

## Performance and Importance of Medical Tourism in Iran: A Cross Sectional Study

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### Abstract:

*Medical tourist a person who travel to other countries seeking high quality and cheap health service deliveries. Increase of medical tourism has benefits for both the host country and the patient. In this study we try to find performance and importance of 15 items of medical tourism in Shiraz, Iran. 289 medical tourists and 45 health service deliverers were questioned for this purpose. The results of this study showed that "The waiting time for receiving medical services was the most important and had the best performance from the view of medical tourists. From the view of health deliverers, "establishment of translator in hospital "and "Patient satisfaction" was the most important and the least important item respectively. No significant differences were found for the view of medical tourists and health services deliverers. Findings of this study could be useful for health*

*policymakers and other organizations to change the policies about tourism and medical tourism.*

**Key words:** medical tourism, performance, importance, Shiraz, Iran

## **Introduction**

Medical tourism is not a new phenomenon and from many years ago, humans noticed it. Because of its nature, this industry will increase in the future. In the recent years the number of tourists who travel to developed countries for being treated is increasing (Moghimehfar and Nasr-Esfahani, 2011). Medical tourism is one of the most important indicators in the tourism industry and gives lots of economic and social benefits to host countries (Connell, 2006). In overall, medical tourists travel to other countries seeking cheaper health services. Medical tourism contains physician services, cosmetic surgery and Hydrotherapy. Iran is one of ten countries with good situations in weather, antiquities and nature but its medical tourism income is low. Some countries like Spain earn high percentages of their income from medical tourism and medical tourism income is higher than other income sources like oil and other natural resources (Bookman and Bookman, 2007, Homaie Rad et al., 2015). Some of the benefits of medical tourism are rapid construction, rapid increasing in exchange income and controlling brain drains. Medical tourism is called invisible export. In countries which notice to their economic growth, by constructing advanced hospitals and advertisements increase their medical tourists and economic growth. Competition between countries for attraction of medical tourists is increasing and lots of countries have opened hospitals with cheap services in other countries. Iran has been developed in some fields of medicine like infertility, renal and liver transplantation, radiology, etc.. Furthermore Iran has lots of capacities for attraction of medical

tourists. Mineral water springs in all parts of country, dialysis centers, dental service centers, cosmetic, hearth and liver surgeries, and herbal medicine services are some of them. Unfortunately, medical tourism income of Iran is very low and only medical tourists from Persian Gulf countries travel to Iran(Samadi and Rad, 2013). Unfortunately, medical tourism opportunities of Iran has not been advertised well in the world. In addition, lots of Muslims like to be treated in Islamic countries with Muslim medical staffs. Lots of nonmuslim countries like china and Thailand try to attract Muslim patients by delivering Hilal foods, constructing hotels, and other Islamic deliveries. Iran, because of being an Islamic country have lots of cultural similarities with other Islamic countries and have lots of potentials for attracting medical tourists from Islamic countries(Moghimehfar and Nasr-Esfahani, 2011, Tourani et al., 2010). The number of Muslims are not few in the world and some of the Islamic countries are as the most reach ones in the world. So by increasing in investment in medical tourism Iran can increase its medical tourists. Iran is one of the cheapest countries in health services and delivering cheap services does not mean low quality services and the quality of health services in Iran are near the world standards(Samadi and Rad, 2013, Rad et al., 2015). Having acceptable quality of services with the newest methods of medical services are some of the most important reasons that attract medical tourists to Iran. The main aim of this study was to show the importance and operation of medical tourism in Shiraz (as a cultural and ancient city of Iran), and the amount of success of medical tourism in this city.

## **Methodology**

This was a cross sectional study. The research community was all of medical tourists and medical and nursing staffs and the

managers of the parts which accept medical tourists in the three selected hospitals of Shiraz, Iran for medical tourism. These hospitals contain Khodadoost, MRI and Ordibehesht. The number of health service deliverers were estimated 45 person and the number of medical tourisms were estimated 1150 ones. Using Cochran sample selection method, the sample size of study was calculated 289 persons. Questionnaire was used for data gathering. The questionnaire contained 15 questions and the main aim of these questions was to calculate importance and performance of medical tourism in Shiraz from the view of medical tourists and health service deliverers. Reliability and validity of this questionnaire was confirmed later by Delgoshayii et al. the average of each index was calculated and a 2-2 matrix was calculated for importance and performance. In the horizontal row of this matrix, the results of importance and in the vertical row of it the results of performance were added. In this matrix the points in the north east of it meant that that item had the best performance with the highest importance and the south west of it meant that the item had the worst performance with the least importance. Finally the view of health deliverers and medical tourists was compared using t-test. SPSS software was used for this purpose.

## **Results**

Form 289 medical tourists, 178 ones were male, 85 tourists had less than high school education degree, 104 ones had diploma and 96 ones had university degrees. The average age of the medical tourists was 45.6, where it was 43.5 for males and 48.5 for females. The youngest person had 14 years old and the oldest had 88 years old. 202 tourists lived in Arab countries and 85 others lived in the countries in the east of Iran, like Afghanistan, Pakistan, India, Tajikistan.

Furthermore, the average age of health deliverers was 43.24( $\pm$ 11.33), form the 45 health deliverers, 20 were male and 25 were female. 8 person had education degrees less than diploma, 18 persons had bachelor degree and others had higher than bachelor degrees.

In the table one, the view of medical tourists about importance and performance of the items is shown. "The waiting time for receiving medical services", "establishment of translator in hospital", and "the ability to follow up after going back to their country" were the most important items from the view of medical tourists. Furthermore, form the view of medical tourists, "waiting time for receiving medical services"," transparency of pricing" and modern medical equipment had the best performance in the hospitals. In addition, acceptance of foreign insurance, quality of services and diversity of health services had the worst performance in hospitals.

