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Determining the effective factors on developing entrepreneurial managers in the Iranian health system: A qualitative study

Fatemeh Farajzadeh, Sogand Tourani, Hossein Shabaninejad¹

Abstract:

BACKGROUND: Entrepreneurship is the engine of economic growth and a main symbol of innovation in any country. The health system of the country needs entrepreneur managers to eradicate the problems and provide better services. The purpose of this study was to identify factors affecting the nurturing of entrepreneurial managers in the Iran's health system.

MATERIALS AND METHODS: This study was carried out qualitatively with the grounded theory method and through semi-structured interviews with six questions. The data sources were 22 key informants who were purposefully selected from healthcare organizations and other entrepreneurship-related institutions. Data were analyzed and interpreted using the framework analysis. Data were managed and analyzed using MAXQDA software.

RESULTS: Findings of this study indicated 6 main themes and 46 subthemes. The six factors affecting the development of entrepreneurial managers in the Iran's health system were determined as individual, family, social, economic, organizational, and educational.

CONCLUSION: Iranian health organizations need to nurture entrepreneurial managers to tackle the challenges of the health system, compete internationally, and have successful performance. Hence, delivering the health industry to entrepreneurial managers in the long run will bring back positive results of growth and development to the body of the health system. Therefore, paying attention to the identified themes and subthemes and the solutions presented in this study can help nurture entrepreneurial managers' and successful performance of the Iran's health sector.

Keywords:

Entrepreneurial managers, health system, Iran

Introduction

Nowadays, organization management is done in complex, competitive, and uncertain environments and requires great ideas. Organizations that are run with great thoughts face challenges creatively and create new solutions for challenges from new point of view.^[1]

Given the growing complexities and competitiveness of the world coupled with the rapid evolution and the epidemiological,

informational, and economic transition in the today's world, entrepreneurship is considered as the engine of economic growth since it can boost the country's economic growth, increase productivity, and create employment and social welfare.^[2]

Entrepreneurship is a process in which individuals, independently or within the organization seeks for economic opportunities.^[3] Entrepreneurs interpret change as a normal phenomenon. They are always looking for it, reacting to it, and using it as an opportunity.^[4]

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Department of Health Services Management, School of Health Management and Information Sciences, Iran University of Medical Sciences, Tehran, Iran, ¹Health Management and Economics Research Center, Department of Medical Library and Information Science, School of Health Management and Information Sciences, Iran University of Medical Sciences, Tehran, Iran

Address for correspondence:

Dr. Sogand Tourani, Department of Health Services Management, School of Health Management and Information Sciences, Iran University of Medical Sciences, Tehran, Iran. E-mail: sogandtoorani@gmail.com

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Entrepreneurship was first raised in economics by Cantillon in 1755 and later by Schumpeter.^[5,6] Subsequently, many intellectuals in different fields such as psychology and sociology paid attention to this issue.^[7]

Since the early 1970s, the emphasis of organizations on innovation to promote their performance and create competitive advantage has led to entrepreneurial activities within administrative structure of organizations (organizational entrepreneurship).^[8] Among the first issues discussed in the field of entrepreneurship was identification of the factors influencing entrepreneurship such as individual, family, government, and society.^[9]

Other studies have identified factors such as individuals' demographic and occupational characteristics, community culture, intraorganizational factors, cognitive factors, and past influential factors as the most important factors affecting the behavior of entrepreneurs and owner managers in the health industry.^[10,11] Moreover, the role of human resources in the health sector has been considered remarkably in the early first decade of the 21st century.^[12] One of the systems that has undergone enormous changes in recent years is the health industry, in which the opportunities, created by health industry evolution, have provided the environment for entrepreneurship growth.^[13]

Studies by Guo in the United States showed that utilizing entrepreneurship in healthcare organizational strategies is essential because of the challenging environment in these organizations. The results of these studies bring up choosing an entrepreneurial approach in the field of health and education Innovative, risk-taking and opportunistic entrepreneurial managers are the key to success and the chances of survival of health organizations in challenging environments.^[14-17]

