	0.8
	Student	2	0.6
	Total	*361*	*100.0*
Monthly income (€)	2,501–3,000	158	43.8
	2,001–2,500	125	34.6
	3,001–3,500	41	11.4
	1,501–2,000	20	5.5
	3,501+	14	3.9
	1,001–1,500	2	0.6
	501–1,000	1	0.3
	Total	*361*	*100.0*

Source: Author's research

The study was conducted on a sample of 361 foreign tourists with prior experience or interest in undergoing cosmetic surgery abroad. The sample is predominantly female (66.5%), highly educated (83.4% holding graduate or postgraduate degrees), and largely concentrated in the 35–64 age group (88.4%). Respondents originate mainly from nearby European markets, particularly Germany (29.4%), Italy (24.9%), Slovenia (20.8%), and Austria (16.9%). Over half are married (51.5%), and most travel with a partner (44.3%) or friends (27.4%). The sample is economically active and financially capable, with 54.0% employed and 44.6% self-employed. Most respondents report monthly incomes between €2,001 and €3,000 (78.4%), indicating solid purchasing power. Overall, the sample represents a mature, well-educated, and financially stable segment from proximate European markets with strong potential for elective medical tourism travel.

Variables and methods

Questions referring to intentions of tourists who used cosmetic surgery services were adapted based on the studies of Martin (2011) and Liang et al. (2019), while travellers´ revisit intentions questions were adapted based on the research of Alkier et. al. (2019). All constructs, except socioeconomic variables, were measured using a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). Descriptive statistics, Cronbach's alpha reliability analysis, and Pearson correlation coefficients were used to examine respondents' perceptions, attitudes, and behavioural intentions toward cosmetic surgery services in Kvarner, ensuring the validity and internal consistency of the measurement scales. Multiple linear regression analysis was used to examine the predictors of tourists' intention to reuse cosmetic surgery services in Kvarner.

RESULTS AND DISCUSSION

Descriptive statistical analysis

Descriptive statistics were used to examine respondents' subjective norms, perceived behavioral control, attitudes, perceived benefits, risk perceptions, and travel intentions regarding cosmetic surgery services in Kvarner.

Table 2. Subjective norms

Expectations of family and friends: descriptive statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
My family and friends expect me to go overseas for cosmetic medical treatment.	361	1	5	3.21	1.492
Most people who are important to me think that I should be treated overseas.	361	1	5	2.63	1.470
My family and friends encourage me to spend some time overseas for cosmetic medical treatment (surgery).	361	1	5	2.61	1.443

Table 2. *(continued)*

	N	Minimum	Maximum	Mean	Std. Deviation
My close relatives and peers want me to go overseas to seek cosmetic medical treatment (surgery).	361	1	5	2.50	1.438
My family and friends encourage me to spend some time overseas for cosmetic medical treatment (surgery).	361	1	5	2.45	1.454
Valid N (listwise)	361				

Anticipated reaction of family and friends: descriptive statistics

	N	Minimum	Maximum	Mean	Std. Deviation
My close friends and relatives anticipate that I will go to a foreign country to receive cosmetic medical treatment	361	1	5	3.54	1.392
My family and friends predict that I will seek treatment outside my homeland.	361	1	5	3.46	1.418
My close relatives and peers will be happy if I travel overseas for cosmetic medical procedures.	361	1	5	2.91	1.479
Valid N (listwise)	361				

Source: Author's research

As visible from table 2, within subjective norms were measured expectations of family and friends and anticipated reaction of family and friends. It has been registered that the results for social expectations are moderate to low, indicating that the respondents are not experiencing socal pressure from their friends and family to go abroad and seek cosmetic surgery treatments.

The highest score was given to the statement relating to the expectations of family and individuals that the individual will go overseas to use cosmetic treatment (AM=3.21), followed by the statements that most individuals who are important to the individual believe that he/she should be treated abroad (AM=2.63), encouragement from family and friends that the individual spends some time abroad to use cosmetic medical treatments (surgery) (AM=2.61), the desire of close relatives and peers that the individual seek cosmetic medical treatment services abroad (AM=2.50), and and encouragement from family and friends that the individual spends some time overseas to use cosmetic medical treatments (surgery) (AM=2.45). Within the predicted reactions of family and friends, the highest rating was given to the statement relating to predictions by close friends and relatives that the individual will go to a foreign country for cosmetic medical treatment (AM=3.54), predictions by family and friends that the individual will seek treatment outside their home country (AM=3.46). Statement adrdressing that close relatives and peers will be happy if the individual travels abroad for cosmetic medical procedures (AM=2.91) was marked the lowest indicating low emotional support.

Table 3. Perceived behavioral control

Perceived ability to obtain overseas medical care: descriptive statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
I am confident I can arrange overseas trips for cosmetic medical surgery or treatment.	361	4	5	4.62	.486
In the right foreign country, I can manage to receive care to recover from a cosmetic medical procedure.	361	2	5	4.60	.524
I am capable of getting cheaper but excellent cosmetic medical care in some countries.	361	2	5	4.54	.537
If I am in the right foreign country, I can manage to get excellent cosmetic medical treatment (surgery).	361	2	5	4.52	.533
Valid N (listwise)	361				
Perceived ability to achieve a successful medical outcome: descriptive statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
I can follow my doctor's advice and receive the services needed for quick recovery after a cosmetic medical intervention overseas.	361	4	5	4.75	.436
I can communicate with overseas health care providers and get them to perform the needed procedure	361	4	5	4.68	.468
After the recovery from overseas cosmetic medical procedures, I can go home safely.	361	2	5	4.59	.640
Valid N (listwise)	361				

Source: Author's research

As visible from previous table, within Perceived control authors observed participant´s perceived ability to obtain overseas medical care and their perceived ability to achieve a successful medical outcome. Findings indicate the respondents experiencing very high level of perceived control about obtaining cosmetic surgery treatments because all the elements were marked above 4,00. The highest mark was given to the statement relating to the individual's belief that they can arrange travel abroad for cosmetic medical surgeries or treatments (AM=4.60), followed by the statements relating to the individual's belief that in the right foreign country they can successfully recover from a cosmetic medical procedure (AM=4.60), that in some countries they can receive cheaper, yet excellent cosmetic medical care (AM=4.54), and the possibility of recovering from an excellent cosmetic medical treatment (surgery) if they are in the right country (AM=4.52). In terms of Perceived Ability to Achieve a Successful Medical Outcome, respondents rated the statement indicating the respondent's ability to follow their doctor's advice and the ability to obtain the services necessary for a quick recovery after a cosmetic medical procedure abroad the highest (AM=4.75), followed by the ability to communicate with foreign healthcare professionals and persuade them to perform the necessary procedure (AM=4.68), and the ability to safely return home after recovering from cosmetic medical procedures abroad (AM=4.59).

Table 4. Attitude - descriptive statistics

	N	Minimum	Maximum	Mean	Std. Deviation
In your opinion, medical care in Kvarner is worth the search	361	4	5	4.83	.375
In your opinion, medical care in Kvarner is very high quality	361	4	5	4.77	.421
Medical care in Kvarner is beneficial	361	4	5	4.73	.447
In your opinion, medical care in Kvarner is trustworthy	361	4	5	4.71	.452
In your opinion, medical care in Kvarner is more competent (than other compeeting destinations	361	2	5	4.67	.538
In your opinion, medical care in Kvarner is very important	361	2	5	4.65	.505
In your opinion, medical care in Kvarner is worth the cost	361	4	5	4.61	.489
Medical care in Kvarner is appealing	361	3	5	4.55	.503
Medical care in Kvarner is a bargain	361	1	5	4.10	1.084
In your opinion, medical care in Kvarner is life saving	361	1	5	2.95	1.670
Valid N (listwise)	361				

Source: Author's research

The data in Table 4 indicate that respondents have an extremely positive attitude towards cosmetic surgery treatments, given that only two statements were rated low. Respondents believe that medical care in Kvarner is worth seeking out (AM=4.83), that it is of very high quality (AM=4.77), useful (AM=4.73), reliable (AM=4.71), more competent (than other competing destinations) (AM=4.67), very important (AM=4.65), worth the price (AM=4.61), attractive (AM=4.55). The lowest rated statements are those relating to the affordability of cosmetic surgery treatment services (AM= 4.10) and that they save lives (AM=2.95). Moderate mark for the "life-saving" is not surprising considering the fact that the nature of these procedures is elective. The statement describing medical care as a "bargain" shows more variability (M = 4.10; SD = 1.084), suggesting some differences in price perceptions among respondents.

Table 5. Perceived benefit: descriptive statistics

	N	Minimum	Maximum	Mean	Std. Deviation
I am sure I receive better cosmetic surgery treatments in Kvarner than in my own country.	361	4	5	4.78	.418
Cosmetic surgery treatments in Kvarner is better than in my own country.	361	3	5	4.74	.444
Doctors in Kvarner are better trained in cosmetic surgery treatments better than in my country.	361	2	5	4.70	.505
I am sure I have quicker access to the cosmetic surgery treatments in Kvarner than in my own country.	361	1	5	4.59	.770
Valid N (listwise)	361				

Source: Author's research

Respondents rated the perceived benefits of using cosmetic surgery services in Kvarner very highly, which is also evident from the previous table. Respondents are certain that they receive better cosmetic surgery treatments in Kvarner than in their own country (AM=4.78), that cosmetic surgery treatments in Kvarner are better than in their own country (AM=4.74), that doctors in Kvarner are better trained in cosmetic surgery treatments than in the country from which the respondents come (4.70), and they are certain that they have faster access to cosmetic surgery treatments in Kvarner than in their own country (AM=4.59).

