

Importance-Performance Analysis of Medical Tourism in Iran from Medical Tourists and Medical Services Provider's Perspective: 2011

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Abstract: Developing countries seek to alternative revenue sources. Iran as one of these countries with high potentiality for attracting medical tourist is seeking to enter medical tourism market. The study aimed to analyze the importance- performance of Tehran Province medical tourism as viewed by medical tourists and medical services providers. This descriptive, cross-sectional study was carried out in Tehran selected hospitals in the first three months of 2011. The data were gathered using a validated self-constructed questionnaire. The data were analyzed using descriptive statistical techniques. The results of the study indicate that the majority of medical tourists are attracted from the United Arab Emirates (%22.3). The respondents considered medical tourism factors as important ($M=4.40\pm0.61$). The Tehran selected hospitals' performance is average as related to medical tourism factors ($M=2.75\pm0.66$). Despite the importance given to medical tourism factors by medical tourists and medical services providers, Tehran selected hospitals' performance is average and no serious attempts are being made to attract medical tourists at macro level. Although quality, variety and cost of medical services and equipment in the selected hospitals are satisfactory, International accreditation of hospitals is still a major problem.

Key words: Importance-Performance Analysis (IPA) • Medical Tourism • Medical Services Provider

INTRODUCTION

Medical standards improvement of developing countries, globalization and trade liberalization in health services field have developed a context to grow medical tourism, rapidly [1]. Researches conducted on the Singapore medical tourism expenditure patterns, indicated that each medical tourist spend \$ 362 on the average in each day. This country has invested huge amount of money in order to develop medical tourism during recent years, so that its marketing plan has aimed to attract about one million foreign patients [2]. The Malaysian government in its long term plans has emphasized on turning this country's position as one of the medical tourism focal point, all over the world [3]. Thailand has become famous in some specialized branches of medicine,

specifically in cosmetic surgeries since 1970s. India has set some broad efforts to establish infrastructures, improve medical equipment technology, make low costs and sign protocols to deliver medical services [4]. Jordan has been a pioneer in medical tourism field among Middle East countries, as well [5]. In recent years, countries such as Bahrain and United Arab Emirates, has set some efforts on this field, as well [6]. Different countries statistics explain rapidly growing of medical tourism industry and it has been predicted that, it would earn about \$ 4.5 milliard in Asia, until 2012 [2].

The medical tourism issue has been taken into consideration during recent years In Iran. The special position of Iran's geographical location, its history of medical science and existence of expert medical and paramedical workforce, low costs and high quality of its

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health services, all could increase the importance of medical tourism in economic and medical fields in this country [7]. Legal essentials such as achievement of the goals defined in the "Forth Development Planning" and "Vision Document" reveal another aspect of medical tourism necessity [8].

According to above-mentioned, it is obvious that doing research and development on this topic has an increasing level of importance. In recent years, various researches have been done in the field of medical tourism.

Beichl study sponsored by USAD (the International Development Representative of United States of America), has analyzed market and competition of the Jordan hospitals and suggested some marketing improvement strategies. It also suggests solutions to meet the expectations, through setting collaborative processes, putting Jordan on the excellent position in medical field, guaranteeing of collaboration with partners and offering the practical standards [9].

The results of Cherukarta research about the analysis of Indian medical tourism industry show that having internal benefits, this industry has high potentials to grow in India. This study implies the quality and costs and states the competition and successful issues. In this research, developing factors influencing on this industry and applying a common strategy among its various factors have been proposed. Finally, considering the challenges facing India to reduce relevant concerns, role of the government to facilitate private investments in this industry, increasing information on medical malpractices and follow up after treatment has been suggested, as well. This research indicates joint investments with foreign partners as underlying factors to achieve high position by India in this industry [10].

