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Article

Digital Marketing of Aesthetic Healthcare Institutions in Serbia

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Abstract: The aim of this paper is to determine the current state of digital marketing in aesthetic healthcare institutions in Serbia, in order to provide guidelines for its further improvement. The research encompassed three elements – the website (existence, URL characteristics), e-mail addresses (existence, availability of information on the website, type), and selected social networks (existence of open accounts, links to accounts on the website, account activity, number of followers). The research sample consisted of plastic and reconstructive surgery institutions included in the official list of medical tourism providers of the Ministry of Health of the Republic of Serbia. All analyzed healthcare institutions possess an account on at least one of the following three social networks: Instagram, Facebook, or YouTube. Among them, all institutions have an Instagram account. The majority also possess an e-mail address and an official website with links directing to social networks. Posts were present on all open Facebook accounts and on the majority of Instagram and TikTok accounts (starting from 2025 onwards). The majority of institutions actively utilize two social networks – Facebook and Instagram. In terms of follower count, Instagram holds the leading position. Aesthetic healthcare institutions in Serbia utilize digital marketing, but significant potential for improvement remains.

Keywords: *Healthcare institution marketing; digital marketing; digital media; online social networks; websites; plastic and reconstructive surgery; aesthetic tourism.*

1. Introduction

The world of tourism and hospitality is irreversibly entering the sphere of digital business, altering operational concepts. Marketing is a field that is not lagging behind in this process; rather, it plays one of the leading roles. Digital marketing in tourism implies the application of modern digital technologies in the implementation of marketing activities. This form of marketing is not only a feature of tourism practice but also of theory, as embodied in scientific and professional research. This can be confirmed by analyzing the results of bibliometric papers, which demonstrate a growing interest among researchers regarding the publication of papers related to digital marketing in tourism and hospitality [1,2].

Aesthetic tourism, as a specific form of tourism, is differentiated based on its distinct attraction base, which is precisely the improvement of the tourist's physical appearance. Alternative terms occasionally encountered in the existing literature and practice are 'cosmetic tourism' and 'beauty tourism'. Aesthetic tourism may, but does not necessarily have to, share similarities with medical tourism. It is not required for an 'aesthetic tourist' to have a specific medical condition. Aesthetic tourism is a concept characterized by a complexity evident in the diverse elements it encompasses.

Among the most important criteria for classifying aesthetic tourism are: (1) The point of origin of aesthetic tourists (domestic, international); (2) Characteristics of aesthetic tourists (gender, age, etc.); (3) Invasiveness of procedures (invasive, non-invasive); (4) The body parts where aesthetic procedures are applied (face and head (especially hair and the dental segment), breasts, extremities, the entire body); (5) The purpose or objective of application; (6) The technology utilized; among others [3].

Numerous procedures exist within the field of aesthetic tourism, but differences remain regarding their popularity. On a global level, the most common surgical procedure is liposuction. Breast augmentation occupies the second place, while eyelid surgery ranks third. Considering the targeted body parts, the majority of procedures relate to the face and head. Among non-surgical procedures, the leading position is held by the use of Botulinum toxin [4]. Each of the aforementioned services, as well as the category of users, requires a tailored marketing approach. Accordingly, Shauly et al. [5] analyzed papers in the field of digital marketing within plastic surgery, providing recommendations for social media content and platforms, while also pointing out the necessity for a differentiated approach depending on the age of the target population. Regarding the platforms themselves, it can be concluded from the literature that the most frequently analyzed are: Facebook, Instagram, YouTube, Snapchat, TikTok, and Twitter [5].

Among the key digital marketing strategies in aesthetic tourism are [6]:

- E-commerce,
- SEO and SEM,
- Social Media Marketing,
- Online Website Communities,
- E-mail Marketing.

When discussing the state of medical tourism in the Republic of Serbia, it is important to note that two categories of services stand out, both of which can be classified within the sphere of aesthetic tourism. The aforementioned categories of services are [7]:

- Dental services,
- Plastic and reconstructive surgery.

Both categories belong to the sphere of health tourism, but within it, they encompass medical and aesthetic tourism. Their affiliation with health tourism stems from the aspiration to preserve or improve health status; with medical tourism due to the need for standardized medical procedures and qualified personnel; and with aesthetic tourism due to the focus on enhancing the aesthetics of the service user.

