
**A model for organizational entrepreneurship with organizational health
approach of district 1 Iran teaching hospitals**

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Abstract: Each member of an organization would be exposed to the deficits both spiritually and physically in case of not benefiting from organizational health. So, it would gradually end in the disruption of organizational operations, including entrepreneurship, so as not to achieve the highest goals of the organization. For determining the relationship between organizational health and entrepreneurship, the present research was carried out of district 1 Iran Teaching Hospitals. This cross-sectional study was carried out on 946 managers and experts at level one hospitals of the University of Medical Sciences in 2019. The measuring tool was the standard questionnaires of entrepreneurship and organizational health of Organizational Health Index (OHI). The data were analyzed by Pearson correlation coefficient and Structural Equation Modeling using the partial least squares method and Smart PLS₂ software. The results showed that the organizational health at an institutional level ($r = 0.98$), organizational health at managerial level ($r = 0.94$), organizational health at the technical level ($r = 0.95$) and overall organizational health ($r = 0.98$) are significantly and directly associated with the organizational entrepreneurship ($p \leq 0.05$). In terms of the direct relationship between the organizational health and organizational entrepreneurship, it seems that by improving the organizational health, the entrepreneurship will be improved and vice versa.

Keywords: *Entrepreneurship, Organizational Health, Hospital, PLS method.*

Introduction

Today, the complexity and uncertainty of the organizational environment have led them to be fragile toward some trivial changes namely methods, systems and structures (Amirkabiri & Fathi, 2010). Having determined to recognize entrepreneurs benefiting from capabilities of creating new workflows, finding creative problem solutions, and developing necessary capabilities, lots of attempts have been recently made (Ernesto-Amoros et al., 2010; Alimardani & Ghahramani, 2009). To be innovative is an obligation for survive in today's markets which encounter with Changing environments and growing competition (Amabile et al., 2005). Change is inevitable. Due to today's dynamic and turbulent environments, competition is considered as a key to progress; innovation is a major factor in running the competition; thus as it has been described innovation is the foundation for the survival of the

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organization (Tosi , 2009) and the stimulus engine of revenue growth (Hurley & Hult, 1998). For benefiting from enhanced innovation performance, the organizations have to enjoy innovation capabilities (Patterson, 1998). what leads to the superior innovation performance in organizations is the innovation capability (Tsai, M. T., & Tsai, 2010) and such capability is accessible through human resources.

Hospitals are considered to be the most important centers of health care. Thus, it is necessary to change the view on the hospitals' role and their capabilities to be the health promoting structures. Therefore, quick changes in today's competitive environment-can only be achieved through benefiting from creative and innovative ideas. Entrepreneurs do not waste their time by waiting for jobs generated by the government; rather through accurate information about opportunities and the use of stagnant capital, they provide opportunities that not only will they be employed but also will create jobs in the private sectors (Yang, 2012).

The importance of the two variables of entrepreneurship and organizational health can be seen in the role they play in organizations. Without organizational health, each member of the organization is both physically and spiritually deficient, which more or less disturbs their effectiveness, which in turn affects the organizational attempts in achieving principle objectives. Hospitals should provide various services which are more efficient to citizens quickly in order to develop the culture of entrepreneurship in unstable environmental conditions. The main concept of entrepreneurship revolves around the questions of when and how opportunities are created for the future of goods and services (Corbett , 2007).

Due to quick changes in technology and scientific advances among health care provider organizations, it would be difficult to determine the future needs and to plan based on. Since the health care systems as other economic organizations are very complex and chaotic, no longer can traditional approaches apply. Lack of accurate planning and management in these systems will limit the expectations and creativity required to solve serious and new prospective problems of health care. Accordingly, innovation and entrepreneurship are regarded as prerequisites for the conservation and sustainability of the organizations in the era of development and reconstruction of health care systems, (Asefzade & Rezapor, 2007).

Some factors such as increasing the costs of services, competition, expensive equipment, old population and high cultural diversity affect health services environment. The situation is more complex for the health care related organizations which are exposed to above mentioned challenges and factors; therefore, they seek solutions for their long-term survival. Devising such solutions will not be possible without change, innovation and an entrepreneur attitude (Robey, 1998). Different experts have offered numerous scientific and practical frameworks for the study of entrepreneurship within the organization.

Many researchers have examined the results of entrepreneurship within organizations along with its different aspects. The growth and profitability of the organizations as well as the customers' satisfaction have been the principal priorities of the entrepreneurship outcomes (Antoncic & Hisrich, 2001). According to the previous relevant studies conducted in this field and due to the importance of managers' viewpoints as well as their performances in promoting the entrepreneurial culture, learning and innovation for healthcare organizations considering the nature of their activities are of essential requirements. Moreover quick technological changes and scientific advances in healthcare systems and the necessity of immediate planning in healthcare will be resulted in the presence of entrepreneur managers in this area.