In a study done by the United Nation, factors such as establishing advanced facilities, high quality and low costs of treatment has been identified as the most important factors for attracting patients in the medical tourism field [11]. Herrick, in his study, has shown the increasing number of patients which travel to other countries because of medical reasons, also, having state the important goals of medical tourism in the world, made a comparison between costs of various medical procedures and quality assurance issues [12]. Considering that the researches on medical tourism issue are sparse in Iran and this subject has a high position of importance, analyzing its current situation could be useful for making decisions about identification

and improvement the areas which are in a high priority, reinforcement of this industry's potentials and finally, attracting more medical tourists. Regarding to active role of some Iran's hospitals in medical tourist attraction issues, the objective of the proposed study is to investigate this issue in this hospitals. In this regard, having use the "importance –performance" as an instrument to understand the situation of a given system, current position of medical tourism in Iran has been identified. It could be lead to take positive actions to attract medical tourists.

MATERIAL AND METHODS

This was a cross-sectional study and was done in hospitals of Iran which had some active role in medical tourist attraction issues and had the inclusion criteria to participate in this study, as well. These hospitals:

- Had met general characteristics of medical tourist acceptance, passed by the Ministry Of Health and Medical Education. These general criteria was: To Have legal licenses, to achieve at least the first level of the evaluation during two consecutive years (including the first year of utilization), to achieve the first level of hospital evaluation in relevant units, to achieve at least the first level of hospital evaluation in intensive care units including: NICU, PICU, ICU and CCU according to their certificate of hospital evaluation.
- Had taken actions in attracting foreign patients.
- Had agreed to participate in this research after initial negotiations.

These hospitals named as Noor ophthalmology, Parsian, Laleh and Moheb hospital. Study population was all of the foreign patients admitted in these hospitals during the last 3 Month in the year 2010, their medical services providers and some of the university scientists. Study participants were all of the foreign patients admitted in the last three months in the year 2010 and all of the physicians, nurses, head-nurses and head of the wards working in the units which admit foreign patients and the head and manager of these hospitals. Purposive sampling method was used to select the university scientists and relevant policy makers who worked in the Ministry Of Health and Medical Education, thus, those who had some study regarding this subject was participated in this research.

It has been used a researcher-constructed questionnaire based on the literatures and interviewing with experts to analysis importance-performance of Iran's medical tourism. This questionnaire assessed whether the importance and performance of studied hospitals was, according 15 factors related to medical tourism, based on the participant's perspective. These fifteen-fold aspects was: the time of the services received, placement of translators in the hospital, suitable hospital information giving, the costs, quality and variety of the hospital services, transparency of pricing schemes, valid regulatory oversight, existence of residency facilities for the patient's partner, foreign health insurances acceptance, availability of pre-consultation with physicians via website, to take hospital international accreditation, modern medical equipments, to follow up after returning to the relevant country and finally medical malpractice rate.

In order to measure these factors, it has been used the five-point Likert-type scale (1, the lowest value, to 5, the highest value). Content and face validity of the instrument was evaluated by the experts. Reliability of the medical tourist questionnaire was assessed using the Cronbach's α method and it was 0.74 and 0.72 for importance and performance section, respectively. For medical services provider part, test-retest method was applied. And the Pearson's correlation coefficient was calculated and it was equal to 93% and 95% for importance and performance part, respectively. After obtaining approval from the hospital managers and verbal consent from foreign patients, with the assistance of the admission and discharge personnel and the translators of hospital, the questionnaire was completed at the time of discharge. The research instrument was sent to all of the physicians and nursing personnel of the relevant units of under study hospitals, the university scientists and relevant policy makers of the Ministry Of Health and Medical Education and those who had some study on this subject. Then, paying attention to ethical issues such as the principle of voluntarily participation in the study, to be honest and respect the integrity and impartiality of researcher, in order to analysis the data collected, SPSS software (version 15) was used. First of all, the mean of importance values was computed and showed on vertical axis, then the mean of performance values was calculated and showed on horizontal axis by excel. As a result, a 2×2 matrix was constructed. The situation of each 15-type aspects related to medical

tourism on this matrix indicated the degree of its importance and performance. In this matrix, cell labeled as number1, shows high degree of importance and low degree of performance and means these aspects are in high priority and need to take urgent actions. cell labeled as number 2, shows high degree of importance and performance and means this aspects are in good current position and should be remained. cell labeled as number 3, indicated low degree of importance and performance and means this aspects aren't considered as threats and they don't need to be remained. cell labeled as number 4, showed low degree of importance and high degree of performance and means better utilization of current resources could be done in the other aspects.