Lages *et al.* investigated the factors affecting entrepreneurial orientation in the health industry. Their research has confirmed the potential of entrepreneurial behavior in the health organizations, as well as has considered entrepreneurship as a solution to create value added and sustainability for the health industry in a competitive socioeconomic environment.^[11]

A study by Cutler in the UK found that low satisfaction with the health system was due to a lack of attention to entrepreneurship in the health sector reform in spite of huge expenditures spent on the healthcare system.^[18]

Jahani *et al.* explored the entrepreneurial motivations of Iranian entrepreneur nurses. According to the findings of this research, Iranian nurses to enter nursing entrepreneurship and confront the challenges

and problems need motivations such as professional promotion, professional independence, dignity and social status, development of role and service to society, spiritual achievements, and more money and job creation.^[19]

Khayatan and Mobaraki examined the factors affecting the entrepreneurial behavior of the managers in research centers of Tehran University of Medical Sciences. The findings of their study indicate that content factors including cognitive approach, competence, networking behavior, prior experience, riskiness, pioneering, creativity, and self-efficacy as well as underlying factors including available resources and new technologies have a positive and significant effect on entrepreneurial behavior of managers. In contrast, structural factors such as organizational structure constraints and standard execution procedures have a negative effect on the entrepreneurial behaviors of managers.^[20]

Among other studies in this area of research is Salarizadeh *et al.*; their results indicate low level of entrepreneurship in healthcare organizations considering the structural, behavioral, and environmental factors affecting organizational entrepreneurship.^[21]

Global entrepreneurship monitoring in regard to Iran presented that institutional indicators that promote the development and dynamism of entrepreneurship are not favorable in comparison with their own countries in the region.^[22,23]

Realizing the strategic goals of our country for entrepreneurship development, which includes surviving in competitive healthcare environment, responding adequately to the growing needs of the community to health services, generating productive employment, utilizing existence potential of healthcare, using entrepreneurship concept and knowledge in the health sector, and demand-driven research is needed for healthcare entrepreneurship development in Iran. Therefore, this article investigates factors affecting the development of the entrepreneurial managers in the health system of Iran.

Materials and Methods

Study design and setting

This is a qualitative study that was carried out between 2017 and 2019 to investigate the factors affecting development of entrepreneurial managers in the Iranian health system. One of the reasons for choosing the qualitative method for the present study is the real complexity of health systems and the existence of multiple perspectives on health issues that necessitate the conduction of high-quality qualitative researches. Qualitative studies can explain and predict important

phenomena and effectively relate to the quantitative parts of a larger study to improve health services and health policy development.^[24] In addition, qualitative methods reach within participants and extract the experiences, knowledge, and silent information.^[25]

Among the different approaches to qualitative studies, the grounded theory approach was selected for the present study because it examines substances in human experiences and life phenomena.^[26] Grounded theory produces the theory, directly from the data that have been regularly collected and analyzed.^[27,28] Hence, lets a theory to emerge freely from the substance of data that have been attained.^[29]

Study participants and sampling

Study participants were key informatics including entrepreneurship experts, Ph.D. graduates in different fields of entrepreneurship from the University of Tehran, health system managers at Ministry of Health and Ministry of Cooperatives, Labor and Social Welfare, vice-chancellors of health, development, and treatment of medical universities, and experts in private sector of the health system.

Maximum variation sampling, as a purposive sampling technique, is used to capture a wide range of perspectives relating to the study. Key informants were selected as participants who had the richest information to share appropriately with at least 10 years' experience in the field of study. The interviews were continued until the information saturation stage reached, that is, until the researchers felt sure that new information would no longer be obtained by continuing sampling.^[30]

Interview framework analysis was used to analyze the data, which is a method for identifying, classifying, and organizing data based on concepts and themes within the text, which is widely used in qualitative data analysis. If done well, framework analysis method can be an appropriate tool to achieve the goals of improving health services and developing health policies through the production of valid and relevant findings.^[31] Among the various models for the framework analysis, the seven-stage model of Gale *et al.*, one of the complete framework methods for the analysis of qualitative data in health research, was selected. Accordingly, the data analysis and coding steps were seven steps: transcription, familiarization with the interview, coding, developing a working analytical framework, applying the analytical framework, charting data into the framework matrix, and interpreting the data. Two researchers through inductive attitude coded data.

