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TURKISH AESTHETIC SURGEONS' WEBSITES AS ONLINE INFORMATION SOURCES FOR MEDICAL TOURISM

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Abstract: In recent years, the increasing importance of medical tourism in Turkey cannot be ignored. Existence of websites that fulfil various quality criteria concerning its features is important for providing the right information to people looking for aesthetic interventions and aesthetic surgeons. The aim of this study is to reveal the current situation of Turkish aesthetic surgeon's websites in terms of both HONcode (Health on the Net Code of Conduct) and TSPRAS' principles (Turkish Society of Plastic-Reconstructive and Aesthetic Surgeons' Ethical Rules for Websites). In this study, Turkish aesthetic surgeons' websites were evaluated and scored according to the HONcode and selected TSPRAS' principles concerning eleven basic features of the website. There were 749 surgeons who were members of the TSPRAS. Of these, 341 (45.7%) had their own accessible, professional websites. 190 websites confirm to at least all of the 5 selected TSPRAS' principles. Various studies have been conducted for the purpose of examining websites and their role in medical tourism. Based on those, it can be considered that increasing the number and quality of TSPRAS' registered surgeons' websites will give a fresh momentum to aesthetic health tourism. This will

be beneficial in terms of patient safety and national economy, and will increase the competition with other countries to achieve higher levels of quality in medical tourism.

Keywords: *Aesthetics, Internet, Medical tourism, Online health information, Turkey*

Introduction

Beauty and aesthetics are as old as human history. It is known that people resort to many different methods because of their desire to look beautiful and to satisfy their aesthetic sense (Ricketson, 1962). For this purpose, in addition to the use of various products, alternative treatment methods, natural or synthetic sourced human products and surgical procedures can be used (Azak-Sungur et.al, 2018; Heller et.al, 2006; Rowe and Baker, 2009).

The professionals in this field are aesthetic surgeons. Surgeons who perform appropriate interventions for their patients by making intensive efforts in accordance with medical requirements in the light of scientific methods also make important contributions to public health. According to Ricketson (1962), ''Cosmetic surgery is defined as any surgical procedure in which the primary goal is beautification or improvement of appearance above and beyond what might be considered average or normal'' (Ricketson, 1962). To sum up, ''cosmetic plastic surgery'' can be defined as a "specialized surgery that focuses on improved appearance for its own sake" (Atiyeh et.al, 2008). It is necessary to be aware of the procedures those are not carried out in accordance with professional and ethical rules will lead to important health problems and to avert this, reliable professionals should be consulted (Klein et.al, 2017).

At the same time, it is known that since the first ages of history, people went from the places where they are located to other sites with the aim to meet their requirements relating with health (Rodrigues et.al, 2017). These kinds of travels with the purpose of getting quality health services are being realized more widely in our present time due to emerging technologies and advanced opportunities in health and travel.

In the light of the above facts, medical tourism is a type of travelling activity that involves a wide range of medical services both domestic and across international borders (Heung et.al, 2010; Hudson and Li, 2012). Medical tourism has become a subject matter that is being demanded more and being given importance by various countries in recent years. Medical tourism, with sub-areas such as thermal health tourism, geriatric tourism, and tourism for the disabled people, is gaining

priority in the Turkish Health System. Notably, Turkey is one of the top 5 countries in the world in terms of having patients from various countries (Ministry of Health, 2019).

Across the world, it is seen specific sub-areas are parts of medical tourism with various purposes, ranging from operations to various cosmetic interventions (Falk and Prinsen, 2016). Similar to developing countries such as India, Brazil, Philippines, Malaysia, Thailand, Turkey is among the countries that are preferred for medical tourism (Falk and Prinsen, 2016; Dinçer et. al, 2016; Khan et.al, 2016). Eye surgeries, tooth surgeries, in vitro fertilization, aesthetic and plastic operations, and cardiovascular diseases comprise the general medical tourism services (Erdoğan and Yılmaz, 2012; Ozsari and Karatana, 2013). Turkey has a relative advantage compared to other countries such as Germany, Czech Republic, and Serbia due to lower price levels, talented health professionals, healthcare being provided with high standards, and reliable information sources, especially regarding aesthetic surgeries (Klein et.al, 2017).

It is well known that people want to get information relating to health benefits and risks from the Internet, mainly because it provides easy access with privacy being safeguarded, and due to the reasons such as fast and flexible accessibility and numerous options being provided (Winker et.al, 2000; Wong et.al, 2010). In this regard, Internet has a significant importance concerning medical tourism as well. People, who want to get healthcare services from places outside their own country, can reach to many different sources through the Internet and they can make their preferences accordingly (Klein et.al, 2017; Rodrigues et.al, 2017; Falk and Prinsen, 2016; Öksüz and Altıntaş, 2017). For this reason, it is required that the information provided on websites is reliable and meets some certain standards (Yegenoglu et.al, 2012).

