Human capital status in Mashhad Health Tourism

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ABSTRACT

Introduction: Abundance of human resource cannot singly guarantee good performance in achieving health tourism goals, rather, theoretical knowledge and familiarity with professional skills are also crucial. Therefore, this research was conducted to determine the relationship between human capital and the quality of services provided in health tourism in Mashhad.

Methodology: This applied study was carried out in 2016-2017 on the heads, managers, and experts of hospitals in five regions (north, south, east, west, and center) of Mashhad, as the statistical population, from which a total of 120 persons were selected as samples. In addition, 384 individuals were selected for the second part (health tourism) according to the Cochran sampling formula given the infinity of society. Structural validity of the questionnaire was verified by confirmatory factor analysis and its reliability was confirmed with Cronbach's alpha of >0.7. The data were analyzed with SPSS-18 and Lisrel-8.50, using the mathematical models of the final model, and the pattern was verified according to confirmatory factor analysis.

Findings: The results of factor analysis showed a relationship between human capital and the quality of services provided in Mashhad's health tourism.

Conclusion: Trained and skilled human resources can help improve the health tourism sector in Mashhad and lead to comprehensive advancement of the region.

Keywords: human capital, health tourism, medical tourism, training

1. INTRODUCTION

Tourism has become one of the most prosperous and most efficient economic activities of the world in the current century. Different countries seek to use the tourism capabilities in their land to attract tourists and, consequently, to make economic profit (M. K. 2008). The significant role of this industry over the past two decades in raising employment, rising foreign exchange earnings, boosting domestic industries, and expanding international cooperation have made governments to have a special look at this issue and to specially consider it in policy-making (Baum T. 2015). People who travel to a country or another for healthcare (prevention, treatment, and rehabilitation) are referred as health tourists. People health has been threatened seriously in recent decades due to the increasing spread of air pollution in large and industrialized cities, population aging, inappropriate nutrition, and sedentary life. As a result, health tourism has become one of the most prominent branches of the tourism industry. Health tourism per se includes wellness tourism, treatment tourism, and medical tourism subcategories which are defined below (Lee J, Kim, H. 2015). Khorasan province and Mashhad, in particular, have good capacities to attract (domestic and foreign) health tourists. On the other hand, the provinces and countries neighboring with Khorasan lack the potential for healthcare (including skilled manpower in the field of medicine and its infrastructures) (Maleki; S T, m. 2015). With the growth of tourism industry, tourism companies have been attracting more manpower to meet the needs of tourists and customers. Obviously, only the abundance of manpower cannot guarantee good performance in achieving the objectives of this sector; rather, theoretical knowledge and the familiarity of service providers with professional skills are also crucial, because in tourism, employees translate resources and products into experiences, which are ultimately consumed by visitors. In this regard, highly trained, experienced, and efficient human resources can provide quality services and satisfy customers, providing the basis for tourism development in any country (Chandra M, Chandana , J., Richard, T. 2013). In the tourism industry and its components, training should be provided at different levels to meet the needs of human resources (Baum T. 2012.).

The growth of tourism industry has highlighted the need to attract and train manpower in this human-oriented industry. Obviously, only the abundance of manpower cannot guarantee good performance for achieving the goals of this sector; rather, theoretical knowledge and familiarity of service providers with professional skills are also determinative. Therefore, the quantity and quality of education in this sector can be considered as one of the most important and effective factors. Therefore, establishment and expansion of centers for training human resources for this industry are emphasized and recommended in educational policies (Eraqi MI, Kasem, A. M., Hassan, S. B., Ragab, A. M.2011). The main principles are physicians skills and increasing the number of surgical procedures and diagnostic methods which are neglected. They only build new buildings. It's clear that they do not spend enough time to teach people and spend only six months for training, the required standard of which is at least eighteen months. While in other countries they must work for two to three years at the residency level. Lacking proper investment in training of human resource can lead to uselessness of modern advanced equipment. In some private hospitals, these instruments change to sophisticated equipment that nobody knows how to interpret the results. Given the low number of high-level professionals, if one changes the job, a serious problem will arise for substitution (Snyder J, Byambaa, T., Johnston, R., Crooks, V. A., Janes, C., Ewan, M. 2015). Therefore, development and implementation of human resources development strategy of the tourism industry is of particular importance and training plays the most important role in this regard (Lotfi H, Hamidi, A. Zanei, J. 2013). Chanin *et al.* (2015) found a statistically significant difference between the sexes in terms of health tourism. Age, education, income, occupation, status, experience, and nationality had a significant difference with respect to health tourism. The Thailand government should be supported in setting up residence based on Islamic Principles. A sense of security and protection should be created for all tourists with fair prices (Chanin O, Khunchumnana, P., Amphansookkoa, S., Thongyaia, K., Rodneuma, J. 2015.). Lee and Kim (2015) stated that factors affecting the decision of travelers for health tourism destination, such as distance, cost, language, economy, qualifications of medical technology, and culture, were identified in each category of health tourism (3).