Table 6. Perceived risk: descriptive statistics

	N	Minimum	Maximum	Mean	Std. Deviation
I am worried about complications happening during the cosmetic surgery treatments that would require a longer absence.	361	1	5	1.78	1.009
My doctor might not want to treat me if I had cosmetic surgery treatments in Kvarner.	361	1	5	1.29	.756
I am afraid that I might not get the same care as in my own country.	361	1	5	1.25	.681
I am not sure that I would receive good cosmetic surgery treatments in Kvarner.	361	1	5	1.17	.555
Valid N (listwise)	361				

Source: Author's research

The respondents' attitudes about potential risks are very low, which is visible in Table 7. The highest mark was given to the statement that addresses the user's concern about complications that could occur during cosmetic procedures, which would require a longer absence (AM=1.78), followed by the concern that a doctor in the user's country of origin would potentially not want to treat the user (AM=1.29), the fear that the user will not receive the same care as in their own country (AM=1.25), and the feeling of insecurity about not receiving good cosmetic procedures in Kvarner. These findings indicate the respondents consider cosmetic surgery procedures in Kvarner as trustworthy, safe and reliable.

Table 7. Travel intentions: descriptive statistics

	N	Minimum	Maximum	Mean	Std. Deviation
I would like to use cosmetic surgery treatments in Kvarner again.	361	2	5	4.57	.518
Variety of cosmetic surgery treatments in Kvarner stimulates me to use them again.	361	4	5	4.56	.497
Uniqueness and specificity of cosmetic surgery treatments offer stimulates me to revisit Kvarner.	361	4	5	4.53	.500
Costs associated with the cosmetic surgery treatments in Kvarner are acceptable for me.	361	4	5	4.53	.499
Using cosmetic surgery treatments in Kvarner makes me feel relaxed physically and mentally.	361	1	5	4.51	.543
I intend to travel to Kvarner for cosmetic surgery treatments in next 3 years.	361	1	5	4.41	.722

Table 7. *(continued)*

	N	Minimum	Maximum	Mean	Std. Deviation
I intend to travel abroad for cosmetic surgery treatments in next 3 years.	361	1	5	4.22	.989
I expect to have some cosmetic surgery treatments in a foreign country of my choice.	361	1	5	4.16	.977
Apart from cosmetic surgery treatments, uniqueness, specificity and preservation of natural resources stimulates me to revisit Kvarner.	361	1	5	3.91	1.264
Apart from cosmetic surgery treatments, uniqueness, specificity and preservation of cultural resources stimulates me to revisit Kvarner.	361	1	5	3.17	1.511
Valid N (listwise)	361				

Source: Author's research

The attitudes in the previous table represent travel intentions of the respondents. The results are in line with the previous findings of this study. The respondents expressed that they would like to use cosmetic surgery treatments in Kvarner again (AM=4.57), and that they intend to travel to Kvarner for cosmetic surgery treatments in the next 3 years (AM=4.56). The decision to visit Kvarner again was motivated by the diversity of cosmetic surgery treatments (AM=4.56), the uniqueness and specificity of the cosmetic surgery treatment offer (AM=4.53), the acceptability of the costs associated with cosmetic surgery treatments (AM=4.53), using cosmetic surgery treatments in Kvarner makes them more relaxed physically and mentally (AM=4.51), and the expectation of having some cosmetic surgery treatments in a foreign country of their choice (AM=4.16). The lowest rated statements related to the impact of uniqueness, specificity and preservation of natural resources on encouraging respondents to visit Kvarner again (AM=3.91) and uniqueness, specificity and preservation of cultural resources (AM=3.17).

Instrument validity

The authors evaluated whether the subscales were reliably measured. Calculation of the total score for each construct, based on the items representing each factor was also calculated (Table 8).

Table 8. Scale statistics

Factor	Number of items	AM	SD	Cronbach's Alpha
Expectations of family and friends	5	13.40	6.75	0.958
Anticipated reaction of family and friends	3	9.91	3.96	0.914
Perceived ability to obtain overseas medical care	4	18.28	1.70	0.835
Perceived ability to achieve a successful medical outcome	3	14.01	1.25	0.718
Attitudes	10	44.57	3.87	0.686
Perceived benefit	4	18.81	1.84	0.850
Perceived risk	4	5.48	2.41	0.790
Intention to Reuse Cosmetic Surgery Services in Kvarner	10	42.57	5.06	0.778

Source: Author's research

"Cronbach's alpha is a measure of reliability that ranges from 0 to 1, with values of 0.60 to 0.70 deemed the lower limit of acceptability" (Hair *et al*., 2014). As shown in Table 8, most constructs demonstrated strong reliability: *Expectations of family and friends* ($\alpha = 0.958$), *Anticipated reaction of family and friends* ($\alpha = 0.914$), *Perceived ability to obtain overseas medical care* ($\alpha = 0.835$), *Perceived ability to achieve a successful medical outcome* ($\alpha = 0.718$), *Perceived benefit* ($\alpha = 0.850$), *Perceived risk* ($\alpha = 0.790$), and *Intention to reuse cosmetic surgery services* ($\alpha = 0.778$).

However, the *Attitudes* scale showed a lower reliability coefficient ($\alpha = 0.686$), falling slightly below the commonly accepted threshold. Therefore, to ensure the robustness and validity of subsequent analyses, the *Attitudes* construct was excluded from further statistical testing. This decision preserves the integrity of the findings and focuses the analysis on constructs with confirmed internal consistency.

Correlation Analysis

Authors conducted Pearson correlation coefficients analysis to test the relations between social influence, perceived control, perceived benefits and risks, and intentions to reuse cosmetic surgery services in Kvarner. The findings show a strong positive correlation between *Expectations of family and friends* and *Anticipated reaction of family and friends* ($r = 0.763$, $p < 0.01$), confirming close alignment of social expectations and anticipated reactions. Other correlations among social influence constructs and perceived ability variables are weak or nonsignificant, which indicates that social pressures play a minor role in shaping perceived control or intentions.

Authors determined positive correlation of *Perceived ability to obtain overseas medical care* with *Perceived ability to achieve a successful medical outcome* ($r = 0.556$, $p < 0.01$), indicating that respondents' confidence in organizing care is closely associated with confidence in treatment success.

Both of these constructs also show significant positive correlations with *Perceived benefit* ($r = 0.230$ and $r = 0.318$, respectively, $p < 0.01$) and with *Intention to reuse services* ($r = 0.322$ and $r = 0.244$, respectively, $p < 0.01$), indicating that higher perceived control and outcome expectancy are connected with stronger intentions to revisit Kvarner for cosmetic surgery. *Perceived risk* shows significant negative correlations with *Perceived ability to obtain care* ($r = -0.124$, $p < 0.05$), *Perceived ability to achieve a successful outcome* ($r = -0.201$, $p < 0.01$), *Perceived benefit* ($r = -0.221$, $p < 0.01$), and *Intention to reuse services* ($r = -0.121$, $p < 0.05$). These findings indicate that higher perceived risk is associated with lower confidence in accessing and benefiting from cosmetic surgery, as well as lower revisit intentions.

Table 9. Correlations between study constructs

Variable	1	2	3	4	5	6	7
1. Expectations of family and friends	1	.763**	.063	.028	-.031	.013	.058
2. Anticipated reaction of family and friends		1	.156**	.052	-.011	.009	-.021
3. Perceived ability to obtain overseas medical care			1	.556**	.230**	-.124*	.322**
4. Perceived ability to achieve a successful medical outcome				1	.318**	-.201**	.244**
5. Perceived benefit					1	-.221**	.320**
6. Perceived risk						1	-.121*
7. Intention to Reuse Cosmetic Surgery Services in Kvarner							1

Source: Author's research

Overall, the correlation analysis shows that perceived ability, anticipated outcomes, and perceived benefits are positively associated with behavioral intentions, whereas perceived risks have a dampening effect. Social influence is moderately interrelated but plays a smaller role in predicting intentions.

Multiple Regression Analysis

A multiple linear regression analysis was conducted to examine the predictors of tourists' intention to reuse cosmetic surgery services in Kvarner. Six independent variables were included in the model: *Expectations of family and friends*, *Anticipated reaction of family and friends*, *Perceived ability to obtain overseas medical care*, *Perceived ability to achieve a successful medical outcome*, *Perceived benefits*, and *Perceived risk*. The *Attitudes* construct was excluded due to insufficient reliability (Cronbach's alpha < 0.70).

The overall model was statistically significant, $F(6, 354) = 14.179$, $p < 0.001$, indicating that the set of predictors jointly explains a meaningful portion of the variance in tourists' revisit intentions. The model accounted for 19.4% of the variance in intention to reuse cosmetic surgery services ($R^2 = 0.194$), with an adjusted R^2 of 0.180.

Table 10 presents the unstandardized and standardized regression coefficients for each predictor.

