The Requirements and baises of Medical Tourism Website for Hospitals: A Cross-Sectional Study

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Abstract

Background: Informing the target population plays an important role in medical tourism attraction and should be managed in order to incorporate all appropriate tools to increase it. The aim of this study was to determine the requirements and basis of a medical tourism website for hospitals.
Methods: This study was a cross sectional analytical study that was performed during year 2018 amongst hospital managers and faculty members of Iranian medical sciences universities that have the potential to attract medical tourism. Data gathering was done by a self-made questionnaire. From 120 questionnaires, which were distributed between samples, 82 were gathered completely. Data analysis was done by SPSS version 16 and descriptive (mean, frequency and etc.) and analytical (one-way ANOVA) statistical tests.
Results: The results of the study showed that from the experts point of view, the most important requirement and basis of Hospital Medical Tourism Websites) HMTW(was photo gallery (mean = 4.44) and a general guide for patients (mean = 3.85) was the least significant element in HMTW. Also, there was no difference between faculty members, staff, and different genders regarding views about HMTW items (P = 0.11).
Conclusions: Based on the results, it was suggested that the results of this study could be used by policymakers of medical tourism and Hospital Medical Tourism Websites (HMTW) developers. Also, the results of this study could be used as an evaluation tool for investigating hospital websites regarding medical tourism attraction abilities.

Keywords: Medical Tourism, Hospitals, Website, Tourism Attraction

1. Background

Today, medical tourism has become a profitable and high income industry, especially in developing countries (1, 2). Medical tourism consists of two scientific fields, including medicine and tourism (3). Medical tourism is defined as process of traveling to another country for receiving medical care (4, 5). In other studies, medical tourism has been described as an organized trip from the individual's living environment to another place to maintain, improve or recover physical and mental health (6).

Medical tourism is a tourism type associated with direct intervention of medical issues, and the results of such trips should be fundamental and long-term. Medical tourism addresses needs of people, who are increasing in number; these people can be tourists and patients (7). In the past few years, a significant growth occurred in the number of people that exit their country to utilize health services (8). Medical tourism is one of the main dimensions of the tourism industry and it can help sustainable development and dynamic economics of the country (9). On the other hand, Iran, as a developing country, aims at becoming a new developed country in the world, and this great goal needs development of the tourism industry, especially in medical tourism. Iran is very capable and empowered in medical sciences (10) and because of the low cost of medical services, very high security in cities, many natural attractions, high quality of medical services, cultural attraction and etc. could be a target location of medical tourism, especially for middle-eastern countries (11-13). Therefore, all tools and abilities should be employed to increase this benefit to help the development of this country. The most important tool for increasing tourist attraction is true and extensive advertising and notification (13). In many studies, emphasis has been placed on internet and websites as the most important tool to increase medical tourism attraction (1, 12-14).

The tourism business, like all industries and businesses, needs proper use of Information Technology (IT), especially websites (15). Use of proper methods for inform-

ing, advertising, and marketing in medical tourism is a key element [16]. Martin et al. in their study concluded that advertising and informing have an important role in development of medical tourism [17]. In some countries, use of internet marketing allows successful attraction of medical tourism [15, 17, 18], although some other countries have not yet utilized this tool in medical tourism. The advertising media is effective in medical tourism attraction and the advertising of Iranian medical abilities and natural attraction is an appropriate tool [12].

With regards to the results of other studies, hospital websites are a preferred method for medical tourism attraction [1, 9, 12, 13, 19]. Recently, studies were performed on Hospital Medical Tourism Websites (HMTW). For example, the study of viladrich and Baron concluded that use of internet marketing made Argentina a place for cosmetic surgeries [15]. Samadbeik et al. in their study, reported on ten main elements for HMTW, including information related to physicians in hospitals, costs, and etc. [13]. With regards to the point that determining the requirements and basis of hospital websites is an important step for scientific design of HMTW and has an important role in informing medical tourists to acquire medical touristic information through the internet, and considering the lack of studies on requirements and basis of HMTW, this study was done to determine the requirements and basis of hospital medical tourism websites.