To increase the credibility of this study, techniques such as coding by two coders and ensure uniformity of their

views, provide data analysis results to interviewees to confirm selected categories, continue interviews until to reach data saturation, continuous note-taking during the research as well as continuous review and correction during the data collection and analysis process were utilized [Table 1].

For organizing data as well as reporting and analyzing information, MAXQDA 10 software is a product of VERBI GmbH, Berlin, Germany was used.

Ethical consideration

Ethical considerations of this study included obtaining an ethics code from Iran University of Medical Sciences (IUMS), obtaining informed consent from the interviewees, considering the right to cancel and quit the study, explaining the study objectives at the onset of the interview, and assuring the interviewees to keep information confidential.

Findings

The present study examined the factors affecting the development of entrepreneurship in managers of health system. The extracted effective factors related to entrepreneurship of health system managers were classified into 6 categories, 26 themes, and 46 subthemes [Figure 1].

Entrepreneurship is a phenomenon influenced by demographic and the local factors of the country. Table 2 shows the demographic information of the 22 interviewees in the present study.

To identify the factors influencing the development of entrepreneurship in the health system as the first question, interviewees were asked about the individual characteristics of entrepreneur managers. The findings from the interviews featured 10 characteristics, which are presented as individual factors in Table 3.

Individual category

Individual category was determined by 10 themes and 16 subthemes according to the interviewee's statements. The majority of interviewees were seeing individual factors as a driver in entrepreneurship for healthcare system managers. Self-confidence and courage were the most important individual factors in the views of interviewees. People who are highly inclined to risk have a greater chance of optimally exploiting entrepreneurial opportunities because risky behavior is one of the fundamental elements of entrepreneurship. The third individual factor identified in this research is creativity. Creative managers will grow their organization on the path to entrepreneurship. Positive



Figure 1: Factors affecting the entrepreneurship of Iranian health system managers

Table 1: The guidance of semi-structured interview

In general, what is your opinion about development of entrepreneurial managers in the Iranian health system?
What do you know about the dimensions and effective factors for developing entrepreneurial managers in the Iranian health system?
What environmental and social issues are needed to develop entrepreneurial managers in the health sector?
In your opinion, what infrastructure and conditions should health organizations have to cultivate an entrepreneurial manager in the health sector?
In your opinion, what infrastructures and conditions should educational systems have to cultivate an entrepreneurial manager in the health sector?
Respecting your participation, please provide your freely comments, possible suggestions or obstacles of entrepreneurial managers in the health sector of our country

thinking and critical thinking are other individual factors identified in the present study. Paying attention to the full half of the cup and at the same time trying to get out of the undesirable and unfavorable conditions can differentiate entrepreneur managers from the other ones. The ability to establish effective communication with others is another individual factor identified in the present research. Twelve of the interviewees believed that they could not simply run the business through laws and regulations. The entrepreneur managers, along with the use of rules and regulations, use effective communication skills to succeed. Recognizing opportunity has been identified as another characteristic of entrepreneur managers. Entrepreneur managers are constantly monitoring the situation so that they can, in an appropriate position, make accurate decisions about their business or organization. Believing in participation and consultation is another factor that has been identified in the context of this study. From interviewees' point

of view, paying attention to the opinions and ideas of others and collaborating with individuals and elements lead to the success of entrepreneur managers. On the other hand, the ability to think multidimensionally and pay attention to all aspects of affairs is another feature according to the interviewees. The last factor identified in this study is related to having specialized knowledge in the field of activity. The interviewees believed that the entrepreneur manager should have the knowledge and expertise in the field of health management. The entrepreneur manager, due to having specialized knowledge, understanding, experience, and recognition of the health industry, will be able to take advantage of the organization more efficiently by adopting a suitable strategy at an appropriate time [Table 3].

Family category

The family is the smallest social unit and the place of the formation of many personality characteristics. The analysis of the interviews indicates another category influencing the development of entrepreneur managers in health system named family factors, which were determined by three themes and five subthemes [Table 3]. Based on the views of interviewees, children should be given an opportunity to develop a sense of responsibility and independence in their childhood. Eliminating humiliating behavior to children was other identified factors. The humiliation and continuous downsizing of children stop them from being motivated and creative, so they do not express new ideas and ultimately being receptive and passive becomes part of the character of these children. The proper shaping of children's personality from the very beginning requires strong families. Hence, nurture the family as the origin of entrepreneur managers identified as the factors influencing the development of entrepreneur managers in the health system.