The criteria concerning health-related websites should comply with some regulations established by various institutions. As being one of them, since 1996, the Health on the Net Foundation (HON), ensures that the health-related information on the Internet should comply with certain rules as per 8 principles that are specified in the HONcode (HON Foundation, 2019). This foundation is accrediting websites that meet the HONcode (Boyer et.al, 2016; Boyer et.al, 1998; Gaudinat et.al, 2007). Obviously, websites that meet certain quality standards are perceived by the users as trustworthy and reliable.

Furthermore, institutions related with certain disease groups or doctor communities develop specific regulations regarding the rules that must be complied with on the websites that provide

information concerning their fields (Siegel et.al, 2015). In this context, "Ethical Rules for Websites" exist as prepared by the Turkish Society of Plastic-Reconstructive and Aesthetic Surgeons (TSPRAS) for their privately working member surgeons (TSPRAS, 2019).

Since the beginning of the 2000s, various studies have been conducted about the aesthetics and plastic surgery-related information and websites on the Internet. In some of these, the content of the information was investigated. On the other hand, it is seen that there were some studies about the features of the websites. In 2002, Jejurikar et. al. found that 34% of the information about breast augmentation on the Internet were false or incomplete (Jejurikar et. al., 2002). In another study related to breast augmentation, it was found that only 25% of the websites examined were eligible for the Ensuring Quality Information for Patients evaluation (Palma et. al., 2016). In the study conducted by Wong et al. on aesthetic surgery, the appropriateness of the advertisements related to aesthetic surgery on the websites were analyzed according to the ASAPS / American Society of Aesthetic Plastic Surgeons (ASPS) and American Medical Association Codes of Ethics codes. As a result of this study, it was found that compliance with these codes is high (Wong et. al., 2010). Also, Gutierrez and Johnson emphasized the importance of following ethical rules in the Internet and social media use by plastic surgeons (Gutierrez and Johnson, 2018).

Besides, in a study conducted on the effects of information about aesthetic surgery that patients accessed over the Internet, it was determined that 95% of patients collected information from the internet before meeting with the physician (Montemurro et. al., 2015). Similarly, Janik et al.stated that social media is a frequently used for information gathering about aesthetic surgery (Janik et. al., 2019). In another study, it was determined that Internet searches on plastic surgery increased in December-January and June-July (Ward et. al., 2018).

In a study regarding the internet and social media usage of plastic surgeons in Canada, it was found that 42% of surgeons who are members of the Royal College of Physicians and Surgeons of Canada have a website and 85% have a social media profile (McEvenue et. al., 2016). In addition, it has been determined that the posts about plastic surgery on social media are made by plastic surgeons, 83% on Instagram, 18% on Facebook and 13% on Youtube (Naftali et. al., 2018). Besides this, in a study that examined the websites of plastic surgeons in Turkey, it has been demonstrated that the quality of the information related to orthognathic surgery was low (Baybek and Tuncer, 2017).

It is understood from the studies in the literature that the patients use the Internet for gathering information about aesthetic surgery and that the quality of this information is extremely important. In this context, the accessible websites of the TSPRAS' members are important information sources for aesthetic surgery and can have an important role in medical tourism in Turkey. The aim of this study is to reveal the current situation of these websites in terms of both their quality, measured by the HONcode and TSPRAS' principles.

1. Materials and methods

In this study, Turkish aesthetic surgeons' websites were evaluated according to the HONcode and selected TSPRAS' principles. All 8 principles[a] covered by HONcode were included in the study. Out of the 16 TSPRAS' principles, only 5 were selected[b] because of their online accessibility. Eleven basic features (gender, city, foreign language, biography, photo of the surgeon, other visual materials (photographs, videos, clarification drawing, etc), advertisements, interactive communication (an online tool for easy messaging), mail address, e-mail address, and telephone number) were identified to evaluate against the selected principles. A form containing the selected features of the HONcode and TSPRAS' principles was prepared by the researchers and consistently applied. The compliance to the criteria was scored as 1 point for compliance and 0 point for noncompliance. Maximum total scores were therefore 8 for the HONcode and 5 for the TSPRAS.