Analyzing the available literature in the field of health tourism marketing, it is observed that this area is insufficiently researched regarding the Republic of Serbia. Within the sphere of digital marketing, only a few papers are identified, two of which relate to dental tourism [8,9], and one to the COVID-19 pandemic in the Western Balkans region [10].

It is precisely due to the growing importance that digital marketing holds in contemporary marketing activities within the health tourism sphere, as well as the insufficient research in this domain within the Republic of Serbia, that the objective of this paper emerges. The aim of this paper is to determine the current state of digital marketing in aesthetic healthcare institutions in Serbia, in order to provide guidelines for its further improvement.

2. Materials and Methods

The analysis of digital marketing in plastic and reconstructive surgery institutions in Serbia conducted in this paper encompassed several phases. An overview of these phases is presented in Table 1.

Table 1. Phases of digital marketing analysis of plastic and reconstructive surgery institutions in Serbia.

No.	Name	Description
1	Sample definition	List of plastic and reconstructive surgery institutions engaged in medical tourism [11]. List of active institutions verified through data from the Serbian Business Registers Agency [12].
2	Website analysis	Determining the existence of the healthcare institution's website. Analysis of the healthcare institution's website URL characteristics (protocol, domain name, subdomain, TLD).
3	E-mail address analysis	Availability of e-mail address data on the healthcare institution's website. Determining the healthcare institution's e-mail address. Analysis of the healthcare institution's e-mail address type.
4	Social media analysis	Determining the existence of links on the healthcare institution's websites leading to open social media accounts. Searching for the existence of other open accounts on selected social networks (Facebook, Instagram, X, YouTube), supplemented by additional social networks if the website search indicates a need for it.

The methodology applied in this paper is based on similar research conducted in the Republic of Serbia relating to the digital marketing of health tourism [8,9]. The research was conducted in early May 2026.

3. Results and Discussion

A total of 12 plastic and reconstructive surgery institutions were identified (Ministry of Health of the Republic of Serbia, n.d.). Out of the aforementioned number, 11 are active institutions (Serbian Business Registers Agency, n.d.). In terms of location, all of them have business premises in Belgrade, while only one also operates in Novi Sad (9.1%).

For enhanced clarity, the results of the conducted research are presented separately across three sections.

3.1. Websites

Ten of the analyzed healthcare institutions possess a website (90.91%). Out of the ten website URL addresses, all utilize the https:// protocol, and half employ the www subdomain. One URL (10.00%) contains a subdomain for commercial organizations (.co). In the domain name, only one URL contains a hyphen ("-") alongside alphabetic characters. The average number of characters in the domain name is 8.30. The longest domain consists of 12 characters, while the shortest has 3 characters. The most frequent domain name lengths are 12 and 11 characters (2 URLs each, i.e., 20.00% each). Two top-level domains (TLDs) are present, .rs and .com, with .rs being the most prevalent among the majority of websites (Table 2).

Table 2. Top-Level Domains (TLDs) of healthcare institution websites.

TLD	No.	%
.rs	8	80.0
.com	2	20.0

3.2. E-mail Addresses

E-mail address data are available on 7 of the healthcare institution websites (70.0%). In order to complete the e-mail address database of the analyzed healthcare institutions, a search of available data was conducted across social media and the internet. It was established that all 11 healthcare institutions possess an e-mail address. Regarding the types of e-mail addresses, the majority of the institutions utilize an official domain-based address (Table 3).

Table 3. Types of e-mail addresses.

	No.	**%**
Provider-based address	2	18.2
Public/commercial address	1	9.2
Official domain address	8	72.7

3.3. Social Media

On 9 of the healthcare institution websites (90.0%), there is a link leading to the official page of the healthcare institution on at least one social network. It is concluded that only one website does not contain links to social media (Table 4). The average number of social networks for which links are provided on the websites is 2. The largest number of websites feature links to 4 social networks (4 websites, i.e., 40.0%).

Table 4. Number of websites with links to a specific number of social networks.

	No.	**%**
None	1	10.0
One	1	10.0
Two	1	10.0
Three	4	40.0
Four	3	30.0

The social network most prevalent on healthcare institution websites is YouTube (90.0%), which can also be observed in Table 5. Links to the social networks Facebook and Instagram are also present on the majority of websites. It is important to note that the presence of a link to the social network X was not established, despite the aforementioned network being one of the four primary social networks used as the starting point for this research. Among other social networks, LinkedIn and TikTok are present.

Table 5. Number of websites with links to specific social networks.