Table 2: Frequency distribution of gender and organization of interviewees (n=22)

Organization	Gender, frequency (%)		Total frequency (%)
	Female	Male	
Ministry of Health and Medical Education	2 (9)	2 (9)	4 (18)
Ministry of Cooperatives, Labor and Social Welfare	0	1 (4.5)	1 (4.5)
Ministry of Economy and Finance	1 (4.5)	1 (4.5)	2 (9)
Parliament	1 (4.5)	1 (4.5)	2 (9)
President Deputy Strategic Planning and Control	0	1 (4.5)	1 (4.5)
Managing Director and Founder of Private Hospital	1 (4.5)	4 (18.5)	5 (23)
Founder/Managing Director of Private Health Company	1 (4.5)	4 (18.5)	5 (23)
Board of Directors of Medical Universities	1 (4.5)	1 (4.5)	2 (9)
Sum	7 (31.5)	15 (68.5)	22 (100)

Social category

Society has a decisive role in shaping and developing the entrepreneurial spirit in individuals. Therefore, interviewees interviewed the social factors affecting the development of entrepreneurship in the health system. Social factors presented by interviewees are presented by 4 themes and 6 subthemes as shown in Table 3. For most interviewees, community attitudes toward entrepreneurship can be one of the factors influencing the development of entrepreneurship in the context of the study. The incentive community will lead to the growth of talent and the training of entrepreneurs. Fatalism was another factor that was raised by interviewees. The belief in the internal control center creates a belief among people who can manipulate and control the environment through their own behaviors and actions; this thinking strengthens the spirit of change and thus entrepreneurship. The acceptance of differences was the third identified subcategory in social factors. In general, tradition breaking and novelty culture can be considered as a suitable platform for entrepreneurship development. Conversely, homogeneity and unity of behavior will be a disadvantage for entrepreneurship. Other factors identified in this category are attention to the culture of attempt and commitment to ethics in society.

Economical category

The political, economic, and legal structure of the country is capable of influencing the growth and development of entrepreneurship in the health system. Based on the findings of the current study, economic category was identified by 4 themes and 6 subthemes as presented in Table 3. The adoption of appropriate tax and insurance policies is the first of the few structural factors, that most interviewees have been put forward. The second subcategory refers to the political structure of the country. Under the legal constraints, entrepreneur managers will not be able to provide the best solutions to improve the outcomes. In the event of the dynamics of the country's political structure, government policies will create legal protections and facilitate the activities of entrepreneur managers. In other words, healthy and dynamic political structure will be able to provide the

necessary ground for the growth and development of entrepreneurship through appropriate legislation, reducing the government's role in various affairs and creating a healthy competitive environment. The third subcategory, which has been presented by most interviewees, refers to the exclusive power structure of the country's health system. The interviewees believed that the monopoly structure governing the health system was a major obstacle to the development of entrepreneurship in this field. The final subcategory refers to the country's economic structure. According to research findings, market security and economic structure of the country can help develop entrepreneurship and entrepreneur managers in the health system.

Organizational category

As one of the interview questions guide, interviewees were asked about the organizational factors affecting the development of entrepreneur managers in the health system. Organizational factors extracted from interviews were classified in two general categories, called organizational culture and organizational structure [Table 3]. According to the viewpoints of interviewees, the culture dominating the organization plays an important role in the entrepreneurship of the employees. Encouraging creative staff will motivate other employees of the organization. In growing organizations, employees are proud of their strengths and abilities and gain the confidence they need to deliver entrepreneurial opinions and ideas. Teamwork was also identified the basis for creativity and the emergence of new ideas in organizations. The organizational structure subcategory was also considered as the second factor in the organizational category affecting the development of health manager entrepreneurship in the context of research. According to interviewees, support for entrepreneurship and entrepreneurs should be considered in the organization's structure and policy. The existence of a dynamic organizational structure with free boundaries makes employees independent and allows them to work with more freedom and act in an innovative way, and excessive control is not an obstacle to entrepreneurship.