To assess the aesthetic surgeons' websites, the members of the TSPRAS were identified, afterwards investigated and a database was created according to the availability of the websites (Figure 1). Then, the websites were evaluated via a specifically developed form. The websites were accessed during the first half of 2017.
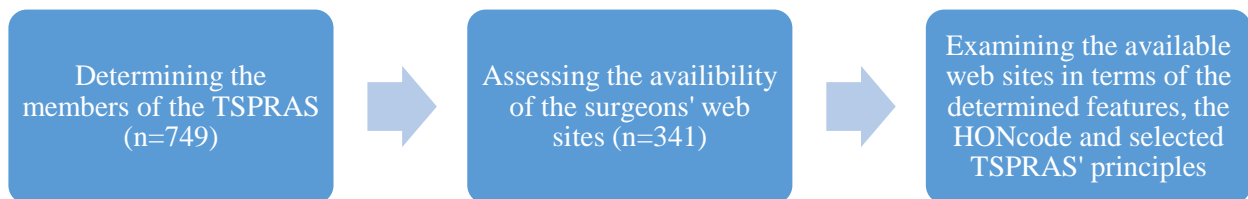

Figure1. Flow chart of the study

Also, the patient ratings for the surgeons were gathered as an indicator of patient satisfaction and the mean scores were calculated. However, a comparison to find a relation between the ratings and compliance to the principles couldn't be made due to the differences in the numbers of the patients who graded the surgeons online.

Since not all of the TSPRAS' principles were evaluated, statistical analysis was not performed to examine the difference between the determined variables in terms of compliance to these principles. Yet, statistical analyses on HONcode scores were undertaken. IBM SPSS version 22 was used for descriptive statistical analyses, two sample independent t-test and one-way analysis of variance (ANOVA) tests. ANOVA was used to examine if there were any significant differences between the compliance with different principles, or not. Tukey post hoc test was performed to find which groups are different in terms of compliance with the HONcode. The level of significance was set a priori at $p < 0.05$.

2. Results

There were 749 surgeons who were members of the TSPRAS. Of these, 341 (46%) had their own accessible, professional websites.

As seen in Table 1, most of the surgeons are male (88%) and more than half of the clinics are located in Istanbul (51%). Only 24% (83) of them has their websites in English or in other foreign languages. On the other hand, 96% (326) of them provide their telephone number as a contact information on their websites.

Table 1. Basic features of the websites (N=341)

Features		n	%
Gender of the surgeon	Female	41	12.0
	Male	300	88.0
City (where the clinic is located)	Ankara	49	14.4
	Istanbul	175	51.3
	Izmir	28	8.2
	Other cities*	61	17.9
	NA	28	8.2
Website in foreign language	Available	80	23.5
	NA	261	76.5
Biography of the surgeon	Available	321	94.1
	NA	20	5.9
Picture of the surgeon	Available	310	90,9
	NA	31	9.1
Other visual materials on the website	Available	321	94.1
	NA	20	5.9
Advertisements on the website	Available	13	3.8
	NA	328	96.2
Interactive communication tool	Available	252	73.9
	NA	89	26.1
Mail address	Available	313	91.8
	NA	28	8.2
E-Mail address	Available	292	85.6
	NA	49	14.4
Telephone number	Available	326	95.6
	NA	15	4.4

* Adana, Afyonkarahisar, Antalya, Batman, Bursa, Canakkale, Denizli, Diyarbakir, Gaziantep, Hatay, Isparta, Kayseri, Kocaeli, Konya, Malatya, Manisa, Mersin, Sakarya, Samsun, Sanliurfa, Zonguldak
NA: not available

The number of the websites, which are conforming to the HONcode, are shown in Table 2. None of the websites meets all of the HONcode principles. Of these 341 websites, 132 (38.7%) contain a warning stating that "Information should support, not replace, the doctor-patient relationship". Solely, 5 (1.5%) of the websites provide references to the content (Table 2).

Table 2. Identified websites and their adherence to the HONcode (N=341)

HONcode	n	%
Authoritative "*Indicate the qualifications of the authors*"	304	89.2
Complementarity "*Information should support, not replace, the doctor-patient relationship*"	132	38.7
Privacy "*Respect the privacy and confidentiality of personal data submitted to the site by the visitor*"	5	1.5
Attribution "*Cite the source(s) of published information, date medical and health pages*"	5	1.5
Justifiability "*Site must back up claims relating to benefits and performance*"	2	0.6
Transparency "*Accessible presentation, accurate e-mail contact*"	134	39.3
Financial disclosure "*Identify funding sources*"	0	0.0
Advertising policy "*Clearly distinguish advertising from editorial content*"	9	2.6

190 websites confirm all of the 5 selected TSPRAS' principles. Also, none of the websites contain price information. The numbers of the websites, which are conforming to the selected TSPRAS' principles, are shown in Table 3.