Table 10. Regression Coefficients

Predictor	B	Std. Error	β	t	p	VIF
Constant	15.047	3.718		4.047	.000	
Expectations of family and friends	0.170	0.055	0.228	3.071	.002*	2.418
Anticipated reaction of family and friends	-0.300	0.096	-0.236	-3.141	.002*	2.472

Table 10. *(continued)*

Predictor	B	Std. Error	β	t	p	VIF
Perceived ability to obtain overseas medical care	0.826	0.174	0.278	4.759	.000**	1.503
Perceived ability to achieve a successful outcome	0.038	0.240	0.009	0.159	.874	1.558
Perceived benefits	0.688	0.141	0.250	4.886	.000**	1.152
Perceived risk	-0.063	0.104	-0.030	-0.612	.541	1.073

Note: *p < 0.05, **p < 0.01

Source: Author's research

Collinearity diagnostics showed no multicollinearity concerns among the predictors, with all VIF values below 2.5, confirming the stability of the regression coefficients. Standardized residuals were approximately normally distributed, with no extreme outliers, supporting the adequacy of the model. *Perceived ability to obtain overseas medical care* emerged as the strongest positive predictor ($\beta = 0.278$, $p < 0.001$), indicating that tourists who feel capable of managing logistics and accessing care abroad are more likely to plan a return visit. *Perceived benefits* also significantly predicted revisit intention ($\beta = 0.250$, $p < 0.001$), suggesting that perceived superior outcomes in Kvarner relative to home countries strongly drive revisit intention. *Expectations of family and friends* showed a significant positive effect ($\beta = 0.228$, $p = 0.002$), whereas *Anticipated reaction of family and friends* had a significant negative effect ($\beta = -0.236$, $p = 0.002$). This pattern suggests that while social expectations matter, tourists may weigh anticipated emotional reactions differently when making decisions. *Perceived ability to achieve a successful outcome* and *Perceived risk* were not significant predictors ($p > 0.05$), indicating that, when controlling for other factors, confidence in recovery and risk perceptions play a smaller role.

DISCUSSION

In the previous chapter authors presented the results of the empirical research focused on determining how foreign tourists perceive cosmetic surgery services on Kvarner, what are their preferences, and what influences their travel intention. Results for subjective norms indicate moderate influence of social pressure of friends and family to go abroad and seek cosmetic surgery treatments. Decisions about cosmetic surgery abroad are largely self-driven rather than socially imposed. Our findings indicate weak to moderate average values of subjective norms, respectively the respondents are not pressured to travel abroad for cosmetic surgery, nor they are provided with emotional support. These findings indicate that despite the fact that social pressure is not strong (in the form of praise or encouragement), normative beliefs such as the perception of others' expectations and the prediction of their reactions can have an indirect but significant influence on an individual's intention to use cosmetic surgery services In comparison with the study of Liang et al. (2019), perceived social pressure may influence tourist intention in the sense of changing their attitudes about using cosmetic surgery procedures. Findings of Boguszewicz-Kreft et al. (2020) indicate subjective norms being significantly lower in Poland in relation to Turkey, indicating presence of lower

perceived approval for medical tourism among relatives and friends. Our findings are also in accordance with the qualitative study of Prasad & Forsyth (2024) which states that most represented topic among the participants in the online community was them searching some form of a support as a form of a validation. Users did not use support systems to ask for an approval whether they should use cosmetic surgery services. These systems were used as a support for the decisions that were already made, as well as for determining where and by whom users may get their procedures done. Findings of Prashad and Forsyth indicate on cosmetic surgery users being strong and confident. Results for Perceived Control and Perceived Ability to Achieve a Successful Medical Outcome were both high indicating that the respondents having perceived barriers rather low in terms of medical communication as well as post-procedural care. Previously presented findings are in accordance with the study of Boguszewicz-Kreft et al. (2022) who used only one question to measure perceived behavioural control. The question addressed the ability of tourists going abroad to get medical service. Their results indicate Perceived Behavioural Control being the weakest predictor since most of the respondents (in their case students) stated that they believe that would be capable of going abroad to receive cosmetic surgery services. These findings, although valuable, might be considered with caution because the participants in the study were young students, so there is a chance that they do not fully understand the complexity of organizing such a demanding journey. Study of Lee et al. (2012) also confirms perceived behaviour control being marked high and positively affecting tourist´s intention to travel and use cosmetic procedures. Findings further indicate that respondents stated costs, information, communication, time and effort, i location being the most problematic and critical elements in decision-making process for traveling. Findings presented in the study of Liang et al. (2019), on the other hand show weak influence of Perceived Behaviour Control on tourist´s intention to travel and use cosmetic surgery services. As a reason they state possibility of limited accessibility to adequate information and facilitators about the cosmetic surgery services which influences their weaker intention. In terms of attitudes, our findings (medical offer worth seeking, and trust and quality) were marked the highest, which is not entirely in accordance with the study of Majeed et al. (2020), in which among the analysed constructs (staff competency, medical facility, emotional attachment and trust), trust was marked with the lowest mark. This indicates that despite high perception of quality of cosmetic surgery services does not necessarily imply equal level of trust. Furthermore, our findings are in according with the study of Yilmaz et al. (2021) indicating that quality of medical service and perceived value positively influence trust as well as intention to use medical services in the future. Furthermore, the findings of our study (perception of quality and trust, as well as cost value) are in accordance with Liang et al. (2019) who indicate positive attitudes influencing intention to travel and use cosmetic surgery services. When observing perceived benefits, our data related to attitudes towards treatment quality, education of medical professionals, overall treatment, and perceived benefits of faster access to services are consistent with the findings of the study by Majeed et al. (2020), who formed a model that considers the impact of perceived quality of medical service (quality of staff and facility), and supports the key role of physician expertise and competence and high quality of medical care in making decisions about traveling and using cosmetic surgery services. Furthermore, our findings are in accordance with the qualitative study of Prasad & Forsyth (2024) which shows that participants perceiving foreign medical professionals (surgeons) having better

qualifications in relation to the ones in their own country, foreign medical facility being better than the domestic one, and shorter waiting time for using cosmetic service relevant in the decision-making process. The findings of our study are consistent with Liang et al. (2019) who found that perceived benefit has a statistically significant and positive impact on subjective norms, attitudes towards tourism offerings, and perceived behavioural control. Furthermore, the findings indicate that benefits related to the quality of medical care, as well as the expertise of medical professionals and the speed of service provision are significant predictors of travel decisions. Results for risks in our study indicate low level of risk perception, which is not in accordance with the study of Nam (2020) in which respondents expressed higher level of concern regarding competences of medical professionals this way indicating higher perception of risk. What is surprising is the fact that they failed to express their level of concern in the period after returning home. The study of Boguszewicz-Kreft et al. (2022) indicates tourists perceiving cosmetic medical procedures as riskier, which is also not in accordance with our findings. Our findings for future intention indicate strong interest in using cosmetic surgery treatments again, as well as revisiting for these services within the next three years, which indicates significant level of loyalty and is in accordance with the study of Olya and Nia (2021) whose findings also indicate high level of behavioral intentions. Our findings indicating acceptability of costs is in accordance with the findings of Rahman et al. (2022), respectively they state that achieving value for money significant influences revisit intention. Sense of relaxation and recovery were marked with a high mark and as a strong predictor of revisit intention which is not in accordance with Rahman et al. (2022). Considering the non-existence of similar studies up until now, our findings are important for cosmetic surgery providers as they provide insight into the attitudes of patients who have previously visited Kvarner for cosmetic surgery services.

CONCLUSION

The purpose of our study was to determine the perceptions, preferences and travel intentions of foreign tourists for cosmetic surgery in Kvarner, an emerging destination for medical tourism. The literature focused on determining the attitudes of foreign tourists who travel motivated by cosmetic surgery services has proven to be very weak, which is somewhat contrary when discussing studies focused on medical tourism. The findings established within our study show a low influence of subjective norms on tourists' attitudes towards the use of cosmetic surgery services. In terms of perceived control, respondents feel quite confident about their abilities to organize their travel and come to Kvarner for cosmetic surgery procedures. The findings also indicate that users have extremely positive attitudes towards cosmetic surgery treatments, perceiving them as positive and minimally risky. This is in line with their positive attitudes towards returning to Kvarner in the next three years and using cosmetic surgery services. Furthermore, it is found that perceived ability to obtain overseas medical care and perceived benefits are, out of the selected predictors, the strongest drivers of revisit intention. Even though the results of empirical research can be considered satisfactory, it is necessary to consider which direction to take in terms of further improving the medical tourism offer. This research study represents a contribution to the theory considering that up until now a considerably limited number of research studies were

published focusing on perceptions, preferences and travel intentions of foreign tourists for cosmetic surgery, while research studies focused on Kvarner region are non-existent. Results also have practical implications, which are valuable not only for cosmetic surgery service providers, but also for destination management. The findings, which reflect the attitudes of subjective norms, indicate that when designing marketing activities and communication methods, "social pressure" should not be emphasized due to its weak impact on respondents. Therefore, marketing campaigns should emphasize achieving personal benefits and personal goals for the tourists. Emphasis should be placed on providing better professional support when planning a trip (advice by providing accurate and precise information about procedures, checking the progress of recovery after a medical procedure, etc.). In this way, service providers will ensure that their users fully meet their needs and provide emotional support in the postoperative period, which may result in their greater loyalty. Our findings have presented that respondents show a very high perceived control in terms of their ability to organize travel, communication with medical care providers, and postoperative recovery and return home. In line with this, marketing campaigns and information packages must be designed in a way to address patient autonomy and allow them to choose the desired services in the simplest possible way. Taking into account the independence of respondents in managing the entire process and bearing in mind the development of information technology, it is recommended to introduce IT solutions in the form of online guides, checklists, online calculators that will allow users to estimate costs and a recovery time plan that will show an estimate of all phases of the stay in the medical institution (preoperative period - surgical procedure - postoperative period - return home). Such solutions will allow users to better manage the entire process. In terms of postoperative support, it is possible to implement telemedicine control services (in accordance with the wishes and preferences of the patient). It is recommended to form/improve communication protocols that will strengthen the experience of professionalism and control by the patient (which documentation to send to the doctor and which specific questions to focus on). In order to ensure successful product quality management and to strengthen the safety of patients and the medical service provider itself, it is recommended to provide all necessary information about recovery (its duration, restrictions that the patient must adhere to before and after the operation, when it is safe to go home, how to react adequately in case of complications, etc.). Such information gives patients a sense of greater safety and control over the process itself. It is desirable to establish a protocol for returning home (a list of documents used during the stay, instructions on how to get home safely without jeopardizing the results of the medical procedure, what symptoms to pay attention to, and to know the contact points in case of complications). It is recommended to form a basic package that would contain the medical procedure, basic instructions to follow after the procedure and postoperative control. This package could be complemented with additional services that would be in line with the wishes and preferences of the patient (translation services if there is a language barrier, transfer service, additional controls and counseling). The focus must be on price transparency and quality of medical services. Therefore, it is necessary to provide information that is clear and comparable (structure of the service package). Given the positive assessment of attitudes, cosmetic surgery service providers and tourism destination stakeholders should focus more on improving the quality of services and strengthening the sense of trust of patients through a personalized approach, with