Ebrahim Zadeh *et al.* (2013) stated that the weighted score of strengths in India is high efficient and the weighted scores of weaknesses is low efficient (Ebrahimzadeh I, Sakhavar, N., Taghizadeh, Z. A. 2013). According to Baum (2012), limited skills in local labor market, access to education, and formal education are issues that can affect sustainability of employment, service, and product quality. While resources and staff recruitment, employee retention, education and development, and professional advancement seem to reflect those facing with it in larger urban areas . Araghi *et al.* (2011) said that Egypt needs a way to improve tourism labor market. However, evaluation of the satellite tourism accounts project in Egypt shows that this country has a good experience in implementing this system . Khodaei and Khalantari Khalil Abad (2012) stated that since training is an infrastructure for human resource management and quality management in the tourism industry, reform in this sector in Iran can be initiated from the reform in the education system (Khodaei ZKKA, H. . 2012). Unfortunately, there are a lot of shortcomings in the industry in terms of education and advertisement, hindering good hospitality for tourists and gaining profit for the country. Therefore, according to previous studies, this research was conducted to investigate the status of human capital in health tourism in Mashhad.

2. MATERIALS AND METHODS

This was an applied research in terms of objectives, a field study in terms of degree, importance, and the level of variables control, a survey in terms of data collection in 2016-2017, and descriptive-analytic in terms of data analysis method. It attempted to collect information on human resources in health tourism from domestic and foreign literature in hospitals and other organizations, identify the related patterns through their comparison, and develop an appropriate pattern according to hospital experts' opinions using the structural equation modeling.

The statistical population of the present study for the first part (factors analysis) was consisted of the heads, managers, and experts of hospitals including physicians, faculty members of health services management, masters of health services management, masters and bachelors of hospital disciplines in the five regions of Mashhad (north, south, east, west, and center). Structural equation modeling was performed based of Kaiser-Meyer-Olkin (KMO), so that, if *p*-value <0.05, then the sample size is adequate.

In this method, the sample size is determined through sampling of 10-20 times of the number of variables (Hooman HA. 2016.). According to the number of variables (6 main and secondary variables), 120 people were considered as sample size, with 24 people for each of five regions in Mashhad, based on multistage random cluster sampling in each region. The subjects were selected by random stratified sampling in the hospital. The information was also compared with that of the six regions of the WHO. Two countries which are members of the World Health Organization and are active in health tourism were selected (for the first society) from the six regions of Africa, America, Eastern Mediterranean, Europe, Southeast Asia, and Western Pacific. A total of 384 individuals were also selected for the second part (health tourism) according to the Cochran sampling formula, given the infinity of society. Since there are five regions (north, south, east, west, and center) in Mashhad for health tourists, 77 people were allocated for each region (for the second society).

A tripartite questionnaire was designed and used for data collection. Part I included demographic information of respondents such as gender, age, education, and work experience. Part II included the main questions of the human resources survey, adapted from Cassidy's (2014) research. Part III included the main questions of the health tourism survey, adapted from Goodarzi *et al.* Scoring was based on the 5-point Likert scale as totally disagree (1), disagree (2), intermediate (3), agree (4), and totally agree (5). The health tourism questionnaire included nine questions, and the respondents chose from the options. In order to determine the reliability of the research tool, 30 questionnaires were distributed among the members of the statistical sample before its complete distribution; the reliability of the questionnaire was >0.7 and hence approved. The questionnaire was redistributed between these individuals after a week and the alpha coefficient was again 0.73. The data were analyzed using descriptive and inferential statistics and the hypotheses were tested with SPSS-18 and Liserl-8.

The ethical considerations observed in this research included obtaining the consent and cooperation of the officials working in the educational hospitals affiliated to the Ministry of Health and Medical Education, preserving the respect and rights of each subject, including the names of the authors and researchers whose articles are used in the research, ensuring confidentiality of the information, really reflecting the research

findings and avoiding any prejudice in conclusion, and providing the final results to the respondents upon request.