2. Methods

This study was a cross sectional analytical study, which was done during year 2018. Data gathering was done by a self-made questionnaire, based on prior study of the research team [13]. The questionnaire had two main dimensions, including demographic information and main elements of medical tourism website.

The major elements of HMTW include "introducing the hospital" (six questions), "general guide for patients" (two questions), "tourism information" (four questions), "information related to physicians in hospital" (five questions), "costs" (four questions), "treatment follow-up" (five questions), "online hospital appointment scheduling" (three questions), "statistics and news" (four questions), "photo gallery" (three questions), and "contacts" (four questions). The questionnaire generally consisted of 40 questions, which were scaled based on the Likert scale (one, very low, to five, very high).

For calculation of content validity, ten faculty members of health information management and medical informatics' (PhD degree and five years of work experience) opinions were used. Content validity of the questionnaire was determined by Content Validity Ratio (CVR) and Content Validity Index (CVI). Content Validity Ratio is a three-state scale, including unnecessary item = 1, useful but not necessary = 2, and necessary = 3. The CVR was calculated from the Equation 1:

$$CVR = \frac{n - \frac{N}{2}}{\frac{N}{2}} \qquad (1)$$

Based on the above formula, "n" is experts, who chose the necessary choice, and "N" is all experts, who take part in the panel. Calculated CVR was 0.80 and showed the high validity of the questionnaire.

The CVI is a four-state scale with three factors, including not relevant = 1, somewhat relevant = 2, quit relevant = 3, very relevant = 4 and not clear = 1, somewhat clear = 2, quit clear = 3, very clear = 4 and not simple = 1, somewhat simple = 2, quit simple = 3, and very simple = 4. The CVI was calculated from the Equation 2:

$$CVI = \frac{People\ who\ chose\ 3\ or\ 4\ item\ number}{All\ experts} \qquad (2)$$

The CVI calculated of the questionnaire was 0.90, which is acceptable because the cut off CVI is 0.79.

The reliability of the questionnaire was determined by Cronbach alpha coefficient ($\alpha = 0.83$), which was at an acceptable level. The score of questions was divided to three parts, including 1 to 1.7 indicating eliminate, 1.8 to 3.5 optional, and 3.6 to 5 compulsory (as the cut off point).

The sampling was done through the purposive sampling method and 120 samples were selected based on this method. The study population were International Patient Department (IPD) staffs in Tehran and Shiraz authorized hospitals (hospitals with high standards, which were accredited by the Ministry of health annual evaluations) (15 governmental hospital), accreditation department staffs in accredited hospitals informing department staffs in Tehran and Shiraz, and PhD faculty members in health information management and health service management from Iran University of Medical Sciences, Shiraz University of Medical Sciences, and Lorestan Univrsity of Medical Sciences.

Data analysis was done by SPSS version 16 and descriptive tests included mean, standard deviation, frequency, and frequency percent and analytical statistical tests, included one-way Analysis of Variance (ANOVA).

Table 1. Demographic Information of Participants

	Values
Sex, No. (%)	
Woman	27 (32.93)
Man	55 (67.07)
Age (mean ± SD)	33.90 ± 6.38
Level of education, No. (%)	
BSc	9 (10.97)
MSc	39 (47.56)
PhD	34 (41.47)
Job, No. (%)	
Faculty member	41 (50)
Staff in hospital	33 (40.24)
Other	8 (9.76)