special emphasis on support in the postoperative period (online/onsite), the possibility of communication in the patient's native language. Since patients perceive medical care in Kvarner as reliable and high-quality, marketing and communication activities should continue to focus on strengthening the credibility of the offer, highlighting qualifications and increasing the visibility of medical professionals by publishing public profiles of experts (the structure of their educational process, what their sub specializations are, participation in scientific research work), which contributes to the reputation of the medical institution, the existence of accreditations and quality standards, the availability of protocols that ensure impeccable provision of medical services and patient safety. Cosmetic surgery services should be presented as beneficial in terms of improving the quality of life of potential patients, and sufficiently worth coming to the medical institution and destination. It is necessary to form an offer of services that will enable minimal effort in the planning process by clearly defining all the steps that a potential patient must take before consulting with medical experts, by creating an information package that will clearly and transparently explain the entire procedure, the possibility of telemedicine meetings, the expected recovery and return home dates, and postoperative examinations. In our research, respondents expressed disagreement with the statement regarding the affordability of the offer (price), which indicates the necessity of forming and offering basic packages that patients will be able to upgrade. The implementation of the previously proposed development guidelines will contribute to improving the quality and diversity of the cosmetic tourism offer, which will enable Kvarner to take a more competitive position in the tourism market. As research limitation, it is possible to mention the size of the population that agreed to participate in our research. It is advisable to repeat the research on a larger sample to increase the possibility of generalizing the results.

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A SYSTEMS APPROACH TO UNDERSTANDING ATTITUDE – INTENTION RELATIONS IN COSMETIC MEDICAL TOURISM: THE MODERATING ROLES OF PERCEIVED BENEFIT AND RISK

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Abstract

Background: Cosmetic medical tourism is a high-uncertainty service context in which favourable evaluations do not always translate into repeated usage. This study addresses the need to explain when and why attitudes convert into intentions to reuse cross-border cosmetic services in the Kvarner micro-region. *Objectives*: This study aimed to examine the attitude–intention relationship in cosmetic medical tourism. This study tested whether perceived benefits and perceived risks moderate this relationship. *Methods/Approach*: Data were collected in 2025 using a structured questionnaire (physical and online), yielding 373 valid responses. Exploratory factor analysis was used for construct validation, and moderation was tested using the Hayes PROCESS macro (Model 2). *Results*: Attitudes did not have a statistically significant direct effect on the intention to reuse services, and perceived benefits did not moderate the relationship. Perceived risk significantly moderated the attitude–intention relationship, such that the relationship was stronger when the perceived risk was lower. *Conclusions*: The findings suggest that in cross-border cosmetic medical tourism, risk perception functions as a key boundary condition for converting positive attitudes into reuse intentions. Managerial efforts should prioritise systematic risk reduction (e.g. accreditation, transparent safety protocols, and continuity of care) to strengthen reuse intentions.

Key words: cosmetic medical tourism; reuse intention; attitudes; perceived risk; perceived benefit; moderation analysis; theory of planned behaviour; systems approach; Kvarner (Croatia).

INTRODUCTION

Medical tourism decision-making is frequently analysed through the Theory of Planned Behaviour (TPB), which posits that behavioural intentions are shaped by attitudes toward

the behaviour, subjective norms, and perceived behavioural control; recent research confirms the continued relevance of this framework in medical tourism settings (Ajzen, 1991; Meng et al., 2023; Wong et al., 2024).

Medical tourism has developed into a global service industry that combines healthcare and travel, while cosmetic procedures have emerged as one of its most dynamic segments because patients are often motivated by lower costs, shorter waiting times, privacy, and the opportunity to combine treatment with leisure experiences (McCartney, Wang, & Peng, 2025; Zhong, Deng, Morrison, Coca-Stefaniak, & Yang, 2021). Recent scholarship further shows that medical tourism should be understood not only as a market phenomenon, but also as a destination-management issue shaped by interactions among healthcare providers, tourism actors, institutions, and patients (Wong, Vongvisitsin, Li, Pan, & Ryan, 2024). In Europe, digitalisation, accreditation, transparency, and continuity of care are becoming increasingly important in shaping destination competitiveness and patient confidence in cross-border care (European Commission, 2022, 2025; World Health Organization, 2025).

Despite this growth, the mechanisms through which favourable evaluations translate into behavioural intention remain insufficiently explained in cosmetic medical tourism. The Theory of Planned Behaviour (TPB) suggests that attitudes are an important predictor of intention; however, in high-uncertainty service settings such as cosmetic surgery, this relationship may be unstable because consumers must evaluate not only expected benefits, but also medical risk, legal protection, information quality, and the availability of follow-up care (Ajzen, 1991; Heung, Kucukusta, & Song, 2011; Wong et al., 2024). Recent clinical evidence reinforces this concern by showing that plastic surgery tourism may involve limited preoperative assessment, fragmented postoperative follow-up, and additional complications and costs, all of which can alter how prospective patients form intentions in cross-border settings (Hery, Schwarte, Patel, Elliott, & Vasko, 2023).

The decision process is also increasingly mediated by digital and social information environments. Recent qualitative research on cosmetic medical tourists demonstrates that individuals combine websites, online communities, personal networks, and professional consultations when evaluating options, suggesting that intention formation is iterative, information-intensive, and closely tied to digital health literacy (Prasad & Forsyth, 2024). This indicates that positive attitudes alone may not be sufficient to generate behavioural intention unless perceived benefits are convincing and perceived

Against this background, the present study examines whether perceived benefit and perceived risk moderate the relationship between attitudes toward cosmetic medical tourism and the intention to reuse such services. By doing so, the study moves beyond a purely linear interpretation of the attitude-intention link and responds to calls for more context-sensitive and theoretically diversified medical tourism research (Boguszewicz-Kreft, Kuczamer-Kłopotowska, & Kozłowski, 2022; Han & Hyun, 2015; Wong et al., 2024).

The empirical setting of the study is the Kvarner micro-region in Croatia. Data were collected in 2025 through a structured questionnaire administered in physical and online

form, yielding 373 valid responses from individuals with prior experience or interest in cross-border cosmetic medical services from source markets relevant to Kvarner's medical tourism sector. The measurement structure was assessed using exploratory factor analysis, and the hypothesised moderation effects were tested with Hayes' PROCESS macro (Model 2), with attitude as the independent variable, intention to reuse as the dependent variable, and perceived benefit and perceived risk as moderators (Hayes, 2022).

The paper contributes to the literature in two ways. First, it refines behavioural explanation in cosmetic medical tourism by examining the attitude-intention relationship together with benefit- and risk-based boundary conditions rather than treating attitude as a uniformly stable predictor. Second, it provides context-specific evidence from Kvarner and offers practical implications for providers and destination stakeholders seeking to strengthen reuse intention through more credible value communication, stronger safety signalling, and more systematic risk-reduction measures across the patient journey.

The remainder of the paper is organised as follows. The next section reviews the relevant literature and develops the hypotheses, followed by the methodology, results, discussion, and conclusion.

LITERATURE REVIEW

Medical tourism decision-making is frequently analysed through the Theory of Planned Behaviour (TPB), which posits that behavioural intentions are shaped by attitudes toward the behaviour, subjective norms, and perceived behavioural control. Although Ajzen's original formulation remains the primary theoretical foundation, more recent medical tourism research confirms the continued relevance of TPB for explaining intention formation in health-related travel contexts (Ajzen, 1991; Meng, Piaralal, Islam, Yusof, & Chowdhury, 2023). At the same time, recent critical reviews argue that medical tourism decisions cannot be understood solely through individual cognition because they are also embedded in destination management, institutional arrangements, and service ecosystems involving multiple stakeholders (Wong, Vongvisitsin, Li, Pan, & Ryan, 2024).

This broader framing is especially relevant in cosmetic medical tourism. Unlike many routine consumer choices, decisions about cosmetic procedures abroad are made under conditions of uncertainty, information asymmetry, and cross-border dependence on clinics, intermediaries, accommodation providers, insurers, and regulatory systems. Recent evidence shows that cosmetic medical tourists often rely on a mix of online and offline information sources, including websites, social networks, digital communities, and professional consultations, which makes intention formation iterative and dependent on both information quality and digital health literacy (Prasad & Forsyth, 2024). In addition, clinical evidence on plastic surgery tourism indicates that complications, fragmented postoperative care, and additional financial burdens remain salient concerns, reinforcing the importance of risk-sensitive behavioural models in this context (Hery, Schwarte, Patel, Elliott, & Vasko, 2023).