The inclusion criteria were the heads, managers, and experts of hospitals, doctors, faculty members of health services management, masters of health services management, masters and bachelors of hospital disciplines, and the exclusion criteria were administrative staff and referrals.

In addition, the acceptable error rate in the research was 0.05.

3. RESULTS

According to the research findings, 52% of the surveyed employees were women and 72% of the tourists were male; 35% of the employees aged 31-40 years and 59% of the tourists were in the same age group; 38% of the employees and 53% of the tourists were bachelor. Also, 52% of the employees had a work experience of 11-15 years (Table 1).

Table 1: Frequency distribution, frequency percentage, and cumulative percentage of demographic variables of respondents (employees and tourists).

Frequency Variables		Observed frequency	Observed percent	Cumulative percent
Gender (employees)	Female	62	52	48
Age (employees)	31-40 years	42	35	67
Education (employees)	Bachelor	46	38	89
Work experience (tourists)	11-15 years	63	52	65
Gender (tourists)	Male	276	72	72
Age (tourists)	31-40 years	228	59	97
Education (tourists)	Bachelor	204	53	66

Given the suitability of Kaiser-Meyer-Olkin (KMO) size adequacy and the Bartlett's Test of Sphericity Significance, the data were appropriate for factor analysis. According to these two tests, when the KMO index is >0.6 and close to one and the significance level of the Bartlett's test is <0.05, the data are suitable for factor analysis; if the value

is >0.7, the correlations are very suitable for factor analysis; if it is between 0.5 and 0.69, be very careful, and if it is <0.5, it is not suitable for factor analysis (Table 2).

Table 2: KMO size and the result of Bartlett's Test of Sphericity

Index	Suitable value	Obtained value
KMO	>0.7	0.734
Bartlett's Significance	<0.05	0.000
Test result		Suitable

According to the output of Lisrel, the values of the fitted index are appropriate, and all the numbers and factor loadings are >0.3 and acceptable (Chart 1).
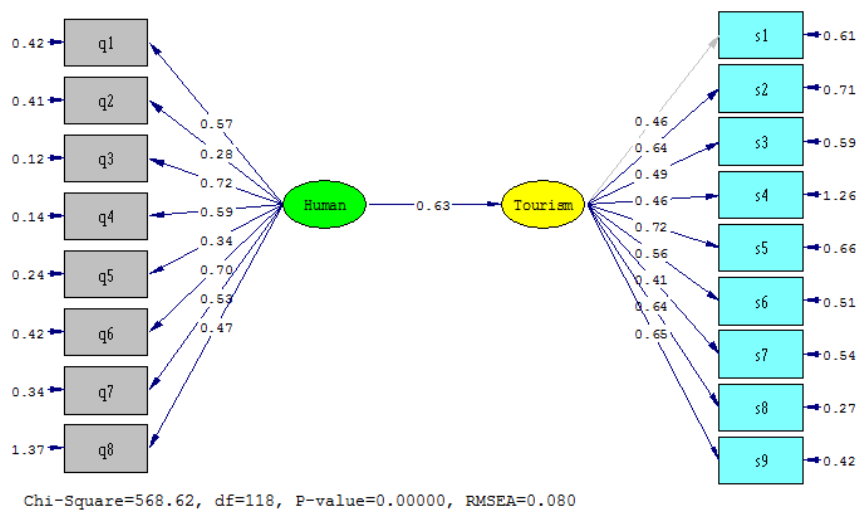

Chi-Square=568.62, df=118, P-value=0.00000, RMSEA=0.080

Figure 1: Standard factor loading for the structural research model

In the modeling of the structural equations, all of the numbers and factor loadings are >0.3 and acceptable (Fig. 2).

Table 3. Fitness indices for the research model

Fitness index	χ^2/df	SRMR	RMSEA	GFI	AGFI	NFI	CFI	IFI

Fitness of research model	4.8	0.04	0.80	0.93	0.90	0.95	0.94	0.84
Acceptance range	1-5	<0.05	<0.5	>0.9	>0.9	>0.9	>0.9	0-1

The results of this table indicate that the research model is in good condition in terms of fitness indices, and the root of approximate squares mean error with the acceptance range of >0.5 is very good (0.080). Therefore, considering the total indices and the calculated fitness indices, it can be said that the research model enjoyed of suitable fitness indices (Table 3).