Table 2. The Main Requirements and Basis of HMTW

Main Elements and Requirement	Mean	Mean and SD of Main Elements	Necessity of Element or Requirement
Introducing the hospital		4.05 ± 0.34	
The history of the hospital	3.63		Compulsory
Direction of hospital floors	3.75		Compulsory
Introducing hospital officials (dean, director, etc.)	3.78		Compulsory
Modern equipment available in hospital	4.73		Compulsory
Introducing the hospital sections and specialities available in the hospital	4.71		Compulsory
Presenting hospital vision and mission	3.70		Compulsory
General guide for patients		3.85 ± 0.34	
Patients' bill of rights	3.90		Compulsory
Providing basic medical information to patients	3.81		Compulsory
Tourism information		4.09 ± 0.34	
Introduction of tourism attractions in the city and province	3.81		Compulsory
Providing maps to access to hospital and tourism sites	4.05		Compulsory
Introducing hoteling services in hospital for foreign patients	4.65		Compulsory
Introducing of hotels, restaurants and other well-known entertainment places in the city	3.88		Compulsory
Information related to physicians in hospital		4.23 ± 0.34	
The introduction of specialists and subspecialists in hospitals	4.51		Compulsory
Ability to search for names and specialities	4.41		Compulsory
The attendance schedule of physicians in clinics of hospital	4.41		Compulsory
Address and contact number of hospital physicians' offices	4.15		Compulsory
Physician email and website link	3.95		Compulsory
Costs		4.04 ± 0.34	
Presenting global costs of surgeries (pre-determined)	4.11		Compulsory
Comparing the hospital prime costs with other competing countries	4.10		Compulsory
Formulas to calculate respective costs	3.46		Optional
List of insurance contracts for tourists	4.51		Compulsory
Treatment follow-up		4.28 ± 0.34	
Non-in person follow ups after treatment	4.38		Compulsory
Tracking complaints	4.30		Compulsory
Coordination ways to readmission	4.23		Compulsory
Medical consultations	4.40		Compulsory
Registration of requests and specialized questions	4.10		Compulsory
Online hospital appointment scheduling		4.41 ± 0.34	
The possibility for registering people (various clinics, para clinic sectors)	4.65		Compulsory
Providing tracking code	4.18		Compulsory
Possibility to change or cancel appointment time	4.41		Compulsory
Statistics and news		3.89 ± 0.34	
Statistics of foreign clients	3.90		Compulsory
Continuous monitoring of foreign patients' satisfaction and presenting it in the related link	4.30		Compulsory
The newest news related to surgeries and other medical procedures	4.08		Compulsory
The schedule of journal clubs and scientific meetings in hospital	3.28		Optional
Photo and film gallery		4.44 ± 0.34	
Photos and films of the sectors in hospital (operating rooms, overview of hospital and photos of surgeries)	4.35		Compulsory
Photos and films of tourism attractions	4.86		Compulsory
Photos and films of facilities as well as clinical and para clinical services	4.11		Compulsory
Contacts		4.14 ± 0.34	
Hospital contact numbers	3.93		Compulsory
Hospital email address	4.25		Compulsory
Hospital exact mail address	4.38		Compulsory
Hospital fax number	4.01		Compulsory

3. Results

From the 120 questionnaires that were distributed, 82 of them were gathered completely, and the response rate was 68.33%. Based on Table 1, most participants were faculty members (50%) and in terms of level of education, most of them had an MSc degree, 39 (47.56%).

As Table 2 indicates, the "photo gallery" (mean = 4.44) is the most important requirement and "general guide for patients" (mean = 3.85) was the least significant requirement in HMTW.

Based on Table 2, the only formulas for calculating respective costs, the schedule of journal clubs and scientific meetings in hospitals, were optional choices in HMTW and other items were compulsory from the experts' point of view.

Other results of the study showed that there was no difference between faculty members and staff and different genders' point of view about HMTW items (P > 0.05).

4. Discussion

Taking into account the basic needs and requirements of hospitals with the aim of attracting medical tourism, from the experts and activists' of view, designing hospital websites with higher capabilities is required.

The results of this study showed that introducing the hospital on the website is a compulsory requirement and should be considered in website designing. Samadbeik et al. in their study indicated that introducing the hospital is an essential element in HMTW (13). Therefore, it is suggested that introducing a hospital should be considered in designing and evaluating hospital websites. Modern equipment, various specialities, departments and units are very important information in sub categories of introducing the hospital that must be observed.