	No.	**%**
Facebook	8	80.0
Instagram	7	70.0
YouTube	9	90.0
X	0	0.0
LinkedIn	2	20.0
TikTok	1	10.0

In order to obtain a more comprehensive overview of the existence of open healthcare institution accounts on social media, an additional internet search regarding their existence was conducted. The results demonstrated that all healthcare institutions possess an Instagram account, while only one

lacks an account on Facebook and YouTube. In addition to the aforementioned, the majority of healthcare institutions have a TikTok account (Table 6).

Table 6. Number of social media accounts.

	No.	**% of all healthcare institutions**	**% of accounts present on the website out of the total number of accounts**
Facebook	10	90.9	80.0
Instagram	11	100.0	63.6
YouTube	10	90.9	90.0
X	4	36.4	0.0
TikTok	6	54.5	16.7

Comparing the number of open accounts with the available links leading to them on the healthcare institutions' websites, it can be observed that in no case is there full connectivity between the website and the open social media accounts. The lowest level of connectivity is found in the case of the social network X, where no open accounts are featured on the website, and TikTok, where only 16.7% of accounts are displayed on the website.

In order to obtain a more realistic overview of the actual utilization of the healthcare institutions' existing social media accounts, the number of actively used accounts was determined. Active utilization implied that the respective account had posts during 2025 or during the first four months of 2026. The results demonstrated that all open accounts were used only in the case of Facebook, while the majority of open accounts were utilized in the case of Instagram as well. The least favorable situation is observed with the social network X (Table 7).

Table 7. Overview of active social media accounts.

	Active		**Inactive**		**Actual utilization percentage***
	No.	%	No.	%	
Facebook	10	100.0	0	0.0	90.9
Instagram	10	90.9	1	9.1	90.9
YouTube	3	30.0	7	70.0	27.3
X	1	25.0	3	75.0	9.1
TikTok	5	83.3	1	16.7	45.5

Note: * – % of the total number of healthcare institutions (N=11).

Considering only the actively used social media accounts and the total number of healthcare institutions analyzed (Table 7), it was established that the majority of healthcare institutions actively use two social networks – Facebook and Instagram.

Data regarding the number of followers on the healthcare institutions' Facebook accounts are presented in the following Table 8.

Table 8. Data on the number of followers on Facebook accounts.

		All	**Active**	**Inactive**
No. of accounts		10	10	0
Followers	Total	102.2	102.2	-
	Average	10.2	10.2	-
	Max	30	30	-
	Min	0.8	0.8	-

Note: The number of followers is expressed in thousands, rounded to one decimal place.

Data regarding the number of followers on the healthcare institutions' Instagram accounts are presented in Table 9.

Table 9. Data on the number of followers on Instagram accounts.

		All	Active	Inactive
No. of accounts		11	10	1
Followers	Total	293.3	289.6	3.7
	Average	26.7	29.0	3.7
	Max	172.5	172.5	3.7
	Min	3.2	3.2	3.7
Note: The number of followers is expressed in thousands, rounded to one decimal place.				

Data regarding the number of followers on the healthcare institutions' TikTok accounts are presented in Table 10.

Table 10. Data on the number of followers on TikTok accounts.

		All	Active	Inactive
No. of accounts		6	5	1
Followers	Total	99.3	99.1	0.2
	Average	16.6	19.8	0.2
	Max	69.6	69.6	0.2
	Min	0.2	0.3	0.2
Note: The number of followers is expressed in thousands, rounded to one decimal place.				

Data regarding the number of followers on the healthcare institutions' X accounts are presented in Table 11.

Table 11. Data on the number of followers on X accounts.

		All	Active	Inactive
No. of accounts		4	1	3
Followers	Total	0.3	0.3	0.0
	Average	0.1	0.3	0.0
	Max	0.3	0.3	0.0
	Min	0.0	0.3	0.0
Note: The number of followers is expressed in thousands, rounded to one decimal place.				

Data regarding the number of subscribers on the healthcare institutions' YouTube channels are presented in Table 12.

Table 12. Data on the number of subscribers on YouTube channels.

		All	Active	Inactive
No. of accounts		10	3	7
Followers	Total	16.8	15.2	1.6
	Average	1.7	5.1	0.2
	Max	9.2	9.2	0.5
	Min	0.0	0.0	0.0
Note: The number of followers is expressed in thousands, rounded to one decimal place.				

A comparative overview of the data regarding the number of followers on the healthcare institutions' social media accounts is presented in Table 13.