Table 3: Factors affecting the development of the entrepreneur managers in the health system of Iran

Category	Themes	Subthemes	Evidence
Individual	Self-confidence	Self-confidence	The entrepreneur manager needs to have the confidence to express an idea and put the idea into action (interview number 6)
	Courage	Risk taking	The power of risk-taking and the sense of success lead to the victory of the entrepreneur managers (interview number 9)
		Daring	Entrepreneurship requires boldness to break old structures and make changes (interview number 4)
	Creativity	Creativity and innovation	Creativity and innovation are among the most important features of the entrepreneur manager (interview number 12)
		Multidimensional thinking ability	An entrepreneur manager can address all aspects of an issue (interview number 1)
	Thinking positive	Attention to assets	Drowning in the things s/he does not prevent the person from paying attention to the things s/he has (interview number 10)
		Positive energy	The entrepreneur manager is a person with positive energy (interview number 13)
	Critical thinking	Non acceptance of the ruling conditions	The entrepreneur manager does not accept the ruling constraints and conditions and seeks a way out of the negative situation (interview number 2)
	Will and perseverance	Strong will	Entrepreneur manager is a person with a strong will (interview number 13)
		Ability to deal with problems	The entrepreneur manager should be able to deal with the hardships of the way (interview number 1)
	Effective communications	Great social relationships	An entrepreneur manager can establish strong relationships with other people in the organization and the environment (interview number 9)
		Effective public relations	Good and effective public relationship is one of the most important characteristics of an entrepreneur (interview number 11)
	Opportunism	Understanding the right opportunities	The correct identification of opportunities is one of the hallmarks of entrepreneur managers (interview number 9)
	Team working	Belief in the teamwork	The entrepreneur manager believes in group work (interview number 17)
Consulting		Consult with other experts is among the requirements of entrepreneurship (interview number 17)	
Family	Nurture responsibility in children	Giving children roles and responsibilities	Trusting children and giving them a role and responsibility will create the ground for the adoption of future big responsibilities in the child (interview number 4)
		Development confidence in children	
	Nurture independence	Formation of independent character	We should not raise our children in a way that they become family-dependent and gain everything without effort (interview number 3)
	Family stability	Eliminating humiliating behavior in the family	Considering children incapable will have lasting effects that will be visible in their personality traits (interview number 13)
Strong families and strong mothers		Many entrepreneurs are educated by strong families, especially strong mothers (interview number 9)	
Social	Social support	Welcome to the differences in society	If the structure of the community tends to match and the differences are suppressed, there will be no progress in raising entrepreneur managers (interview number 8)
		Encouraging society for entrepreneurship	Some societies encourage entrepreneur managers while other societies discourage them (interview number 9)
		Attitude of the society to the rich people	In some societies, it is believed that the capitalist himself/herself is a thief or his father (interview number 10)
	Internal control	Ability and belief for changing lives and destinies	In a society where the control center of people is more external than internal, and everything is attributed to destiny and fate, the spirit of entrepreneurship will not grow (interview number 14)
	Hard working and effort culture	Encouraging for endeavor	Entrepreneurship has a good place in societies in which the culture of work and effort is in a good place (interview number 8)
	Commitment to ethics	Oriental ethics of society and individuals	The more entrepreneurial activities are promoted in the community of commitment to individual and social morality, empathy, and sympathetic empowerment (interview number 7)
	Economical	Appropriate tax and insurance policies	Tax and insurance policies
Healthy and dynamic political structure		The dynamics of political structure	The country's political structure needs to be dynamic and everything in relation to entrepreneurship should not be limited to names (interview number 8)

Contd...

Table 3: Contd...

