

## Original Article

**The role of hospital performance assessment on medical tourism development**

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## ABSTRACT

**Background& Aim:** Medical tourism industry would not be developed without well-known healthcare centers which are popular for their therapeutic outcome, efficiency, patient centeredness, responsive to governance and staff orientation.

**Methods & Materials:** This is an applied, correlation and cross-sectional study which was done in first quarter of 2018. The population of study consisted of international patient department hospitals staff that were selected randomly (N=263). There were used two kinds of research-made questionnaires for medical tourism development and hospital performance assessment which were included of 14 and 45 questions respectively and validated by the experts. The reliabilities determined as 0.85 for medical tourism development and 0.68 for hospital performance assessment by Cronbach's alpha coefficient. The Pearson correlations counted as 0.85. SPSS version 21 was used for all descriptive and inferential analysis.

**Results:** There was a significant correlation between all hospital performance assessment dimensions and medical tourism industry ( $p < 0.05$ ). The highest correlation was related to patient centeredness ( $r = 0.45$ ) and the lowest to staff orientation ( $r = 0.30$ ). Total amount of correlation between two variables was determined as 0.76.

**Conclusion:** There was a significant and direct relation between hospital performance assessment dimensions and medical tourism development. Thus, it is strongly recommended that hospital managers as well as policy makers implement hospital performance strengthening strategies for generating medical tourism attraction.

**Introduction**

Nowadays, medical tourism industry is growing drastically in the world due to vast majority of reasons specially increasing insurance payment as well as premiums. Particularly, US citizens are willing to explore medical care in other places rather than their own country for being more affordable, available (1) and timely (2,3). Investigations have been shown that in Asia the most common destination countries for tourists are India, Malaysia, Singapore, Thailand and Philippines (4,5). However, despite of high potentially has been detected in Iran for attracting medical tourism such as cost and quality of care which is delivered in Iranian medical care facilities (6) medical tourism industry in Iran has

not yet growing very well (7). Although some hospitals have individual strategy for accepting foreign patients, actually ministry of health has not systematically national strategy to implement. To do so, in recent years, ministry has been forced hospitals either public or private ones to observe limited standards to get International Patient Department (IPD) certificate for admitting and hospitalize other nationals legally (7,8).

There is no doubt that medical tourism is ranked as service international trade. Although medical quality of care is different from one country to another and it is mainly determined by competency of medical staff or healthcare providers (9) Iranian medical care facilities needs to improve and meeting global standards in competition with other neighboring or Asian countries through comprehensive program (10). One approach would be focuses on general population not only patients preferences (11) and also on therapeutic outcomes (12) improve quality of healthcare and better accessibility to

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health technologies (13). Amongst which World Health Organization (WHO) Performance Assessment Tool for Hospitals (PATH) project as a comprehensive as well as flexible guide (14) for improving healthcare services is an asset. According to this model, key dimension of each hospital performance assessment is clinical effectiveness, safety, patient centeredness, production efficiency, staff orientation and responsive governance (14). Although, in previous similar researched such as Agharahimi and Momtaz (10), Herrick (15), Hinnawi (16), Monica and Yu-Feng (17), Klashrtti and Pillai (18) and Shalbafian (19) focused on medical tourism and its developmental impact on healthcare structure, actually in none of them specifically neither attention to its direct relation to performance of healthcare system nor their mutual synergy to national medical tourism policy. Therefore, in this study designed to examine these dimensions correlations to medical tourism industry to what extent.

### Methods

This study was carried out as an applied, correlation-descriptive and cross-sectional study during the first quarter of 2018 in Tehran International Patient Department hospitals. Study tools were two questionnaires. The first one was Tourism Development Industry questionnaire contains of 14 questions which was validated by 20 experts and reliability (Cronbach's alpha=0.86). The second one which was named as hospital performance assessment questionnaire

consists of 45 questions divided to 5 dimensions (Clinical effectiveness, efficiency, patient centeredness, responsive governance, staff orientation) according to World Health Organization (WHO) PATH project (14). It was research made questionnaire with Cronbach's alpha 0.678 and Pearson correlation 0.85.

The population for this study included of IPD hospitals physicians, nurses and officers who were selected by random sampling (N=263). For analysis of this study used descriptive (means, standard deviations) and inferential (normality, Kolmogorov-Smirnov, Shapiro and Wilk tests, Regression coefficient) using SPSS v.21.

### Results

Among 263 individuals who responded to our questions mainly worked in international patient department of Tehran hospitals, 21 persons (8.0%) had bachelor degree, 96 persons (36.5%) had master, 17 persons (6.5%) was student, 129 ones (49.0%) got PhD and over. In other worlds, 105 people (39.9%) were on 22-45 age group, 126 ones (47.9%) put on 45-65 years old and 32 individuals (12.2%) were 65 and upper.

As it has been indicated in Table1 the average positive responds to the five-point Likert scale of questions which are belonged to every dimension, most respondents (3.92) chose patient centeredness and the least ones (3.69) agreed with staff orientation from first questionnaire. In second one, most of the participants (3.85) consensus on medical tourism development (Table 1).