Unfortunately, in the majority of organizations as well as the hospitals, the innovation has not been adopted in the appropriate place and it is considered as a temporary phenomenon. Therefore, this study attempted to determine the relationship between organizational health

and organizational entrepreneurship, then presenting an entrepreneurial model with the organizational health approach in Iran's district 1 hospitals in 2019.

Literature Review

Entrepreneurship

The nature and the scope of organizational entrepreneurship and organizational health have been previously studied by many researchers. Entrepreneurship is widely defined as 'situations in which new goods, services, raw materials, markets and organizing methods can be introduced through the formation of new means, ends, or means-ends relationships' (Eckhardt & Shane, 2003, p. 336; Shane and Venkataraman, 2000). Entrepreneurship has been recently viewed as the encompassing transformational change that may extend to social or institutional spheres (Battilana et al., 2009; Rindova et al., 2009).

Entrepreneurship refers to "new entry," that is, the creation of new ventures resulting from an individual's occupational choice to work for his or her own account and risk (Gartner, 1984). Dynamism is known as a fundamental factor in marketing which consumes less resources; however, it provides such a massive production for entrepreneurs (Decker et al., 2014; Hathaway & Litan, 2014). Entrepreneurship is an attitude that reflects an individual's motivation and capacity to identify an opportunity and to pursue it, in order to produce new value or economic success (Ajzen 2002; Shapero 1982).

Entrepreneurship has a passive and active component with propensity to induce changes oneself, but also the ability to welcome and support innovation brought by external factors by welcoming change, taking responsibility for one's actions, positive or negative, to finish what we start, to know where we are going to set objective and meet them, and have the motivation to succeed (Shapero-Sokol, 1982). Important aspects of entrepreneurship can be summarized as identifying one's personal strengths and weaknesses, displaying proactive behavior, being curious and creative, understanding risk, responding positively to changes and the disposition to show initiative (Shapero-Sokol, 1982).

Entrepreneurship requires time, involving both considerable planning and a high degree of cognitive processing. According to Bird (1988), entrepreneurial intentions refer to a state of an individual mind, which directs and guides them toward the development and the implementation of new business concept. Nowadays, it is essential to promote entrepreneurship and its culture in a society, since the role of entrepreneurs in the industrial and economic growth and prosperity of countries, as well as the issues and bottlenecks that exist in economic and industrial development, especially unemployment are significant (Ardichvili *et al.*, 2003). Various studies showed that although organizations have recognized the importance of innovation and entrepreneurship to compete in today's world, they have not been successful in creating innovation and entrepreneurship due to the lack of proper infrastructure (Zheng *et al.*, 2010).

Entrepreneurship is a phenomenon that occurs in different environments and complexes and promotes economic growth through innovations that individuals have created in response to economic situations (Shepherd *et al.*, 2008). In fact entrepreneurship is a function of entrepreneurship (Prokopenko & Pavlin, 1991). Scientists have expressed various characteristics for entrepreneurs, including internal locus of control, moderate risk-taking, ambiguity tolerance, achievement, independence, innovation, foresight, determination and perseverance, and opportunism (Kuratko & Hadgetts, 2002; Mueller & Thomas, 2000; Lee & Peterson 2000; Shane *et al.*, 2003; Cunningham & Lischeram, 1991; Hisrich & Peters, 2002). Opportunities cannot be exploited until they are recognized (Mainela & Puhakka, 2009). Opportunities are available in the environment and are waiting to be discovered by entrepreneurs (Pacheco *et al.*, 2010).

Entrepreneurial personality traits within the employees of an organization are a unique asset that enables the organization to use these capabilities more easily and with less investment and time to select and train employees toward entrepreneurship. The prerequisite for achieving this goal is to support, motivate, and provide the ground for ideas by trial and error (Wee & Teck, 2002). There must be some good conditions within the organization for promoting organizational entrepreneurship. Factors that affect the entrepreneurship are called entrepreneurship environment (Wee & Teck, 2002). Organizational health is one of the most prominent and most obvious indices of organizational effectiveness. Miles believes that organizational health depends on the viability of the organization in its environment, adapting to it, and upgrading its ability to adapt to it (Miles, 1969). An organization is healthy as Hoy and Mixell believed that holds the feature of creativity and it must welcome changes and new thinking for this attribute, consider experimentation and failure as part of the success and appreciate the efforts of individuals. All social systems must be adapted to the environment for their own survival and development in order to achieve their goals and coordination, prepare relevant resources, organise their activities and motivate their employees. By doing these actions, the organization health will be guaranteed (Hoy & Miskel, 2005).