Category	Themes	Subthemes	Evidence
Organizational		Eliminating disabling political factors	Political disabling factors should be eliminated; one of the challenges faced by entrepreneurs is dealing with people in power (interview number 4). Fair space and healthy political system are the requirements of competition and entrepreneurship (interview number 13)
		Reduce state ownership	Reducing the government's role in various matters and removing government privileges can provide a healthy competition (interview number 11)
	Balance in the power structure of the health system	Existing power of monopoly and informal groups within the health system	The monopoly power in the health system can be a major obstacle to entrepreneurship (interview number 8) "Entrepreneurship is not compatible with exclusivism" (interview number 10)
		Secure market and economic environment	Insecure markets and economic environments are extremely dangerous for entrepreneurship (interview number 3)
	Organizational culture	Attention to and encouraging creative staff	In organizations, people with new ideas should be considered (interview 1). Encouraging creative staff encourages other employees to do creative work (interview number 3)
		Growing organizational relationships	The spirit of organizational relationships should be fruitful and strengthen self-esteem of employees (interview number 13)
		Creating the culture of team working	Group and team activities provide new ideas (interview number 9)
	Organizational structure	Defining entrepreneurial missions	If entrepreneurial missions are not seen in healthcare organizations, healthcare organizations cannot be expected to carry out entrepreneurial activities in the field of routine tasks and planning. (interview number 7)
		Supporting of entrepreneurship	The structure and policy of the organization should be set up aligned to support entrepreneurship (interview number 7) Most organizational structures prevent the growth of entrepreneurial thoughts because an individual has to grow to survive in an organization in the same organization's closed system (interview number 8)
		Dynamics of organizational boundaries	Consideration of sufficient authority for entrepreneur managers in an organizational structure is mandatory (interview number 10) Organizational staff should have the freedom to act and be independent enough to carry out creative work (interview number 5)
Educational	Education in schools	Teamwork training	The workgroup is the basis of entrepreneurship. Individuals should be trained to conduct group activities (interview number 4)
		Critical thinking training	The formal education system should familiarize children with critical thinking and avoid humiliating children with different thoughts (number 13) in the educational system, dare to raise opinions in children should be created (interview number 11)
		Creativity pedagogy	The educational system should seek to nurture a creative and influential human being rather than submissive and receptive human (interview number 9)
	University-based educations	Training entrepreneurial managers as a goal	Goal setting should begin before academic education and academic education should be conducted in line with the goal (interview number 11)
		Providing educational courses related to entrepreneurship	Providing educational courses related to entrepreneurship at different levels of education can be effective in fostering entrepreneur managers (interview number 2)
	Organizational educations	Continuous organizational training	Organizational training should be continuous and uninterrupted to motivate individuals (interview number 13)
		Conducting entrepreneurship and creative thinking courses	Holding entrepreneurship and creative thinking training courses can be an effective step toward achieving the organizational entrepreneurship (interview number 3)

Educational category

The fourth question was asked with an emphasis on effective educational factors on the training of entrepreneur managers in health system. The findings of the educational factors are shown in Table 3. Based on the findings of this study, educational factors related to the context of this study were categorized under three main subcategories of education in schools, entrepreneurship education in university, and organizational education.

Discussion

In the present study, six dimensions influencing the development of entrepreneurship in Iran's health system were identified as individual, family, social, economic, organizational, and educational by main themes and 46 subthemes.

Examining the individual characteristics of the entrepreneur manager is a sustainable approach in the

study of entrepreneurship because these characteristics are also effective in the individual's effort to develop knowledge about entrepreneurship and entrepreneurial management.^[32] Based on the findings of this research, self-confidence, courage, creativity, positive thinking, critical thinking, willpower and perseverance, effective communication, opportunism, and belief in participation and consultation were the most important individual characteristics of entrepreneur managers in the health system. This finding was aligned with the views of psychologists such as Alvin Toffler, who say that the root of many human sufferings is a meaningless crisis or absurdity. Therefore, the individual's desire of health managers for entrepreneurial activities meets their human need to understand the transcendent meaning and utilize life opportunities.^[33]

The results of the study showed the skills required by hospital managers also indicate the need to strengthen the personal and personality characteristics of managers along with improving their human relations skills, strategic insight, and work experience.^[34]

Carland *et al.* also consider personality traits as one of the effective criteria in the entrepreneurial process.^[35] Marques *et al.*'s research results (2018) well proved that the properties of personal characteristics such as motivation and entrepreneurial skills are the basis of entrepreneurship whereas it matches with the present study findings.^[36]

The results of Zhao *et al.*'s study, 2010 in United States about individual factors were different from the present study. The results of the study by Zhao *et al.* showed that five main personality traits (neuroticism, extraversion, adaptability, acceptance of experience, and conscientiousness) affect the emergence and performance (incidence) of entrepreneurship. Entrepreneurial managers also have higher conscientiousness, extraversion, emotional stability, and openness to experience and lower neuroticism than nonentrepreneurial managers.^[37] The reason of difference between this study with our study based on his research method were fundamentally different from this study. Further, it can be influenced by the country's cultural conditions and climate.