Within this context, attitudes remain important because they capture an individual's overall positive or negative evaluation of obtaining cosmetic medical services abroad. TPB-based research generally suggests that more favourable attitudes should increase the likelihood of behavioural intention, including intention to visit, use, or revisit services. However, recent studies in medical tourism indicate that the attitude-intention link is not always stable and may depend on how patients interpret surrounding conditions such as safety, trustworthiness, procedural clarity, and anticipated outcomes (Boguszewicz-Kreft, Kuczamer-Kłopotowska, & Kozłowski, 2022; Meng et al., 2023). This implies that attitudes should not be treated as uniformly predictive across all respondents and contexts.

Perceived benefit is one of the most plausible conditions under which attitudes may more readily translate into intention. In medical tourism, perceived benefit commonly includes value for money, service quality, competence, convenience, comfort, and expected improvement in well-being or appearance. Earlier work has shown that quality, trust, satisfaction, and price reasonableness positively affect customer retention and revisit-related outcomes in medical tourism, suggesting that favourable evaluations are more likely to become behaviourally relevant when consumers perceive strong value in the service offer (Han & Hyun, 2015). Broader literature reviews also indicate that reputation signals, quality assurances, and destination attractiveness strengthen perceived value and reinforce positive behavioural responses in health and wellness tourism settings (Zhong, Deng, Morrison, Coca-Stefaniak, & Yang, 2021).

More recent scholarship supports this reasoning, even if it does not always test identical constructs. Ecosystem-oriented medical tourism research shows that patient evaluations are shaped by interconnected destination, service, and institutional factors, which together influence whether positive perceptions remain merely attitudinal or become action-oriented (Wong et al., 2024). Likewise, research on digitally mediated decision-making among cosmetic medical tourists suggests that anticipated benefits are filtered through perceived credibility, relevance, and accessibility of information, rather than accepted at face value (Prasad & Forsyth, 2024). In this sense, perceived benefit may function less as a simple direct predictor and more as a condition that increases the likelihood that favourable attitudes translate into reuse intention.

Perceived risk represents the opposite evaluative force. In consumer behaviour, perceived risk traditionally includes physical, financial, functional, psychological, and social dimensions, and it tends to weaken commitment to uncertain choices. In medical tourism, these concerns are amplified because the patient must assess not only the procedure itself, but also cross-border regulation, accountability, aftercare continuity, communication barriers, and the quality of information available before travel (Boguszewicz-Kreft et al., 2022; Wong et al., 2024). Recent evidence in cosmetic and plastic surgery tourism adds further support to this concern by documenting the clinical and financial consequences of inadequate follow-up and complications after treatment abroad (Hery et al., 2023).

Risk is therefore especially important in cosmetic medical tourism, where consumers may hold favourable attitudes toward the idea of treatment abroad but still hesitate to act

when uncertainty remains high. Research cited in the current manuscript already suggests that risk-related constructs can weaken TPB relationships in medical tourism settings (Boguszewicz-Kreft et al., 2022; Kim, 2022). More recent literature also supports a broader interpretation: destination-level uncertainty, fragmented systems of responsibility, and weak continuity of care can operate as gatekeeping conditions that suppress intention even when the underlying evaluation of the service is positive (Wong et al., 2024; Hery et al., 2023). From this perspective, perceived risk is not merely another antecedent of intention, but a boundary condition that can reduce the behavioural effect of favourable attitudes.

A systems-oriented perspective helps integrate these arguments. Medical tourism does not involve a single provider-consumer exchange, but a chain of interdependent actors and processes that includes providers, facilitators, destination services, information infrastructures, and regulatory frameworks. Recent reviews emphasise that such interdependencies shape patient expectations, perceived value, trust, and behavioural responses, which means that intention formation should be analysed as context-dependent rather than purely individual-level and linear (Wong et al., 2024). In cosmetic medical tourism specifically, digital health literacy, source credibility, and concerns about postoperative continuity further reinforce the need to examine how benefit and risk jointly condition behavioural intention (Prasad & Forsyth, 2024; Hery et al., 2023).

The literature suggests that the translation of attitudes into reuse intention in cosmetic medical tourism is likely to depend on evaluative conditions rather than occur automatically (Boguszewicz-Kreft et a.l, 2022; Wong, Vongvisitsin, Li, Pan, & Ryan, 2024). Positive attitudes should increase reuse intention when patients perceive credible benefits, as recent evidence links perceived value with revisit intention in medical tourism and highlights the importance of credible information in shaping favourable evaluations (Han & Hyun, 2015; Prasad & Forsyth, 2024; Yıldız, 2025). By contrast, elevated perceived risk should reduce the extent to which such attitudes become behaviourally meaningful, since cross-border cosmetic care remains highly sensitive to uncertainty, complications, fragmented follow-up, and broader institutional conditions (Boguszewicz-Kreft et al., 2022; Hery, Schwarte, Patel, Elliott, & Vasko, 2023; Wong et al., 2024). This study therefore treats perceived benefit and perceived risk as simultaneous moderators of the attitude-intention relationship and examines these relationships in the context of cosmetic medical tourism in Kvarner, Croatia.

A favourable attitude toward cosmetic medical tourism should, in principle, increase a patient's intention to reuse such services. According to TPB, attitudes influence the degree to which individuals are willing to engage in a behaviour, and more positive evaluations generally correspond with stronger behavioural intentions (Ajzen, 1991). Recent medical tourism research continues to support the usefulness of this assumption, although it also suggests that the strength of the relationship may vary across contexts and patient groups (Meng et al., 2023; Wong et al., 2024). In the present study, attitude is therefore expected to exert a positive direct effect on reuse intention.

H1: *Attitude toward cosmetic medical tourism positively predicts the intention to reuse such services.*

Perceived benefit is expected to strengthen this relationship. When individuals view cross-border cosmetic medical services as valuable, high-quality, affordable, convenient, and personally worthwhile, they should be more likely to convert favourable evaluations into concrete intention. Existing studies in medical tourism and service marketing show that quality perceptions, trust, satisfaction, and price reasonableness support revisit-related outcomes and customer retention, indicating that positive attitudes become more actionable when consumers perceive clear benefits (Han & Hyun, 2015; Zhong et al., 2021). More recent work on medical tourism ecosystems and information practices also suggests that perceived benefits gain force when they are supported by credible information and coherent destination-level signals (Wong et al., 2024; Prasad & Forsyth, 2024).

H2: *Perceived benefit moderates the relationship between attitude and intention, such that the relationship is stronger when perceived benefit is high.*

Perceived risk, by contrast, is expected to weaken the relationship between attitude and reuse intention. Even when individuals hold generally positive attitudes toward cosmetic treatment abroad, concerns about complications, legal protection, aftercare, communication, or uncertainty in service quality may discourage them from acting on those evaluations. Research in medical tourism already indicates that risk can diminish intention directly and can also interfere with the predictive strength of attitude-based models (Boguszewicz-Kreft et al., 2022; Kim, 2022). Recent critical and clinical contributions reinforce this logic by showing that cross-border cosmetic and plastic surgery remains highly sensitive to uncertainty, fragmented responsibility, and postoperative vulnerability (Wong et al., 2024; Hery et al., 2023).

H3: *Perceived risk moderates the relationship between attitude and intention, such that the relationship is weaker when perceived risk is high.*

Finally, when considered together, perceived benefit and perceived risk should improve the explanation of reuse intention beyond the direct effect of attitude alone. The literature suggests that patients do not evaluate cosmetic medical tourism through a single positive or negative lens; rather, they weigh expected gains against different forms of uncertainty in a context shaped by institutional, informational, and service-system conditions. For this reason, a model that simultaneously incorporates both benefit and risk should capture intention formation more accurately than a model based only on attitude. This expectation is consistent with recent calls for more context-sensitive, multi-factor, and system-aware modelling in medical tourism research (Wong et al., 2024; Zhou, Chen, & Li, 2024).

H4: *The combined moderating effects of perceived benefit and perceived risk statistically improve the prediction of the intention to reuse such services.*

METHODOLOGY

The paper employed a quantitative, cross-sectional research design to examine whether perceived benefit and perceived risk moderate the relationship between attitudes toward cosmetic medical tourism and the intention to reuse such services in the Kvarner micro-region in Croatia. The methodological approach combined survey data collection, exploratory factor analysis, reliability assessment, and moderated regression analysis in line with the study's conceptual framework.

Research Design and Data Collection

Purposive sampling was used to target individuals with prior experience or interest in cross-border cosmetic medical services, particularly from source markets relevant to Kvarner's medical tourism sector. Data were collected between March and July 2025. Patients were approached through clinics in the Kvarner region and were invited by the clinics to complete the questionnaire electronically via Google Docs. Participation was voluntary and anonymous, and respondents were informed that the questionnaire was intended for academic research purposes.

A structured questionnaire was used as the main research instrument. After data screening, incomplete and unusable responses were excluded, resulting in a final analytical sample of 373 valid responses. This procedure ensured that only sufficiently complete questionnaires were retained for the subsequent statistical analyses.

Sample

The final sample was international and reflected the principal source markets relevant to Kvarner's medical tourism sector. Most respondents were from Germany (28.4%), Italy (24.1%), and Slovenia (20.1%), followed by Austria (16.4%), Serbia (5.6%), Croatia (3.2%), Bosnia and Herzegovina (1.6%), North Macedonia (0.3%), and Spain (0.3%).