Table 3. Websites conforming to the selected TSPRAS' principles (N=341)

Criteria	n	%
Any kind of information should not be aimed at gaining, directing, praising a physician, bringing to the forefront or defeating other physicians.	12	3.5
At the bottom of each web page the warning should be placed "*The content of this page is for informational purposes only. Please consult your physician for diagnosis or treatment.*"	132	38.7
There should be no pre- or post-operative mentioning of information which may reveal the identity of any patient.	327	95.9
Information on the website should be scientific and should not encourage the patient to have an operation. There should be no doubtful expressions such as that surgery is painless and taintless.	338	99.1
Treatment costs should not be included on the website.	341	100.0

The results of the t-tests for the HONcode are presented in Table 4. Surgeons' gender has no statistically significant effect on the compliance with the HONcode. On the other hand, statistically significant differences are found for the compliance with the HONcode and availability of visual elements, interactive communication tool, mail addresses, e-mail addresses, and telephone number

Table 4. HONcode scores of the websites according to various variables

	Mean±SD	Median	Min-Max	P value*
Gender				
Male	2.7±0.9	3	0-5	0.866
Female	2.7±1.0	3	0-4	
Foreign language				
Available	2.8±0.8	3	1-5	0.214
NA	2.7±1.0	3	0-5	
Biography				
Available	2.7±0.8	3	0-5	0.088
NA	2.2±1.4	2	0-5	
Other visual elements				
Available	2.8±0.8	3	0-5	<0.001
NA	1.5±1.2	1	0-3	
Interactive communication tool				
Available	2.8±0.8	3	0-5	<0.001
NA	2.3±1.0	2	0-4	
Mail addresses				
Available	2.7±0.9	3	0-5	0.091
NA	2.3±1.2	2	0-4	
E-mail addresses				
Available	2.7±0.9	3	0-5	0.019
NA	2.4±0.9	2	0-4	
Telephone number				
Available	2.7±0.8	3	0-5	0.064
NA	2.0±1.4	2	0-4	

*Independent samples t-test (The mean difference is significant at the 0.05 level)

SD: Standard Deviation; Min-Max: Minimum-Maximum; NA: Not available

According to the ANOVA and Tukey tests results, statistically significant differences were found between the groups in terms of compliance with HONcode principles (p<0.001). Mean values of websites that meet 3 principles and 4 principles are higher than websites that meet 5 principles.

Moreover, patients graded 298 surgeons on satisfaction and it was found that this sample got the mean score of 4,71±0.03 (Mean±SD) out of 5.

3. Discussion

In the age of information technologies, online health information is increasing rapidly (Sbaffi and Rowley, 2017). In recent decades the world is becoming smaller because of globalization and instant access to information via the Internet. Thus people, who want to get health services from locations outside their own country, can reach easily too many different sources through the Internet and make their preferences accordingly, while having privacy safeguarded (Klein et.al, 2017; Rodrigues et.al, 2017; Falk and Prinsen, 2016; Öksüz and Altıntaş, 2017). This has a significant importance regarding medical tourism (Lunt et.al, 2016), inclusive for Turkey. In this context, it is considered that increasing the number and quality of TSPRAS' registered surgeons' websites (45.7%) will give an impetus to aesthetic health tourism in Turkey, where medical tourism is supported as a government policy (Fetschrein and Stephano, 2016).

There are many studies conducted examining the websites, which have a significant role in medical tourism. These studies observe various features of the websites. One of them is the availability of information in foreign languages. In this respect, Moghavvemi et al. found that Malaysian healthcare facilities' websites provide a higher level (90%) of information in foreign languages than India and Thailand (Moghavvemi et.al, 2017). In the present study, it is found that only 23.5% of the websites gave information in foreign language and when compared to the previous studies this percent seems to be very low. Obviously, this ratio should be increased further in order to provide more widespread services in international healthcare markets, enhancing medical tourism in Turkey.

In this study, it was detected that 91% of the websites had the physicians' pictures online. In the study conducted by Frederick and Gan, it was found that only 62% of the investigated websites

had picture of the healthcare professional (Frederick and Gan, 2015). It has been shown that the CV and photograph of the physician is also preferred by users for various cultural reasons (Mason and Wright, 2011). In particular, the visitors of the website can feel more confidential when they see the picture of the surgeon besides reading his/her CV.

In addition, it is known that the presence of other visual materials is an effective marketing technique for the Internet (Frederick and Gan, 2015). In this study, the availability ratio of other visual materials is 94%.