RESULTS

The results showed that total number of medical tourists and health services providers was 103 and 123, respectively. Of the total number of medical tourists, 64.1% was male and 35.9% was female. Health services provider sample was consisted of 32.5% male and 67.5% female. The average amount of age in each group was (38.2 ± 7.41) and (40.6 ± 8.7), respectively. The majority of medical tourists were from the Asia continent (72.8%) and the United Arab Emirates had the maximum number of medical tourists (22.3%) among them. The medical services provider group was consisted of physicians (27.6%), nurses (52.8%), health sector policy makers or medical faculties (11%) and the hospital's head, manager or nursing management (8.1%).

The 15 multiple dimensions asked by questionnaire were assessed based on the two group perspectives. Tables 1 and 2 present comparison of average score of importance ($M=4.40 \pm 0.61$) and performance ($M=2.75 \pm 0.66$) between two group, separately. The lowest score was 1 and the highest one was 5 due to our applied scale which was likert.

Matrixes 1 and 2 indicate the degree of importance-performance of these aspects in both medical tourist and medical services provider samples, at the same time. All of the medical tourism aspects were located in upper cells of these matrixes which means they have high level of importance, based on medical services providers and medical tourist perspective. But the results showed discrepancy between two groups according to performance of these aspects in Iran hospitals.

Table 1: Comparison of mean and standard deviation of the importance scores of 15 aspect of medical tourism in medical tourists and medical services provider groups

Medical tourism aspects	Medical tourists (n=103) M±SD	Medical services providers (n=123) M±SD
Minimum time of the services reception	4.30±0.66	4.57±0.58
Placement of translators in the hospital	4.35±0.59	4.26±0.71
Suitable hospital information giving	4.24±0.63	3.99±0.71
Low costs of the hospital services	4.33±0.68	4.67±0.53
High quality of the hospital services	4.91±0.28	4.95±0.21
High variety of the hospital services	4.06±0.74	4.28±0.70
Transparency of pricing schemes	4.59±0.56	4.39±0.68
Valid regulatory oversight	4.38±0.64	4.13±0.66
Existence of residency facilities for patient's partner	4.01±0.79	4.04±0.84
Accepting foreign health insurances	4.44±0.66	4.79±0.47
Availability of pre-consultation with physicians	4.01±0.76	4.37±0.70
Via website		
Taking hospital international accreditation	4.53±0.57	4.82±0.42
Modern medical equipments	4.39±0.59	4.60±0.55
Follow up after returning to the relevant country	4.29±0.69	4.38±0.68
Low medical malpractice rate	4.48±0.62	4.67±0.50

Assessment scale: Likert (1=absolutely low, 2=low, 3=moderate, 4=high, 5= absolutely high)

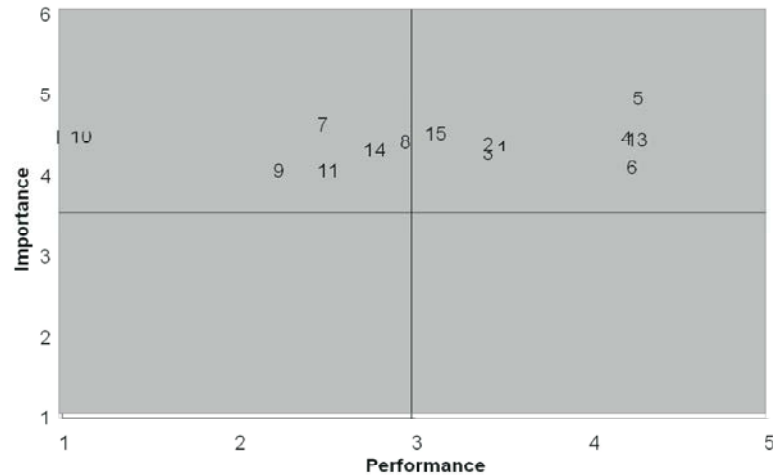
Table 2: Comparison of mean and standard deviation of the performance scores of 15 aspect of medical tourism in medical tourists and medical services provider groups