In terms of sociodemographic characteristics, 67.0% of respondents were female, 32.7% were male, and 0.3% selected "I prefer not to say." The largest age groups were 35-44 years (48.8%) and 45-64 years (38.9%), followed by 25-34 years (9.7%), 65+ (1.9%), and 18-24 years (0.8%). Most respondents were married (51.2%), while 29.2% were unmarried or single and 19.6% were separated or divorced. The sample was highly educated, with 83.4% reporting graduate education or above and 16.4% undergraduate education. In employment terms, 54.2% were employees, 44.2% were self-employed, 1.1% were retired, and 0.5% were students. The largest household income categories were EUR 2,501-3,000 (42.9%) and EUR 2,001-2,500 (34.6%).

Measures and Measurement Validation

Data were collected using a structured questionnaire divided into several sections. The first section measured Theory of Planned Behaviour-related constructs in the context of medical tourism, drawing on the MEDTOUR scale proposed by Martin et al. (2011) and later extended by Liang et al. (2019). The second section assessed travellers' revisit intentions following Alkire et al. (2019), while the final section captured respondents' socioeconomic characteristics.

The empirical model focused on four core constructs: attitudes toward cosmetic medical tourism, intention to reuse services, perceived benefit, and perceived risk. Descriptive statistics were calculated for 33 items used to assess the main attitudinal and evaluative constructs, while an additional 10 items measured respondents' intention to reuse cosmetic surgery services in Kvarner. Composite scores were subsequently computed for each validated construct and used in the moderation analysis.

Exploratory factor analysis (EFA) was used to examine the dimensionality of the measurement items and identify coherent latent constructs. EFA was used rather than confirmatory factor analysis because the principal aim was to explore the underlying factor structure of the items and generate reliable composite scores for hypothesis testing rather than to confirm a fully pre-specified measurement model.
Internal consistency was assessed using Cronbach's alpha.

Statistical Analysis and Hypothesis Testing

The statistical analyses were performed using IBM SPSS Statistics, while the moderation analysis was conducted with Hayes' PROCESS macro (Model 2), which is available for SPSS and is specifically designed for mediation, moderation, and conditional process analysis. In the moderation model, attitude (ATT) was specified as the independent variable, intention to reuse (INT_RE) as the dependent variable, and perceived benefit (BEN) and perceived risk (RISK) as moderators.

To facilitate interpretation and reduce multicollinearity, the predictors were mean centred prior to estimating the model and computing the interaction terms ATT × BEN and ATT × RISK. The regression model was specified as follows.

$$INTRE = b0 + b1ATT + b2BEN + b3RISK + b4(ATT \times BEN) + b5(ATT \times RISK) + \varepsilon$$

This specification enabled direct testing of all four hypotheses. H1 was tested through the direct effect of attitude on intention to reuse, H2 through the ATT × BEN interaction term, and H3 through the ATT × RISK interaction term. H4 was assessed through the joint incremental explanatory power of both interaction terms, reported as the combined ΔR^2 test. This analytical strategy was consistent with the study's systems-based interpretation of behavioural intention formation in cosmetic medical tourism.

RESULTS

Descriptive Statistics and Measurement Validation (EFA and Reliability)

Before conducting exploratory factor analysis (EFA), descriptive statistics (Table 1) were calculated for all items within the Theory of Planned Behavior Constructs to examine central tendency and dispersion.

Table 1. Descriptive Statistics of Items within the Theory of Planned Behavior Constructs

Item	M	SD	N
My family and friends expect me to go overseas for cosmetic medical treatment.	3.18	1.485	373
My close relatives and peers want me to go overseas to seek cosmetic medical treatment (surgery).	2.49	1.430	373
My family and friends encourage me to spend some time overseas for cosmetic medical treatment (surgery).	2.60	1.437	373
My family and friends encourage me to spend some time overseas for cosmetic medical treatment (surgery).	2.43	1.451	373
Most people who are important to me think that I should be treated overseas.	2.62	1.463	373
My close friends and relatives anticipate that I will go to a foreign country to receive cosmetic medical treatment	3.53	1.386	373
My family and friends predict that I will seek treatment outside my homeland.	3.45	1.413	373
My close relatives and peers will be happy if I travel overseas for cosmetic medical procedures.	2.90	1.467	373
I am capable of getting cheaper but excellent cosmetic medical care in some countries.	4.54	.536	373
If I am in the right foreign country, I can manage to get excellent cosmetic medical treatment (surgery).	4.52	.532	373
In the right foreign country, I can manage to receive care to recover from a cosmetic medical procedure.	4.59	.524	373
I am confident I can arrange overseas trips for cosmetic medical surgery or treatment.	4.62	.486	373
I can follow my doctor's advice and receive the services needed for quick recovery after a cosmetic medical intervention overseas.	4.75	.435	373
I can communicate with overseas health care providers and get them to perform the needed procedure	4.68	.467	373
After the recovery from overseas cosmetic medical procedures, I can go home safely.	4.58	.649	373

Table 1. *(continued)*

Item	M	SD	N
In your opinion, medical care in Kvarner is worth the search	4.83	.373	373
In your opinion, Medical care in Kvarner is very important	4.65	.536	373
In your opinion, Medical care in Kvarner is life saving	2.94	1.674	373
In your opinion, medical care in Kvarner is worth the cost	4.61	.487	373
In your opinion, medical care in Kvarner is very high quality	4.77	.420	373
In your opinion, medical care in Kvarner is more competent (than other compeeting destinations	4.66	.537	373
In your opinion, medical care in Kvarner is trust worthy	4.71	.453	373
Medical care in Kvarner is a bargain	4.12	1.075	373
Medical care in Kvarner is appealing	4.55	.503	373
Medical care in Kvarner is beneficial	4.73	.446	373
Cosmetic surgery treatments in Kvarner is better than in my own country.	4.74	.445	373
Doctors in Kvarner are better trained in cosmetic surgery treatments better than in my country.	4.70	.505	373
I am sure I receive better cosmetic surgery treatments in Kvarner than in my own country.	4.77	.418	373
I am sure I have quicker access to the cosmetic surgery treatments in Kvarner than in my own country.	4.58	.774	373
I am worried about complications happening during the cosmetic surgery treatments that would require a longer absence.	1.77	1.008	373
I am not sure that I would receive good cosmetic surgery treatments in Kvarner.	1.17	.548	373
I am afraid that I might not get the same care as in my own country.	1.24	.673	373
My doctor might not want to treat me if I had cosmetic surgery treatments in Kvarner.	1.28	.747	373

Source: Author's research

Respondents reported moderate social influence from family and friends regarding seeking cosmetic medical treatment abroad, with mean values ranging from 2.43 to 3.53 and standard deviations of approximately 1.43 to 1.49. Participants indicated high confidence in their ability to access quality care abroad, with means ranging from 4.52 to 4.75 and standard deviations of approximately 0.43 to 0.65. They also evaluated medical care in the Kvarner micro-region positively, particularly in terms of quality, competence, and trustworthiness, with means ranging from 4.61 to 4.83 and standard deviations of approximately 0.37 to 0.54. Perceived risk of complications was generally low, with mean values ranging from 1.17 to 1.77 and standard deviations of approximately 0.55 to 1.01.

The data were suitable for factor analysis, as the Kaiser–Meyer–Olkin measure of sampling adequacy was 0.867, suggesting adequate sampling for factor analysis, and Bartlett's test of sphericity was statistically significant ($\chi^2 = 9369.95, p < .05$). Seven factors were extracted, explaining 69.53% of the total variance. These factors were labelled as Subjective Norms (*My family and friends expect me to go overseas for cosmetic medical treatment; My close relatives and peers want me to go overseas to seek cosmetic medical treatment (surgery); My family and friends encourage me to spend some time overseas for cosmetic medical treatment (surgery); My family and friends encourage me to spend some time overseas for cosmetic medical treatment (surgery); Most people who are important to me think that I should be treated overseas; My close friends and relatives anticipate that I will go to a foreign country to receive cosmetic medical treatment; My family and friends predict that I will seek treatment outside my homeland; My close relatives and peers will be happy if I travel overseas for cosmetic medical procedures*), Attitudes (*In your opinion, medical care in Kvarner is worth the cost; In your opinion, medical care in Kvarner is very high quality; In your opinion, medical care in Kvarner is trust worthy; Medical care in Kvarner is beneficial)*, Perceived Benefit (*Cosmetic surgery treatments in Kvarner is better than in my own country; Doctors in Kvarner are better trained in cosmetic surgery treatments better than in my country; I am sure I receive better cosmetic surgery treatments in Kvarner than in my own country; I am sure I have quicker access to the cosmetic surgery treatments in Kvarner than in my own country*), Perceived Risk (*I am not sure that I would receive good cosmetic surgery treatments in Kvarner; I am afraid that I might not get the same care as in my own country; My doctor might not want to treat me if I had cosmetic surgery treatments in Kvarner)*, Perceived Ability to Achieve a Successful Medical Outcome (*I can follow my doctor's advice and receive the services needed for quick recovery after a cosmetic medical intervention overseas; I can communicate with overseas health care providers and get them to perform the needed procedure)*, Perceived Ability to Obtain Medical Care Abroad (*I am capable of getting cheaper but excellent cosmetic medical care in some countries; If I am in the right foreign country, I can manage to get excellent cosmetic medical treatment (surgery); In the right foreign country, I can manage to receive care to recover from a cosmetic medical procedure; I am confident I can arrange overseas trips for cosmetic medical surgery or treatment)*, and Perceived Benefit-Value of Kvarner Medical Care (*In your opinion, medical care in Kvarner is more competent (than other compeeting destinations; Medical care in Kvarner is a bargain)*. Factor loadings exceeded 0.60 with minimal cross-loadings, supporting the intended factor structure.