Organizational health

The term organizational health was first proposed by Miles in 1969 to examine the climate of schools' (Tsui & Cheng, 1999). According to Miles, a healthy organization not only is an organization survived in its environment but also is a structure constantly using its abilities to cope with difficulties and surviving in the long run (Miles, 1969). Originally used to explain the continuity of organizational life, the term organizational health was reconsidered by Parson's, Bales & Sils (1953), Hoy and Tarter (1991), and Hoy & Miskel (1991): it is the ability of the organization to successfully adapt to its environment, create solidarity among its members and reach its objectives.

As this definition suggests, organizational health is a useful structure to picture the mutual relationship of such human resources in organization between management and other staff. To protect such a useful structure, organizations are in need of support by the community in their environment. Simultaneously, they successfully adapt to their environment and impose the shared values on their staff. Organizational health is occurring amidst the wave of changes in social and economic conditions which is beyond the frontier and has become a challenging phenomenon requiring adaptation by all organizations in the government and private sectors and also in state enterprises so as to keep up with the conditions of the changing times and to be able to lead their organizations to prosperity and to sustain their development.

This requires the ability of each organization to adapt efficiently and effectively (Suntiwong, 1995). Hence, leaders in each organization are highly responsible for specifying their organization's vision and expected directions via efficient adaptation resulting from good organizational health. This is in accord with Miles (1973) who attached great importance to the improvement of an organization to be pleasant, comfortable to work in, inviting for more learning, and having systematic work practices divided organizational health. Hoy and Feldman (1987) narrowed the ten characteristics of organizational health by Miles (1969) to seven. Those seven areas include Institutional level (Horlicks, Principal influence), Managerial level (Consideration, Initiating structure, Resource support) and Technical level (Morale, Academic emphasis). The organizational health is one of the famous and useful concepts in management (Kriger & Hanson, 1999). Miles (1969) defined the organization health not only as survival in its environment, but also the ability to maintain sustainable development and to deal with the problem (Miles, 1969).

In healthy organizations, employees are interested and committed to their work, which in turn promote the performance and competitiveness of the organizations. Above all, the organization must be able to adapt to the changing environment and deal with any problem in critical situations, to make the best use of its resources and to successfully deal with external threat forces and to direct their forces towards the overarching goal of the organization and always to develop and maintain its capabilities and sustainability; in other words, to benefit from health organizational (Hoy & Miskel, 2005). Health Organizational is defined at three levels and seven dimensions of organizational health which together make up the behavioral patterns and special interactions within the organization. These dimensions are institutional levels (institutional unity, managerial influence), consideration, structure, resource support (administrative level), morale and scientific emphasis (technical level). These important components of both categories meet the expressive needs of the social system and introduce the level of responsibility and supervision existing in the organization (Hoy & Miskel, 2005). Although there are lots of emphases on the role of entrepreneurship, especially the importance of employees' individual capabilities in developing the organizational entrepreneurship, in the health sector of Iran, the issue of entrepreneurship has not been addressed yet.

Despite of the potential for entrepreneurship in this sector and the many intra- and extra-organizational opportunities that exist for the survival and promotion of health care organizations to cope with the overwhelming changes and fluctuations in the industry, there are still considerable actions to be taken. In this regard, due to the diversity and multiplicity of service sector activities, especially health care services, it is possible to benefit from individual, group and organizational entrepreneurship to increase resource efficiency and effectiveness of activity, and ultimately to improve quality and productivity. But the main problem in this regard is the lack of common literature among managers and practitioners and the lack of deep knowledge of executives and planners on the concepts, themes, dimensions and obstacles of entrepreneurship. Therefore, entrepreneurship has not been exploited in its proper sense and has not been properly utilized in the health care sector which has the characteristics necessary for entrepreneurship.

Due to lack of proper exploitation in developing countries such as Iran, the financial and human resources are faced with the traditional and modern problems though benefiting from acceptable social and economic condition. New issues proposed over the last few decades at the global level, including knowledge-based economy, encouraging innovation, new production and services, creating small, medium businesses and self-employment. Such issues have led organizations towards change and entrepreneurship. Therefore, this research aimed at developing a clear picture of organizational entrepreneurship for the district 1 Iran teaching hospitals through applying an organizational health approach. The results will be investigated in details in the subsequent sections.

This study addresses the following question: What kind of relationship exists between the organizational health and the organizational entrepreneurship of the hospitals?