Medical tourism aspects	Medical tourists (n=103) M±SD	Medical services providers (n=123) M±SD
Minimum time of the services reception	3.42±0.74	3.15±0.85
Placement of translators in the hospital	3.34±1.01	1.91±0.71
Suitable hospital information giving	3.34±0.70	2.81±0.76
Low costs of the hospital services	4.12±0.80	4.08±0.70
High quality of the hospital services	4.19±0.76	3.92±0.66
High variety of the hospital services	4.15±0.69	4.10±0.66
Transparency of pricing schemes	2.40±0.77	2.04±0.80
Valid regulatory oversight	2.87±0.70	2.30±0.87
Existence of residency facilities for patient's partner	2.15±0.78	2.29±0.83
Accepting foreign health insurances	1.00±0.00	1.00±0.00
Availability of pre-consultation with physicians via website	2.41±1.11	1.30±0.46
Taking hospital international accreditation	1.00±0.00	1.01±0.12
Modern medical equipments	4.15±0.72	4.36±0.68
Follow up after returning to the relevant country	2.66±0.90	1.60±0.62
Low medical malpractice rate	3.01±0.80	2.56±0.79

Assessment scale: Likert (1=absolutely low, 2=low, 3=moderate, 4=high, 5= absolutely high)

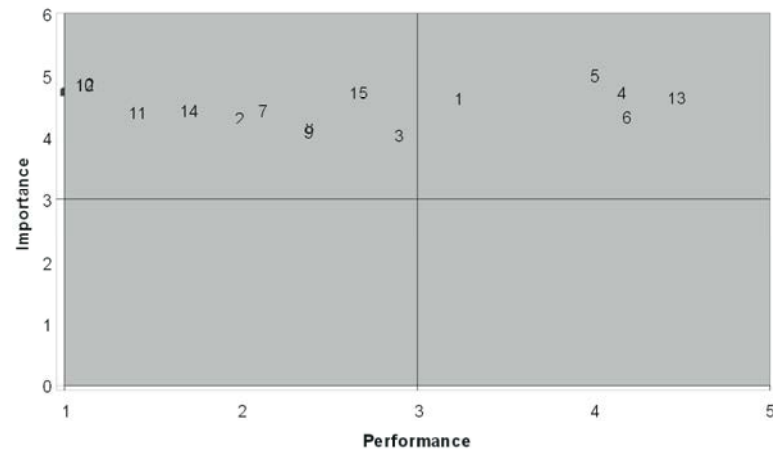
In other words, as it could be seen in matrix 1, “placement of translators in the hospital”, “suitable hospital information giving”, “minimum of the time to receive services”, “low costs of hospital services”, “high variety of the hospital services”, “modern medical equipments” and “high quality of hospital services”, have high level of importance and their performance is in high level, as well. On the other hand, “foreign health insurances acceptance”, “to take hospital international accreditation”, “existence of residency facilities for the

patient's partners, “transparency of pricing schemes”, “availability of pre- consultation with physicians via website to follow up after returning to the relevant country”, “valid regulation supervising”, have high level of importance, but they evaluate low due to their level of performance. Meanwhile, factor of “low rate of medical malpractices” located in the boundary line between cells 1 and 2, which means this aspect has high level of importance, but middle level of performance based on medical tourists perspective.