Internal consistency was assessed using Cronbach's alpha. Reliability was satisfactory for all extracted factors, with alpha values above 0.70, except for the Perceived Benefit-Value of Kvarner Medical Care factor, which showed low reliability ($\alpha = 0.44$) and was therefore interpreted cautiously. Consequently, this construct was not included in the regression model, as its low reliability could compromise the validity and stability of the estimated relationships.

For the 10-item intention-to-reuse scale (Table 2), mean values ranged from 3.18 to 4.56 and standard deviations from 0.50 to 1.50, indicating generally positive reuse intentions with some variability across respondents.

Table 2. Descriptive Statistics of Items within the intention to reuse construct

Item	M	SD	N
I intend to travel abroad for cosmetic surgery treatments in next 3 years.	4.21	1.004	373
I expect to have some cosmetic surgery treatments in a foreign country of my choice.	4.14	.989	373
I intend to travel to Kvaner for cosmetic surgery treatments in next 3 years.	4.41	.715	373
I would like to use cosmetic surgery treatments in Kvarner again.	4.56	.518	373
Apart from cosmetic surgery treatments, uniqueness, specificity and preservation of natural resources stimulates me to revisit Kvarner.	3.90	1.258	373
Apart from cosmetic surgery treatments, uniqueness, specificity and preservation of cultural resources stimulates me to revisit Kvarner.	3.18	1.504	373
Using cosmetic surgery treatments in Kvarner makes me feel relaxed physically and mentally.	4.49	.576	373
Costs associated with the cosmetic surgery treatments in Kvarner are acceptable for me.	4.53	.500	373
Variety of cosmetic surgery treatments in Kvarner stimulates me to use them again.	4.55	.498	373
Uniqueness and specificity of cosmetic surgery treatments offer stimulates me to revisit Kvarner.	4.53	.500	373

Source: Author's research

The reuse intention constructs also demonstrated acceptable internal consistency, with Cronbach's alpha above 0.70. The intention-to-reuse construct also demonstrated acceptable internal consistency, and composite scores were computed for use in the moderation analysis.

Moderated Regression Results

To test the proposed framework, moderated regression analysis was conducted using Hayes' PROCESS macro (Model 2). This model estimated the direct effect of attitudes toward cosmetic medical tourism on intention to reuse cosmetic surgery services in Kvarner, while simultaneously testing whether perceived benefit and perceived risk moderated the attitude-intention relationship. To facilitate interpretation and reduce multicollinearity, all predictors were mean centred prior to computing the interaction terms.

The overall model was statistically significant and explained 14.8% of the variance in intention to reuse cosmetic surgery services in Kvarner (R^2=.148, F(5,367) =12.74, p<.001). However, the direct effect of attitude on reuse intention was not statistically significant (B=0.5830, SE=0.8125, t=0.72, p=.474), indicating that favourable attitudes

alone did not reliably translate into reuse intention in this cross-border cosmetic medical tourism context

As shown in Table 3, the moderated regression model was statistically significant overall, but attitude did not exert a statistically significant direct effect on intention to reuse cosmetic surgery services in Kvarner.

Table 3. Moderated Regression Results

Predictor	B	SE	t	p	95% CI (LLCI, ULCI)
Constant	9.4018	28.2372	0.33	.739	−46.13, 64.93
Attitude (ATT)	0.5830	0.8125	0.72	.474	−1.01, 2.18
Perceived Benefit (BEN)	−0.0330	1.3797	−0.02	.981	−2.75, 2.68
ATT × BEN	0.0080	0.0394	0.20	.840	−0.07, 0.09
Perceived Risk (RISK)	2.5237	1.1178	2.26	.025	0.33, 4.72
ATT × RISK	−0.0707	0.0314	−2.26	.025	−0.13, −0.01

Source: Author's research

Perceived benefit (BEN) did not have a statistically significant main effect on reuse intention (B = -0.0330, SE = 1.3797, t = -0.02, p = .981). Likewise, the interaction between attitude and perceived benefit was not statistically significant (B = 0.0080, SE = 0.0394, t = 0.20, p = .840), indicating that perceived benefit neither strengthened nor weakened the relationship between attitudes and reuse intention. These findings do not support Hypothesis 2.

By contrast, perceived risk (RISK) showed a statistically significant main effect (B = 2.5237, SE = 1.1178, t = 2.26, p = .025). More importantly, the interaction between attitude and perceived risk was statistically significant and negative (B = −0.0707, SE = 0.0314, t = −2.26, p = .025). This finding supports Hypothesis 3 and indicates that perceived risk acted as a boundary condition in the attitude-intention relationship. As perceived risk increased, the strength of the relationship between positive attitudes and intention to reuse decreased. In substantive terms, positive attitudes translated more strongly into reuse intention when perceived risk was lower, whereas higher perceived risk weakened this conversion. Consistent with this interaction, the conditional effect of attitude on intention to reuse was steeper at lower levels of perceived risk and flatter at higher levels of perceived risk.

Table 4 presents the incremental variance explained by the interaction terms. The ATT×BEN interaction did not produce a meaningful improvement in explained variance (ΔR^2 = .0001, F (1, 367) = 0.041, p = .840). By contrast, the ATT×RISK interaction resulted in a statistically significant increase in explained variance (ΔR^2 = *.0118*, F(1, 367) = 5.085, p = .025). When both interaction terms were entered jointly, their combined contribution was marginal (ΔR^2 = .0135, F (2, 367) = 2.917, p = .055), which did not meet the conventional 5% significance threshold. Accordingly, Hypothesis 4 was not supported at α = .05.

Table 4. Interaction tests

Interaction	ΔR^2	F	df	p
ATT × Benefit	.0001	0.041	1, 367	.840
ATT × Risk	.0118	5.085	1, 367	.025
Both interactions	.0135	2.917	2, 367	.055

Source: Author's research

Taken together, the moderated regression results indicate that perceived risk was the key conditioning factor shaping whether favourable attitudes were translated into reuse intention. Efforts to strengthen positive attitudes through value or benefit communication alone appear insufficient in this context, whereas lowering perceived risk is more likely to reinforce the conversion of favourable evaluations into behavioural intention.

DISCUSSION

This study examined whether attitudes toward cosmetic medical tourism translate into intention to reuse cross-border cosmetic services in the Kvarner micro-region and whether perceived benefit and perceived risk condition this relationship. The findings indicate that favourable attitudes alone do not reliably predict reuse intention, suggesting that behavioural prediction in high-uncertainty service settings is better explained through boundary conditions than through a simple linear attitude-intention path, as commonly implied in the Theory of Planned Behaviour (Ajzen, 1991). This pattern is also consistent with a systems view of medical tourism, in which behavioural outcomes emerge from interdependencies among clinics, intermediaries, hospitality providers, and regulatory arrangements rather than from isolated consumer evaluations alone (Heung, Kucukusta, & Song, 2011; Wong, Vongvisitsin, Li, Pan, & Ryan, 2024).

A central implication of the findings is that perceived risk functions as a system-level constraint on the conversion of favourable evaluations into behavioural intention. In cross-border care, perceived risk is amplified by information asymmetry, fragmented accountability, discontinuities in aftercare, and variation in regulatory protections and redress mechanisms, all of which may suppress intention even when attitudes are positive (Wismar et al., 2022; European Commission, 2025). This interpretation is aligned with previous medical tourism research showing that risk-related constructs can weaken or override otherwise favourable evaluations when intentions are formed (Boguszewicz-Kreft, Kuczamer-Kłopotowska, & Kozłowski, 2022; Kim, 2022). Interpreted through a systems lens, the significant ATT × RISK interaction supports the view that perceived risk acts as a gatekeeping mechanism that determines whether positive attitudes become behaviourally meaningful within the broader medical tourism ecosystem (Wong et al., 2024).

By contrast, perceived benefit did not significantly moderate the attitude-intention relationship in the present model. This suggests that value-oriented communication alone is unlikely to strengthen reuse intention if perceived risk remains salient, which is broadly compatible with earlier evidence showing that retention in medical tourism

depends on wider configurations of service quality, satisfaction, trust, and price reasonableness rather than on value perceptions in isolation (Han & Hyun, 2015). From a systems perspective, benefits may operate as upstream attractors that support destination appeal, whereas risk reduction appears to act as the more decisive stabilising mechanism enabling downstream conversion from positive attitudes to reuse intention under conditions of uncertainty (Wong et al., 2024; Zeithaml, Berry, & Parasuraman, 1996).

The findings also generate clear managerial implications for destination stakeholders in Kvarner. If perceived risk is the principal conditioning factor, then clinics, facilitators, and related tourism actors should prioritise structured risk-reduction interventions rather than rely primarily on messages about value, affordability, or quality. In practical terms, this includes verifiable accreditation signals, transparent safety and complication-management protocols, explicit postoperative procedures, and continuity-of-care arrangements that reduce cross-border fragmentation and uncertainty (Heung et al., 2011; European Commission, 2025; Wong et al., 2024). Such interventions are expected to increase reuse intention not by creating positive attitudes per se, but by enabling already favourable attitudes to translate into behavioural intention when perceived risk is lower (Boguszewicz-Kreft et al., 2022; Wismar et al., 2022).