Methodology

Sample Size and Sampling Process

This descriptive-analytical cross-sectional study with the purpose of the application was carried out on the employees of district 1 teaching hospitals, including the general hospitals of universities (in Mazandaran, Babol, Semnan, Golestan, Shahroud, and Gilan, Iran) in 2019. Totally, out of 37 hospitals, 17 hospitals were selected by cluster and random sampling. All the employees (i.e., the managers and heads of hospitals, supervisors, matrons, heads of nursing services, nursing experts, and managers of health services) from clinical and paraclinical wards were considered the target population of this study (n=946). In total, about 1,000 copies of the questionnaires were distributed among the employees of the desired

hospitals in person. Out of 1,000 questionnaires, the incomplete ones were eliminated. Totally, 946 correct questionnaires were collected in this study (with a questionnaire return rate of 0.94).

Medical ethics code and study introduction letter were obtained from the relevant university for all the hospitals under study. In addition, the subject of the questionnaire was explained to those participating in the study with at least a bachelor's degree. Furthermore, informed consent was obtained, and the study subjects were assured of the confidentiality of their information. The individuals who were fully conscious and willing to participate were entered into the study. Moreover, the exclusion criteria were also the individuals' reluctance to continue the task and incomplete questionnaires.

Demographic information, including gender, age group, educational level, and years of work experience, were collected using a questionnaire.

The data collection tool in this study consisted of the standard questionnaire of organizational entrepreneurship (Hill, 2003) with 32 items, including organizational actions, individual attitude and entrepreneurial culture, each with 6 items, reward and flexibility status each with 5 items, and entrepreneurial leadership with 4 items. Additionally, the Hoy's Organizational Health Inventory (OHI) was used with 27 items at the institutional level with institutional unity dimensions (5 items) and manager's influence (3 items), administrative level with the dimensions of observance (3 items), construction (3 items), and resource support (2 items), and technical level with the components in the dimensions of scientific emphasis (5 items) and morale (6 items) (Hoy & Miskel, 2005).

Measurements Examination

The validity of both questionnaires was confirmed by experts, and the Cronbach's alpha coefficients of the organizational entrepreneurship questionnaire and OHI were calculated to be 0.86 and 0.90 respectively.

Both questionnaires were scored according to a 5-point Likert scale (i.e., Very low=1; Low=2; Medium=3; High=4; Very high=5) and distributed in person among the target population. One-sample t-test was used to analyze the data related to determining the health status of the organization in the hospitals under study. Additionally, the relationship between the two variables of organizational entrepreneurship and organizational health was determined using Pearson's correlation coefficient. Furthermore, the data were analyzed using SPSS software (version 25). The accepted error ratio in this study was considered 0.05.

Findings

The descriptive findings of the current study showed that 69% (n=654) and 31% (n=292) of the subjects were female and male, respectively. The obtained results showed that 37% (n=349) of the respondents were within the age range of 40-49 years. Furthermore, other participants in the order of frequency distribution were within the age range of 30-39 years (36%; n=343), higher than 50 years (14%; n=129), and under 30 years (13%; n=125). Approximately, 61.7% (n=584), 25.8% (n=244), 7.2% (n=59), and 6.3% (n=55) of the respondents had a bachelor's degree, master's degree, specialized doctoral degree, and professional doctoral degree, respectively. In addition, 23% (n=223), 22% (n=206), 17% (n=163), 15% (n=140), 13% (n=119), and 10% (n=95) of the participants had 10-14, 15-19, 20-24, 5-9, 25 and higher, and under 5 years of work experience, respectively. The obtained results of the current study demonstrated that the differences in the variables of age, years of work experience, and educational level between the two groups of male and female subjects were not statistically significant ($P > 0.05$). After calculating the study participants' (n=946) scores of the organizational entrepreneurship and organizational health questionnaires, to specify the status of organizational health and its dimensions from the viewpoint of service providers (i.e., employees), one-sample t-test was used in teaching hospitals. Pearson's correlation coefficient was also utilized in order to determine the relationship between the

two components of organizational entrepreneurship and organizational health. The results have been presented in Table 1.

Based on the results (Table 1) in a response to the questions : "Is there a relationship between the scores of the three components of organizational health, including institutional, managerial, and technical, with the organizational entrepreneurship in the population of district 1 Iran teaching hospitals?" According to the results of Pearson correlation coefficients (with significance level of test $Sig \leq 0.05$), there was a significant direct relationship between the institutional level of organizational health and organizational entrepreneurship ($r = 0.98$), between the managerial level of organizational health and organizational entrepreneurship ($r = 0.94$), between the technical level of organizational health and organizational entrepreneurship ($r = 0.95$) and between the organizational health and organizational entrepreneurship ($r = 0.98$).