Table 13. Comparative data on the number of followers on social media accounts.

		All	Active	Inactive
Total	Facebook	102.2	102.2	0.0
	Instagram	293.3	289.6	3.7
	YouTube	16.8	15.2	1.6
	TikTok	99.3	99.1	0.2
	X	0.3	0.3	0.0
Average	Facebook	10.2	10.2	0.0
	Instagram	26.7	29.0	3.7
	YouTube	1.7	5.1	0.2
	TikTok	16.6	19.8	0.2
	X	0.1	0.3	0.0
Max	Facebook	30.0	30.0	0.0
	Instagram	172.5	172.5	3.7
	YouTube	9.2	9.2	0.5
	TikTok	69.6	69.6	0.2
	X	0.3	0.3	0.0
Min	Facebook	0.8	0.8	0.0
	Instagram	3.2	3.2	3.7
	YouTube	0.0	0.0	0.0
	TikTok	0.2	0.3	0.2
	X	0.0	0.3	0.0

Note: The number of followers is expressed in thousands, rounded to one decimal place.

The results indicate that the social network characterized by the best indicators regarding the number of followers is Instagram (both all accounts and active accounts).

It is important to highlight two additional social networks that exhibit less favorable indicators compared to Instagram, but are certainly not negligible. These are Facebook and TikTok. Facebook occupies the second position regarding the total and minimum number of followers (in the case of the minimum number of followers, the social network X shows similar indicators), while TikTok holds this position regarding the average and maximum number of followers.

When the categories of all and active accounts are included in the analysis, the weakest results are observed for the social network X, except in terms of the minimum number of followers, where YouTube occupies a slightly weaker position.

When considering the indicators for the number of followers on inactive accounts, Instagram occupies the first place across all categories.

4. Conclusions

The research results demonstrated that the majority of the analyzed healthcare institutions have an official website, mostly with the ".rs" TLD. All healthcare institutions have an email address available on most websites. For the majority of healthcare institutions, this is an official domain address.

Most websites feature a link to at least one official social media account, with the average number of social networks being 2. The majority of websites include links to the social networks YouTube, Facebook, and Instagram.

All healthcare institutions have an open account on Instagram, and the majority on Facebook and YouTube. On all open Facebook accounts and the majority of Instagram and TikTok accounts, there were posts from the beginning of 2025 until the time of the study, thus they can be considered active. Taking such accounts into consideration, it is concluded that the majority of healthcare institutions actively use two social networks – Facebook and Instagram. From the perspective of the number of followers, Instagram holds the best position, but Facebook and TikTok also occupy important positions.

Based on the established current state, the following guidelines are proposed for enhancing the digital marketing of plastic and reconstructive surgery institutions engaged in medical tourism:

- Website – establish a website if the healthcare institution does not already have one; link the website to active social media accounts; update the website with email address information;
- Email – set up an official domain email address if the institution does not have one and make it publicly available;
- Social media – create accounts on new social media platforms and actively utilize them; reactivate existing social media accounts or, if necessary, close them and open new ones; link accounts across different social media platforms, as well as to the website.

Considering the aforementioned results, along with the guidelines for enhancing the digital marketing of the analyzed healthcare institutions, it can be concluded that the primary objective of this study has been achieved.

There are several fundamental limitations to this research. First, the institutional sample certainly does not encompass all plastic and reconstructive surgery institutions engaged in medical tourism. Furthermore, focusing exclusively on plastic and reconstructive surgery institutions overlooks the role played by institutions from other sectors of aesthetic tourism (e.g., dental clinics, clinics providing non-invasive procedures, etc.). Although websites, social media, and email addresses were analyzed, other digital marketing components such as e-consultations, SEO, and similar tools could also have been included. The website analysis was limited to determining their existence, the inclusion of email address information, and integration with open social media accounts. The content, design, functionality, and other significant website characteristics were not taken into consideration. Social media platforms were analyzed solely from the perspective of active account existence, the presence of posts, and follower counts. Consequently, other important metrics were omitted, including the number of posts, post types, content, engagement rates (reactions), and similar indicators.

The significance of this study lies in providing a comprehensive overview of the current state of digital marketing within plastic and reconstructive surgery institutions in the medical tourism sector, thereby establishing a foundation for further research. All the aforementioned limitations provide a baseline for conducting future studies. Additionally, this paper offers practical guidelines for enhancing the digital marketing strategies of the analyzed institutions.

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