Matrix 1: degree of importance- performance of medical tourism of Iran based on medical tourists perspective

1. Minimum time of the services reception	2. Placement of translators in the hospital
3. Suitable hospital information giving	4. Low costs of the hospital services
5. High quality of the hospital services	6. High variety of the hospital services
7. Transparency of pricing scheme	8. Reliable regulatory oversight in hospitals
9. Offering residential facilities for patient partner	10. Accepting foreign health ins
11. Availability of pre-consultation with physicians via website	12. Taking hospital international accreditation
13. Modern medical equipments	14. Follow up after returning to the relevant country
15. Low medical malpractice rate	



Matrix 2: Degree of importance- performance of medical tourism of Iran based on medical services providers perspective

1. Minimum time of the services reception	2. Placement of translators in the hospital
3. Suitable hospital information giving	4. Low costs of the hospital services
5. High quality of the hospital services	6. High variety of the hospital services
7. Transparency of pricing scheme	8. Reliable regulatory oversight in hospitals
9. Offering residential facilities for patient partner	10. Accepting foreign health ins
11. Availability of pre-consultation with physicians via website	12. Taking hospital international accreditation
13. Modern medical equipments	14. Follow up after returning to the relevant country
15. Low medical malpractice rate	

Matrix 2, shows that “minimum time of the services reception”, “high quality of the hospital services”, “low costs of the hospital services”, “high variety of the hospital services” and “modern medical equipments” have high level of importance and performance based on medical services provider’s perspective.

The remaining factors despite having high level of importance were in low level because of their performance. Among them aspects numbered 10 and 12, i.e. “accepting foreign health insurances” and “taking hospital international accreditation” are minimum due to their performance.

DISCUSSION & CONCLUSION

Rapid improvement and promotion of applied technology and attempting to fill the gaps because of lacking technology and providing services in accordance with international standards of medicine, lead to improvement of quality of services in Asian countries [1]. Asian financial crisis caused governments seek new revenue resources [2]. Results obtained from Kazemi study regarding this subject, suggest that it is essential to find alternative incomes by private hospitals in Asian countries such as Iran, to attract medical tourists [7].

Since the United Arab Emirate patients were accounted for the largest number of foreign patients, this country can be considered as one of the potential market of medical tourism in Iran. In relation to the fifteen-fold aspects of medical tourism, to put all of these in cell 1 and 2 of the matrix signify that both two group i.e. medical tourists and medical services providers have had the same perspective and both of them deemed that these factors are in high level of importance. Whereas, they have different perspectives regarding to performance. Comparing two views of medical tourists and medical services providers together, indicate that the performance of medical tourism factors is at higher level according to medical tourist's perspective of this province than medical services provider's viewpoint. Meanwhile both groups considered all of the factors as important, but the number of factors which are in high level of importance is much more, based on medical tourists perspective than the other under- study group; And overall, the medical tourists scored the performance of these factors higher than the medical services provider group. This group assesses the performance related to "placement of translators in the hospital" and "suitable hospital information giving" at high level of position; whereas, the related performance of these two factors is in low level of position based on medical services provider's perspective.

Finally, it could be concluded that some actions must be done on factors related to cell 1 by the relevant authorities; because this cell propose some factors which are in high level of importance but low level of performance. Thus, they are in high level of priority. Issues such as "accepting foreign health insurances" and "taking hospital international accreditation" are the two factors considered as "important" according to both

group's perspectives; but yet, it has not been paid attention to them in Iran as a whole. Consistent with our findings, "accepting foreign health insurances" is considered as an important factor to attract medical tourists by Kazemi study in 2008 [7].

On the other hand, factors situated in cell 2 (high level of importance- high level of performance), while being important, they have suitable performance, so it is suggested to remain their current situations. Considering that time, quality, cost, variety and medical equipments had high level of performance, so it can be considered them as competitive advantages in order to compete in medical tourism market.

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