Table 1: The relationship between organizational health and organizational entrepreneurship in the population under study (N = 946)

Variables	Organization al Health at the Institutional Level	Organization al Health at the Managerial Level	Organization al Health at the Technical Level	Organization al Health in General	Significan ce Level
Intrapreneurs hip	0.98	0.94	0.95	0.98	<0.001

The results in Table 2 show that the respondents' views are not the same in terms of the variables affecting entrepreneurship, and as it can be seen, the scientific emphasis or, in other words, the same organizational effort to achieve the highest rank of employee success has found the highest rank. In addition, the rank of the other variables has been also presented.

Friedman test was used to evaluate the ranking of research variables. To test the conceptual model of the research, the model analysis algorithm was used in the Structural Equation Method of Smart pls2 and the required analyzes were performed to fit the measurement models and to fit the structural model.

Table 2: Rankings of variables affecting entrepreneurship

Variables	Rank	Mean Rank
Emphasis	1	7.42
Horalick	2	6.77
Technical level	3	6.60
Institutional	4	6.39
Organizational health	5	6.21
Influence	6	5.79
Consideration	7	5.70
Morale	8	5.41
Initiating structure	9	5.37
Managerial	10	5.20
Resource support	11	5.15

Cronbach's alpha is considered the classic criterion for reliability assessment and the Internal Sustainability Assessment Index. Internal stability indicates the degree of correlation of a construct and its related indices, with a criterion above 0.7 indicating acceptable reliability. To determine the reliability of each construct, in addition to the traditional criterion of Cronbach's alpha, a more modern criterion of composite reliability (CR) is used. The superiority of this criterion compared to Cronbach's alpha coefficient is that the reliability of constructs is calculated together, not absolutely but according to the correlation of their constructs. Both criteria are used to better assessing of the reliability, and to confirm convergent validity the factor loadings were higher than 0.7. The mean extracted variance (AVE), as one of the main indices of convergence of the questions in a questionnaire was above 0.5 for each variable and finally the third convergent validity condition ($CR > AVE$) was verified by the researcher.

Divergent validity tests in this research include transverse load test and that of Fornier and Locker (Fornell & Larcker, 1981), which was performed and confirmed before the structural model was implemented (in-house model), so the researcher was allowed to present the structural model with pls. The modified structure of the research has been shown in Table 3. Also, the research structural model was studied and confirmed by the researcher in terms of significance. Also, the Communalilty Index is used to check the quality of the measurement model of each hidden variable. The positive values of this index reflect the quality of the model of measurement of the hidden variables.

Table 3: Mean extracted variance and combined reliability for the research variables