With regard to the *t*-test, the value of *t* or the significance of the observed correlations in this model was >1.96 and hence was accepted (Fig. 2).
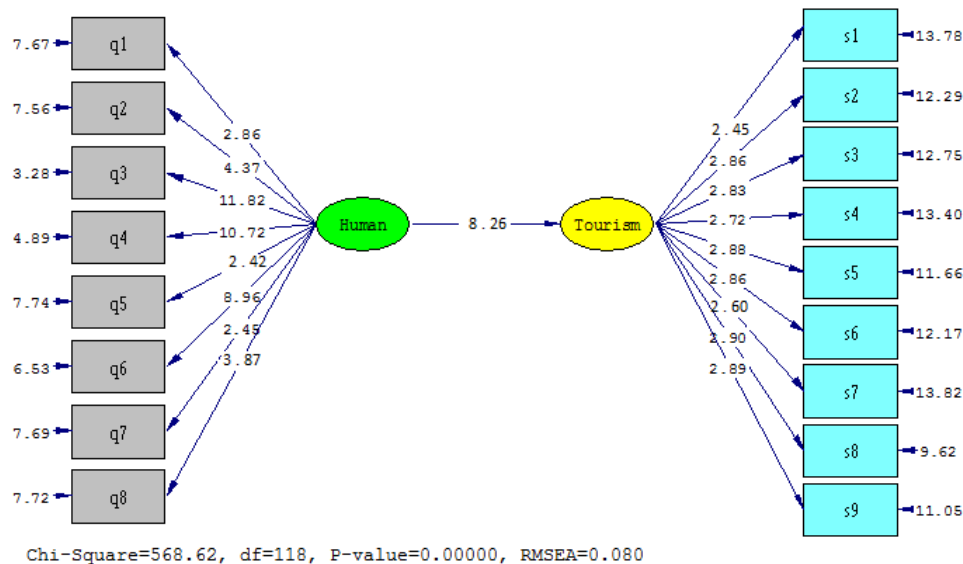

Chi-Square=568.62, df=118, P-value=0.00000, RMSEA=0.080

Figure 2. Factor loadings of *t*-value statistics of the research structural model

4. DISCUSSION and Conclusion

In the inferential statistics, it was first expressed that the sample size (number of respondents) is adequate for factor analysis according to the value of KMO index. Also, the significance level of Bartlett's test shows that factor analysis is suitable for identifying the structure of the factor model. The structural equations model and the correlation of relationship between the human capital and the quality of services

provided in Mashhad health tourism were confirmed like similar studies. Regarding the output of Lisrel, the obtained fitness index values are appropriate, and all numbers and factor loadings are acceptable. Therefore, the research model is in good condition in terms of fitness indices. There is an association between human capital and the quality of services provided in Mashhad health tourism. Lee and Kim (2015) stated that one of the factors influencing the decision of travelers for health tourism destination is human resources (3). Chandra *et al.* (2013) highlighted senior management regarding attracting Sri Lanka for taking part in tourism and equipping them with personal and professional skills needed to provide the expected services of international tourists (5). According to Baum (2012), limited skills in local labor market, access to education, and formal education are issues that can affect sustainability of employment, service, and product quality (6). Araghi *et al.* (2011) said that Egypt needs a way to improve tourism labor market (7). Khodaei and Khalantari Khalil Abad (2012) stated that since training is an infrastructure for human resource management and quality management in the tourism industry, reform in this sector in Iran can be initiated from the reform in the education system (12). All results are similar to those of this study and this relationship was confirmed.

In this regard, training is a useful investment and a key factor in development, and if properly designed and implemented, it can have significant economic returns. The prominent role of human resources in the development of tourism as a result of training can be beneficial to the local and national economy through the growth of local residents' skills and knowledge. The overall levels of human capital in health tourism can be formed based on combination of the tourism education system with emphasis on issues such as culture, society creativity, and workforce skills and efficiency. Having specialized and trained human resources in the tourism industry is of especial importance, because tourists are constantly associated with these people. If they can provide them with appropriate services and facilities, the tourists will have a pleasant and memorable memory, but in case of shortcoming and failure, the health tourism of the region may damage irreparably.

Therefore, in order to achieve the goals of sustainable development and to provide high quality services, skilled human resources should be employed, and proper planning

should be performed according to the sector's needs. In this regard, providing effective training requires new thoughts, new models, new approaches, and new tools and mechanisms. Since training is considered as the infrastructure for human resources management and quality management in the tourism industry, reform in the health tourism system of Mashhad can be started by reforming the educational system. There should also be a database on the needs of the existing labor market and human resources, to streamline the supply and demand of the human resources of the industry. Each research faces a number of limitations, and in this study they were the unwillingness of some respondents to answer and the lack of references similar to the subject of this research.

5. ACKNOWLEDGMENT

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