Another identified individual influencing factor is opportunism. In the studies conducted by Shane and Eckhardt in the United States, opportunism has also been identified and investigated as one of the individual characteristics of entrepreneurial managers.^[38,39]

Identification of the family dimension as one of the effective factors in nurturing entrepreneurial managers in the health system of Iran showed that the family

underpins the formation of important characteristics such as responsibility, independence, and self-confidence in the individual. Family businesses today are the basis of many national and local economies that can be a good benchmark for understanding the role of the family in realizing entrepreneurship.^[40]

Molina's research which was dedicated to mothers' roles, security, and stability in families on the entrepreneurship outlook and job creation was lining up in a same direction of this study.^[41] Vakili *et al.*'s research results in Iran also point out family as the main motivating, creating, strengthening, and sustaining the culture and spirit toward entrepreneurial development as mentioned in Wennekers *et al.*^[9,42]

The third category of factors identified in this study refers to social factors. This group emphasized the culture of governing the community. Based on the results of this research, an encouraging society, committed to ethics and with culture of effort that welcomes differences and does not accept fatalism, can be a good base for fostering entrepreneurship in the field of health. In her study, introduced sociocultural factors as effective factors in the process of entrepreneurial management.^[37]

The fourth identified category refers to the structural factors. Based on the findings of this study, the economic and legal structure of the country is effective in fostering entrepreneur managers in the health system. The results of this study are consistent with the findings of Morris *et al.*^[43] According to the results, political commitment and economic conditions are necessary for the create and improvement of the culture of entrepreneurship. Guo's research has also highlighted the political and economic condition as influencing factors that affect entrepreneurship.^[16]

Based on this study results, under legal constraints, entrepreneurial managers will not be able to provide the best solutions to improve outcomes. If the political structure of the country is dynamic, government policies will lead to the creation of legal protections and facilitate the activities of entrepreneurial managers. In other words, a healthy and dynamic political structure will be able to provide the necessary ground for growth and expansion of entrepreneurship through appropriate legislation, reduction of government tenure in various matters, and establishment of a healthy competitive environment. The third subtheme, which is discussed by most of the interviewees, refers to the monopoly structure of the power in the health system of country. Experts believed that the power of informal stakeholders groups within the health system was a major obstacle to the nurturing of entrepreneurial managers in this sector.

Organizational category was the fifth group of effective factors in the present study. Based on the results of this research, the culture dominating the organization and organizational structure can affect the formation and development of entrepreneurial spirit in the health system.

Organizational entrepreneurship refers to a set of active and focused measures that lead to the production of a new product, service, or process in the organization. Entrepreneurship in the organization will bring benefits such as reducing the costs and increasing the assets and capital of the organization.^[43] But in other study they believe that intrinsic factors of the organization, such as management support, freedom of action and autonomy, job independence, reward-reinforcement, time availability, and organizational boundaries, can affect the entrepreneurial behavior of employees.^[44] Also, in other study indicated that lack of innovation climate and lack of individual motivation in the organizations influenced absence of entrepreneurial performance in the workplace.^[45]

Educational factors were the sixth category of identified factors in the present study. Based on the results of this research, the education of entrepreneur managers should start from schools and continue until the activity of an individual in an organization or a particular business. Training entrepreneurship skills should be continuous and targeted to motivate and empower managers. Growth of entrepreneurship spirit in health managers requires continuous education.^[46,47]