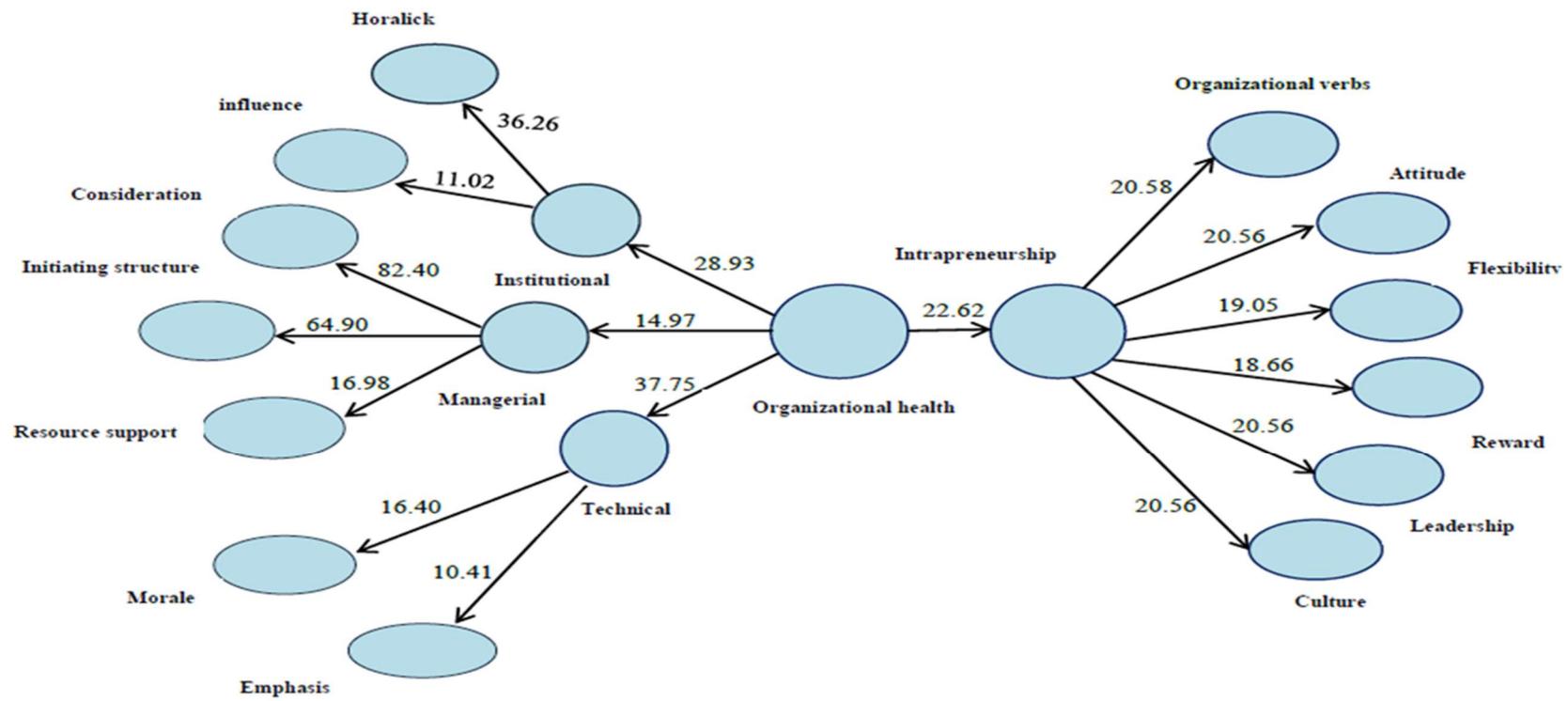
Variables	AVE	Composite Reliability	R Square	Cronbach's Alpha	Communalit y	Redundancy
Attitude	0.92	0.98	1.00	0.98	0.92	0.92
Consideration	0.80	0.92	0.92	0.87	0.80	0.74
Emphasis	0.62	0.90	0.93	0.88	0.62	0.57
Entrepreneur Culture	0.92	0.98	1.00	0.98	0.92	0.92
Entrepreneur Leadership	0.92	0.97	1.00	0.97	0.92	0.92
Flexibility	0.92	0.98	0.99	0.98	0.92	0.92
Horalick	0.88	0.97	0.98	0.96	0.88	0.87
Influence	0.85	0.94	0.96	0.91	0.85	0.82
Initiating structure	0.75	0.90	0.92	0.83	0.75	0.69
Institutional	0.85	0.97	0.97	0.97	0.85	0.83
Intrapreneurship	0.92	0.99	0.97	0.93	0.92	0.89
Managerial	0.66	0.94	0.96	0.92	0.66	0.64
Morale	0.78	0.94	0.94	0.93	0.78	0.73
Organization Health	0.69	0.98	0.00	0.98	0.69	0.00
Organizational verbs	0.92	0.98	1.00	0.98	0.92	0.92
Resource support	0.68	0.81	0.73	0.54	0.68	0.50
Reward	0.92	0.98	0.99	0.98	0.92	0.92
Technical	0.65	0.95	0.97	0.94	0.65	0.63

Fitting of the structural model

After fitting the measurement models, the fit of the PLS is investigated in accordance with the data analysis algorithm in the Research Structural Model Method. Unlike the measurement models in which the relationships between the present variables and the explicit variables are considered, in analyzing the structural model, the relations of the t-values of the hidden variables with each other were analyzed and the criteria of significance coefficients of R Squares or R^2 were investigated to fit the structural model.

Several criteria are used to evaluate the fitting of the structural model of the research, the first and most basic of which are the significance coefficients of Z, or t-values, which are represented by executing the Bootstrap command on the lines of the paths. If the t values are more than 1.96, it indicates the correctness of the relationship between structures and thus, confirms the research hypotheses at the confidence level of 95%. In Figure 1, the t values have been shown for evaluating the structural part of the model. Given that all the numbers on the paths are above 1.96, this indicates the significance of the paths, the suitability of the structural model, and the confirmation of all research hypotheses.

The second criterion necessary to check the fit of the structural model is to examine the determination coefficients of R^2 of the dependent endogenous hidden variables of the model. This criterion is used to connect the measurement and structural part of structural equation modeling and to show the effect of an exogenous variable on an endogenous one. It should be noted that the values of R^2 are shown within the model circles and are only calculated for the endogenous (dependent) structures. For the exogenous structures the value of this criterion is zero. The three values of 0.19; 0.33 and 0.67 are represented as a criterion for weak, medium, and high values, indicating a better fit for the model (Chin, 1998). The values of Determination Coefficient are shown in Table 3 and Figure 2. Given that the value of R^2 has been calculated for the institutional level variable to be 0.976, managerial level variable by 0.965 and technical level variable by 0.978, considering the three values, confirms the appropriate fit of the model.