These results should be interpreted in light of several limitations. First, the study relied on purposive sampling and cross-sectional survey data, which limits generalisability and prevents causal inference regarding the temporal development of attitudes, risk perceptions, and reuse intentions. Second, at least one benefit-related construct showed low internal consistency, which means that the non-significant moderating role of perceived benefit should be interpreted with caution and re-examined using refined measures. Future research should therefore disaggregate perceived risk into clinical, legal, informational, financial, and social dimensions and test whether these components moderate the attitude-intention relationship differently across contexts and market segments (Mitchell, 1999; Boguszewicz-Kreft et al., 2022). Comparative studies across source markets and longitudinal designs would further clarify whether risk reduction produces durable loyalty rather than a one-time behavioural response, while extended models including trust in regulators, aftercare coordination, and digital health support may better capture the multi-actor structure of cross-border cosmetic medical tourism (Wong et al., 2024; European Commission, 2022).

CONCLUSION

This paper addressed the research question of how perceived benefits and perceived risks condition the relationship between attitudes toward cosmetic medical tourism and the intention to reuse services in the Kvarner micro-region. The findings showed that attitudes did not directly predict reuse intention and that perceived benefit did not significantly moderate the attitude-intention relationship, whereas perceived risk significantly moderated this relationship, such that positive attitudes translated more strongly into reuse intention when perceived risk was lower. In this sense, the results indicate that in a high-uncertainty service context, the conversion of favourable

evaluations into behavioural intentions is governed primarily by safety-related constraints rather than by perceived benefits alone.

The study contributes to research on medical tourism and behavioural intention models by showing that a linear attitude-intention assumption is insufficient for explaining reuse intention in cross-border aesthetic services. Conceptually, the findings support a systems interpretation in which reuse intention emerges from a broader service ecosystem composed of clinics, intermediaries, tourism providers, and institutional-regulatory safeguards. Within this ecosystem, perceived risk appears to function as a cross-cutting mechanism that determines whether favourable attitudes become behaviourally meaningful.

The findings also have practical implications for stakeholders in Kvarner. The results suggest that clinics and destination actors should not rely primarily on benefit-focused communication, such as quality or value claims, to increase reuse intention. Instead, priority should be given to the systematic design and communication of risk-reduction mechanisms across the patient journey, including verifiable accreditation signals, transparent safety and complication-management protocols, explicit postoperative procedures, and organised continuity of care. These measures are more likely to strengthen attitude-intention conversion than additional value messaging alone.

Some limitations should be acknowledged. The purposive sampling strategy and cross-sectional design limit generalisability and do not allow causal conclusions regarding the temporal development of attitudes, risk perceptions, and reuse intentions. In addition, at least one benefit-related construct showed low reliability, which may partly explain the non-significant moderation effect of perceived benefit and indicates the need for improved measurement in future studies.

Future research should employ longitudinal designs to capture changes in perceived risk and intention across different stages of the service experience, including pre-trip expectations, peri-procedure experiences, and post-procedure outcomes. Comparative studies across source markets and cultural contexts are also needed to determine whether the moderating role of risk remains stable across segments and regulatory environments. Finally, the explanatory power of the model could be improved by operationalising perceived risk in a more granular way, including clinical, legal, informational, and financial dimensions, and by incorporating additional system-level variables such as trust in regulators, aftercare coordination quality, and digital health support.

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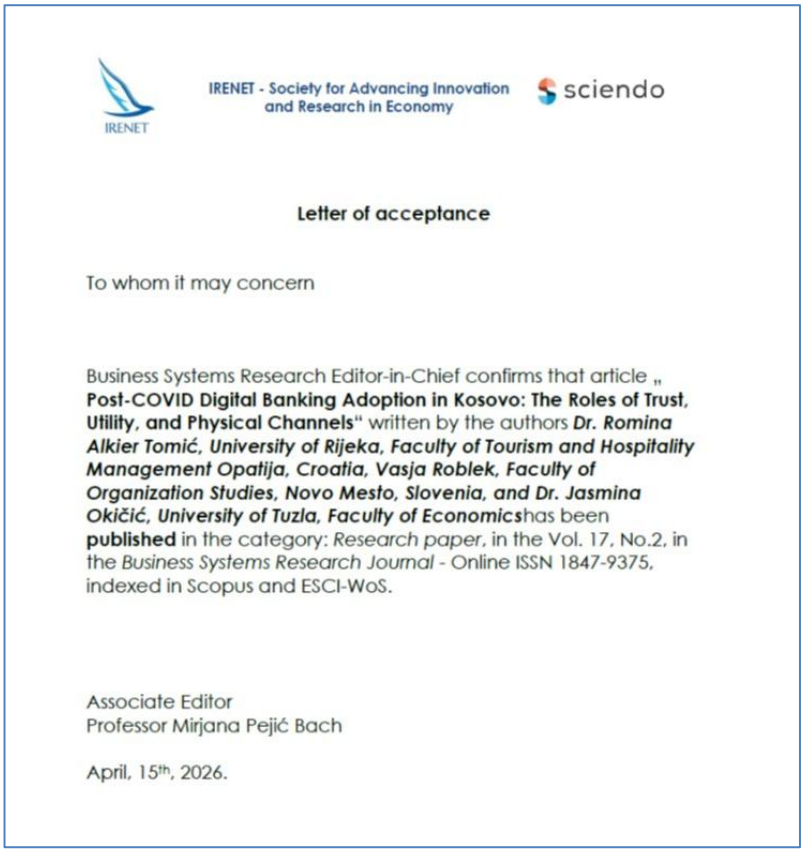

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Letter of acceptance

To whom it may concern

Business Systems Research Editor-in-Chief confirms that article „ **Post-COVID Digital Banking Adoption in Kosovo: The Roles of Trust, Utility, and Physical Channels**" written by the authors ***Dr. Romina Alkier Tomić, University of Rijeka, Faculty of Tourism and Hospitality Management Opatija, Croatia, Vasja Roblek, Faculty of Organization Studies, Novo Mesto, Slovenia, and Dr. Jasmina Okičić, University of Tuzla, Faculty of Economics***has been **published** in the category: *Research paper*, in the Vol. 17, No.2, in the *Business Systems Research Journal* - Online ISSN 1847-9375, indexed in Scopus and ESCI-WoS.

Associate Editor
Professor Mirjana Pejić Bach

April, 15th, 2026.

SUMMARY

The research team of the scientific project "Perception of Kvarner as a Tourist Destination for Beauty and Health" presented the results and conclusions of the research to the public through published scientific papers, which are collected in this publication and will not be listed separately. The project focuses on examining contemporary trends in health tourism, with particular emphasis on aesthetic and dental tourism as increasingly important segments of the global tourism market.

The main objectives of the project have been achieved and relate to the analysis of Kvarner's perception as a destination of beauty and health, the development of valorization models for aesthetic and dental tourism, as well as the examination of tourists' attitudes towards the quality and safety of medical services in the destination. The study also includes the perspectives of decision-makers, healthcare professionals, and tourism experts, providing a comprehensive understanding of the destination's development potential.

There is a strong connection between tourism and health, particularly between the tourist experience and the perception of medical and aesthetic services during the stay in a destination, which has been confirmed by this research. Health, physical appearance, and overall wellbeing are becoming increasingly important factors influencing tourist satisfaction and destination competitiveness.

During their stay, tourists may use various medical services, including aesthetic and dental procedures, or encounter unexpected health situations. In such cases, it is natural for tourists to seek safety, reliability, and access to quality healthcare services. Therefore, it is essential to develop systems that ensure a high level of safety, transparency, and accessibility of information.

In the upcoming period, Kvarner should focus on improving communication with tourists in order to provide timely, accurate, and relevant information about available medical services, treatment conditions, pricing, and service quality. This approach is crucial for building trust between tourists and service providers and enhancing the overall perception of the destination.

Tourists show significant interest in communication with service providers, as well as in general information about the destination, organization of healthcare services, and quality of medical care during their stay. The research results clearly indicate that tourists who consider visiting Kvarner place high importance on effective communication, professionalism of medical staff, and reliability of healthcare infrastructure.

Kvarner is perceived as a safe and high-quality destination in the field of aesthetic and dental tourism, indicating its potential for further positioning as an internationally recognized destination of beauty and health. This perception aligns with the growing demand for health tourism, particularly in the post-COVID period.

The COVID-19 pandemic had a significant impact on both tourism and healthcare sectors; however, due to rapid adaptation and the implementation of crisis management strategies, recovery occurred relatively quickly. Changes in tourist behavior and expectations have further emphasized the importance of safety, hygiene standards, and service quality.

Safety and quality have become key components of a comprehensive tourism product. The perception of risk among tourists is evolving, directly influencing their decision-making when choosing a destination. The ability to provide a safe and high-quality stay contributes to the attractiveness and competitiveness of the destination.

For future development planning, it is essential to continuously monitor tourists' perceptions and analyze motivational factors influencing their decision-making processes, especially in the post-pandemic period. Understanding these factors enables more effective tourism development strategies.

The research findings provide a solid basis for shaping future development activities aimed at improving service quality, strengthening competitiveness, and increasing tourist satisfaction. Special emphasis should be placed on integrating the healthcare and tourism sectors and developing innovative and sustainable business models.

Kvarner has the potential to further strengthen its position on the international tourism market through continuous quality improvement, development of specialized services, and adaptation to the needs of modern tourists. Such an approach will contribute to increased tourist arrivals, longer stays, and greater tourist loyalty.

In conclusion, an integrated approach to health tourism development, combined with continuous monitoring of tourist perception and strategic adaptation, represents the key to long-term development and international recognition of Kvarner as a destination of beauty and health.

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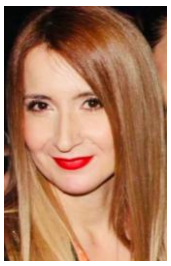

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