Schools and teachers, through training of teamwork, critical thinking, and creativity in children, can be a prerequisite for a culture of entrepreneurship. Accordingly, entrepreneurship skills training should start from school and then continue in university education. Based on the opinions obtained from interviewees, the training of the entrepreneur manager should be considered as one of the objectives of the university education system and its related curriculum should be presented at different levels of education. On the other hand, after entering the field of work and practice, the entrepreneurship training process should continue in most organizations and businesses. In addition, conducting continuous creative training courses in organizations was one of the issues mentioned by some interviewees. In this regard, the UK National Health System has implemented an entrepreneurship training program for managers and leaders in the health sector since 2017 to meet the challenge of health system changes and entrepreneurial reforms.^[48]

Consistent with the present study, according to Vakili *et al.*, schools and teachers could create the culture

of entrepreneurship through teaching teamwork, critical thinking, and nurturing creativity in children. Family and school support for innovation, risk-taking, and no fear of failure helps entrepreneurship, while promoting a culture of observance of customs and restrictions by family and school can be detrimental to entrepreneurship.^[49]

Conclusion

The six main categories affecting the development of entrepreneurial managers in the Iran's health system were identified as individual, family, social, economic, organizational, and educational. These determined factors represented the essential infrastructures necessary for entrepreneur managers in the field of health.

Addressing some of the identified problems, such as the health system structural barriers, influential family factors, monopoly within economic, it show that providing some infrastructures for the developing of entrepreneurial managers in the health system is hard and difficult. Since, the main root of these problems outside of the health system of the country. The government should provide a facilitating role in creating the opportunities and conditions for entrepreneurship of health system managers. However, most interviewees considered the government to be undesirable and deterrent, indicating a lack of supportive measures.

To train entrepreneurial managers in the health system, the role of governments as facilitators and leaders in creating opportunities and providing the conditions for entrepreneurship of health system managers must be emphasized. Further, reformulating the principles and values based on scientific and accurate evidence or delegating authority to entrepreneurial health professionals can improve the strategies to develop entrepreneurial managers in healthcare organizations of Iran and other countries. The education sector of our community can also address the concept of entrepreneurship as one of the main concepts of its education, from the beginning of children's education to employment in the workplace.

In spite of the accepted fact that entrepreneurship is a global acceptance, Iran's health managers agree on stability and maintaining the current situation and are not willing to risk and innovation to achieve success. The health system of our country needs entrepreneurial manager to be able to boost health system with innovation and creativity. Hence, the health industry should be in the hands of entrepreneur managers, which in the long run will bring positive, economical, and spiritual results to the body of the health system of the country.

Suggestions for the next studies

Regarding practical suggestions resulting from this study, the following can be highlighted: Evaluation orientation and ability of applicants for managerial positions toward entrepreneurship before appointing in high level management positions along having psychological characteristic tests or standard job-related consulting. Creating the entrepreneurship development unit for health manager's to oppose dispersion in activities and be able to make right decisions toward development of entrepreneurship, and defining new culture within health organizations regarding the entrepreneurial roles, compiling an entrepreneurship charter in health organizations as a platform for entrepreneurial performances.

The strengths of this study are addressing a new and neglected subject in the field of forecasting and attempt to align Iran's health system development in the direction of global health growth. The present study helps the entrepreneurial capacities to be intentioned and revealed through training entrepreneurial managers of health sector. Due to the novelty of the research topic, it can pave the path for other studies in areas of identified dimensions of utilization of entrepreneurial managers. It can also challenge the traditional view on training and evaluating the skills of health managers, drawing attentions of policymakers and stakeholders to this important area, and providing the fundamentals for development of services to stakeholders and users. Another point of this study was the pioneer use of qualitative methods and interviews as a research method, since because of the lack of previous research, identifying the factors affecting the development of entrepreneurial managers in the field of health without extracting the opinions of experts and key informants in this field, was not possible. This method resulted in an almost comprehensive perception of the dimensions and components of entrepreneurial managers in the health system.

The weaknesses of this study are the interdisciplinary essence of entrepreneurship that makes it necessary for entrepreneurship researchers to capture insights in the other disciplines, including psychology, economics, sociology, and politics that is difficult and time-consuming. Few studies in the global research literature were found for entrepreneurial managers in the field of health, which made it hard to objectively compare studies in some dimensions. Moreover, very limited number of research codes could not be published due to social considerations.

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Conflicts of interest

There are no conflicts of interest.

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