T-values ≥ 1.96

Figure 1: T-Values for the Structural Part of the research model

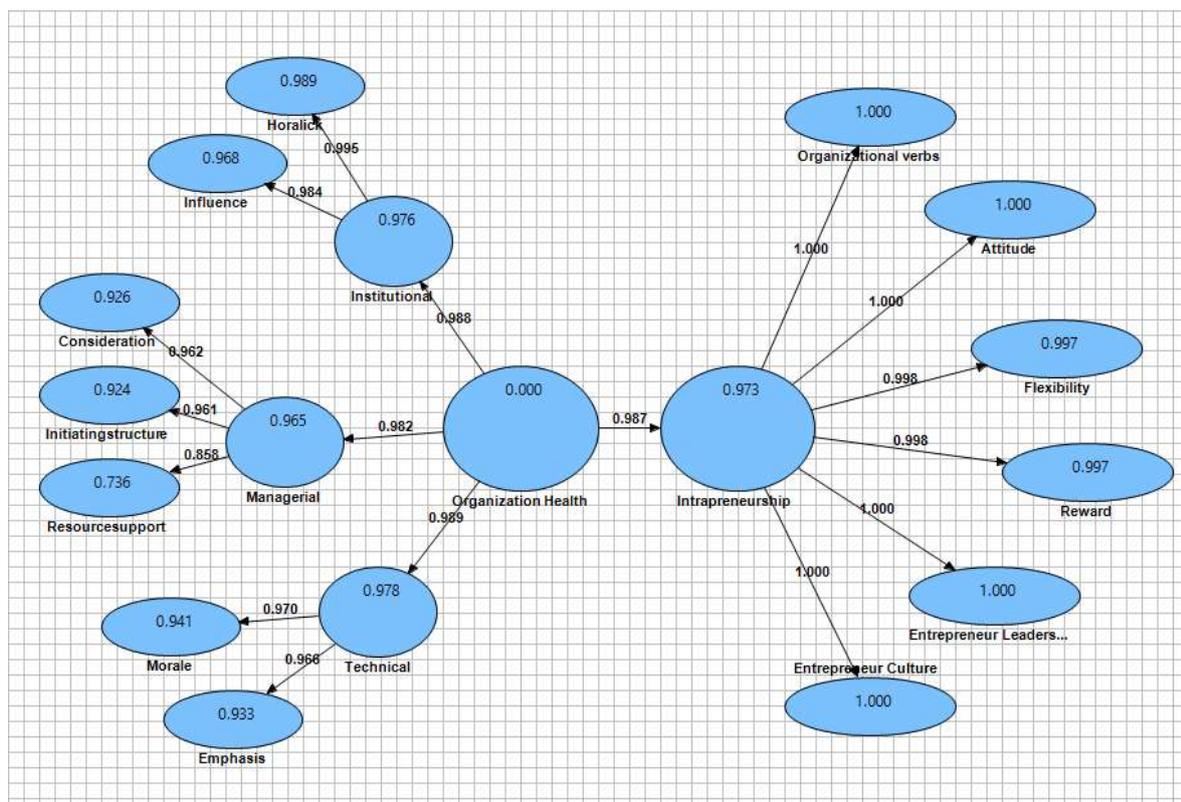


Figure2: Path coefficients, values of factor loads R^2

According to the data analysis algorithm in PLS method, after checking the fit of the measurement and structural models, by examining the significance coefficients of Z of t values of each path and also the Standardized coefficients of factor load related to the paths, the research hypotheses are tested.

If the significance coefficient value of each of the paths is more than 1.96, the corresponding paths are significant at the confidence level of 95% and its related hypothesis is confirmed. Based on the conceptual model tested in Fig 2 and the numbers on the lines, the path coefficient shows the relationship between the hidden variables. To examine the significance of the path coefficient, the coefficients t of each path is considered as well. Considering that the t- value necessary for each path is higher than 1.96, so, at the confidence level of 95%, the predicted paths are meaningful. The final results show that there is a positive and significant correlation between the organizational health variables at institutional, managerial and technical levels and organizational entrepreneurship. Therefore, the relationship suggested in the present research is confirmed (Rasooly Kalamaki *et al.*, 2021).

Results and Discussion

Despite the importance of organizational entrepreneurship, few studies have been conducted on the organizational entrepreneurship in the organization. There are multi-faceted reasons and necessities for developing entrepreneurship across organizations. The main reasons are winning competitions, the advances in science and technology, the need for risk taking, the departure of the best workforce from companies and the pursuit of independent entrepreneurship, the interaction of organizations with market changes, the implications of new designs used in organizations, the need to create independent work units in large firms, changing demographics, and so on. Nowadays, given the volatile and changing environment,

those organizations can continue to survive which give a rapid and appropriate response to these environmental changes.