In the table two the view of health deliverers about importance and performance of the 15 items of medical tourism are shown. From the view of health deliverers, "establishment of translator in hospital" and" modern medical equipment" were the most important items. "Patient satisfaction" and " the ability to consult with physician before travelling" were the least important items. Form the view of health deliverers the hospital had the best performance in the items of "The ability to follow up after going back to their country" and "low medical failures". "Diversity of medical services" and" proper medical notification" were the worst items from the view of health deliverers in the dimension of performance.

### **Tests the hypothesis of study:**

Paired t-test was used to test the differences between the view of health deliverers and medical tourists. The null hypothesis of this test was that there is not any differences in two groups in importance of items. T-statistics for this test was 1.527 with p-

value of 0.1489. So the null hypothesis between two groups is accepted and the views of health deliverers and, medical tourists were similar to each other. In addition the t-statistics for the difference between performances was -0.1870 with the p-value of 0.8455. So there were no differences in the view of health deliverers and medical tourists in the items of performance too.

## **Discussion**

The results of this study showed that from the view of medical "The waiting time for receiving medical services", "establishment of translator in hospital", was the most important item. Furthermore, "waiting time for receiving medical services" had the best performance in the hospitals. From the view of health deliverers, "establishment of translator in hospital" and "Patient satisfaction" was the most important and the least important item respectively. Form the view of health deliverers the hospital had the best performance in the item of "The ability to follow up after going back to their country" while "Diversity of medical services" was the worst item.

Iran health system has lots of potentials for attracting medical tourists. Having skilled medical staffs, having the technology of medical surgeries and delivering cheap services are some of them. However this system is not established very well for medical tourism. Acceptance of foreign insurance can decrease the costs of health services for tourists, so they travel to Iran more and more to use Iran health services. In addition, it is important to increase diversity of health services. By increasing diversity, patients with different diseases travel to Iran to be treated.

Kazemi in his study found that the lack to international standards and worn out medical equipment were as the most

important reason for having less developed health system in Iran. Nagarajan in India found that not having a national health guidance system is one of the reason for not having developed medical tourism in this country. Crooks in a study done in India found that diversity of health care services was a reason for attracting medical tourists. In this study they found that promotion to medical tourism must be done globally(Crooks et al., 2011). Bookman et al found that cosmetic surgery can attract medical tourists in the United States. In addition physicians who had free time and worked in private sector attract more medical tourists(Bookman and Bookman, 2007). Herrick et al found that in African countries which has been colony before, people usually traveled in to their colonial countries for being treated because the cultural, political and health system of these countries was similar to the colonial(Herrick, 2007). Jabbari et al found that Iran had many potentials to attract medical tourists to the country (Jabbari, 2009). Erfan nia in his study found that having a unique health information management system can help medical tourism of Iran and can develop health delivery in this country(M., 2010. [Persian]).Mogheimehfar et al found that religions factors could be a good reason for attracting medical tourists specially in fertility treatments(Moghimehfar and Nasr-Esfahani, 2011). This study had some limitations. First we did not test other items which had effect on the performance and importance of medical tourism. Second, we did not have enough sample size for the view of health service deliverers.

## **Conclusion**

The results of this study showed the importance and performance of medical tourism from the view of health service deliverers and medical tourists. These results could be useful

for health policymakers and other organizations to change the policies about tourism and medical tourism.

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**Table one: the view of medical tourists about importance and performance of the items**

Standard error	average	Standard error	average	questionnaire	
performance		importance			
2.341	4.051	1.206	3.304	The least waiting time for receiving services	1
1.076	2.166	1.516	3.833	Establishment of translator	2
1.212	3.183	1.133	3.098	Appropriate medical notices	3
1.351	2.826	1.272	3.235	Satisfactory about the costs	4
1.063	2.083	1.400	3.055	Quality of services	5
0.687	1.498	1.160	3.089	Diversity of services	6
1.224	3.671	1.127	3.058	Transparency of costing methods	7
1.293	3.107	1.498	3.103	Supervision of hospital	8
1.228	3.110	1.269	3.155	Accommodation facilities	9
1.355	1.989	1.505	3.016	Acceptance of foreign health insurance	10
1.202	3.076	1.341	2.788	ability to consult with physician before travelling	11
1.335	2.854	1.149	3.069	International Accreditation	12
1.285	3.249	1.321	2.771	Modern medical equipment	13
1.174	2.131	1.278	3.179	ability to follow up after going back to their country	14
1.355	2.927	1.361	2.899	Having low medical failure	15

**Table 2: the view of health deliverers about importance and performance items**

Standard error	average	Standard error	average	questionnaire	
1.166	2.844	1.247	3.111	The least waiting time for receiving services	1
1.477	2.733	1.368	3.888	Establishment of translator	2
1.267	2.444	1.461	3	Appropriate medical notices	3
1.367	2.755	1.355	2.733	Satisfactory about the costs	4
1.466	2.822	1.453	3.022	Quality of services	5
1.464	2.644	1.464	2.644	Diversity of services	6
1.398	2.666	1.186	3.044	Transparency of costing methods	7
1.597	2.755	1.551	2.955	Supervision of hospital	8
1.364	2.955	1.335	3.111	Accommodation facilities	9
1.233	2.977	1.159	3.133	Acceptance of foreign health insurance	10
1.334	2.644	1.334	2.644	ability to consult with physician before travelling	11
1.316	2.755	1.198	2.133	International Accreditation	12
1.336	2.822	1.336	3.822	Modern medical equipment	13
1.233	3.342	1.307	3.133	ability to follow up after going back to their country	14
1.330	3.155	1.351	2.755	Having low medical failure	15