General guides for patients was the least important requirement and basis in HMTW. However, this should be considered in medical tourism websites as an optional choice. The results of the study showed that touristic information is one of most important requirements in HMTW and introducing hoteling services in hospitals, especially for foreign patients, was a very necessary item from the experts' point of view. Azimi et al. in their study suggested that most patients did not consider advertising strategies effective and suggested that advertising practices should be revised and novel methods should be adopted to appeal to a greater range of potential tourists (20). Therefore, paying attention to this factor in HMTW is an affective factor to attract medical tourism.

The most important requirement in hospital medical tourism websites is information about physicians. The results of this study showed that information related to physicians in hospitals should provided in HMTW with details. Turner, in his study, concluded that providing information about specialists is important (21). The provided

schedule of physicians in clinics of hospitals is one of the most important requirements that is suggested in HMTW.

Other results of the study showed that providing information about the cost of surgical operations and other medical services has an important role in attracting medical tourism, so it is necessary to consider it in designing medical tourism websites. Providing exact and up-to-date information about medical care costs and also comparing with developed countries and country of origin (Iran) is a proper and preferred method (13) considered in HMTW.

The results showed that "treatment follow-up" ability for all patients should be considered as a key feature for website developers and policymakers. Accountability of health centers, as a stimulating demand, is one of the affective factors in medical tourism attraction (22-24). Information about facilities, including treatment tracking, readmission coordinating, and medical consultations were emphasized by experts for HMTW.

The results of the study showed that "online hospital appointment" system, including registering people (in various clinics and para-clinic department), changing or cancelling appointment time, and providing tracking code are key services for HMTW. With regards to the progress of information and communication technology (ICT), e-booking systems improve hospital appointment services and patient are interested to use this system for online appointment scheduling, especially in Iran (25, 26). It is obvious that many foreign patients will also use it to reassure their appointment. Therefore, it is suggested to pay more attention to this ability on HMTW.

Based on other results of the study, providing some statistics and news about foreign clients, continuous monitoring of foreign patients' satisfaction, latest surgeries and other medical procedures were identified as important elements for HMTW. The schedule of journal clubs and scientific meetings in hospitals were recognized as an optional choice for these websites. The news related to surgeries and other medical procedures was an important factor in HMTW. Nikrafatar et al. achieved similar results (9).

The results of this study showed that images and videos of the hospital and advanced equipment can help users create a mental image from the hospital. Furthermore, information about natural attractions and tourism potential, images and films that help attract tourists to destinations, should be available on medical tourism websites. The results showed that photos and films gallery is the most important element in HMTW. Azimi et al. in their study referred to the importance of advertising hospitals by films, as an important factor to tourist attraction (20).

From the expert's point of view, providing different contact methods with hospitals for patients and referrers should be considered in HMTW. Abouhashem Abadi et al. in their study achieved similar results (27).

4.1. Conclusion

It is suggested that all hospitals that have the potential to attract medical tourism should use medical tourism

websites as a proper and helpful tool to advertise medical tourism. Therefore, the identified key requirement should be payed much attention in designing and developing medical tourism websites. Paying attention to information about welfare facilities, surgical and nonsurgical information, e-booking, social condition for foreigners, natural attraction pictures and hospital facilities were suggested to website developers, managers and policymakers. Although some of elements are optional for these websites. With regard to this point that, the few studies in the field of medical tourism website, it is suggested that more studies were done on this field of study. The results of this study can be used as an appropriate tool to evaluate hospital websites regarding their ability in medical tourism attraction.

4.2. Limitations

One of the research constraints was the lack of willingness of experts to participate in the study. To overcome this issue and increase the number of completed questionnaires, more experts were selected to participate in the study and more time was given to complete the questionnaire.

Acknowledgments

Footnotes

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