This research concentrates on the entrepreneurship and its importance at hospitals, and considers its relationship with the organizational health of hospitals as a health care provider organization. Like other researches, this research was designed to answer basic questions or to help clarify the different aspects of a problem. Is it really possible to find a way from the organizational health to the entrepreneurship? The importance of these two variables can be seen in the role they play in the fate of organizations. Without organizational health, each member of the organization is physically and spiritually deficient, which somehow affects their performance, which in turn disrupts organizational operations to achieve the highest goals of the organization. The importance of entrepreneurship in the educational organizations that somehow deal with the formal education is further enhanced. In the present research, there was a significant relationship between the organizational health at an institutional level, organizational health at managerial level; organizational health at the technical level and overall organizational health are associated significantly and directly with the organizational entrepreneurship at hospitals. That is, the higher the desirability of organizational health at hospitals, the more organizational entrepreneurship has increased. Therefore, there is positive relationship between different aspects of organizational health, namely: moral, scientific emphasis, construction, resource support and managerial influence with organizational entrepreneurship.

In a research, Marie and James (Lavoie & Addis, 2018) found that the challenges that entrepreneurs currently face, can be overcome through the scientific entrepreneurship, collective entrepreneurship, and the actions of an entrepreneurial government. The results of a research carried out by Fakhar Shahzad (Shahzad & XGuo, 2017) showed that organizational innovation is based on and influenced by the organizational culture. The results of the research of Christopher Sutter et al. (Christopher *et al.*, 2019) showed that to alleviate extreme poverty, entrepreneurship is essential.

This result was supported by Luke (Luke, 2006), Jong & Hartog (Jong & Hartog, 2007), Tatina (Tatina *et al.*, 2007), Darling (Darling *et al.*, 2007), Smith (Smith *et al.*, 2006), Towmey (Towmey *et al.*, 2000) and Timmons (Timmons & Spinelli, 2007).

Comparing the two variables of emotional intelligence and entrepreneurship tendency in the research of Anga (Nghah *et al.*, 2016) showed that the emotional intelligence has a greater impact on innovation and risk taking and the education, culture and environment have a significant impact on this issue. Students with stronger emotional intelligence are of the more communication skills that lead to the greater propensity for entrepreneurship. The results of Zehira et al.'s research analysis (Zehira *et al.*, 2016) showed that the mediating role of entrepreneurship in the strategic management of human resources and firm performance is effective. Moreover, if companies are pursuing entrepreneurial goals, they need to expand some features, such as being more active, encouraging innovation and risk-taking and competitiveness. In order to achieve its goals and strategies, the company must enhance long-term HR support programs such as adequate training programs, competitive activities and reward systems. As a result, with the development of human resources and company performance, it is expected that the entrepreneurship increases automatically. Evidence from the research done by Koelewijn (Koelewijn, 2014) showed that the entrepreneurial physicians are influenced by intra-organizational dynamics such as commitment, interest, attachment, and value, and are a means of motivating entrepreneurship. Thus, it can be seen that the organizational entrepreneurship is compatible with many organizational variables, including organizational health. On the other hand, in a more general sense, the organizational climate and culture have a significant relationship with organizational entrepreneurship.

A limitation of this study is the lack of cooperation of some universities, authorities, staff and hospitals under study with the researcher; some managers and experts refused to complete the questionnaire.

Policy implications

Regarding the direct relationship between organizational entrepreneurship and organizational health, it seems that entrepreneurship is influenced by organizational health. Organizational entrepreneurship will be improved if the health of the organization is improved, and vice versa. According to the present study, it is suggested that hospitals and universities pay more attention to the appointment of managers who give importance to the entrepreneurship.

Identifying and developing elements that can enhance organizational and personal factors of entrepreneurship and improve entrepreneurial spirit. Holding Entrepreneurial education workshops among hospital staff can be effective too. Managers should devote great amount of resources to boost hospital staff's entrepreneurship spirit and creativity to keep up with changing environments. In this way, making decisions that will have a positive impact on both of these variables will improve the health of the organization and lead to a healthy and entrepreneurial organization. With proper planning in this regard, the factors affecting these two variables need to be identified and investigated in order to provide appropriate solutions for a healthy and entrepreneurial organization. In order to achieve its goals and strategies, the hospital must enhance long-term support programs such as adequate training programs, competitive activities and reward systems. As a result, with the development of human resources and company performance, it is expected that the entrepreneurship increases automatically(Rasooly Kalamaki *et al.*, 2021).

Conclusion

The findings of this study indicate that the organizational health at an institutional level, organizational health at managerial level, organizational health at the technical level and overall organizational health are associated significantly and directly with the organizational entrepreneurship.

Conflicts of Interest

The authors have no conflicts of interest to declare.

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