Furthermore, e-mail and social media are potential tools for physician-patient communication (Lee et.al, 2016). Also, to have interactive communication tools on the websites is important to communicate instantly (Frederick and Gan, 2015). While healthcare facilities in India, Thailand and Malaysia, potentially outstanding countries in terms of medical tourism, have interactive communication tools in 18%, 14% and 0% of cases, respectively (Moghavvemi et.al, 2017) this ratio was 74% in the present study, much higher than in those other countries.

Another remarkable factor in the study is the lack of price information on any site. This situation, may vary though according to the legislation of the countries. As a matter of fact, a study conducted in Malaysia, India and Thailand indicates that this information is found on their websites (Moghavvemi et.al, 2017). However, according to TSPRAS' principles, price information of any operation shouldn't be available on the websites of the physicians in Turkey (TSPRAS, 2019).

Furthermore, it is stated that online ratings of physicians by patients are another important and widespread practice in decision making (Samora et.al, 2016; Trehan and Daluiski, 2016). There are some studies available about the relation of these ratings and website quality (Ford et.al, 2013; Graves et.al, 2012). The mean score of the surgeons' score is 4.71 out of 5 in this study, which seems relatively high.

As indicated before medical tourism is supported as a Turkish government policy and promoted by Turkish brands (like Turkish Airlines), as well as recognized worldwide (Fetschrein and Stephano, 2016). It should be noted that in the age of information technologies, online health information seeking is increasing rapidly (Sbaffi and Rowley, 2017). Compliance with both HONcode and local TSPRAS principles will increase the trust and credibility of the websites and will help these websites to become primary information source for medical tourism. This will be

beneficial for increasing medical tourism activities in Turkey as well as in terms of enhancing patient safety and the national economy. Also, it will increase the competition with other countries to achieve higher levels of quality in medical tourism in general.

Acknowledgment

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[a] *Selected HONcode Principles (HON Foundation, 2019)*

Aim: The HONcode certification is an ethical standard aimed at offering quality health information. It demonstrates the intent of a website to publish transparent information. The transparency of the website will improve the usefulness and objectivity of the information and the publishment of correct data.

1. Authoritative: Any medical or health advice provided and hosted on this site will only be given by medically trained and qualified professionals unless a clear statement is made that a piece of advice offered is from a non-medically qualified individual or organisation.

2. Complementarity: The information provided on this site is designed to support, not replace, the relationship that exists between a patient/site visitor and his/her existing physician.

3. Privacy: Confidentiality of data relating to individual patients and visitors to a medical/health Web site, including their identity, is respected by this Web site. The Web site owners undertake to honour or exceed the legal requirements of medical/health information privacy that apply in the country and state where the Web site and mirror sites are located.

4. Attribution: Where appropriate, information contained on this site will be supported by clear references to source data and, where possible, have specific HTML links to that data. The date when a clinical page was last modified will be clearly displayed (e.g. at the bottom of the page).

5. Justifiability: Any claims relating to the benefits/performance of a specific treatment, commercial product or service will be supported by appropriate, balanced evidence in the manner outlined above in Principle 4.

6. Transparency: The designers of this Web site will seek to provide information in the clearest possible manner and provide contact addresses for visitors that seek further information or support. The Webmaster will display his/her E-mail address clearly throughout the Web site.

7. Financial disclosure: Support for this Web site will be clearly identified, including the identities of commercial and non-commercial organisations that have contributed funding, services or material for the site.

8. Advertising policy: If advertising is a source of funding it will be clearly stated. A brief description of the advertising policy adopted by the Web site owners will be displayed on the site. Advertising and other promotional material will be presented to viewers in a manner and context that facilitates differentiation between it and the original material created by the institution operating the site.

[b] Selected TSPRAS' Principles (TSPRAS, 2019)

Aim: It is to establish standards for plastic surgery websites in order to prevent unethical practices and unfair competition at the same time to inform the public, and to transform these standards into a legal framework in cooperation with TSPRAS and Turkish Medical Association.

3. Any kind of information should not be aimed at gaining, directing, praising a physician, bringing to the forefront or defeating other physicians.

4. At the bottom of each web page the warning should be placed "The content of this page is for informational purposes only. Please consult your physician for diagnosis or treatment."

6. There should be no pre- or post-operative mentioning of information which may reveal the identity of any patient.

7. Information on the website should be scientific and should not encourage the patient to have an operation. There should be no doubtful expressions such as that surgery is painless and taintless.

10. Treatment costs should not be included on the website.