**Table 1.** Descriptive analysis for hospital performance assessment dimensions and medical tourism

Dimension	Sample number	Mean	Standard Deviation	Variance
Clinical effectiveness and patient safety	263	3.74	0.298	0.089
Efficiency	263	3.70	0.385	0.148
Patient centeredness	263	3.92	0.452	0.204
Responsive Governance	263	3.69	0.340	0.116
Staff orientation	263	3.69	0.376	0.141
Medical tourism development	263	3.85	0.420	0.072

**Table 2.** Normality test for hospital performance assessment

Dimension	Kolmogorov-Smirnov			Shapiro and Wilk		
	The statistics	Sample number	Probability value	The statistics	Sample number	Probability value
Clinical effectiveness and patient safety	0.097	263	<0.001	0.951	263	<0.001
Efficiency	0.098	263	<0.001	0.987	263	<0.001
Patient centeredness	0.14	263	<0.001	0.961	263	<0.001
Responsive Governance	0.066	263	<0.001	0.980	263	0.001
Staff orientation	0.091	263	<0.001	0.976	263	<0.001
Medical tourism development	0.78	263	<0.001	0.984	263	0.002

Undoubtedly, for seeking the answer of the research and demonstrating the correlation between the main variables of this study the normality tests should be done. Through Table 2 results of these tests could be seen. All of them were followed as normal distribution trend (Table 2).

Finally, for deciding on whether the direct or indirect correlation between hospital performance assessments dimension and medical tourism development industry both Pearson and Regression coefficient were used. As it is simply seen in Table-3 the most correlation coefficient accounted for patient centeredness ( $r=0.450$ ), efficiently ( $r=0.412$ ), responsive governance ( $r=0.375$ ), clinical effectiveness and patient safety ( $r=0.364$ ) and staff orientation ( $r=0.306$ ) respectively. Furthermore, R-squared index (0.760) confirmed that the independent variables or hospital performance assessment dimensions accepted the differentiations of the dependent variable or medical tourism development (Table 3).

### Discussion

In this study, we were willing to demonstrate the relation between dimensions of hospital performance and medical tourism development, so, we questioned practitioners who were working in different parts of IPD hospitals. In comparison with others like Ajmers et al (20) who targeted managers as well as doctors for assessment their perspective about Indian health globalization policy. However, Qolipour et al (21) focused on international patients to evaluate service quality of medical tourism for Iranian hospitals.

After that, most respondents agreed with patient centeredness vice versa staff orientation as a dimension for hospital performance assessment. As Veillard, et al (14) explained patient centeredness characteristic of a hospital when all

the services look patients in the heart of the hospital care and its needs and expectations are mainly concerns of healthcare providers. Exactly like medical tourism which is a globalized product (22) which serves medical care to patients no matter temporary visitors or long-term residents' even common-boarders and outsourced patients (23,24). Staff orientation refers to personnel empowerment and their continued training (25).

Then, each dimension correlation coefficient accounted to medical tourism industry and its strongest relation with patient centeredness and the least one approved with staff orientation. To compare with relevant investigation, it should be noted that our findings are in accordance with Khajepour and Doosti (26) who determined the direct and significant relation between customer relation management and exercise tourism development industry. Meanwhile, Agharahimi and Momtaz (10) showed that there is a statistical significant relation between medical tourism and indicators which affected on society development. In other words, Herrick (15) insisted that medical services export is a popular principle in medical tourism which leads to strengthening health care system structure of every country in a way which will be include implementing global healthcare standards as well as internal community satisfaction.

Furthermore, Hinnawi (16) through his investigation which was carried out in Jordan demonstrated that via mutual memorandum between one private hospital and MENA regional board for securing facilities to attract and treat international patients forced to receive international accreditation certificate. In other research was done in Thailand Monica and Yu-Feng (17) mentioned that the government of the country is planning and developing strategies for strengthening infrastructure of medical centers and hospitals in addition to medical equipment

**Table 3.** Descriptive and Inferential Statistical Analysis

Dimension	Pearson Correlation coefficient	Regression coefficient	t	P value
Clinical effectiveness and patient safety	0.364	0.390	13.456	<0.001
Efficiency	0.412	0.296	11.246	<0.001
Patient centeredness	0.450	0.400	12.357	<0.001
Responsive Governance	0.375	0.355	8.741	<0.001
Staff orientation	0.306	0.380	4.531	<0.001
Medical tourism development	---	---	$R^2 = 0.760$	Constant quantity=0.123

and professional staff in order to medical tourism development. In fact, Klashrtti and Pillai (18) through an investigation in India emphasized that annual medical tourism market growth in Indian thanked to government commitment for motivating private investors to invest in private hospitals. Finally, Shalbfafian (19) indicated that effective medical tourism development strategies which are considered as determination of medical services tariff and pricing system in medical centers, medical visa arrangement facilities, encourage investment, Ministry of health supervision, medical centers accreditation, use of recreation centers, informative portal of medical centers in the field of medical tourism and staff empowerment training courses.

### Conclusion

The finding of this study revealed that there was a significant and direct relation between hospital performance assessment dimensions and medical tourism development. Hence, both variables have strong effect on each other. Indeed, without reinforcement of healthcare delivery systems infrastructure and also implementing motivation system, the development of medical tourism industry could not be happened. And conversely, none medical tourism policy never been succeed unless supportive operational strategies implemented in delivery centers. In other means it is policy makers and hospital managers' mandate to look these two variables as complementary ones to place the right position of our country in medical tourism market.

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### Conflicts of interests

The authors declare that there is no conflict of interest regarding the publication of this article.

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